

Original

Oral Hygiene Practices and Habits among Dental Students in Napata College in Sudan, 2021.

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Abstract

Background: Poor oral hygiene and untreated oral diseases and conditions can have a significant impact on the quality of life. Dental students, the future leaders in oral-health care, have a significant role to play in public oral health education and its promotion. Dental students in general have been found to have a positive oral health attitude but their own oral-health behavior must improve if they are want to serve as positive models for their patients, families and friends. **Material and Methods:** A descriptive cross sectional faculty – based study was conducted on December 2021. A total of 92 dental students were involved from Napata College, Dentistry Program, Sudan from (third, fourth and fifth academic level). Data were collected using self-administered questionnaire including questions regarding oral hygiene practice and habits. The data was entered and analyzed using SPSS version 23. **Results:** Majority of the dental students were female (59)64.1%. The commonest academic level was 3rd year 37(40.2%), students. The oral hygiene practice among dental students showed that regarding frequency of brushing per day 50(54.3%) of dental students brushed their teeth twice per day, and the type of tooth brush 49 (53.3 %) of dental students used medium sized tooth brush and 42(45.7%) with circular motion and when asked about changing tooth brush 52 (56.5%) changed tooth brush once every three month. Regarding how often participants floss their teeth, the commonest answer was never 45(48.9%), followed by occasionally. 43(46.7%) of dental students went for dental checkup only if they had oral problems .61 (66.3%) of dental students had 1-4 decay teeth. 32(34.8%) ate a sugar containing snack or drink (other than tea and coffee) between meals more than twice daily. Regarding if participants used tobacco products, the majority 84 (91.3%) said no. Most of the dental students 60(65.2%) were strongly agree that tobacco had adverse effect in the oral and dental tissue.

In the presents study 52(56.5%) of dental students aware that gingival diseases may progress to cause periodontitis.

Conclusion: Overall, this study concluded that majority of dental students are aware of oral hygiene practices including brushing frequency, and technique. But never use dental floss and only went to the dental clinic if there was a problem .Dental students are aware about the adverse effect of tobacco on the oral and dental health.

Key words: Oral health, Tobacco use, Undergraduate dental students

Introduction:

Oral health is defined as the ability to speak, taste, smell, smile, touch, swallow, and express emotions with confidence and without pain, disease, or discomfort of the craniofacial complex (1). Oral health is considered an essential part of general health that has been shown to affect the quality of life (2). Oral health may influence the personal appearance, social communication, physical, mental and psychological daily activities (2).

Dental caries and periodontal diseases are the most common oral health problems in the world and the dental plaque is a primary etiologic factor in the development of oral and periodontal diseases (3). Poor oral hygiene will lead to gingival inflammation, gingivitis, that progress to form periodontitis (4). Oral hygiene is important because it removes bacterial plaque accumulation and prevents periodontal disease progression (4).

Oral hygiene practice can be defined as any effort performed by the individual to prevent plaque formation, remove supragingival, interdental and sub gingival plaque, keeping the tongue, gingiva and teeth clean (5). The most effective method for preventing dental caries or periodontitis is the removal of dental plaque by regular

and proper mechanical cleaning of the teeth (6). Proper oral hygiene practices include tooth brushing regularly twice daily with proper technique, using aids such as dental floss to clean interdental spaces, change the toothbrushes every 3 months, take food which has less sugar content, regular dental visits, and avoiding tobacco products all of these are important components of oral hygiene care, which is an integral part of general health (7) (8).

Dental students are the future oral health providers and they are care about the public oral health education and its promotion. Dental students own oral-health behavior must be convenient and usually enhanced if they are wanted to serve as positive role models for their patients, families, and friends (9). Dental students' oral-health attitude reflects their understanding of the importance of the oral and periodontal disease prevention and their dedication and commitment to enhance their patients' oral health. These attitudes should be established, developed and reinforced during undergraduate training (7) (9). The aim of this study was to assess oral hygiene practices and habits among dental students in Napata College and to identify brushing

frequency and technique, interdental aids mainly dental floss usage, bad habits that may affect their oral health and to assess the their sugar diet consumed and the number of routine dental visits that they had.

Material and Methods:

This descriptive cross-sectional faculty based study was carried out on the 3rd, 4th, 5th year dental students, by total coverage, 92 students (37 3rd, 21 4th, 34 5th year) of Napata College's, Dentistry Program, Khartoum state, Sudan on December 2021. This study excluded adult students who studied any medical science before as they may have been exposed to teaching of oral health or their own experience when they deal with patients. The ethical clearance was taken from the research technical and ethical committee at the Napata College, Program of Dentistry. The participants' privacy and confidentiality were maintained. Data were collected by using standardized self-administered questionnaire which adopted and modified from a previous study (8). Questionnaire based on socio-demographic information and other questions regarding oral hygiene practice and habits among dental students. Data collected were computerized through Microsoft Excel. The data was analyzed through SPSS Version 23. The data was

presented as percentages and frequency in tables and graphs.

Results:

A total number of 92 dental students were included in this study. The participants were 59 females (64.1%) and 33males (35.9%). The commonest age group was found to be 20-29 years in 81 dental students (88%).The commonest academic level was 3rdyear by37 students (40.2%), followed by 5th year 34 students (37%).When asked how often do you brush your teeth, the commonest answer was twice daily in 50 students (54.3%), followed by once daily in 40 students (43.5%). 49 (53.3%) of the dental students used medium tooth brush and 42 (45.7%) with circular motion. When asked if participants change their tooth brush 52 (56.5%) said that they changed their tooth brush once in three months. Regarding how often do participants usually eat a sugar containing snack or drink (other than tea and coffee) between meals, the commonest answer was more than twice daily by 32 (34.8%), followed by twice daily in 26 (28.3%) dental students. Regarding how often participants floss their teeth, the commonest answer was never 45 (48.9%), followed by occasionally 43 (33.7%). When asked how often participants go for a dental

checkup, the commonest answer was only when there is a problem by 61 (46.7%), followed by never in 26 (28.3%) dental students. Regarding their last dental visit or checkup, 41 (44.6%) said less than 6 months ago, followed by never/I don't remember in 25 (27.2%). When asked about participants' number of decayed teeth, the commonest answer was 1-4 teeth (66.3%), followed by none (28.3%). Regarding if participants use tobacco products, the majority 84 (91.3%)

said no. Most of the dental students 60 (65.2%) strongly agree with the concepts that tobacco and its usage lead to discoloration of teeth, gingival color changes, changes in oral mucosa, greater gingivitis and periodontitis, impaired healing of periodontitis and smoking increases risk of oral cancer. In the presents study 52 (56.5%) of dental students were aware that gingival diseases may progress to periodontitis .

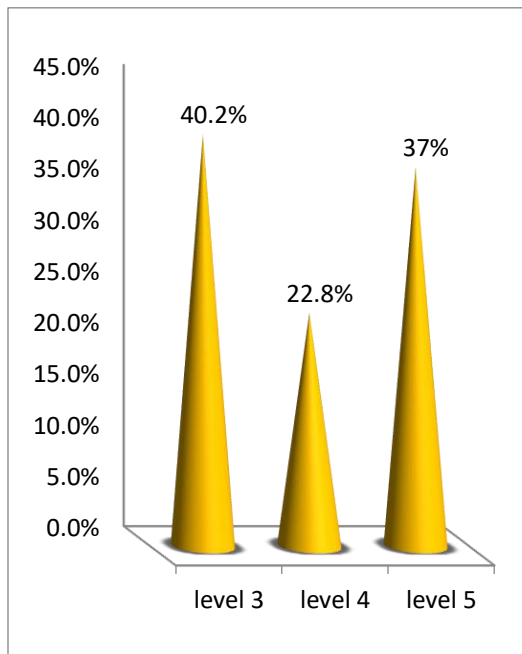


Figure 1: The academic level of the dental student

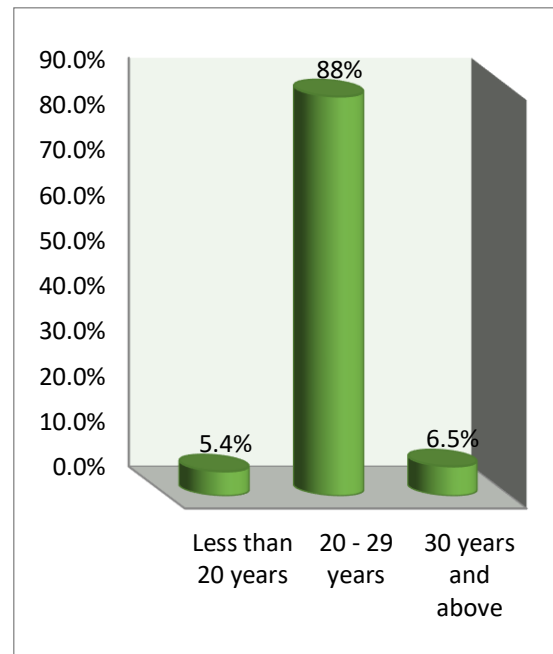


Figure2: The age distribution among dental students

Table (1): The oral hygiene practice and dental visits for checkup among dental students:

Oral hygiene practice		Frequency	Percent %
Frequency of brushing	Once daily	40	43.5
	Twice daily	50	54.3
	After every meal	2	2.2
	Total	92	100.0
Type of tooth brush	Soft	43	46.7
	Medium	49	53.3
	Hard	0	0
	Total	92	100
Brushing Technique	Horizontal motion	18	19.6
	Vertical tooth brush	20	21.7
	Circular motion	42	45.7
	Vibratory	12	13.0
	Total	92	100.0
change their tooth brush	Once in a month	9	9.8
	Once in three months	52	56.5
	Once in 6month	31	33.7
	Total	92	100.0
Inter dental aid use	Daily	10	10.9
	Weekly	6	6.5
	Sometimes	26	28.3
	Never	50	54.3
	Total	92	100.0
Dental floss use	Occasionally	31	33.7
	Once daily	8	8.7
	After every meal	8	8.7
	Never	45	48.9
	Total	92 24	100.0

	Oral hygiene practice	Frequency	Percent %
Brushing with fluoridated toothpaste	Always	77	83.7
	Quite often	9	9.8
	Seldom	1	1.1
	Never	5	5.4
	Total	92	100.0
do participants go for a dental checkup	Once in 6 months	11	12.0
	Once in a year	12	13.0
	When there is a problem	43	46.7
	Never	26	28.3
	Total	92	100.0
The last dental visit or check up	Less than 6 months ago	41	44.6
	Within 6-12 months	14	15.2
	Between 1-2 yrs	12	13.0
	Never/ I don't remember	25	27.2
	Total	92	100.0

Table (2): If dental students used tobacco products

Dental students used tobacco products	Frequency	Percent %
Current	4	4.3
Former smoker	2	2.2
Never	84	91.3
I use occasionally	2	2.2
Total	92	100.0

Table (3): Is the dental students that agree with the consequences of tobacco and its usage; discoloration of teeth, gingival color changes, changes in oral mucosa, greater gingivitis and periodontitis, impaired healing of periodontitis, smoking increases risk of oral cancer.

The Agreement	Frequency	Percent%
Strongly agree	60	65.2
Agree	26	28.3
Neither agree nor disagree	1	1
Disagree	3	3.3
Strongly disagree	2	2.2
Total	92	100.0

Table 4: The awareness regarding gingival diseases progression if not treated:

The progress of gingival diseases	Frequency	Percent%
Peritonitis	52	56.5
Loss of teeth	10	10.9
Abscess	2	2.2
No things	28	30.4
Total	92	100.0

Table 5: How often do participants usually eat a sugar containing snack or drink (other than tea and coffee) between meals?

A sugar containing snack or drink between the meals	Frequency	Percent%
Once daily	23	25.0
Twice daily	26	28.2
More than twice daily	32	34.8
Rarely or never	11	12.0
Total	92	100.0

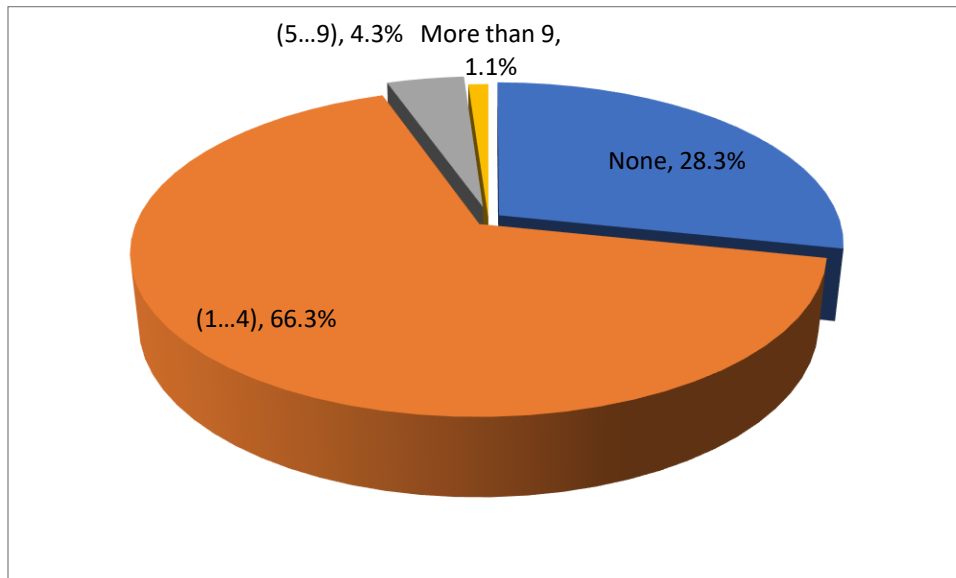


Figure (4): The number of decayed teeth among dental students.

Discussion:

Oral health affects general health, physical and social well-being (10). Preventive oral health knowledge, behavior and its practice are important ways of keeping our teeth and periodontal tissue health (11). Lack of awareness and poor oral hygiene habits increasing the risk of oral health problems among population (8). Dental students are in contact with the majority of the population, they have an important role in influencing oral health knowledge and attitude of the society (10). Dentists are expected to be role models for their patients and the evaluation of oral health behaviors of dentists will influence their advice to the patients in their oral self-care practices (8).

In the present study regarding the oral hygiene practice our result is similar or agree with the result obtained by Ahmed *et al*, where students brushes their teeth twice with fluoridated tooth paste while disagree with Gupta & Sxena where student brush their teeth one a day, and this could be due to that our dental student aware that the fundamental of oral health for teeth and gingival tissue is by plaque control that could be achieved mainly by brushing twice daily with fluoride tooth paste (7,12).

Majority of dental students in our study used medium tooth brush with circular motion which is not in accordance with Ahmed *et al* results which showed that soft tooth brush was used by 50% of the dental students with both horizontal and vertical stroke (7). Dental Students in present study focus in the brushing technique which was circular more than tooth brush type.

This study found that the majority of participants change their tooth brush once every three months which is in agreement with Ahmed *et al* study, the students were familial about the important of changing tooth brush every three month as way of keeping the efficacy of teeth brushing (7).

The oral hygiene practice including the interdental aids for the plaque removal from the inter-dental area, which is important adjunct method for proper plaque control. In this study most of the students did not use the interdental aids and only 33.7% used dental floss occasionally this may be explained by lack of their commitment of using the interdental aids and they underestimated the importance of using them. This result was not in agreement with the Kirchhoff *et al* who found that 71% of dental students used dental floss regularly

(13). Özdal et al disagreed with our study, their results showed that 10% of the students stated that they use dental floss every day, 31% stated that they use 2-3 times in a week. The percentage of those who do not use dental floss was found to be 36% (10).

Regular dental visits are an important part of oral health care, most of dental students in the present study went to the dental checkup only when there is a problem, unlike study done by Ahmed et al in which higher percentage of dental students confirmed that they never had any periodontal treatment or a routine dental checkup (7).

In our study regarding the student's last dental visit, less than half said less than 6 months ago, this result was higher than the Reddy et al who reported that 29.25% of the dental students and staff went for a dental check up every 6 months (8).

Oral self-care also includes take food items which have less sugar content to reduce the risk of dental caries and periodontal diseases (14).

In this study most of the students usually ate a sugar containing snack or drink (other than tea and coffee) between meals, more than twice daily, which explained the number of

carious teeth which was in range of 1-4 teeth in the majority of the participants. Unlike a study done by Reddy et al among dental students and staff which reported 60.85% of them, had no decayed teeth and this may be because 35.14% reported that they rarely or never had sugar containing snacks or drinks between the meals (8).

Tobacco has adverse effect on the soft and hard tissues of the oral cavity (15). Majority of dental students in this study did not use tobacco and strongly agree with the concepts that tobacco and its usage lead to discoloration of teeth, changes in gingival color and oral mucosa, greater gingivitis and periodontitis, impaired healing of periodontitis and increase the risk of oral cancer. This is because; one of the important learning objectives in periodontal department was about smoking and its adverse effects on the oral and general health and smoking cessation.

Study conducted by Reddy et al supported this study's findings, where the majority of study participants were non-smokers and 49.06% of them strongly agreed that they were aware of the adverse effect of tobacco smoking or chewing (8).

Most of the dental students aware that gingival diseases may progress to periodontitis these oral diseases are preventable through

education about risk factors of periodontal diseases and oral hygiene which is critical in maintaining good oral health (6).

One of the main objectives of dental education is to train students in ways so they can motivate patients to have good oral hygiene. They are more likely to be able to do this if they apply the oral hygiene knowledge and attitude to their own dental care (16).

Awareness programs and continuous dental education programs among dentists is essential to improve their oral hygiene and regular dental check-up should be done, even if there is no problem.

Conclusion: Overall, this study concluded that the majority of dental are aware of oral hygiene practices including brushing frequency, and technique. But never use dental floss and only went to the dental clinic if there was a problem. Dental students aware about the adverse effect of tobacco on the oral and dental health

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