

Knowledge, Attitude and Practice in Dental Hygiene Aids among Undergraduate Students of Different Fraternities

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ABSTRACT

Introduction: Dental hygiene aids comprise of various ammunitions that are used for proper oral health care. Toothbrush, mouthwash, dental floss and interdental cleaning aids are a few of the most commonly used aids to facilitate day to day self-oral care practice. The objective of the study was to assess the knowledge, attitude, and practice of dental hygiene aids among undergraduate students of different fraternities.

Materials and methods: A cross sectional study was conducted among 420 undergraduate students from Pharmacy, Management, Information Technology, and Engineering faculties. Convenience sampling method was used. Study was then carried out online and offline using self-administered closed-ended pre-designed questionnaire. Online data was collected using the google sheet forms, whereas printed questionnaires were distributed and collected by researchers themselves. The obtained data was analyzed using Statistical Package for the Social Sciences version 20 software. Chi square test was used to compare significant differences between the variables and $p \leq 0.05$ was considered statistically significant.

Results: A total number of 420 students participated in this study, among which 52.4% were male and 47.6% were females. Majority of the undergraduate students had good knowledge regarding most oral hygiene aids excluding interdental aids. Toothpaste and toothbrush were the most commonly used aids. Male students had better knowledge than females, yet no significant differences were found in their attitude and practice ($p < 0.05$). Students from pharmacy and management faculties had better knowledge and positive attitude towards the dental hygiene aids. Engineering students had the least knowledge, attitude and personal practice.

Conclusion: The study had showed that majority of the study participants (96.4%) had good knowledge regarding tooth brushing and positive attitude towards brushing aids as compared to other hygiene aids. Despite satisfactory knowledge and attitude, very few participants were using dental hygiene aids in their daily lives to maintain oral hygiene.

Keywords: attitude; dental hygiene aids; knowledge; practice; undergraduate- students

INTRODUCTION

Oral health is one of the major components of general health and well-being.¹ Negligence of one's oral health leads to consequences ranging from reduction in quality of life to mortality. Good oral health can be obtained by merely practicing good oral hygiene and regular visits to the dentist. Practicing good oral hygiene requires knowledge and awareness regarding various oral hygiene aids and also the correct methods by which those aids can be utilized for the utmost benefit to one's oral health.

Adolescence has been identified as a time when personal oral health behaviors may be internalized and become habits, as direct involvement of parents children's care is reduced.² Thus, having adequate knowledge of oral hygiene

aids can motivate them to adopt healthy oral hygiene habits which can, in turn, be beneficial to their oral health.

Undergraduate students have the required level of understanding for practicing oral health care habits, and have accessibility to oral health care centers. Undergraduate students can also dissipate their knowledge amongst their family members and peers, which can consequently help to raise awareness about dental hygiene aids at a community level.

The present study aims to assess and compare knowledge, attitude and practice of oral hygiene aids among undergraduate students of various faculties excluding dental fraternities. As only few studies have been done in past to assess the knowledge, attitude and practice about

dental hygiene aids among undergraduate students in Nepal, this study will give a new horizon in the existing findings.

MATERIALS AND METHODS

A cross sectional study was conducted for eight months from October, 2021 to June, 2022 among 420 undergraduate students belonging to pharmacy, management, IT and engineering faculties after getting permission from the Institutional Review Board of Kantipur Dental college. Convenience sampling technique was chosen. Twenty four self-administered, pre-designed, close ended questionnaires were used to assess the knowledge, attitude and practice of dental hygiene aids. The questionnaires were delivered to the study population via online and physical modalities. Online data collection was done using Google form that was circulated through various social media platforms. Physical data collection was done by visiting different institutions. Permissions were obtained from the respective college principals to conduct the survey. All the participants were informed about the study objectives and purpose. Only those students who volunteered to participate were included.

The questionnaires were divided into four parts. The first part covered demographic data of the participants including their age, gender and their respective faculties. The second part included 10 questions that were designed to assess the knowledge of the participants regarding the dental hygiene aids. Questions about basic oral diseases, oral health hygiene maintenance with toothbrush, floss, interdental aids, tongue cleaner, mouth wash were included.

The third part included 5 questions designed to obtain an idea about attitude of the study population towards the dental hygiene aids. The fourth part included 6 questions

concerning on practice of oral hygiene. Questions were focused on daily oral hygiene habits performed by the study population irrespective of their knowledge regarding dental hygiene aids. Questions were asked in multiple choice formats where the participants chose a single option best suited for them.

The obtained data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics such as frequency table and percentage were used. Data were presented in tabular forms. Chi square test was used to compare significant differences between the variables and $p < 0.05$ was considered statistically significant.

RESULTS

Out of 420 students who participated, 94.3% (396) knew that brushing teeth regularly, helped prevent common dental diseases such as dental decay and gum problems. However, only 52.9% (222) of the study population knew that soft bristled toothbrushes should be opted for brushing. Two hundred and twenty-seven students knew that presence of fluoride in the toothpaste helped in prevention of dental caries. 34.3% students believed brushing once a day was enough for maintaining good oral hygiene. But, 79.3% (333) students thought that the normal interval for changing tooth brush was 3 months. Only about half of the study population was acquainted with the purpose of using dental floss to clean the interdental area with tight spaces. Students weren't well aware about interdental brushes and their uses. Only 171 (40.7%) knew that interdental brushes were helpful in cleaning larger embrasures. Majority of the students (89%) had the idea that cleaning of tongue prevented bad breath and also believed use of mouth wash was necessary for proper oral health. Table 1 shows elaborative results on the knowledge of dental hygiene aids among the undergraduate students.

Table 1: Knowledge of Dental Hygiene Aids amongst Undergraduates

Knowledge		N(%)
Purpose of tooth brushing is to prevent tooth decay and gum diseases	No	10 (2.4%)
	Don't know	14 (3.3%)
	Yes	396 (94.3%)
Toothbrush better to use	Don't know	22 (5.2%)
	Hard bristle toothbrush	30 (12.4%)
	Medium bristle toothbrush	146 (47.1%)
	Soft bristle toothbrush	222 (52.9%)
Presence of fluoride in toothpaste helps to prevent tooth decay	No	59 (14.0%)
	Don't know	134 (31.9%)
	Yes	227 (54.0%)

Knowledge		N(%)
Normal interval for changing toothbrush	Until the toothbrush is damaged	44 (10.5%)
	Once every 6 month	43 (10.2%)
	Once every 3 month	333 (79.3%)
Ideal frequency to brush your teeth	Once a day	144 (34.3%)
	More than once a day	276 (65.7%)
Proper use of dental floss helps to clean the space between two tightly placed teeth	No	53 (12.6%)
	Don't know	130 (31.0%)
	Yes	237 (56.4%)
Proper use of interdental toothbrush helps to clean the large space between two teeth	No	77 (18.3%)
	Don't know	172 (41.0%)
	Yes	171 (40.7%)
Cleaning of tongue helps to remove tongue coating and obtain fresh breath	No	14 (3.3%)
	Don't know	32 (7.6%)
	Yes	374 (89.0%)
Proper tooth brushing technique helps to prevent gum diseases	No	25 (6.0%)
	Don't know	32 (7.6%)
	Yes	363 (86.4%)
Mouthwash is necessary to maintain oral health	No	24 (5.7%)
	Don't know	39 (9.3%)
	Yes	357 (85.0%)

Table 2: Attitude towards Dental Hygiene Aids amongst Undergraduates

Attitude		N(%)
Tooth brushing is necessary to maintain proper oral hygiene	No	5 (1.2%)
	Don't know	10 (2.4%)
	Yes	405 (96.4%)
Tongue cleaning helps to prevent bad breathe	No	32 (7.6%)
	Don't know	22 (5.2%)
	Yes	366 (87.1%)
Interdental brushing is efficient	No	39 (9.3%)
	Don't know	229 (54.5%)
	Yes	152 (36.2%)
Mouth feels fresh after using mouthwash	No	19 (4.5%)
	Don't know	22 (5.2%)
	Yes	379 (90.2%)
It is hygienic to keep toothbrush in the bathroom attached with toilet	No	240 (57.1%)
	Don't know	103 (24.5%)
	Yes	77 (18.3%)

Most of the students had positive attitude regarding the dental hygiene aids. 96.4% of participants believed tooth brushing was absolutely essential to maintain proper oral hygiene. Regarding other dental hygiene aids, 87.1% students were in favor of cleaning tongue to prevent bad breath and 90.2% believed that their mouth felt fresh after using mouthwash. Only 9.3% participants thought interdental aids were not efficient or required for proper

oral health. 57.1% believed that keeping toothbrush in the bathroom attached with a toilet was not hygienic (Table 2).

Tooth brush and toothpaste were the most popular materials used for cleaning teeth. Though, majority of the students had proper knowledge and positive attitude regarding tooth brushing only 54% (n=227) of the undergraduates brushed their teeth more than once a day. 85.0% knew that use of mouthwash was necessary

Table 3: Practice of Dental Hygiene Aids amongst Undergraduates

Practice	N(%)	
Frequency of tooth brushing in a day	Occasionally	7 (1.7%)
	Once a day	186 (44.3%)
	More than once a day	227 (54%)
Material used for cleaning of teeth	Neem twig	2 (0.5%)
	Tooth powder	7 (1.7%)
	Toothbrush and toothpaste	408 (97.1%)
	Others	3 (0.7%)
Material used for mouth rinse	Nothing	13 (3.1%)
	Plain water	307 (73.1%)
	Lukewarm water with salt	38 (9.0%)
	Mouthwash	62 (14.8%)
Frequency of changing toothbrush	Rarely (until it gets damaged)	52 (12.4%)
	Once a year	4 (1.0%)
	Every 6 months	71 (16.9%)
	Every 3 months	293 (69.8%)
Usage of any interdental aids	No	258 (61.4%)
	Yes	162 (38.5%)
Material used for cleaning interdental area	Nothing	259 (61.7%)
	Toothpick	75 (17.9%)
	Thread	17 (4.0%)
	Dental floss/ Interdental brush	69 (16.4%)

to maintain good oral health, however only 14.8% used mouthwash to rinse their mouth. Majority of the students opted for plain water for rinsing their mouths. Very few of the students 38.5% practiced interdental cleaning, among them toothpick was widely used (Table 3)

Regarding knowledge related questions, male students knew more that the purpose of tooth brushing was to prevent dental decay and gum diseases; 51% male and 43.3% female. The difference was statistically significant with the p value of 0.010 and no significant differences were seen in practice and attitude questions (Table 4).

Table 4: Comparison of knowledge, attitude and practice of dental hygiene aids between Male and Female Undergraduate Students

Questions	Male N=220(%)	Female N=200(%)	P
Knowledge			
Purpose of tooth brushing is to prevent tooth decay and gum diseases	Yes	214 (51%)	0.010*
	No	4 (1%)	
	Don't know	2 (0.5%)	
Toothbrush better to use	Don't know	11 (2.6%)	0.382
	Hard bristle	17 (4.0%)	
	Medium bristle	84 (20%)	
	Soft bristle	108 (25.7%)	
Presence of fluoride in toothpaste helps to prevent tooth decay	Yes	116 (27.6%)	0.825
	No	31 (7.4%)	
	Don't know	73 (17.4%)	
Normal interval for changing toothbrush	Until the toothbrush is damaged	23 (5.5%)	0.892
	Once every 6 month	24 (5.7%)	
	Once every 3 month	173 (41.2%)	

Questions		Male N=220(%)	Female N=200(%)	P
Ideal frequency to brush your teeth	Once a day	81 (19.3%)	63 (15.0%)	0.251
	More than once a day	139 (33.1%)	137 (32.6%)	
Proper use of dental floss helps to clean the space between two tightly placed teeth	Yes	125 (29.8%)	112 (26.7%)	0.338
	No	32 (7.6%)	21 (5.0%)	
	Don't know	63 (15.0%)	67 (16.0%)	
Proper use of interdental toothbrush helps to clean the large space between two teeth	Yes	83 (19.8%)	88 (21.0%)	0.328
	No	45 (10.7%)	32 (7.6%)	
	Don't know	92 (21.9%)	80 (19.0%)	
Cleaning of tongue helps to remove tongue coating and obtain fresh breath	Yes	199 (47.4%)	175 (41.7%)	0.606
	No	6 (1.4%)	8 (1.9%)	
	Don't know	15 (3.6%)	17 (4.0%)	
Proper tooth brushing technique helps to prevent gum diseases	Yes	192 (45.7%)	171 (40.7%)	0.121
	No	16 (3.8%)	9 (2.1%)	
	Don't know	12 (2.9%)	20 (4.8%)	
Mouthwash is necessary to maintain oral health	Yes	182 (43.3%)	175 (41.7%)	0.378
	No	15 (3.6%)	9 (2.1%)	
	Don't know	23 (5.5%)	16 (3.8%)	
Attitude				
Tooth brushing is necessary to maintain proper oral hygiene	Yes	214 (51.0%)	191 (45.5%)	0.340
	No	1 (0.2%)	4 (1.0%)	
	Don't know	5 (1.2%)	5 (1.2%)	
Tongue cleaning helps to prevent bad breathe	Yes	192 (45.7%)	174 (41.4%)	0.971
	No	17 (4.0%)	15 (3.6%)	
	Don't know	11 (2.6%)	11 (2.6%)	
Interdental brushing is efficient	Yes	76 (18.1%)	76 (18.1%)	0.763
	No	21 (5.0%)	18 (4.3%)	
	Don't know	123 (29.3%)	106 (25.2%)	
Mouth feels fresh after using mouthwash	Yes	195 (46.4%)	184 (43.8%)	0.477
	No	11 (2.6%)	8 (1.9%)	
	Don't know	14 (3.3%)	8 (1.9%)	
It is hygienic to store toothbrush in the bathroom attached with toilet	Yes	42 (10.0%)	35 (8.3%)	0.645
	No	121 (28.8%)	119 (28.3%)	
	Don't know	57 (13.6%)	46 (11.0%)	
Practice				
Frequency of tooth brushing in a day	Occasionally	3 (0.7%)	4 (1.0%)	0.630
	Once a day	101 (24.0%)	85 (20.2%)	
	More than once a day	116 (27.6%)	111 (26.4%)	
Material used for cleaning of teeth	Neem twig	2 (0.5%)	0 (0.0%)	0.127
	Tooth powder	5 (1.2%)	2 (0.5%)	
	Toothbrush and toothpaste	210 (50.0%)	198 (47.1%)	
	Others	3 (0.7%)	0 (0.0%)	
Material used for mouth rinse	Nothing	6 (1.4%)	7 (1.7%)	0.575
	Plain water	167 (39.8%)	140 (33.3%)	
	Lukewarm water with salt	17 (4.0%)	21 (5.0%)	
	Mouthwash	30 (7.1%)	32 (7.6%)	

Questions		Male N=220(%)	Female N=200(%)	P
Frequency of changing toothbrush	Rarely (until it gets damaged)	27 (6.4%)	25 (6.0%)	0.909
	Once a year	2 (0.5%)	2 (0.5%)	
	Every 6 months	40 (9.5%)	31 (7.4%)	
	Every 3 months	151 (36%)	142 (33.8%)	
Usage of any interdental aids	Yes	86 (20.5%)	76 (18.1%)	0.625
	No	134 (31.9%)	124 (29.5%)	
Material used for cleaning interdental area	Nothing	133 (31.7%)	126 (30.0%)	0.864
	Toothpick	42 (10.0%)	33 (7.9%)	
	Thread	8 (1.9%)	9 (2.1%)	
	Dental floss/ Interdental brush	37 (8.8%)	32 (7.6%)	

p value < 0.05 considered statistically significant

While comparing the results between the four different sampled faculties (pharmacy, IT, engineering and management), few questions in knowledge section were statistically significant. Among 77 engineering students, majority (14.5%) thought medium bristled brush was appropriate whereas, majority of students from all the other faculties chose soft bristled brush. The difference was statistically significant ($p = 0.00$). Pharmacy students had better knowledge regarding the purpose of fluoride in toothpaste as compared to the other three faculties and

difference was statistically significant ($p = 0.00$).

Significant differences were seen in attitude and practice related questions. Among the four faculties, engineering students were found to have least percentile with positive attitude and practice regarding dental hygiene aids (Table 5).

Table 5: Comparison among the undergraduate students regarding the knowledge, attitude and practice of dental hygiene aids

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Questions		Pharmacy N=117(%)	IT N=110(%)	Engineering N=77(%)	Management N=116(%)	P
Knowledge						
Purpose of tooth brushing is to prevent tooth decay and gum diseases	Yes	111(26.4%)	105(25.0%)	75 (17.9%)	105 (25.0%)	0.112
	No	2 (0.5%)	0 (0.00%)	2 (0.5%)	6 (1.4%)	
	Don't know	4 (1.0%)	5 (1.2%)	0 (0.0%)	5 (1.2%)	
Toothbrush better to use	Don't know	6 (1.4%)	13 (3.1%)	0 (0.0%)	3 (0.7%)	0.000*
	Hard bristle	1 (0.2%)	12 (2.9%)	16 (3.8%)	1 (0.2%)	
	Medium bristle	29 (6.7%)	26 (6.2%)	61 (14.5%)	30 (7.1%)	
	Soft bristle	81 (19.3%)	59 (14.0%)	0 (0.0%)	82 (19.5%)	
Presence of fluoride in toothpaste helps to prevent tooth decay	Yes	79 (18.8%)	69 (16.4%)	47(11.1%)	32 (7.6%)	0.000*
	No	14 (3.3%)	7 (1.6%)	13 (3.0%)	25 (6.0%)	
	Don't know	24 (5.7%)	34 (8.0%)	17 (4.0%)	59 (14.0%)	
Normal interval for changing toothbrush	Until the toothbrush is damaged	9 (2.1%)	19 (4.5%)	9 (2.1%)	7 (1.7%)	0.059
	Once every 6 month	8 (1.9%)	10 (2.4%)	9 (2.1%)	16 (3.8%)	
	Once every 3 month	100 (23.8%)	81 (19.3%)	59 (14.0%)	93 (22.1%)	
Ideal frequency to brush your teeth	Once a day	49 (11.7%)	31 (7.4%)	19 (4.5%)	45 (10.7%)	0.029*
	More than once a day	68 (16.2%)	79 (18.8%)	58 (13.8%)	71 (16.9%)	
Proper use of dental floss helps to clean the space between two tightly placed teeth	Yes	61 (14.5%)	70 (16.7%)	56 (13.3%)	50 (11.9%)	0.000*
	No	15 (3.6%)	7 (1.7%)	10 (2.4%)	21 (5.0%)	
	Don't know	41 (9.8%)	33 (7.9%)	11 (2.6%)	45 (10.7%)	

Questions		Pharmacy N=117(%)	IT N=110(%)	Engineering N=77(%)	Management N=116(%)	P
Proper use of interdental toothbrush helps to clean the large space between two teeth	Yes	48 (11.4%)	49 (11.7%)	30 (7.1%)	44 (10.5%)	0.409
	No	22 (5.2%)	12 (2.9%)	17 (4.0%)	26 (6.2%)	
	Don't know	47 (11.2%)	49 (11.7%)	30 (7.1%)	46 (11.0%)	
Cleaning of tongue helps to remove tongue coating and obtain fresh breath	Yes	104 (24.8%)	96 (22.9%)	68 (16.2%)	106 (25.2%)	0.763
	No	5 (1.2%)	5 (1.2%)	1 (0.2%)	3 (0.7%)	
	Don't know	8 (1.9%)	9 (2.1%)	8 (1.9%)	7 (1.7%)	
Proper tooth brushing technique helps to prevent gum diseases	Yes	101 (24.0%)	100 (23.8%)	68 (16.2%)	94 (22.4%)	0.390
	No	8 (1.9%)	3 (0.7%)	5 (1.2%)	9 (2.1%)	
	Don't know	8 (1.9%)	7 (1.7%)	4 (1.0%)	13 (3.1%)	
Mouthwash is necessary to maintain oral health	Yes	103 (24.5%)	93 (22.1%)	63 (15.0%)	98 (23.3%)	0.625
	No	5 (1.2%)	4 (1.0%)	6 (1.4%)	9 (2.1%)	
	Don't know	9 (2.1%)	13 (3.1%)	8 (1.9%)	9 (2.1%)	
Attitude						
Tooth brushing is necessary to maintain proper oral hygiene	Yes	111 (26.4%)	109 (26.0%)	76 (18.1%)	109 (26.0%)	0.046*
	No	4 (1.0%)	0 (0.0%)	0 (0.0%)	1 (0.2%)	
	Don't know	2 (0.5%)	1 (0.2%)	1 (0.2%)	6 (1.4%)	
Tongue cleaning helps to prevent bad breathe	Yes	93 (22.1%)	108 (25.7%)	73 (17.4%)	92 (21.9%)	0.000*
	No	13 (3.1%)	0 (0.0%)	4 (1.0%)	15 (3.6%)	
	Don't know	11 (2.6%)	2 (0.5%)	0 (0.0%)	9 (2.1%)	
Interdental brushing is efficient	Yes	32 (7.6%)	47 (11.2%)	29 (6.9%)	44 (10.5%)	0.022*
	No	9 (2.1%)	10 (2.4%)	3 (0.7%)	17 (4.0%)	
	Don't know	76 (18.1%)	53 (12.6%)	45 (10.7%)	55 (13.1%)	
Mouth feels fresh after using mouthwash	Yes	104 (24.8%)	97 (23.1%)	67 (16.0%)	111 (26.4%)	0.024*
	No	9 (2.1%)	3 (0.7%)	3 (0.7%)	4 (1.0%)	
	Don't know	4 (1.0%)	10 (2.4%)	7 (1.7%)	1 (0.2%)	
It is hygienic to store toothbrush in the bathroom attached with toilet	Yes	18 (4.3%)	39 (9.3%)	8 (1.9%)	12 (2.9%)	0.000*
	No	81 (19.3%)	37 (8.8%)	40 (9.5%)	82 (19.5%)	
	Don't know	18 (4.3%)	34 (8.1%)	29 (6.9%)	22 (5.2%)	
Practice						
Frequency of tooth brushing in a day	Occasionally	3 (0.7%)	1 (0.2%)	1 (0.2%)	2 (0.5%)	0.039*
	Once a day	67 (16.0%)	38 (9.0%)	30 (7.1%)	51 (12.1%)	
	More than once a day	47 (11.2%)	71 (16.9%)	46 (11.0%)	63 (15.0%)	
Material used for cleaning of teeth	Neem twig	0 (0.0%)	2 (0.5%)	0 (0.0%)	0 (0.0%)	0.202
	Tooth powder	3 (0.7%)	3 (0.7%)	0 (0.0%)	1 (0.2%)	
	Toothbrush and toothpaste	114 (27.1%)	103 (24.5%)	77 (18.3%)	114 (27.1%)	
	Others	0 (0.0%)	2 (0.5%)	0 (0.0%)	1 (0.2%)	
Material used for mouth rinse	Nothing	4 (1.0%)	2 (0.5%)	2 (0.5%)	5 (1.2%)	0.000*
	Plain water	89 (21.2%)	65 (15.5%)	69 (16.4%)	84 (20.0%)	
	Lukewarm water with salt	8 (1.9%)	14 (3.3%)	1 (0.2%)	15 (3.6%)	
	Mouthwash	16 (3.8%)	29 (6.9%)	5 (1.2%)	12 (2.9%)	
Frequency of changing toothbrush	Rarely (until it gets damaged)	13 (3.1%)	17 (4.0%)	11 (2.6%)	11 (2.6%)	0.278
	Once a year	0 (0.0%)	1 (0.2%)	1 (0.2%)	2 (0.5%)	
	Every 6 months	13 (3.1%)	21 (5.0%)	18 (4.3%)	19 (4.5%)	
	Every 3 months	91 (21.7%)	71 (16.9%)	47 (11.2%)	84 (20.0%)	
Usage of any interdental aids	Yes	38 (9.0%)	46 (11.0%)	37 (8.8%)	41 (9.8%)	0.208
	No	79 (18.8%)	64 (15.2%)	40 (9.5%)	75 (17.9%)	
Material used for cleaning interdental area	Nothing	79 (18.8%)	64 (15.2%)	41 (9.8%)	75 (17.9%)	0.000*
	Toothpick	25 (6.0%)	11 (2.6%)	12 (2.9%)	27 (6.4%)	
	Thread	0 (0.0%)	8 (1.9%)	5 (1.2%)	4 (1.0%)	
	Dental floss/ Interdental brush	13 (3.1%)	27 (6.4%)	19 (4.5%)	10 (2.4%)	

p value < 0.05 considered statistically significant

DISCUSSION

Various studies have emphasized that undergraduate students belonging to the young and middle age group have worse oral hygiene than older adults, despite the fact that oral problems tend to increase with age.^{3,4} Subjective oral health is affected more deleteriously when experience of oral disease occur earlier in adulthood, than in older ages.⁴ Instilling good oral health practices at this age becomes crucial as the continuation of the same behavior pattern is inevitable during the older ages.

The present study demonstrates that even though majority of the undergraduate students had good knowledge regarding the preventive dental hygiene aids, few of the participants had inadequate practice. Similar results were reported by Kumar et al.⁵ The most common and familiar oral hygiene aids amongst the undergraduate students in present study were toothpaste and toothbrush. This result was in accordance with a study conducted among college students in Bengaluru city of India.⁶ The use of interdental aids however was not very common among the students as they had least knowledge about dental hygiene aids. These results were comparable with another study in South Asian undergraduate students reported by Gopikrishna et al.⁶ In contrast to present study, majority of the young students in San Francisco used dental floss at least once a day.⁷ The difference in practice of dental hygiene may be due to additional cost of interdental aids and mouthwash. Awareness program on various dental hygiene aids is recommended for the improvement of knowledge and practice.

Regarding knowledge related questions, more of male students knew that the purpose of tooth brushing was to

prevent dental decay and gum diseases. This result was in contrast with most of the studies conducted in India and Jordan.^{1,5,8} There was no comparable difference in attitude and practice related questions among the genders.

Among the four faculties, engineering students had the least knowledge, positive attitude as well as practice of oral hygiene aids. A study conducted among 362 engineering students of Bhubaneswar city, Odisha, India reported adequate knowledge with respect to oral health and practice of using fluoridated toothpaste and floss however, lacked good hygiene habits.⁹

CONCLUSION

Majority of the undergraduate students had good knowledge regarding the oral hygiene aids except interdental aids. The participants had positive attitude towards the use of dental aids but lacked in maintaining good oral hygiene. The most common oral hygiene aids used were toothpaste and toothbrush. Male students had better knowledge than female. Engineering students had the least knowledge, attitude and personal practice on dental hygiene aids. Adolescents should be aware of various consequences of improper oral health hygiene and start instilling proper oral hygiene practices daily. Practice of oral health hygiene habits should be emphasized in their basic health courses so as to reinforce good oral hygiene habits throughout their life

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