

Awareness and attitudes towards oral diseases amongst the medical students in Udaipur, Rajasthan, India

A Cross Sectional Study

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Background and aims: To assess the awareness and attitude towards oral diseases amongst the medical students in Udaipur.

Methods and Material: A cross sectional study was conducted using a structured questionnaire on approximately 200 randomly selected medical students. A specially designed questionnaire consisting of 20 close ended questions divided into four sections used to assess the knowledge, attitude, awareness on systemic conditions related to oral health and management of dental trauma. Data obtained was analyzed using the SPSS version 15. Chi –

square test was used to find the statistical significance.

Results: Oral awareness and attitudes were found to be fair among the medical students in Udaipur.

Conclusions: The dental awareness, attitude and knowledge of the post graduate students was better when compared to that of the under graduate students. It can be concluded that very few students maintained the routine dental check up, suggesting lack of positive attitude towards oral health.

Key Words: Dental knowledge, awareness, attitudes, medical students.

INTRODUCTION:

As William Osler said mouth is the mirror of general health.(1) Oral health is recognized as equally important in relation to general health.(2) 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 (Udoye and Aguwa 2000).(3) The oral tissue forms an integral part of the human organism and is extremely vulnerable to disease as they are in intimate relation with the external environment and being constantly subjected to mechanical, chemical and bacterial interactions (Dilip,2005,p26-32).(4) Oral disease can be considered a public health problem due to its high prevalence and significant social impact (Smyth et al,2007).(5) All members of the health profession have the potential to promote oral health by supporting accurate oral health messages, showing exemplary oral health related behaviors, encouraging appropriate dental visits and participating in explicit oral health promoting activities within their scope of duties.(1) The role that a medical practitioner can play in improving oral health of the population depends on his own knowledge about oral disease and their effect on general health, his attitude towards dentistry and their routine practice to maintain oral health.(6)

Hence the present study seeks to assess the dental knowledge, attitudes, awareness on systemic conditions related to oral health and management of dental trauma.

AIMS AND OBJECTIVES :

- To assess the dental knowledge among the medical students in Udaipur.
- To know their attitudes towards oral health.
- To assess their awareness on systemic conditions related to oral health.
- To assess their knowledge on management of dental trauma.

MATERIALS AND METHODS:

The present study is a cross sectional survey conducted among the medical students in Udaipur, Rajasthan. One hundred and fifty

under graduate and 50 Post graduate students were randomly selected.

Data was collected using a questionnaire by visiting two Medical Colleges in the city. Ethical clearance was obtained from the institutional review board. Informed consent was obtained from each participant before the administration of the questionnaire. A self designed questionnaire consisting of 20 close ended questions divided into four sections was used to assess the dental knowledge, attitude towards dental health, awareness on systemic conditions related to oral health and awareness on management of dental trauma. The questionnaire was distributed by the investigator. The medical students were approached personally and the purpose of the study was explained. It was also mentioned that responses would remain confidential. Each participant was given 15 minutes to fill in the questionnaire. Data obtained was analyzed using the SPSS (Statistical package for social sciences) version 15. Chi – square test was used to find the statistical significance among the UG and PG medical students for their responses based on dental knowledge, attitude, awareness on systemic conditions related to oral health and awareness on management of dental trauma.

Results:

Responses of study subjects based on Dental Knowledge with reference to Table 1 –

Among the study subjects, 100% of the Post graduate students and 90% of under graduate students have answered correctly that a human adult normally has 32 teeth. About 90%PG and 56%UG students answered correctly that a child normally has 20 teeth. About 92%PG and 68%UG students said that plaque and calculus is responsible for periodontal disease. About 88%PG and 19.33%UG students knew what an “OPG” stands for. About 77% of medical students considered academic books as their source of knowledge. All the differences noted were found to be highly statistically significant.

Responses of study subjects based on their attitude towards dental health with reference to Table 2-

Only 4% of PG and 14% of UG students perform oral examination for all the patients. About 66% of UG and 92% of PG students answered correctly that brushing teeth daily prevents tooth decay and periodontal disease. About 94% PG and 62% UG students advice their patients to visit the dentist at least once in 6 months. About 62% PG and 44% UG students inform their patients about oral hygiene and tobacco related oral diseases.

Response of study subjects based on awareness on systemic conditions related to oral health with reference to Table 3 –

About 100% PG and 83.33% UG students answered correctly that oral health is related to systemic illness. When asked what would they advice to a patient with dental abscess, only 36% PG and 42% UG students would refer the patient to a dentist while most of them would prescribe antibiotics and analgesics to the patient. About 100% of PG and 62% of UG students said that Ludwig's Angina is a life threatening dental infection.

Responses of study subjects based on the knowledge on management of dental trauma with reference to Table 4 –

It was found that 60% of PG and 44% of UG students have come across an accident where a tooth was knocked out. Only 14% of medical students would put the avulsed tooth into the socket and advice the patient to rush to the dentist while 56% of them would wash patient's mouth with water and advice the patient to take the tooth in a wet cloth. When enquired about the storage media, only 8% of students considered patient's mouth or saliva as an ideal storage medium. Among the study subjects 98% of PG and 57% of UG students were willing to attend an educational program in Management of dental trauma. The differences noted were found to be highly statistically significant.

DISCUSSION

Medical students could play a pivotal role in oral public health. They are endowed to have a basic knowledge as they do come across various oral problems among patients while practicing such as tooth ache, swelling in oral cavity, bleeding gums, various white and red patches, if they examine the oral cavity regularly these conditions can be identified at the initial stages.(6) Poor oral conditions may adversely affect general health and certain medical conditions may have a negative impact on oral health.(1) This cross sectional study was conducted to assess the dental knowledge, attitude and awareness of medical students of Udaipur. Results of the study showed that the medical students had fair knowledge about dentistry. In the present study with regards to dental knowledge, 92% PG and 64.66% UG students said that plaque and calculus is responsible for periodontal disease. In a study conducted by S Srinidhi et al 78% PG and 72% UG students said that plaque and calculus is responsible for the periodontal disease.(1)

In the present study with regard to attitude, 94% PG and 62% UG students' advice their patients to visit the dentist at least once in six months. In a study by S Srinidhi et al 70% PG and 85% UG students suggest their patients to visit the dentist at least once in six months.(1)

In another study by Jagdish Chandra et al it is seen that regular visit of once in six months was suggested by 86.3% of medical students.(7)

Dental trauma can present as an isolated injury or as multiple extended injuries. In either case, they are frequently first attended by

medical professionals in the Emergency Services Department.(8) Although about 48% of the participants in this study had encountered a situation of tooth avulsion in their practice, they had never sought advice for appropriate management of the tooth avulsion.

Confusion about the ideal transport media centers around the lack of understanding. The significance of the media is to preserve the vitality of the periodontal ligament.(8) Although 36% UG students considered sterile saline as the best medium for storage and transportation, it is seldom available at the place of accident. Patient's mouth (saliva) may function well as a storage medium, but only 6% students were aware of it. Less than 5% knew that milk is a good medium of transport. Only 14% of participants would have tried to put the tooth back into the socket and rush to dentist. This reflects the vital point in the study regarding the technical knowledge of the management of tooth avulsion. In a study conducted by Krishna raj et al, 35% of the participants considered sterile saline as the best medium and only 5.5% of the participants would have tried to put the tooth back in the socket. Holan and Shmueli found that 55% of the physicians in their study had never received any information relating to dental trauma.(9) The highlight of our study is that almost all the participants accepted that their knowledge on the management of dental trauma is definitely inadequate. All the participants were willing to attend an educational program on dental trauma. This reflects the fact that the physicians had not got an opportunity to attend a dental health program. We suggest and recommend that oral health awareness among these students should be increased for which the oral health professionals working collectively need to support the development of a 'sound strategy'.(10)

CONCLUSION

From the current study it can be concluded that medical students had a fair knowledge, attitude and awareness about dentistry. The dental awareness and knowledge of the PG students was better than UG students. It can also be concluded that very few students maintained the routine dental check up, suggesting lack of positive attitude towards oral health. These findings highlight the need to improve the education of medical students about oral health and its importance in general health. Such studies will help to determine the need for changes in undergraduate and graduate medical education, as well as identify the necessity for continuing education courses to address this topic.

This is a short study, thus the findings of this study need to be validated by further studies including a larger sample size.

RECOMMENDATIONS –

- To encourage medical students to examine the oral cavity during their general examination for patients.
- To encourage setting up of associate clinics, including both medical and dental practitioners for the benefit of providing both the services under one roof.
- To incorporate basic knowledge about dentistry in medical syllabi especially at the undergraduate level.
- Special study modules in oral health and disease by involving the dental faculty in teaching should be created.

Table No. 1 - Questions and responses of study subjects based on knowledge

QUESTIONS	ANSWERS	TOTAL (UG+PG) =200 (100%)	UG =150 (100%)	PG =50(100%)	<i>p value</i>
1) How many teeth does a human adult normally have?	? 20	0	0	0	0.06 (NS)
	? 24	2 (1%)	2 (1.77%)	0	
	? 32	185 (92.5%)	135 (90%)	50 (100%)	
	? 28	13 (6.5%)	13 (8.66%)	0	
2) How many teeth does a child normally have?	? 20	129(64.5%)	84(56%)	45(90%)	0.0001 (HS)**
	? 24	44(22%)	43(28.66%)	1(2%)	
	? 32	1(0.5%)	1(0.66%)	0	
	? 28	26(13%)	22(14.66%)	4(8%)	
3) What is gingivitis?	? Inflammation of gums	143(71.5%)	97(64.66%)	46(92%)	0.002 (S)*
	? Condition where teeth stain	6(3%)	6(4%)	0	
	? Poor support of bone	41(20.5%)	37(24.66%)	4(8%)	
	? All of the above	10(5%)	10(6.66%)	0	
4) Factor responsible for periodontal disease	? Dental caries	40(20%)	36(24%)	4(8%)	0.002 (S)*
	? Plaque & calculus	148(74%)	102(68%)	46(92%)	
	? Teeth with Fractured restoration	12(6%)	12(8%)	0	
5) Do you know what an OPG stands for?	? Yes	73(36.5%)	29(19.33%)	44(88%)	<0.0001 (HS)**
	? No	127(63.5%)	121(80.66%)	6(12%)	
6) Source of knowledge	? Academic books	154(77%)	106(70.66%)	48(96%)	0.0008 (HS)**
	? Journals	27(13.5%)	27(18%)	0	
	? Any other	19(9.5%)	17(11.33%)	2(4%)	

p value* < 0.05 = significant *p value* < 0.001 = highly significant

Table No. 2 - Questions and responses of study subjects based on the attitude towards dental health

QUESTIONS	ANSWERS	TOTAL (UG+PG) =200(100%)	UG=150(100%)	PG=50(100%)	<i>p value</i>
1) Do you perform oral examination of patient?	? No	78(39%)	69 (46%)	9(18%)	<0.0001 (HS)**
	? On request	30(15%)	26(17.33%)	4(8%)	
	? For all	24(12%)	22(14.66%)	2(4%)	
	? Only if problem exists	60(30%)	25(16.67)	35(70%)	
2) Advice to visit dentist	? At least once in 6 months	140(70%)	93(62%)	47(94%)	0.0004 (HS)**
	? Once in 2 months	37(18.5%)	35(23.33%)	2(4%)	
	? Only if in pain	20(10%)	19(12.66%)	1(2%)	
	? Once in every 2-5 years	3(1.5%)	3(2%)	0	
3) Brushing teeth daily prevents	? Oral cancer	4(2%)	4(2.66%)	0	0.005 (S)*
	? Oral ulcer	9(4.5%)	9(6%)	0	

QUESTIONS	ANSWERS	TOTAL (UG+PG) =200(100%)	UG=150(100%)	PG=50(100%)	<i>p value</i>
1) Do you perform oral examination of patient?	? No	78(39%)	69 (46%)	9(18%)	<0.0001 (HS)**
	? On request	30(15%)	26(17.33%)	4(8%)	
	? For all	24(12%)	22(14.66%)	2(4%)	
	? Only if problem exists	60(30%)	25(16.67)	35(70%)	
2) Advice to visit dentist	? At least once in 6 months	140(70%)	93(62%)	47(94%)	0.0004 (HS)**
	? Once in 2 months	37(18.5%)	35(23.33%)	2(4%)	
	? Only if in pain	20(10%)	19(12.66%)	1(2%)	
	? Once in every 2-5 years	3(1.5%)	3(2%)	0	
3) Brushing teeth daily prevents	? Oral cancer	4(2%)	4(2.66%)	0	0.005 (S)*
	? Oral ulcer	9(4.5%)	9(6%)	0	

Table No.3 - Questions and responses of study subjects based on awareness on systemic conditions related to oral health

QUESTIONS	ANSWERS	TOTAL(UG+PG)=200(100%)	UG=150(100%)	PG=50(100%)	p value
1)Is oral health related to systemic illness?	? Yes	175(87.5%)	125(83.33%)	50(100%)	0.004 (S)*
	? No	25(12.5%)	25(16.66%)	0	
2)What do you advice a patient with dental abscess?	? Refer to dentist	81(40.5%)	63(42%)	18(36%)	0.06 (NS)*
	? Prescribe antibiotics & analgesics	107(53.5%)	75(50%)	32(64%)	
	? Ignore	12(6%)	12(8%)	0	
3)Life threatening dental infection	? Dental caries	9(4.5%)	9(6%)	0	<0.0001 (HS)**
	? Ludwigs angina	144(72%)	94(62.66%)	50(100%)	
	? Periapical abscess	43(21.5%)	43(28.66%)	0	
	? Periodontal disease	4(2%)	4(2.66%)	0	
4)Factor increasing the risk of oral squamous cell carcinoma	? Cigarette smoking	41(20.5%)	38(25.33%)	3(6%)	<0.0001 (HS)**
	? Alcohol consumption	36(18%)	36(24%)	0	
	? Cheek biting	9(4.5%)	9(6%)	0	
	? A & B only	114(57%)	67(44.66%)	47(94%)	

*p value <0.05= Significant **p value<0.001=highly significant

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Table No.4 -Questions and responses of study subjects based on management of dental trauma

QUESTIONS	ANSWERS	TOTAL(UG+PG)=200(100%)	UG=150(100%)	PG=50(100%)	p value
1)Have you come across an accident where a tooth was knocked out?	? Yes	96(48%)	66(44%)	30(60%)	0.07 (NS)
	? No	104(52%)	84(56%)	20(40%)	
2)If you come across a child with an avulsed tooth then what would you do?	? Refer to dentist	52(26%)	37(24.66%)	15(30%)	0.31 (NS)
	? Put tooth back into socket & rush to dentist	28(14%)	18(12%)	10(20%)	
	? Wash child's mouth with water & take tooth in a wet cloth	112(56%)	88(58.66%)	24(48%)	
	? Throw it away & dress the wound	8(4%)	7(4.66%)	1(2%)	
3)How would you keep the tooth till you reach the dentist?	? Tap water	4(2%)	4(2.66%)	0	0.02 (S)*
	? Sterile saline	62(31%)	55(36.66%)	7(14%)	
	? Cotton pad	17(8.5%)	13(8.66%)	4(8%)	
	? Patient's mouth	17(8.5%)	10(6.66%)	7(14%)	
	? Aseptic solution	95(47.5%)	64(42.66%)	31(62%)	
	? Milk	5(2.5%)	4(2.66%)	1(2%)	
4)Do you think it is imp to have an educational program in Management of Dental Trauma?	? Yes	135(67.5%)	86(57.33%)	49(98%)	<0.0001 (HS)**
	? No	14(7%)	14(9.33%)	0	
	? Can't say	51(25.5%)	50(33.33%)	1(2%)	

*p value <0.05=Significant , **p value <0.001= Highly significant

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