Knowledge, practices and perceptions regarding oral health preventive measures among Mexican dental students: a cross-sectional survey study

F. Anguillar Díaz[1], Y.R. Ponce-Cruz[2], C. Mortellaro[3], M Giacomello[4], B. Manfredi[5], S. Khijmatgar[5], R. Biagi[5], A. Greco Lucchina[3] and M. Del Fabbro[5,6]

[1]Department of Preventive Dentistry and Paedodontics, Public Health National Autonomus University of Mexico; [2]Department of Preventive Dentistry and Pedodontics, National Autonomous University of Mexico; [3]Research Laboratory in Regenerative Medicine and Tissue Engineering, Saint Camillus International University of Health Sciences, Rome, Italy; [4]Department of Medicine and Surgery, University of Milano-Bicocca, Milan, Italy; [5]Department of Biomedical, Surgical and Dental Sciences, University of Milan, Milan Italy; [6]IRCCS Orthopedic Institute Galeazzi, Dental Clinic, Milan, Italy

Although oral diseases are mostly preventable, they remain a global public health problem. Thus, there is a need for trained personnel to actively intervene in promoting oral health, to prevent and timeously detect oral diseases, and, in turn, to provide comprehensive quality healthcare. The main objective of the study was to evaluate the knowledge, practices and perceptions regarding oral health preventive measures amongst undergraduate dental students. This cross-sectional study was conducted between the period October 2017 and January 2018. The subjects included were undergraduate students of the dental science program at the School of Dentistry, in Leon Guanajuato, Mexico. A validated questionnaire was used to identify knowledge of preventive dentistry and the frequency of oral health preventive actions in the dental school clinics. Besides, perception towards prevention in dentistry was assessed. A total of N=232 undergraduate students participated of whom 65.9% (N=153) were women. More than half of the students 59.5%, (N=138) rated their knowledge on the prevention of oral diseases as good, followed by 32.8% (N=75) of students who rated it as regular. 49% (N=97) of the students performed frequently preventive treatments in their daily clinical practice. 90% (N=217) think that the main reason of low practice of prevention in dentistry is the lack of commitment of the dentist. 72.8% (N=169) mention that there should be professionals dedicated exclusively to preventive dentistry. Students of second grade demonstrated better prevention knowledge and tended to engage more frequently in preventive activities ($p<0.05$). In conclusion, our study found that, second-year students perform preventive practices more frequently and these practices decrease as their studies progress. It should be sought to create positive attitudes towards prevention not only in the year in preventive dentistry, but also throughout the entire career. This enables students to become trained professionals that can deliver preventive services to their patients.

In political and academic speeches, it is recognized that prevention is the most appropriate way to reduce the burden of disease, favoring equity in health. However, priority is often given to treating illness and its consequences instead of preventing it, even though highly reputable institutions like the World Health Organization (WHO) emphasizes the importance of the availability of oral healthcare

Key words: dentistry, preventive knowledge, practice, perception, oral health

Corresponding Author
Prof. Massimo Del Fabbro,
University of Milan,
IRCCS Orthopedic Institute Galeazzi, Milan, Italy
e-mail: massimo.delfabbro@unimi.it

0393-974X (2020)

workers orientated towards prevention.

Traditional dental care, aimed at rehabilitation, represents a significant economic burden for many high-income countries, where between 5% and 10% of health expenditure is related to oral health (WHO 2012). This high cost of dental treatments can be avoided by applying effective measures of prevention and promotion of health. However, for the effectiveness of preventive actions and treatments it is necessary to gain adequate knowledge and favorable attitudes.

There are several studies that have evaluated the knowledge and attitude toward prevention in dentistry (1, 2). For example, in Libya (3) most of the dentists surveyed had a favorable attitude towards prevention in general, considering preventive dentistry as useful. Among them, the most frequently used preventive techniques were hygiene instructions and recommendations for the use of fluoride toothpaste, topical application of fluoride and fissure sealants. In that study, attitudes and practices related to preventive dentistry varied according to professional characteristics, but not demographic ones. Similarly, Perez et al. (4) observed in Paraguayan dentists that more than half of the respondents demonstrated to have very good levels of knowledge, finding a strong association between attitudes and preventive practices.

Unlike previous studies that evaluated knowledge and attitudes about preventive dentistry, a study conducted in Florida in 2013 focused only on evaluating knowledge and practices on the use of fissure sealants as a preventive measure of dental caries, found positive attitudes regarding the use of fissure sealants and high use of them, observing a relationship between the level of clinical knowledge and the number of years since graduating from their senior year, the greater number of years of receipt the lower level of clinical knowledge (5). On the other hand, a study by Lin et al. (6) reported that dentists have limited up-to-date information on certain topics of caries prevention. Regarding the frequency of caries prevention practices, such as the application of topical fluoride and sealants, it does not coincide with the perceived effectiveness.

Unfortunately, these attitudes and knowledge have been also observed in students of dentistry as mentioned by Nilchian et al. (7) who found that most of the students expressed an intermediate level of knowledge and were well informed about three fields of preventive dentistry: development of caries, fluoride and oral hygiene. However, they lacked knowledge about the role of fluoride toothpaste in caries prevention and did not have enough experience in diagnosing the caries depth.

The aim of this study was to evaluate knowledge, practices, and perception regarding preventive dentistry in dental Mexican pre-grade students. The results of this study would help to determine the level of knowledge, attitude and practices that students have in the different years of the career with respect to preventive dentistry.

MATERIALS AND METHODS

This was a cross-sectional study performed in undergraduate Mexican dental students of the scholar year 2017-2018. In this study, was included a convenience sample of dental pregraduated students, who were contacted inside the classrooms during their daily attendance at university. The minimum sample size of n=216 was estimated after having targeted a confidence level of 95% with precision of 3%; and adjusted to a study population of 270 available students.

The data was collected through the Questionnaire of Knowledge, Perception and Practices on prevention in dentists. This questionnaire was constructed firstly by creating a bank of questions which were then evaluated by a group of experts, through the modified Lawshe test (8). Later, three pilot tests were carried out for the evaluation and adjustment of the questionnaire. Subsequently, the questionnaire was applied to a group of dentists (n=149), for the evaluation of internal consistency and repeatability through the Cronbach's alpha coefficient and the Intraclass Correlation Coefficient (ICC) respectively. In addition, the convergence validity was evaluated with Spearman's rho test. Finally, 39 items were included, divided into two dimensions: Knowledge (23 items), and Practices (14 items) and 2 global questions. Likert type response scale was used. The internal consistency was $\alpha = 0.606$, for the dimensions: Knowledge and Practices $\alpha=0.639$, and 0.687, respectively. The ICC values obtained were for

the instrument in general of 0.556, Knowledge dimension 0.815 and Practices 0.929.

For the objective of this study items regarding perceptions were also added with a Likert type response model. Answer options were: 2 = agree, 1 = neither agree nor disagree, 0 = disagree.

When evaluating how often certain practices were performed in the clinic, only the last three years of the degree were evaluated. First graders were not considered in this section due to their clinical inexperience.

Statistical analysis

Data was captured and then analyzed in the SPSS (Statistical Package for Social Science) version 22 software (IBM Corp, Armonk, NY, USA). Descriptive measures as percentages were obtained for categorical variables. Likewise, bivariate analyses (Chi squared test) were carried out and a significance of $p < 0.05$ was considered.

RESULTS

A total of 232 students were included (response rate was 87%), of which 65.9% were women. Of the total students surveyed 27.6% were of first year, 31% second year, 21.1% third year and 20.3% fourth year students. The data is almost normally distributed. More than half of the total students (66.4%) rated their knowledge on the prevention of oral diseases as excellent-good and 63.1% mentioned to perform always-frequently preventive treatments in their daily practice. In these two questions there were significant statistically difference according to scholar grade (<0.001) as shown in Table I. The most common preventable oral diseases mentioned by students were caries (81.9%), periodontitis (81.5%) gingivitis (65.1%) followed by oral cancer (16.4%), malocclusion (8.6%), dental fluorosis (10.3%) and dental erosion (1.3%).

Knowledge

With regard to knowledge, it was observed statistically significant differences among diverse grades, in the majority of the items. For instance, almost half of the students (46.5%) of second year identify that a healthy diet rich in calcium helps the prevention of dental fluorosis while in the other grades, percentage was less than 25% (p =0.004) (Table II).

More than 90% identified that soft drinks consumption favors the presence of caries, 70.9% referred that this activity favors the presence of dental erosion, nonetheless it was observed a lower percentage (27.4%) of first-year students answered

Table I. *Global items.*

In general, how would you rate your knowledge about the prevention of oral diseases?						
	First	Second	Third	Fourth	Total	
	%	%	%	%	%	
Excellent-good	26.6	77.7	79.6	89.4	66.4	<0.001
Regular-bad	73.5	22.2	20.4	10.6	33.6	
In general, how often do you practice or apply dental preventative measures?						
	First	Second	Third	Fourth	Total	
	%	%	%	%	%	
Always-frequently	---	80.6	55.1	55.3	63.1	<0.001
Ocasionally-rarely	---	19.5	44.9	44.6	36.9	
Should efforts in dentistry be aimed at...?						
	First	Second	Third	Fourth	Total	
	%	%	%	%	%	
Treating disease	3.0	1.6	2.8	6.1	2.1	0.528
Preventing disease	97.0	98.4	97.2	93.9	97.9	

yes to this statement. Similarly, it was observed for the affirmation of whether the eating disorders are related with dental erosion, in which 86.2% answered yes ($p < 0.001$).

Likewise, 97% recognized that an adequate oral hygiene decreases the risk of presenting caries and periodontal disease; 94% identified that smoking increases the risk of periodontal disease, 96.6% that smoking increases the risk of developing oral cancer, 77.2% were aware that personal control of dental biofilm plays a more relevant role in the prevention of periodontal diseases than the elimination of calculus by a specialist; 43.3% that alcohol consumption increases the risk of developing oral cancer. In all

Table II. *Dental students' knowledge regarding preventive dentistry.*

	First	Second	Third	Fourth	Total	p
	%	%	%	%	%	
A healthy diet rich in calcium helps prevent cavities	64.1	73.6	71.4	59.6	67.7	0.293
A healthy diet rich in calcium helps prevent dental fluorosis	20.3	46.5	38.8	23.4	32.9	0.004
The consumption of soft drinks favors the presence of caries	95.3	94.4	93.9	85.1	92.7	0.168
The consumption of soft drinks favors the presence of dental erosion	27.4	86.1	91.8	83.0	70.9	<0.001
Eating disorders are related to dental erosion	54.7	97.2	98.0	100	86.2	<0.001
Adequate oral hygiene decreases the risk of presenting caries, periodontal disease, oral cancer	100	97.2	91.8	97.9	97.0	0.043
Smoking increases the risk of periodontal disease	89.1	98.6	95.9	91.5	94.0	<0.001
Smoking increases the risk of developing oral cancer	98.4	98.6	91.8	95.7	96.6	<0.001
The personal control of oral biofilm plays a more relevant role in the prevention of periodontal diseases than the elimination of calculus by a specialist	64.1	77.8	85.7	85.1	77.2	<0.001
Alcohol consumption increases the risk of developing oral cancer	25.0	70.4	34.7	36.2	43.3	<0.001
Pit and fissure sealant is effective for the prevention of caries in freshly erupted molars	66.7	79.2	77.6	97.9	79.2	<0.001
Placing pit and fissure sealant is contraindicated when there are already non-cavitated carious lesions in enamel	46.9	39.4	30.6	23.4	36.4	0.037
Periodic application of topical fluoride is only recommended in children	4.8	4.2	8.2	6.4	5.7	<0.001
In the formation of caries the frequency of sugar consumption plays a more critical role than the total amount of sugar consumed	78.1	81.7	85.7	91.5	83.5	0.095
Quantity and quality of saliva have little or no influence on general oral health status	46.9	51.4	67.3	31.9	49.6	<0.001
Examining a tooth, newly erupted or with incipient caries, with a sharp explorer damages the enamel and predisposes the tooth to decay	50.0	94.4	87.8	87.2	79.3	<0.001
The current recommendation is to rinse thoroughly after brushing to remove toothpaste excess	77.8	13.9	73.5	70.2	29.9	<0.001
Children under five years of age should use toothpastes with high fluoride concentration (1500ppm or more)	73.4	25.0	12.2	27.7	15.1	<0.001
I can identify the institutions to which I can refer my patients to support to quit smoking	45.9	45.3	22.4	8.9	32.9	<0.001
Habits such as finger suction, lip or lingual protrusion influence the presence of malocclusions.	81.3	100	98	100	94.4	<0.001
The use of toothpaste should start from the eruption of the first tooth in the mouth.	40.6	70.8	57.1	55.3	56.6	0.006
People should use the amount of toothpaste they want	4.7	2.8	10.2	2.1	3.0	0.254
Breastfeeding has multiple benefits for oral health	64.1	98.6	95.9	89.4	86.6	<0.001

these statements there were statistically significant differences ($p<0.05$).

Regarding whether the quantity and quality of saliva have little or no influence on the state of general oral health 49.6% answered yes. Besides, in the statement about whether to examine a freshly erupted tooth or with incipient caries, with a sharp explorer it damages the enamel and predisposes the tooth to decay in total 79.3 answered affirmatively, percentages differ among grades, 50% of the first-year students answered affirmatively, in comparison to the students of the other grades who obtained a percentage greater than 87%, these differences were statistically significant ($p \leq 0.001$).

In Table II. is shown that 29.9 % of the students answered affirmatively to the statement of whether the current recommendation is to rinse abundantly after brushing to remove the excess toothpaste. More than 15% answered affirmatively to statement that children under 5 years of age should use pastes with high fluoride concentration (1500ppm or more); 15.1% were agree that the use of toothpaste should start from the eruption of the first tooth in the mouth, but there was a marked difference between the first- and second-year students regarding this, they obtained of 40.6% and 70.8% respectively ($p <0.001$). On the other hand, 32.9% identify the institutions to which refer the patients to support them to quit the habit of smoking; 94.4% knows that habits such as finger suction, lip or lingual protrusion hence influence the presence of malocclusions.

Finally, 86.6% students were asked whether breastfeeding has multiple benefits in oral health, in which the 64.1% of first, 98.6% of second, 95.9% third year and 89.4% fourth year students answered yes ($p<0.001$).

Practices

Almost all the students mentioned that they always or frequently recommend their patients attending periodically to consult for control reviews and 79.1% reported to instruct always or frequently on the care of the diet to maintain oral health, in this respect there were differences according to the grades ($p<0.001$).

More than 90% gave instructions on good oral hygiene and recommended to use of hygiene attachments (besides toothbrush) while 81.2% recommend using the appropriate amount of toothpaste, these practices there were differences across grades ($p<0.05$).

Table III. *Prevalence of dental students that perform (always-frequently) preventive measures.*

	Second %	Third %	Fourth %	Total %	p
Recommend attending periodically to consult for control reviews	97.2	98	97.9	97.9	0.356
Give instructions on the control of the diet to maintain oral health	91.7	85.7	57.4	79.1	<0.001
Give instructions to have good oral hygiene	98.6	98.0	85.1	93.6	0.027
Recommend the use of hygiene attachments (independent of the toothbrush)	97.2	100	89.4	94.6	0.031
Recommend using the appropriate amount of toothpaste	88.9	89.8	63.0	81.2	0.001
Give instructions or advice to eliminate or reduce the habit of smoking	50.0	52.1	23.4	42.5	0.011
propose to your patients the use of pits and fissures sealants in the temporary dentition and at the eruption of the permanent dentition	58.3	61.2	48.9	54.8	0.097
Regularly place topical fluoride	73.2	38.8	43.5	51.6	<0.001
Evaluate saliva quality (quantity, pH, etc)	11.1	16.3	6.4	10.9	0.591
Promote and teach how to use tablets or plaque revealing solutions	77.5	69.4	66.0	69.2	0.258
Evaluate quantity of microorganisms in the mouth	9.9	20.8	4.3	12.0	0.093
Use sharp explorer to detect the presence of caries	25.0	43.8	63.8	43.0	<0.001
Perform periodontal probing in the diagnostic appointment to all your adult patients to detect loss of periodontal insertion	86.1	98.0	78.7	85.3	0.068

In respect to whether they give instructions or advice to eliminate or reduce the habit of smoking, 42.5% mentioned they do so. Besides, 54.8% proposed to apply pit and fissures sealants in the temporary dentition and at the eruption of the permanent dentition in their patients.

In total, 51.6% regularly place topical fluoride, nonetheless higher percentage of second year students reported to periodically apply topical fluoride (73.2%), these differences were statistically significant ($p < 0.001$).

Regarding to the evaluation of the quality of saliva it was observed that less than 11% reported to perform this practice in all grades; as well 12% evaluate quantity of microorganisms in the mouth. The 69.2% promote and teach how to use tablets or plaque revealing solutions. Lastly, 43% indicate using sharp explorer to detect the presence of caries always or frequently as can be seen in Table III.

Perceptions

93.1% agree that dentist should promote the reduction or cessation of habit of smoking and 80.2% believes that dentist should also promote breastfeeding, in this last one a statistically significant difference was found among first-year students compared to the senior years ($p<0.001$).

Students were asked if they considered that there should be professionals dedicated exclusively to prevention in dentistry, it was found that 68.8% of first year, 69.4% of second year, 89.8% of third year and 66.0% fourth year answered positively.

As shown in Table IV, almost all the students (98.3%) of the four years obtained similar results when asked if dentist can influence patient to take preventive actions or treatments. In the same way, they agreed that the dentist should promote the decrease or cessation of the habit of smoking.

Table IV. *Dental students' perception regarding prevention in dentistry.*

		First %	Second %	Third %	Fourth %	*Total* %	*p*
Dentist should promote the cessation of smoking		90.6	93.1	95.9	93.6	93.1	0.760
Dentist should promote breastfeeding		43.8	95.8	89.8	95.7	80.2	<0.001
Dentist can influence patients to take preventive actions		98.4	98.6	98.0	97.9	98.3	0.643
Preventive care or performing preventive treatments is profitable		57.4	77.8	71.4	78.7	71.2	0.168
Prevention in dentistry has a scientific basis		92.1	95.8	95.9	95.7	94.8	0.554
There should be professionals dedicated exclusively to prevention in dentistry		68.8	69.4	89.8	66.0	72.8	<0.001
Reason of low practice of prevention in dentistry	Lack of knowledge of the dentist	53.1	63.9	71.4	76.6	65.1	0.052
	Lack of motivation of the dentist	70.3	80.3	85.7	89.4	80.5	0.130
	Lack of commitment of the patient	96.9	90.3	91.8	95.7	93.5	0.238
	Lack of training of the dentist	46.9	61.1	61.2	63.8	57.8	0.121
	Lack of dentist remuneration	21.9	56.9	65.3	59.6	49.6	<0.001
	Dentist's lack of time	20.3	52.8	63.3	48.9	45.3	<0.001

Finally, students were asked to indicate reasons of low practice of prevention in dentistry. The most mentioned was because lack of commitment of the patient (93.5%), lack of motivation of the dentist (80.5%), lack of knowledge of the dentist (65.1%), lack of training of the dentist (57.8%), lack of dentist remuneration (49.6%) and dentist's lack of time (45.3%) (Table IV).

DISCUSSION

The dentist plays an important role in the promotion of oral health and in the control of oral diseases (9), thus it is of utmost importance that future dentists show adequate knowledge and positive attitudes toward preventive practices that contribute to the improvement of oral health.

In our study, the pre-graduated students were evaluated about their knowledge, practices, and perceptions regarding oral health preventive measures. In the first section of the questionnaire belonged to the knowledge, some outstanding facts were observed. Gladly, more than half of the students interviewed were aware of the current toothpaste use recommendations. Almost half of the participants correctly identify the appropriate time to recommend the start of the use of toothpaste, the proper amount to utilize and the recommendation of not rinse. These are in accordance with the indications proposed by the World Dental Federation (FDI) in 2015, in which is mentioned that the correct use of toothpaste does not require rinsing after brushing.

At the other hand, this study revealed that almost half of the respondents considered that the quantity and quality of saliva have little or no influence on the state of oral health. However, there is enough evidence to indicate that hyposalivation is a risk factor for various oral diseases, including the most prevalent such as caries and periodontal diseases (10). Thus, it is of the utmost importance to modify and improve knowledge regarding this concept as it is likely that preventive practices, which include a comprehensive diagnosis, are incomplete, and therefore, partial treatments are proposed.

Secondly, practices were evaluated, in which it was observed that, the percentage of students who apply each preventive practice always or frequently decreases as they increment their studies. The fourth-year students showed the lowest results in practicing preventive oral health measures. For instance, second graders give instructions more frequently on diet care, hygiene techniques, use of attachments, use of tablets and revealing solutions, as well as recommend the amount of toothpaste that should be used.

Smoking habit plays an important role in oral health, as tobacco consumption increases the risk of oral cancer and periodontitis. Cigarettes and Beedi (Indian tobacco) are the most common form of tobacco consumption. Therefore, in order to counsel and help tobacco addicts, counseling and nicotine replacement therapy training for the students is required. However less than 50% of the students give instructions or advice to eliminate or reduce the habit of smoking, even only a quarter of the fourth year students do so. A similar result has been found in dentists and mainly is because they do not feel to be adequately prepared or trained to assist smokers to quit (11). Unfortunately, until now this topic per se in not included within the agenda or list of topics reviewed throughout the degree. Therefore, there is a lack of knowledge of students regarding strategies that could be applied with their smoking patients to advise and guide them to achieve smoking cessation.

Another evaluated aspect was the use of the metal explorer on the dental tissue for initial examination, screening and diagnosis, which is considered as invasive method and nowadays it is contraindicated. The reason is that repeated scratching and forceful probing leads to damage to the dental structure and may cause enamel roughness and fractures or a progression of the injury increasing the susceptibility to caries (9, 12, 13). However, a high percentage of students often continue to use the scout to detect the presence of caries, escalating the number of students who do it as they increase the school year.

Besides, non-favoring data was observed for the performance of evaluations of the quality of the saliva and the amount of microorganisms found in the mouth, which is done by a very low percentage of students. This result can be explained and is predictable because in the bachelor's degree these topics are treated at the level of theory and / or

practices in the first year and not as such in a clinical activity. Students should be made aware of the importance of these evaluations, their involvement in the clinic, the role in the detection of pathologies and the need for this evaluation for the correct establishment of caries risk as determined by various models such as CAMBRA (12, 14).

The high prevalence of caries is the main reason to advocate the use of dental sealants to prevent caries as well as the application of fluoride. The use of pit-and fissure sealants is a preventive strategy that if applied correctly will be effective in preventing cavities and in the same way the periodic applications of fluoride. Nonetheless, a decrease in the frequency of these practices was observed, the second graders use to placed them the most, but fourth-year graders, again, recorded the lowest percentages in these two practices. Thus, it should seek out to create a positive attitude in students regarding the application of these strategies because as mentioned in a study conducted in 2014 (5, 6) the adoption of the use of sealants in clinical practice cannot be successful until dentists have positive attitudes on the placement of sealants and have a complete clinical knowledge based on the evidence on the adequate selection of patients and the use of dental sealants and likewise apply for the use of fluoride (6, 9).

In general, the second-year students perform preventive practices more frequently, probably because they have attended the preventive clinic recently which is course during the first grade. Unlike the fourth-year students who study an area of "pre-specialization", perform more frequently treatments directed to cure the disease. Worryingly, the practices acquired after attending the preventive clinic, are no longer applied by them. This fact is alarming since the fourth-year students are close to graduating and exercising either in a private or public practice, and considering that the Official Mexican Standard (Ministry of Health of Mexico 2015) (15, 16) for the prevention and control of oral diseases, mentions that: dentists must be trained to actively participate in the promotion of oral health. They should be able to timely prevent and detect of oral diseases, as well as meet the dental needs of the Mexican population. Thirdly, dentists should guide and empower people based on the prevention, through health promotion actions and specific oral health protection at a massive, group and individual level. It is therefore of utmost importance that future dentists apply the practices learned during all years of the degree and thus be able to have an active role in the prevention and control of oral diseases. Nonetheless, this is not completely happening even since training. The fact that students do not apply these practices to the required extent is a call to seek and implement strategies to increase their interest in preventative issues, as well as trying to achieve the elimination of improperly performed practices and reinforce their knowledge about the role they should play with their patients in relation to the presence of harmful habits.

Although the students in some practices did not obtain high percentages of frequency, their perceptions towards prevention were positive. For example, almost all the students consider that the dentist should promote smoking cessation but as mentioned before students often do not practice preventive actions to achieve this goal. The perception of the students regarding other preventive topics such as the impact of breastfeeding on oral health were positive in terms of its benefits in oral health and the promotion by the dentist. This is an encouraging fact, but an evaluation would be required on whether this is applied in the clinic and how often.

The students were asked if they considered that there should be professionals exclusively dedicated to prevention in dentistry. It was found that third-year students, in a higher percentage compared to the other years, considered that there should be professionals dedicated only to prevention, this result is attributed to the academic and clinical burden to which they are exposed. Those who undergone the third grade, pass through the advanced clinic in which the different areas of dentistry are integrated and most of the treatments they perform are more aimed at treating pathologies, and preventive treatments are not within the requirements that must be met for the approval of the course. Perhaps this is also the reason why a large percentage of the third-year students considered that the barriers to not practicing preventive dentistry were the lack of remuneration and the lack of time of the dentist. Thus, similarly to other studies (17, 18) we observed a need to update and integrate a more

comprehensive oral health prevention program into the predoctoral dental curriculum,

We conclude that, more than half of the total students rated their knowledge on the prevention of oral diseases as excellent-good and perform preventive treatments in their daily practice. The most common preventive measures were directed to avoid caries and periodontitis. We propose the reinforcement of the knowledge in the area of prevention, emphasizing points on which students obtained poor results, as well as applying strategies where once the knowledge is obtained the student is able to translate into clinical practice. Students should seek to create positive attitudes towards prevention not only in the year in which they attend the preventive clinic, but throughout the years to improve their practices and continue applying them even after they are graduated. It is also paramount to be updated on new techniques and recommendations on oral health prevention measures on time to time basis.

ACKNOWLEDGEMENT

The Research was carried out thanks to the UNAM-PAPIIT Program IN309217.

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