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Original Research Article

A comparative evaluation of oral health status and oral hygiene habits between dental students, interns and staff in a dental college India

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ABSTRACT

Objectives: The main objective of conducting this survey is to compare oral hygiene between dental students and dental staff.
Materials and Methods: A self-constructed questionnaire collecting data for the survey was circulated among the participants (275 participants, out of which 210 were undergraduate students, 50 Interns, and 15 BDS staff members) via the Google forms platform. This questionnaire consisted of 11 multiple choice-type questions based on oral health status and oral hygiene maintaining habits. The questions were distributed among the participants and the responses were collected.
Results: A number of 210 dental students as well as 50 interns and faculty members 15 were investigated. It was noted that staff members were more concerned about dental hygiene than students.
Conclusion: In conclusion, our study revealed that BDS Staff members are more conscious about their oral hygiene status and habits than interns and undergraduate students. Maintenance of oral hygiene is an important aspect in human life and important for overall health. Education plays an important role in realising these goals. Hence the, oral hygiene awareness programmes should be conducted regularly to promote oral health and healthy oral hygiene practices.

1. Introduction

Oral self-care practices have been proven to be an effective preventive measure on an individual level for maintaining good oral health as part of general health. The attitude towards oral health determines the health status of the oral cavity. As defined by Steptoe et al. (1994), health behavior is 'the activities undertaken by people to protect, promote or maintain health, and prevent disease'.[1] Dentists should propagate the importance of oral hygiene and be the model example to others with their oral health behavior to gain people's attention towards oral self-hygiene practices. In this way, dental professionals' beliefs and attitudes reflect their oral self-care habits, influence their patients to care for their teeth and shape the public's oral health education level.[2] Oral health is considered an essential component of general health, and poor oral health can harm the quality of life. The World Health Organization (WHO) defined oral health as "a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infection, and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing."[3]

Like other body areas, your mouth teems with bacteria — primarily harmless. But your mouth is the entry point to your digestive and respiratory tracts, and some of these

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bacteria can cause disease. Usually, the body's natural defenses and good oral health care, such as daily brushing and flossing, keep bacteria under control. However, without proper oral hygiene, bacteria can reach levels that might lead to oral infections, such as tooth decay and gum disease.[4]

Throughout history, various devices have been used to maintain oral hygiene. These include toothbrushes and toothpaste, mouthwash, dental floss, miswak (chewing stick), and a toothpick. However, the choice of oral cleaning devices to maintain oral hygiene may vary by age, gender, and socioeconomic levels.[5–7]

The accumulation of bacterial plaques on and around your teeth is associated with dental caries and chronic generalized gingivitis.[8,9] Plaque management consists of the use of mechanical procedures and chemical agents that retard the formation of plaque. Mechanical methods of plaque prevention include tooth brushing, oral hygiene, and professional prophylaxis for interdental washing. The most effective method of plaque control appears to be mechanical plaque control. Chemical plaque regulation was used only as an extension and not as a replacement for mechanical means.[8–10]

Tobacco use has many adverse oral effects. Cancers of the oral cavity and larynx rank second for the highest relative cancer risk due to smoking.[11,12] In addition, the risk of developing oral cancer is mainly associated with the amount of tobacco smoked and the duration of smoking in all countries.[12–16] Other adverse oral effects include staining of teeth, reduced ability to smell and taste, smoker's melanosis, oral candidiasis, and implant failure.[12,14] Smoking increases the severity of periodontal disease and jeopardizes almost all forms of periodontal therapy.[12,15] The adverse risks of smoking may extend to those living with smokers. For example, children exposed to smoking have almost double the risk of dental caries in primary teeth compared to children not exposed to smoking.[12,16].

The context in which dental professionals adjust their motivations and behaviours in relation to their oral self-care routines has received little consideration.[2]Therefore, the main objective of conducting this survey is to compare oral hygiene between dental students and dental staff.

2. Materials and Methods

A total of 275 participants (210 BDS undergraduates, 50 interns and 15 BDS staff members were included in the study. The survey was conducted in Sri Sukhmani Dental College and Hospital, Dera Bassi, SAS Nagar, Mohali, Punjab, India. Ethical clearance was taken. A questionnaire was self prepared and was distributed among the participants via Google form platform.

The questionnaire, which are given below ,were consisted of 11 multiple choice –type questions and were based on oral hygiene maintaining habits, oral health behavior, preventive dentistry and views of using tobacco and its products with regard to oral health. The questions were distributed among the participants and the responses were collected from 23 May, 2022 to 6 June, 2022.

Questionnaire

1. How often do you brush your teeth in a day?
a) Once b) Twice
c) More than twice
2. How often do you go for scaling in a year?
a) Once-in- year b) Twice in year
b) Never
3) Any other mechanical aid except toothbrush you use (for example, Dental floss, Interdental brush, Datun)?
a) Yes b) No
4) Which type of toothpaste do you use?
a) Herbal b) Fluoridated
c) Tooth powder/Dant Manjan d) Non-herbal
5) Any other chemical method of plaque inhibitor you use example (mouthwash)?
a) Yes b) No
6) How many dental caries do you have in the oral cavity?
a) One b) Two
c) More d) None
7) Which nature of sweet intake is more?
a) Liquid (e.g., soft fruit drinks, flavored yogurt). b) Solid and sticky (cake, bananas, chocolate candy, jelly, Cookies)
c) Slowly dissolving (Hard candies, Breathe mints, Antacid acid tablets)
8) Do you have an irregular alignment of teeth?
a) Yes b) No
9) Have you ever gone for preventive dentistry (fluoride application, pit and fissure sealants)?
a) Yes b) No
10) Do you use any tobacco products?
a) Yes b) No
11) Do you have missing teeth?
a) Yes b) No

3. Results

The survey was conducted in Sri Sukhmani Dental College & Hospital, Dera Bassi. It included 275 participants, out of which 210 were undergraduate students, 50 Interns, and 15 BDS staff members. This survey compared the study between dental students and BDS staff members about oral hygiene practice.

The response of the first question, 'How many times you brush your teeth?' showed that 66.6% of BDS Staff members brush twice daily, whereas only 53.8% of undergraduates and 46 % of interns brush twice daily.26.6% of BDS staff members go for scaling twice a year, whereas only 7.1%undergraduates and 2% of interns go twice a year.40% of BDS staff members use other mechanical

Table 1: Sample size

Participants	No of Participants	
	Frequency	Percentage
Undergraduates Student	210	76.4%
Interns	50	18.2%
BDS staff	15	5.4%

Table 2: Responses

Sr. No.	Options	Undergraduate (210 participants)		Interns (50 participants)		BDS Staff (15 Participants)	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1)	Once	97	46.10%	25	50%	4	26.60%
	Twice	113	53.80%	23	46%	10	66.6 %
	More	0	0%	2	4%	1	6.66%
2)	Once in a year	90	42.80%	12	24%	8	53.30%
	Twice in a year	15	7.10%	1	2%	4	26.60%
	Never	105	50%	37	74%	3	20%
3)	Yes	46	21.90%	11	22%	6	40%
	No	164	78%	39	78%	9	60%
4)	Herbal toothpaste	52	24.00%	17	32%	3	20%
	Fluoridated toothpaste	152	72.30%	31	62%	12	80%
	Toothpowder	4	1.90%	2	4%	0	0%
	Non herbal	2	0.90%	0	0%	0	0%
5)	YES	75	35.70%	22	44%	8	53.30%
	NO	135	64.20%	28	56%	7	46.60%
6)	One	137	65.20%	30	60%	13	86.60%
	Two	40	19%	11	22%	1	6.66%
	More	33	15.70%	9	18%	1	6.66%
7)	Liquid	116	55.20%	30	60%	11	73.30%
	Solid & Sticky	88	41.90%	18	22%	4	26.60%
	Slowly Dissolving	6	2.80%	2	18%	0	0%
8)	YES	89	42.30%	23	46%	9	60%
	NO	121	57.60%	27	54%	6	40%
9)	YES	10	4.70%	2	4%	1	6.66%
	NO	200	95.20%	48	96%	14	93.30%
10)	YES	0	0%	1	2%	0	0%
	NO	210	100%	49	98%	15	100%
11)	YES	30	14.30%	3	6%	2	13.30%
	NO	180	85.70%	47	94%	13	86.60%

aid, however 46%undergraduates and 11% of interns use additional mechanical assistance except toothbrushes. 80% of BDS staff uses fluoridated toothpaste, whereas only 72.3% of undergraduates & 62% of interns use fluoridated toothpaste.

53.3% of BDS staff uses another chemical method of plaque inhibitor, whereas only 35.7% of undergraduates & 44% of interns use another chemical method of plaque inhibitor. 73.3% of BDS staff members use the liquid nature of sweet intake, whereas only 55.2% of undergraduates &30% of interns use the liquid nature of sweet intake. 60% of BDS staff members have an irregular alignment of teeth, whereas 42.3% of undergraduates & interns have an irregular alignment of teeth.

Only 6.66%, 4.7% and 4 % of BDS staff members, undergraduates and interns respectively went for preventive dentistry treatment.

0% of BDS staff members and undergraduates use tobacco products, whereas 2% of interns use tobacco products. Only 13.3% of BDS staff members have missing teeth, while 30% of undergraduates & 6% of interns have missing teeth.

All the responses of the undergraduates, interns and BDS staff are given in Table 2 below.

4. Discussion

The present study is a comparative survey between undergraduate, Interns and BDS Staff members about oral hygiene practices. BDS staff members are more conscious of their oral hygiene than dental students. Lavanya Reddy in her study also showed that the dental students lacked knowledge of oral hygiene practices. The results show that dental students need a lot of awareness of their oral self-hygiene. Awareness programs must be conducted frequently to boost oral hygiene practices.[2]

Our survey showed that 53.8 % of undergraduates and 66.6% of graduates brush twice daily. A similar survey conducted by Hanan William showed that 73% of undergraduates and 65% of graduates do brushing twice per day.[17]

Our survey showed that 80% of the graduate staff uses fluoridated toothpaste whereas Maan Surinder Singh[18] used 58% and Hanan William[17]. showed 65% of graduates used fluoridated toothpaste.

In our survey, about 40% of graduates use mechanical aid except a toothbrush to maintain oral hygiene which was 40.8% in Maan Surinder Singh study.[18]

Our survey showed 35.7% of undergraduates, 44% and 53.3% of Graduates use a chemical method of plaque control. Survey by Hanan William showed that 49% of undergraduates and 46.1% of graduates use mouthwash.[17]

Our survey shows that 26.6% of Graduates go for scaling twice a year. A survey by MaanSurinder Singh showed that 22.2%for every three months, 25% for every six months, and 48.4% for every> 1 year of graduates go for oral prophylaxis.[18]

Our present survey shows that 6.66% of graduates show two dental caries in their oral cavities. A survey by Maan Surinder Singh on oral hygiene showed that 39.5% of dental graduates have dental caries.[18]

The present study shows that 0% of graduates use Tobacco products whereas survey by Maan Surinder Singh showed that 10.2%% of dental graduates do smoking and 0% of Tabacco chewing.[18]

Our survey shows 55.2% of undergraduates, 60% of Interns, and 86.6% of dental graduates take sweet in a day as snack preferably in liquid form. A similar survey by Lavanya Reddy R on oral hygiene shows that 35.14% of dental students and staff take sugar between meals.[2] The same survey by V Gopinath showed that 59.4% of Indian dentists eat surgery snacks less than once daily.[19] A similar survey by Hadi Ghasemi showed that 59% of Iranian dentists eat surgery snacks less than once daily.[20]

5. Conclusion

In conclusion, our study revealed that BDS Staff members are more conscious about their oral hygiene status and habits than interns and undergraduate students. Maintenance of oral hygiene is an important aspect in human life and important for overall health. Education plays an important role in realizing these goals. Hence the, oral hygiene awareness programmes should be conducted regularly to promote oral health and healthy oral hygiene practices.

6. Source of Funding

None.

7. Conflict of Interest

None.

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