

# Dental undergraduate students' knowledge, attitudes and practices in oral health self-care: A survey from a South African university

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**Background.** Dental students are seen as role-models for promoting good oral health behaviour, yet there is little published evidence in South Africa (SA) that describes student knowledge and attitudes towards their own oral healthcare.

**Objective.** To investigate undergraduate dental therapy and oral hygiene students' knowledge and attitudes towards their self-care practices and the perceived influence of the dental curriculum on these practices.

**Methods.** This was a descriptive survey of 64 undergraduate dental students at the University of KwaZulu-Natal, Durban, SA. A self-administered questionnaire was used for data collection.

**Results.** Fifty-two respondents returned the completed questionnaires, yielding an 81% response rate. Almost all respondents ( $n=30$ ; 96.8% (2nd-year students), and  $n=21$ ; 100% (3rd-year students)) indicated the use of toothpaste and toothbrush to clean their teeth. Most respondents reported cleaning their teeth from 1 to 5 minutes, with 52% ( $n=27$ ) reporting 1 - 2 minutes and 42% ( $n=22$ ) 3 - 5 minutes. Only three respondents reported cleaning their teeth for >5 minutes ( $n=3$ ; 6%). Other practices included the use of toothpicks ( $n=12$ ; 23%), dental floss ( $n=42$ ; 81%), and interdental brushes ( $n=5$ ; 10%). Almost all respondents ( $n=50$ ; 96%) indicated the use of commercially available mouth rinses. All 2nd-year students ( $n=30$ ) and 90% of 3rd-year students ( $n=18$ ) agreed that exposure to clinical training increased their awareness of self-care practices.

**Conclusion.** Respondents reported good knowledge and practice of oral health self-care, but there were inconsistencies in these practices. Respondents also agreed that the dental undergraduate curriculum did influence their knowledge and oral health self-care practices.

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The attitudes and behaviours of oral health service providers towards their own oral health practices could reflect their understanding of the importance of oral health-promotive procedures and, in turn, play a role in improving the oral health of the population.<sup>[1-2]</sup> Dental undergraduate students are seen as role-models for good oral health behaviour among other university students, patients and the community at large.<sup>[3-5]</sup> These students are uniquely placed in the academic learning environment to motivate individuals and communities on optimal oral health self-care.<sup>[6]</sup> Taylor *et al.*<sup>[7]</sup> further add that to provide students with more information regarding their own health, will allow them to learn more experientially about health parameters, as opposed to theoretical, textbook-based learning.

There is little published research evidence in South Africa (SA) to suggest that sufficient focus is placed on understanding undergraduate students' perceptions and attitudes towards their own self-care practices. In this context, there is a need to describe dental therapy and oral hygiene students' knowledge, attitudes and practices towards oral health self-care and the perceived influence of the dental curriculum on these practices.

## Undergraduate training in prevention

The oral disease profile, potential burden of oral diseases and oral consequences of health problems in SA suggest that interventions need to be addressed at various levels of care, such as promotion, prevention, and therapeutic and curative measures.<sup>[8]</sup> Dental therapists and oral hygienists are an important cadre of oral health workers ideally placed to provide primary preventive and curative oral healthcare in urban and rural settings. To this effect, the University of KwaZulu-Natal, Durban, SA has offered dental therapy and oral hygiene undergraduate training since the

late 1970s. Both these programmes have a strong emphasis on preventive primary oral healthcare, and students registered for these programmes have historically had the same theory and clinical exposure in prevention and oral health promotion. In terms of the university's commitment to community upliftment, these programmes are marketed to increase access for students from historically disadvantaged and rural areas in KwaZulu-Natal.<sup>[9]</sup> Although the Diploma in Oral Health was phased out in 2015, the new proposed Bachelor's degree in oral hygiene will continue to be closely aligned to the dental therapy degree in relation to teaching and learning with regard to prevention.

The students in these programmes are introduced to preventive dentistry early in the 1st year through an engagement with classroom-based theoretical principles and concepts in prevention, followed by skills development on the phantom head in the dental preclinical laboratory. This knowledge acquisition and the skills are further built in the 2nd year, where the student is systematically introduced into the clinical and community environment. Both training programmes are offered on a full-time basis.

## Oral health self-care practices

The measures for oral health self-care practices have evolved over time, but mechanical plaque control remains the primary method for controlling supra-gingival accumulations.<sup>[10]</sup> The most common method of mechanical plaque control is tooth brushing. For enamel caries prevention, the combination of fluoride dentifrice with other topical fluoride treatments has shown some possible additive effect, mainly in patients at high risk of caries.<sup>[11]</sup> Tooth brushing alone, however, does not reach the interproximal areas of the dentition, leaving part of the dentition unclean. A wide variety

of interdental cleaning devices are available. As a method to remove interproximal biofilm (commonly known as dental plaque), flossing has received the most attention. It has been generally accepted that dental floss has a positive effect on removing dental biofilm.<sup>[12]</sup> The use of antimicrobial agents such as stannous fluoride and amine fluoride, tin, zinc and copper has demonstrated antimicrobial effects, but there is little evidence of demonstrated anticaries effectiveness. Similarly, triclosan and essential oils (a mixture of thymol, eucalyptol, methyl salicylate and menthol) have demonstrated effectiveness in reducing plaque and gingivitis, but have also failed in reducing dental caries rates.<sup>[13,14]</sup> Dental students are exposed to these various measures in oral health individual self-care practices in the undergraduate training programme. It would be interesting to note the extent to which the students are able to engage with these practices and the possible influence on their own self-care practices.

## Methods

This was a descriptive quantitative survey to determine undergraduate dental students' knowledge and attitudes towards the use of dental biofilms and self-care practices in relation to their exposure to undergraduate learning in oral disease prevention. The total study population comprised 64 undergraduate dental therapy students in their 2nd and 3rd year of study, and oral hygiene students in their 2nd year of study, in the discipline of dentistry, University of KwaZulu-Natal. The study focused on these students because of their exposure to the clinical and community training environment. Students in the 1st year of study were excluded because they are only exposed to preclinical laboratory-based training.

The research instrument comprised a self-administered questionnaire that was based on a previously developed questionnaire by Oberoi *et al.*<sup>[15]</sup> Permission was obtained from the authors to use and adapt the questionnaire for this study. The questionnaire included 20 items designed to assess students' oral health knowledge, attitudes and self-care practices. The first part of the questionnaire consisted of sociodemographic data, such as age, sex, year of study, knowledge of dental biofilms, and understanding of the relationship between oral health and general health. The second part of the questionnaire included variables, such as frequency of toothbrushing, interval for replacement of toothbrushes, and use of mouth rinses, dental floss and interdental aids. The questionnaire also included questions on dental visits, barriers in accessing dental care, and perceptions of self-reported dental health status. The last part of the questionnaire focused on the perceived impact or influence of the curriculum on self-care practices. A Likert scale format with responses such as 1 (strongly agree), 2 (agree), 3 (not sure), 4 (disagree), and 5 (strongly disagree) was used to elicit respondents' perceptions on whether the theory taught in the classroom, practical lessons in the laboratory, or exposure in the clinical/community environment were perceived to be contributing factors to self-oral hygiene practices. The questionnaire comprised open- and closed-ended responses.

The study was granted ethical clearance by the Humanities and Social Sciences Research Ethics Committee at the University of KwaZulu-Natal (ref. no. HSS/1539/015). Written informed consent was obtained from all participants. Students were made aware that the study was voluntary and that participants were free to withdraw from the study at any stage, without any negative consequences. The questionnaire was administered in the English language after confirming that all the participants were comfortable with the language. All other ethical issues, such as confidentiality and anonymity, were maintained.

Data were analysed using SPSS version 23.0 (IBM Corp., USA). Univariate descriptive statistics, such as frequency and mean distribution, were conducted

for all variables. The responses to the open-ended questions were grouped and emergent themes were examined and compared for possible associations. Inferential techniques included Pearson's  $\chi^2$  test to assess a possible relationship between the independent variables (age, sex, and year of study) and the dependent variables (toothbrushing frequency, and use of dental floss and mouth rinses). A  $p < 0.05$  level was established as being significant.

## Results

In total, 64 questionnaires were distributed among 2nd- and 3rd-year dental therapy and 2nd-year oral hygiene students and 52 were returned, yielding an 81% response rate. The response rate was in proportion to the population total (i.e. 28 students in the 3rd year of study and 36 in the 2nd year, with a ratio of 2:3). The sample comprised 21 respondents in their 3rd year and 31 in their 2nd year. The majority of respondents from the 2nd year were female ( $n=26$ ; 84%) compared with those in the 3rd year of study ( $n=11$ ; 52%) (Table 1). Overall, the ratio of male to female was ~1:3 (28.8:71.2;  $p < 0.01$ ). The mean (standard deviation) age for 2nd-year and 3rd-year students was 20 and 21.6 (1.59) years, respectively.

### Attitudes towards dental health

Forty-four respondents (84.6%) perceived their own dental health to be good ( $n=27$ ; 87.1% (2nd-year students), and  $n=17$ ; 81.0% (3rd-year students)). However, a third of respondents ( $n=18$ ; 32.0%) indicated that their gingiva bled during dental flossing. All respondents ( $n=52$ ) agreed that oral hygiene was important for the overall health of the body.

### Knowledge of dental self-care practice

Respondents provided the following responses to their understanding of oral biofilms: a combination of bacteria, saliva and food debris that adheres to the tooth surface ( $n=24$ ; 46.0%); accumulation of plaque ( $n=12$ ; 23.0%); accumulation of debris caused by food and worsened by not brushing and flossing teeth ( $n=2$ ; 4.0%).

### Oral health self-care practices

The majority of respondents ( $n=30$ ; 96.8% (2nd-year students), and  $n=21$ ; 100% (3rd-year students)) indicated the use of toothpaste and toothbrush to clean their teeth. The time taken to clean teeth varied from 1 to 2 minutes ( $n=27$ ; 51.9%) to 3 - 5 minutes ( $n=22$ ; 42.3%) to >5 minutes ( $n=3$ ; 5.8%) (Table 2). Most respondents ( $n=44$ ; 84.6%) indicated that they brushed their teeth twice daily. Almost all respondents ( $n=47$ ; 92.0%) indicated that brushing the tongue was part of the oral healthcare regimen. Respondents in the 2nd- and 3rd-year programmes indicated similar responses with reference to the replacement of toothbrushes. The majority of 2nd-year students ( $n=26$ ; 83.9%) and two-thirds of 3rd-year students ( $n=15$ ; 71.4%) indicated that toothbrushes were replaced after 3 months. More than half of the responses in the 3rd year were by female students ( $n=9$ ; 60.0%). Only 12% ( $n=6$ ) of respondents indicated that toothbrushes were replaced after 6 months and only 3.8% ( $n=2$ ) replaced their toothbrushes on an annual basis.

**Table 1. Gender distribution of students**

Gender	2nd year, n (%)	3rd year, n (%)	Total, n (%)
Male	5 (16.1)	10 (47.6)	15 (28.8)
Female	26 (83.9)	11 (52.4)	37 (71.2)
Total	31 (100)	21 (100)	52 (100)

Pearson  $\chi^2$  test: 6.048;  $p < 0.01$ .

**Table 2. Respondents' reported knowledge, attitudes and practices**

Questions	Response	2nd-year students, n (%)	3rd-year students, n (%)	Total, n (%)	$\chi^2$	p-values	
How would you describe your present state of dental health?	Excellent	6 (19.4)	6 (28.6)	12 (23.1)	1.248	0.60	
	Good	21 (67.7)	11 (52.4)	32 (61.5)			
	Fair	4 (12.9)	4 (19.0)	8 (15.4)			
Do you think oral hygiene is important for overall health of the body?	Yes	31 (100)	21 (100)	52 (100)	-	-	
	No	0	0	0			
	Don't know	0	0	0			
Which of the following do you use to clean your teeth?	Toothpaste and toothbrush	30 (96.8)	21 (100)	52 (100)	0.691	0.41	
	Other	1 (3.2)	0	0			
How much time do you take for cleaning your teeth?	1 - 2 minutes	18 (58.1)	9 (42.9)	27 (51.9)	1.464	0.54	
	3 - 5 minutes	11 (35.5)	11 (52.4)	22 (42.3)			
	>5 minutes	2 (6.5)	1 (4.8)	3 (5.8)			
How often do you clean your teeth?	Once daily	4 (12.9)	2 (9.5)	6 (11.5)	3.132	0.21	
	Twice daily	27 (87.1)	17 (81.0)	44 (84.6)			
	Thrice or more	0	2 (9.5)	2 (3.9)			
How often do you change your toothbrush?	Once every month	1 (3.2)	2 (9.5)	3 (5.8)	4.183	0.24	
	Once in 3 months	26 (83.9)	15 (71.4)	41 (78.8)			
	Once in 6 months	4 (12.9)	2 (9.5)	6 (11.5)			
	Once every year	0	2 (9.5)	2 (3.8)			
Do you use commercially available mouth washes?	Yes	30 (96.8)	20 (95.2)	50 (96.2)	0.080	0.77	
	No	1 (3.2)	1 (4.8)	2 (3.8)			
How often have you visited a dentist/dental clinic in the past 12 months?	Once	8 (25.8)	2 (9.5)	10 (19.2)	2.925	0.40	
	Twice	18 (58.1)	13 (61.9)	31 (59.6)			
	More than twice	4 (12.9)	4 (19.0)	8 (15.4)			
	Never	1 (3.2)	2 (9.5)	3 (5.8)			
Do you seek a routine dental visit for oral hygiene maintenance?	Once in a year	9 (29.0)	5 (23.8)	14 (26.9)	0.388	0.82	
	Twice in a year	14 (45.2)	9 (42.9)	23 (44.2)			
	Only if a problem occurs	8 (25.8)	7 (33.3)	15 (28.8)			
What are the potential barriers for avoiding a routine visit to a dentist/dental clinic for oral hygiene maintenance?	Cost	10 (32.3)	8 (38.1)	18 (34.6)	1.503	0.68	
	Time	17 (54.8)	10 (47.6)	27 (51.9)			
	Fear	3 (9.7)	1 (4.8)	4 (7.7)			
	Other	1 (3.2)	2 (9.5)	3 (5.8)			
Has the dental curriculum influenced your daily self-care practices?	Yes	29 (93.5)	18 (90.0)	47 (92.2)	0.212	0.65	
	No/not sure	2 (6.5)	2 (10.0)	4 (7.8)			
Which components of the curriculum have assisted you in understanding oral hygiene self-care practices?	Theory taught in the classroom	Strongly agree	14 (45.2)	13 (65.0)	27 (52.9)	2.293	0.32
		Agree	16 (51.6)	7 (35.0)	23 (45.1)		
		Disagree	1 (3.2)	0	1 (2.0)		
	Practical lessons in the laboratory	Strongly agree	20 (66.7)	12 (60.0)	32 (64.0)	1.597	0.67
		Agree	7 (23.3)	5 (25.0)	12 (24.0)		
		Not sure	2 (6.7)	3 (15.0)	5 (10.0)		
		Disagree	1 (3.3)	0	1 (2.0)		
	Exposure in the clinical environment	Strongly agree	21 (67.7)	17 (85.0)	38 (74.5)	7.774	0.02
		Agree	10 (32.3)	1 (5.0)	11 (21.6)		
		Not sure	0	2 (10.0)	2 (3.9)		
	Exposure in community-based interventions	Strongly agree	9 (31.0)	10 (52.6)	19 (39.6)	8.781	0.32
		Agree	7 (24.1)	8 (42.1)	15 (31.3)		
Not sure		10 (34.5)	1 (5.3)	11 (22.9)			
Disagree		3 (10.3)	0	3 (6.3)			

With reference to the use of dental aids, 23% of respondents ( $n=12$ ) used toothpicks, 81% ( $n=42$ ) used dental floss, and 10% ( $n=5$ ) used interdental brushes. About 56% of respondents ( $n=29$ ) indicated that they always rinsed their mouths with plain water after meals. Thirty-one percent of respondents ( $n=16$ ) indicated that they rinsed their mouths once in the morning. Almost all respondents ( $n=50$ ; 96.2%) indicated the use of commercially available mouth rinses.

More than half of the study population ( $n=31$ ; 59.6%) mentioned that they visited the dental clinic twice a year for their own treatment. However, respondents provided varied responses to whether they would seek routine dental care for oral hygiene maintenance. About 45% of respondents ( $n=23$ ) indicated that they would visit the dental clinic twice a year to seek routine dental treatment, while 27% ( $n=14$ ) stated that they would visit the dental clinic once a year. A significant number of respondents ( $n=15$ ; 28.8%) indicated that they would seek dental care only if a problem occurred (Table 2). More than half of the study population ( $n=27$ ; 51.9%) noted time as a potential barrier for seeking routine dental visits for oral hygiene maintenance. Similarly, the cost of dental treatment ( $n=18$ ; 34.6%) was also shown as a potential barrier.

## Linking oral health self-practices to the curriculum

The majority of respondents ( $n=29$ ; 93.5% (2nd-year students), and  $n=18$ ; 90.0% (3rd-year students)) agreed that the dental curriculum influenced their daily self-care practices. Respondents were further asked to identify aspects of the curriculum that were seen as being valuable in their understanding of oral hygiene self-care practices. Almost all respondents ( $n=30$ ; 96.8% (2nd year), and  $n=20$ ; 100% (3rd year)) agreed that the theory taught in the classroom contributed to their understanding of oral health self-care practices. Ninety percent of respondents in the 2nd year ( $n=27$ ) and 85% in the 3rd year ( $n=17$ ) agreed that the practical lessons learnt in the laboratory also contributed to their self-care practices. Although all respondents in the 2nd year of study ( $n=31$ ) agreed that the clinical environment did have an influence on understanding oral health self-care, some differences were noted among respondents in the 3rd year. Only two respondents (10%) were unsure of this perceived influence. While the majority of respondents in the 3rd year ( $n=18$ ; 94.7%) agreed that their exposure to community-based activities did contribute to their understanding of oral health self-care practices, a number of respondents in the 2nd year ( $n=13$ ; 44.8%) disagreed or were unsure.

Some of the perceived influences of the curriculum included understanding the significance of good oral hygiene and ensuring optimal oral hygiene care ( $n=21$ ; 40%); use of interdental aids, additional fluoride uptake and mouth rinses ( $n=10$ ; 19%); correct toothbrushing practices ( $n=5$ ; 10%); flossing practices ( $n=7$ ; 14%); and change in dietary practices ( $n=2$ ; 3.8%).

## Discussion

The results indicated that both 2nd- and 3rd-year dental students generally had good knowledge of the nature and formation of dental biofilms. The perceived influence of the undergraduate curriculum included an understanding of the significance of good oral hygiene and ensuring optimal oral hygiene care; use of interdental aids, additional fluoride uptake and use of mouth rinses; correct toothbrushing practices; and flossing. Mathur *et al.*,<sup>[16]</sup> however, point out that students' understanding and conceptualisation of oral disease processes could affect daily practice, but that the opposite also holds true. Existing social practices may also affect concepts of the disease process. This study investigated the concept of dental biofilm only from a

theoretical perspective. A more detailed assessment of this learning process is required in future studies to unpack the complex realities in understanding health and oral disease processes.<sup>[16]</sup>

Given that the study population comprised 2nd- and 3rd-year undergraduate dental students, it was assumed that they would have adequate theoretical knowledge of the nature and formation of dental biofilms in addition to the measures to ensure plaque control. However, knowledge of theoretical concepts and principles does not necessarily translate into positive self-care practices.<sup>[17]</sup> Some inconsistencies were noted in the respondents' reported self-care practices, such as time taken to clean teeth, replacement of toothbrushes and dietary practices. Similar inconsistencies were also reported by Gopinath,<sup>[18]</sup> i.e. less than two-thirds of dentists in their study (55.9%) indicated that they brushed twice a day with fluoridated toothpaste (55.1%), despite their awareness of plaque control measures. Although the majority of respondents in this study used toothpaste and toothbrushes to clean their teeth, 13% of 2nd-year students ( $n=4$ ) and 19% of 3rd-year students ( $n=4$ ) did not replace their toothbrushes after a 3-month period. More female respondents in the 3rd year (60%) reported replacement of their toothbrushes after a 3-month period than male students. Oberoi *et al.*<sup>[15]</sup> further noted significant gender differences in their study. This study, however, did not observe any other marked gender difference in the reported knowledge, practices and attitudes, except the replacement of toothbrushes. There is little evidence-based data to guide the replacement of toothbrushes, with the average period recommended being between 2 and 6 months. The literature is also inconsistent with regard to the effectiveness of new and worn toothbrushes for optimal plaque removal,<sup>[19,20]</sup> however, Tangade *et al.*<sup>[21]</sup> suggest that the design of the toothbrush bristles should be considered for efficacy in toothbrushing.

Over half of the respondents (56%) indicated that they rinsed their mouths regularly with plain water after meals. Reinforcement of correct toothbrushing, flossing and dietary advice forms part of the core of oral hygiene counselling that dental students are expected to conduct as part of patient/client management. Mechanical oral hygiene measures (toothbrushing and flossing) could be complemented by chemotherapeutic agents (broad-spectrum antiseptics, antibiotics aimed at specific bacteria, combinations of enzymes that could modify plaque structure or activity, and non-enzymatic-dispersing or non-enzymatic-modifying agents).<sup>[12-14]</sup> Furthermore, there is no scientific basis for the recommended 6-monthly dental check-up. Dental recall systems should be based on individual risk assessment profiles.<sup>[2]</sup>

While toothbrushing and flossing have been highlighted, very little mention was made of dietary practices. This is of particular interest given that diet, specifically the consumption of refined sugars, is an integral component of oral health education.<sup>[7]</sup> Dogan and Gokalp<sup>[22]</sup> reported that snacking between meals and consumption of sugary foods were observed among dental students in their study. Folanay *et al.*<sup>[23]</sup> also observed an association between students' oral health behaviour, gender, age, knowledge of preventive care, and attitudes towards preventive dentistry. The authors concluded that older students were more likely to follow the recommended oral self-care measures, while younger students could have good knowledge of preventive dental care yet were more likely to consume sugary snacks. Our study did not observe a marked difference in the reported oral health knowledge and self-care practices between 2nd- and 3rd-year dental students. This could possibly be attributed to the curriculum's structure. Students acquire the core skills in preventive dentistry in the 2nd year of study. The 3rd year of dental therapy training focuses mainly on building clinical skills in the area of relief of pain, sepsis (extractions), and restorative dentistry (fillings). There is no additional acquisition of knowledge and skills in preventive dentistry

in the 3rd year. Hence, both 2nd- and 3rd-year students would have similar levels of knowledge and skills in preventive dentistry. Second-year students, however, are more involved in preventive care than those in their 3rd year, which could have probably contributed to the slightly higher response scores for the former. The implications of these findings suggest that students need sustained exposure to preventive care in their undergraduate training to maximise greater awareness of positive self-care practices. Therefore, there is a need for a curriculum review to ensure that 3rd-year students are more exposed to prevention strategies in the final-year programme. Time and the costs of dental treatment were also identified as potential barriers for students seeking routine dental visits for oral hygiene maintenance. More effort needs to be made to address these barriers through a curriculum review process. Moreover, more research is required to examine the undergraduate dental students' dietary practices in relation to their oral health self-care. It is further noted that almost a third of the 2nd-year students (44.8%) did not perceive community engagement to influence their understanding of oral health self-care practices. More research is required to unpack students' understanding of the role of community engagement in relation to self-care practices.

Although the results indicate that dental students had positive perceptions towards the influence of the curriculum on self-care practices, there is a need to reiterate comprehensive coverage in prevention in undergraduate dental curricula. Kawamura *et al.*<sup>[24]</sup> suggest that undergraduate dental education should include comprehensive programmes in preventive care that empower dentists/oral health workers to motivate patients' self-care practices, in addition to programmes that ensure dental students also institute their own oral self-care regimens. Such educational effort should enable dental students to develop stable oral health behaviours and practices. Therefore, curriculum planning needs to take into account that undergraduate learning is not simply an acquisition of knowledge and clinical skills but that students' self-awareness and self-reflection should be integrated into the learning process.<sup>[25]</sup>

## Study limitations

The study provided valuable insight into dental undergraduate students' oral health knowledge and self-care practices, but some limitations were noted. The study focused exclusively on students' perspectives of the influence of the curriculum on self-care practice. More research is required to further explore the learning environment, taking into account the attitudes and perceptions of educators, patients and other stakeholders. The interplay between the learnt experience (dental curriculum) and the social and cultural norms that influence students' attitudes and oral health practices, is an important consideration.<sup>[3]</sup>

As this study relied on self-report, there could have possibly been over-reporting with regard to students' oral health self-practices. This observation is consistent with Ahamed *et al.*'s<sup>[6]</sup> findings that self-reported data could be over- or under-reported owing to social desirability. More research is required to correlate students' reported self-care practices to their oral health clinical status (state of the oral cavity).

## Conclusion

The results indicated that dental undergraduate students generally reported having good knowledge and practice of oral health self-care, but there

were inconsistencies in these practices. Respondents also agreed that the dental undergraduate curriculum did influence their knowledge and oral health self-care practices. Dental undergraduate student training is pivotal in producing oral health graduates who can adopt leadership roles in oral health promotion. It cannot, however, be assumed that exposure to dental knowledge and skills will automatically result in a graduate with meticulous oral health self-care practice/habits. Curriculum planning needs to take into account the pre-existing attitudes and oral health practices that students bring into the training programme, and appropriate strategies need to be devised to reinforce/modify positive oral healthcare practices that can be sustained through the life-cycle.

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