

ASSESSING KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS ORAL HEALTH AMONG NURSING STUDENTS, VISNAGAR, GUJARAT

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Article Received on
19 June 2015,

Revised on 10 July 2015,
Accepted on 05 Aug 2015

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ABSTRACT

Objectives: The aim of the study was to assess the oral health related knowledge, attitude, and practice of the students of Nootan College of Nursing, Visnagar. **Materials and Methods:** A cross sectional study was carried out among 193 students of Nootan College of nursing by using self-administered questionnaire. It was conducted as a classroom survey; 7th April 2015 to 28th April 2015. Oral examination was carried out by recording DMFS/DMFT index, Dean's Fluorosis index and gingival index. **Results:** Only 13% of the nursing students knew that dental caries occurs due to sweet and sticky food, majority of them 63.7% could know the cause of gum diseases, a enough number of the nursing students (42.5%) knew about the dental treatment aspects of a

pregnant lady, and majority of nursing students thought that oral health related information should be included in their curriculum that suggest positive attitude of nursing students towards oral health. **Conclusions:** In the context of oral health, whatever amount of knowledge the subjects already has about healthcare and associated preventive measures, better positive attitudes can always be achieved at every step of their learning process.

KEYWORDS: knowledge, attitude practice study, nursing students, oral health.

INTRODUCTION

Health is a common theme in most cultures. During the past few decades, there has been a reawakening that health is a fundamental human right and a worldwide social goal that it is essential to the satisfaction of basic human needs and to an improved quality of life.

According to World Health Organization, health has been defined as ‘a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity and ability to lead socially and economically a productive life (1972).^[1]

“While the eyes may be the window to the soul, our mouth is a window to our body’s health”. The state of oral health can offer lots of clues about overall health. Oral health may be defined as a standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well being.^[2] For the field of dentistry, this new perspective on health suggested that the ultimate goal of dental care, namely good oral health, should no longer merely be seen as the absence of caries or periodontal disease; a patient’s mental and social well-being should be considered as well.^[3]

Oral diseases are categorized as chronic non-communicable diseases. Analysis of current data suggests a majority of the population is affected by dental caries and severe periodontitis is found in 5-20% of the adult population in most countries.^[4]

The effective knowledge of oral health demonstrates better practice, attitudes towards oral health dictate the status of oral cavity, where as changes in the non disease independent factors such as education, income, smoking, attitudes and believes may help reducing tooth loss and raising oral health level among nursing personal.^[5, 6, 7]

Nursing personnel also play a vital role in health promotion and preventive information dissemination, therefore it is very important that their own oral health knowledge should be good and their oral health behavior confirms to expectation of the community people. The simple concept of oral hygiene should be equally understood and put into practice by them. Central to that, the purpose of the study was to investigate the oral health knowledge, attitude and practice among the students of Nootan College of nursing, visnagar.

MATERIALS AND METHOD

A cross-sectional study was conducted to investigate the oral health knowledge, attitude and practice among 193 students of Nootan College of nursing. The study protocol was reviewed and approved by the Ethical Committee of Narsinhbhai Patel Dental College and hospital, visnagar.

Prior permission was obtained from principal of nursing college through a formal letter explaining the purpose of the study and the procedure to be followed, accompanied by a copy of the questionnaire to be used. The questionnaire was explained to the students before being delivered to them. A self-administered structured questionnaire consisting of 18 questions on demographic data, oral hygiene knowledge, attitude and practices was distributed. Informed consent was obtained from all students. The respondents were instructed to fill the questionnaire without discussion with each other in their own classroom. All answers were treated with utmost confidentiality. Study was carried out from 7th April 2015 to 28th April 2015. Student's knowledge, attitude, and practices were assessed by using a questionnaire which included the following:

- I. Knowledge: Oral health related knowledge on matters like causes of dental caries and gum disease, fluoride, dental health information and malocclusion, etc
- II. Attitude: Attitude toward the prevention of oral diseases, dental visits, importance of dental care, etc.,
- III. Practices: Oral hygiene practices, mainly brushing and rinsing habits, tongue cleaning habits etc.

After completing the questionnaire, oral examination was carried out by trained and calibrated examiner. Oral examination was carried out by recording Decayed missing filled tooth surface index (WHO modification 1987), Dean's fluorosis index (WHO oral health survey 2013), and gingival index (Loe H and Silness P in 1963). They took an average of 15 minutes to complete the questionnaire and oral examination.

Statistical analysis

The collected data was compiled in master sheet and subjected to statistical analysis using statistical package for social sciences (SPSS) version 17. Descriptive statistics was obtained and mean, standard deviation and frequency distribution were calculated.

RESULTS

It was distributed to 193 nursing students [Female 178 (92.22%) and male 15 (7.77%)] and the response rate was 93.69%.

Table 1 reveals that most of the students [$n = 191$ (99%)] knew that oral health reflects on the general health. Out of 193 students 17 students (8.8%) know about interdental cleaning aids. 137 (71%) students responds that dental caries occur due to poor oral hygiene followed by 26 (13.5%) responds that it occurs due to sweet and sticky food. Majority of students 123 (63.7%) responds that bleeding from gums occur due to improper brushing followed by poor oral hygiene 51 (26.4%). Majority of students 125 (64.8%) responds that various effects like dental caries, gum disease, poor aesthetics and eating problems occurs due to crowded teeth. Among 193 students majority of don't know about dental fluorosis 184 (95.3%).

Table 2 reveals that oral hygiene practice done by nursing students. Out of 193 students 102 (52.8%) students brushes their teeth twice daily followed by 43 (22.3%) students, who brushes once a day, 4 (2.1%) students who brushes thrice a day and 44 (22.8%) students brushes their teeth every time after meal. Majority of students 188 (97.4%) students use toothpaste and toothbrush. Out of 193 students 126 (65.3%) students brushes their teeth for 3 to 4 minutes followed by 41 (21.2%) students for 4 minutes or more and 26 (13.5%) students for 1 to 2 minutes. Majority of students 101 (52.3%) change their brush after every 3 months followed by 23 (11.9%) students after every 6 months and 60 (31.1%) students change their brush when bristles get frayed. out of 193 students, majority of 168 (87 %) students gargling their mouth after every meal and 183 (94.8%) students clean their tongue after brushing.

Table 3 reveals that 59 (30.6%) students had pain in their teeth in past among them 31 (16.1%) students consulted the dentist to relieve their pain followed by 9 (4.7%) students consulted medical doctor, 2 (1%) students taken self medication, and 17 (8.8%) students did not taken any dental care to relieve pain. Almost 85 (44%) of the respondents visited the dentist in past among 65 (33.7%) respondents believed to visit the dentist only when needed. However 11 (5.7%) and 9 (4.7%) respondents respectively had visited the dentist in every six months and every year.

Almost 91 (47.2%) students had not visited the dentist due to they had not suffered from any dental problems. Only 7 (3.6%) of the respondents had not visited a dentist due to fear of dental treatment. The other reasons for students not visiting dentist due to lack of time,

expensive treatment and ignoring dental problems 3(1.6%), 2 (1%) and 5 (2.6%) respectively.

Out of 193 students, majority of 183 (94.8%) students think that oral health related information should be included in their curriculum.

TABLE: 1 ORAL HEALTH RELATED KNOWLEDGE AMONG NURSING STUDENTS

Sr.No	Knowledge towards oral health	No. of students (n)	Percentage (%)
1.	Does oral Health is important part of general health?		
	Yes	191	99
	No	2	1
2	Give reason, importance of teeth?		
	Eating / chewing	38	19.7
	Speaking	1	0.5
	Aesthetics	3	1.6
	All of the above	151	78.2
3	Knowledge regarding interdental cleaning aids		
	Yes	17	8.8
	Dental floss	3	1.6
	Interdental brush	4	2.1
	Tooth picks	10	5.2
	No	176	91.2
4	Does dental caries is hereditary?		
	Yes	10	5.2
	No	183	94.8
5	Causes of dental caries		
	Poor oral hygiene	137	71
	Sweet and sticky food	26	13.5
	Improper cleaning of teeth	25	13
	Don't know	5	2.6
6	Reason for bleeding from gums during brushing		
	Improper brushing	123	63.7
	Poor oral hygiene	51	26.4
	Crowded teeth	4	2.1
	Don't know	15	7.8
7	Effects of crowded teeth		
	Dental caries	13	6.7
	Gum disease	16	8.3
	Poor aesthetics	25	13
	Problem in eating	14	7.3
	All of the above	125	64.8
8	Knowledge regarding dental fluorosis		
	Yes	9	4.7
	No	184	95.3
9.	Do you know that during pregnancy treatment for teeth and gingiva can be taken?		
	Yes	82	42.5
	No	111	57.5

TABLE: 2 ORAL HYGIENE PRACTICE AMONG NURSING STUDENTS

Sr. No	Oral hygiene practices	No. of students (n)	Percentage (%)
1.	Brushing frequency		
	Once	43	22.3
	Twice	102	52.8
	Thrice	4	2.1
	Every time after meal	44	22.8
2	Oral hygiene aids used		
	Toothbrush and toothpaste	188	97.4
	Toothbrush and tooth powder	4	2.1
	Neem stick	1	0.5
3	Brushing time		
	1 to 2 minutes	26	13.5
	3 to 4 minutes	126	65.3
	4 minutes or more	41	21.2
4	Frequency of changing toothbrush		
	Every 3 months	101	52.3
	Every 6 months	23	11.9
	Every 1 year	9	4.7
	When bristles get frayed	60	31.1
5	Gargle with water after every meal		
	Yes	168	87
	No	25	13
6	Tongue cleaning after brushing		
	Yes	183	94.8
	No	10	5.2

TABLE: 3 ATTITUDE TOWARDS ORAL CARE AMONG NURSING STUDENTS

Sr. No	Attitude towards oral care	No. of students (n)	Percentage (%)
1.	Did you had any pain in your teeth in past?		
	Yes	59	30.6
	If Yes, What did you do to relieve your pain?		
	Self medication	2	1
	Consulted medical doctor	9	4.7
	Consulted dentist	31	16.1
	Nothing	17	8.8
	No	134	69.4
2	Have you visited any dentist in past?		
	Yes	85	44
	If Yes, How often do you consult dentist?		
	Every six months	11	5.7
	Every year	9	4.7
	When needed	65	33.7
	No	108	56
	Reasons for not visiting dentist		

	Lack of time	3	1.6
	Expensive treatment	2	1
	Have not suffered from dental problem	91	47.2
	Ignore dental problems	5	2.6
	Fear of dental treatment	7	3.6
3	Do you think that oral health related information should be included in your curriculum?		
	Yes	183	94.8
	No	10	5.2

Table 4: Distribution of study subject based on DMFS/DMFT index, DEAN'S FLUOROSIS index, GINGIVAL index

ORAL EXAMINATION	Number of students	Percentage	Mean value
Dental caries status			
DMFS	127	65.8	2.82
DMFT	126	65.3	2.06
Fluorosis status	91	47.2	1.20
Normal	102	52.8	
Questionable	20	10.4	
Very mild	24	12.4	
Mild	29	15.0	
Moderate	14	7.3	
Severe	4	2.1	
Gingival status	110	57	0.23
Healthy gingiva	83	43	
Mild gingivitis	109	56.5	
Moderate gingivitis	1	0.5	

Table 4 depicted oral examinations of nursing students, out of 193 students; prevalence of dental caries is 65.8%. Out of 193 students 91 (47.2%) students have different grade of dental fluorosis like 102 (52.8%) students have no fluorosis, 20 (10.4%) students have questionable fluorosis, 24 (12.4%) students have very mild fluorosis, 29 (15%) students have mild fluorosis, 14 (7.3%) students have moderate fluorosis and 4 (2.1%) students have severe fluorosis. Out of 193 students 110 (57%) students have gingivitis and 83 (43%) students have healthy gingiva

DISCUSSION

Oral disease can be considered as a public health problem due to its high prevalence and significant social impact. Due to the educational level and the professional role of the nurses, it is expected that they are to be more knowledgeable in the community about oral health and

its diseases. Keeping in mind the expected role to be played by the nursing students, a need was felt for assessing the oral health knowledge, attitude and practice by these students.

This study assessed oral health knowledge, attitude and practices of students Nootan College of nursing, visnagar. In the present study, the participants were selected by non probability convenience sampling technique. The data were collected by means of structured questionnaires.

This study revealed 97.4% of the respondents were using toothbrush and tooth paste to clean their teeth. This is similar to Doshi D et.al conducted study among medical and engineering students (96%) and Al-Omiri et.al conducted study among school children. It reflects on the homogeneity of the study group with the current lifestyle.^[8, 9]

In other study 48% nursing students brush their teeth twice a day, which is almost similar result with present study (52.8%) which showed the awareness level an implementation into practice among nursing students to a satisfactory level.^[10]

The present study revealed that 52.3% subjects change their toothbrush at intervals of every 3 months, almost similar results obtained by Sarah S Alsrouer et.al, in which 49.3% subjects change their toothbrush at every 3 months.^[11]

Almost 22.3% of the respondents used to brush their teeth once daily in the morning. It could be mainly due to the feasibility of the time as well as to feel fresh in the early start of the day and 22.8% respondents brush their teeth, 87% respondents gargle their mouth after meal and 94.8% clean their tongue after brushing that suggests good oral hygiene practice among nursing students.

Almost 94.8% of them had acceptable knowledge regarding dental caries a hereditary disease and 63.7% responds regarding bleeding from gums occur due to faulty brushing technique. Only 4.7% students knows about dental fluorosis occur due to drinking high fluoridated water.

Out of 193 subjects only 59 (30.6%) Students had suffered from pain in their teeth and 31(16.1%) had consulted dentist that shows positive attitude towards oral care. Only (14.5%) of the students marked toothache as the cause of their last dental visit which is contrast to the present study. The reason could be positive attitude and awareness among nursing students

towards oral diseases. It has been reported that dental visits are mainly symptomatic in many African and Asian populations, and that can be related to culture and economical status role in their attitude regarding dental visits. For example the Asian way of dealing with health and disease is completely different from the western one, in that it mainly relies on home treatments and remedies where as professional help is only asked for when these remedies fail.^[12, 13, 14, 15]

On the other hand (40%) of Turkish dental students will visit a dentist only when having a toothache.^[16] Almost 44% students visited the dentist among them less than 10% students knew the importance of dental visit is required every 6 months (5.7%), Every year (4.7%) and 65 students (33.7%) visited the dentist when needed. It was in agreement with the study by Al-Omiri *et al.*^[9]

Almost 3.6% of them were afraid during their first dental visit that showed that they were conscious about the need and importance of timely dental treatment. This is in contrast with study conducted by Laxmansingh *et.al* in which 49% of them had fear of dental treatment.

In the present study showed that, only 5.2% respondents believe that not consulted a dentist was due to lack of time, cost of the treatment being high and ignoring the dental troubles which is in contradicting results obtained by laxmansingh *et.al.*^[10]

The present study depicted 94.8% subjects thought that oral health related information should be included in their curriculum. That suggests the nursing students have better optimistic attitude of their learning process for improving their oral health.

Oral examination was carried out among all nursing students. In the present study, we examined DMFS, DMFT, Gingival index and Dean's Fluorosis index to know the oral health status of nursing students. In the present study, the mean DMFS is 2.82 and DMFT is 2.06. 56.5% subjects have mild gingivitis and 0.5% has moderate gingivitis. Majority of subjects have mild fluorosis which suggests better oral health condition due to good oral health knowledge, attitude and practices among nursing students. The present study was carried out nursing students of one institution, but if the study was carried out with similar objectives in large sample, which can be suggest nursing students knowledge, attitude and practices. Through which we can know the nursing student care about oral health for implementing the preventive programme to improve oral health among nursing students.

CONCLUSION

It creates an environment which is conducive for shifting the onus of public health from the shoulder of health care professionals to 'people's own hands'. To achieve this there should an accurate knowledge and understanding of scientifically supported information and facts. Medical, dental and paramedical students play an important role in oral health care and promotion.

Still more educational and preventive programs directed toward nursing students are to be planned in order to reach better levels. Thus, a more detailed studies probing in depth about the knowledge, attitude and practice about oral health can always be explored further.

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