CASE REPORT

Eating Habits and Periodontal Health Status of Dental Students

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ABSTRACT

Objective: The aim of the present epidemiological study was to evaluate the eating habits and periodontal health status among dental students.

Material and Methods: A total of 300 dental students were randomly chosen, out of which 280 (108 males and 172 females) within the age group of 18-27 years, volunteered to participate in the study. The questionnaire was distributed to all subjects through which an awareness of oral hygiene methods and their eating habits was analysed, and periodontal health status of the students was checked.

Results: Unhealthy dietary habits, such as low fruit consumption, frequent consumption of high-fat snacks and skipping breakfast, eating fewer fruits and vegetables on a daily basis and having the high intake of high-fat, high-calorie foods among dental students have been found in our study to a certain extent. The present study shows certain indicators for periodontitis: Overweight students, the presence of Incidental Attachment Loss (IAL), decreased the width of attached gingiva, presence of class II malocclusion, aberrant frenum attachment, positive fremitus test, the presence of bleeding on probing.

Conclusion: Based on the results, it can be concluded that certain risk factors can be responsible for the development of periodontal diseases in dental students. But through proper education, motivation as well as through early detection of these risk factors we can reduce the occurrence of future periodontitis.

Keywords: Health behaviour, oral hygiene habits, eating habits, dental students, periodontal status.

INTRODUCTION

Lifestyle is frequently considered a consciously chosen personal behaviour. Lifestyle may be considered as an expression of the social and cultural circumstances that condition and constrain action, in addition to the personal decisions the individual may make.[1] Food preferences usually established during early life, and as people move through adolescence, they make more and more independent eating decisions, thus, the transition to independent living from school days is an important event. This period of the life when people step out independently for the first time and begin to make all of their food preferences is important. In most of the cases, this corresponds to the transition to college or university life from school. This transition to college or university life is a critical period in young adults, as they often get their first opportunity to make their food preferences, and this could have a negative impact on their eating behaviours. Most important factors that predict the food selection among young adults are taste, cost, nutrition, convenience, pleasure, and weight control. Most of the individuals usually develop their tastes and eating habits during their younger age.[2] Evidence suggests the early establishment of habits and preferences occurs for a variety of behaviours including media use and music listening as well as food choice. Therefore, it is advisable to develop healthy eating habits at the younger age, as early as possible. Further, amongst the beginning of the youngsters' parents' control many food decisions during preschools.[3] Therefore food choice for the youngest age groups may be constrained by many factors.

College students often tend to eat fewer fruits and vegetables in routine daily basis and report increased intake of high-fat, high-calorie foods. The transition to college from school life often worsens dietary habits among students who could contribute to increased weight problems especially during the first years of college or university,[4] and may continue during later years of life.[5]

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Dental health behaviour is complex and associated with smoking habit, alcohol consumption, physical activity and dietary habits. Family characteristics and dental health behaviour of the parents affect regular dental visits by adolescents.[6] With this contextual background, an epidemiological survey was conducted to evaluate the eating habits and periodontal health status among dental students.

MATERIALS AND METHODS

Study population: A cross-sectional survey was carried out in the Department of Periodontology, Saraswati Dental College, Lucknow. The study protocol, questionnaire, data-collection methods and procedure for conducting the study was approved by the Institutional Research and Development Committee and Institutional Human Ethics Committee. A total of 300 dental students were randomly chosen, out of which 280 (108 males and 172 females) within the age group of 18-27 years, volunteered to participate in the study.

Questionnaire: A questionnaire developed for the study included general information: age, gender, height, weight and blood pressure. The weight status was classified into three categories: Underweight (BMI $\leq$18.5 kg/m^2), Normal weight (BMI 18.5 - 22.9 kg/m^2), and Overweight (BMI $\geq$23 kg/m^2). Blood pressure was recorded using a digital device (Omron Automatic Blood Pressure Monitor, Gurgaon, Haryana).

Information pertaining to eating habit: 'skipping breakfast', 'dietary pattern', 'eating until full', 'consumption of fresh fruits', 'consumption of junk food', 'consumption of sweet food', 'consumption of soft drink', 'frequency of going to canteen in a day', 'taking meals between classes to relieve stress', 'frequency of going out with friends/family to eat in a week', 'smoking habit/chewing tobacco', 'craze for deserts/something sweet after meals', 'eating fatty foods', 'fibrous diet', 'leaving food at any point of time to lose weight (anorexia nervosa)', 'overeating (bulimia)', 'physical activity' and 'type of food' were asked from the students.

Oral hygiene habits such as 'tooth-brushing technique', 'frequency of tooth-brushing', 'type of toothbrush used', 'time spent for oral care brush', 'frequent use of mouthwash/ freshener', 'interdental cleaning habits' and 'any other oral hygiene methods' were also recorded. Clinical examination:

Oral examination recorded following periodontal health parameters:

- Plaque index score (PI Score according to Sillness and Loe)[7]

- Calculus index according to Miller[8]

- Modified gingival index score (MGI) as advocated by Lobeene and Wetherford[9]

- Bleeding on probing (BOP) is considered present or absent, if bleeding results with 30 to 60 second after periodontal probe is placed in gingival sulcus up to 2 mm and drawn along the inner surface of the gingival sulcus.

- Probing pocket depth (PPD) and Clinical attachment level (CAL): PPD (distance from gingival margin to base of pocket) and CAL (distance from cementoenamel junction to base pf posket) recorded in two molars in each posterior sextant and upper right and lower central incisors. William's periodontal probe with 1 mm precision was used for calculating PPD and CAL. Deepest PPD was recorded and scored as score 0: less than 3 mm; score 1: between 4 to 5; and score 2: if more than 5. Similarly CAL was recorded and scored as score 0: 1 to 2 mm; score 1: between 3 to 5 mm; score 2: if more than 5 mm.

- Mucogingival problems (aberrant frenum attachment, vestibule and width of attached gingiva)

- Gingival recession were recorded as Mahajan's modification of Miller's classification.[10]

- Incidental attachment loss is and epidemiological descriptor used for sutuations in which the loss in clinical attachment cannot be attributed to periodontal diseases such as chronic or aggressive perioodntitis:[11]

- Furcation involvement was recorded clinically and scored as score 0 = No furcation involvement, 1 = Grade 1 furcation involvement, score 2 = Grade II furcation involvement, score 3 = Through and through penetration but filled with soft tissue and may not be visible, score 4 = Through and through penetration and furcation is visible.[12]

- Occlusion (Angle's Class I, II or III) and trauma from occlusion (Fremitus Test) Height, weight and blood pressure were recorded in the department.

Statistical Analysis: The data was analysed using Statistical Package for Social Sciences (SPSS). Chi-square tests were used to analyse the awareness of oral hygiene methods adopted by the dental students. The p-value less than 0.05 were considered statistically significant, and a P value of less than 0.001 was strongly significant.

RESULTS

Table 1 included the general features of dental students who participated in the study. Results showed that 54.28% of the study population were within normal range for body

Table 1: General features of dental students who participated in the study

Parameter	Standard	Total No. (%)	Total no of Males (%)	Total no of females (%)	"p" value
Age	18-20	79 (56.42%)	31 (57.4%)	48 (55.8%)	χ^2=7.27 (df=3); p=0.064
	21-23	23 (16.4%)	10 (18.5%)	13 (15.11%)	
	24-26	30 (21.4%)	8 (14.8%)	22 (25.5%)	
	>27	8 (5.7%)	5 (9.25%)	3 (3.48%)	
Gender	Males	108			
	Females	172			
BMI (kg/m$^{2)}$	Underweight (<18)	26 (9.2%)	10 (9.2%)	16 (9.30%)	χ^2=49.1 (df=1); p<0.001
	Normal (18-22.9)	152 (54.28%)	32 (29.62%)	120 (70.58%)	
	Overweight (≥23)	102 (36.42%)	66 (61.11%)	36 (21.17%)	

weight while 61.11% of male students were overweight as compared to 21.17% female students. Very few (9.2%) of the dental students were underweight in the study.

Table 2 represented oral hygiene habits among dental students. In the present study, results showed that 45% of dental students followed circular pattern of tooth brushing (42.60% males and 46.5% females). Total of 51.4% of dental students were found brushing their teeth twice a day,

amongst them 59.26% of men brush their teeth twice a day as compared to 46.5% of females. The study reported 44.2% of students preferred using the soft toothbrush. About 88.37% of women dental students take 2 to 5 min for brushing their teeth, as compared to 62.96% of the male students. About 32.8% of dental students reported performing interdental cleaning using dental floss, amongst them, 39.53% of female dental students were using dental floss as compared to 22.2% of males.

Table 2: Oral Hygiene Habits

Question	Options	Total No. (%age)	Total no of Males (% age)	Total no of females (% age)	"p" value
Tooth brushing technique	Horizontal	80 (28.5%)	40 (37.04%)	40 (23.26%)	χ^2=11.7 (df=4); p=0.019
	Circular	126 (45%)	46 (42.60%)	80 (46.5%)	
	Bass	40 (14.2%)	10 (9.26%)	30 (17.4%)	
	Modified Stillman	28 (10%)	12 (11.1%)	16 (9.30%)	
	Any other	6 (2.1%)	0	6 (3.49%)	
Frequency of tooth brushing	Once	106 (37.8%)	32 (29.6%)	74 (43.0.2%)	χ^2=8.52 (df=3); p=0.036
	Twice	144 (51.4%)	64 (59.26%)	80 (46.5%)	
	Thrice	28 (10%)	10 (9.26%)	18 (10.47%)	
	After every meal	2 (0.71%)	2 (1.85%)	0	
Type of tooth brush used	Very Soft	38 (13.5%)	18 (16.67%)	20 (11.63%)	χ^2=26.0 (df=3); p<0.001
	Soft	124 (44.2%)	30 (27.78%)	94 (54.65%)	
	Medium	112 (40%)	54 (50%)	58 (33.72%)	
	Hard	6 (2.1%)	6 (5.56%)	0	
For how much time you brush your teeth	<1min	38 (13.5%)	28 (25.93%)	10 (5.81%)	χ^2=27.6 (df=2); p<0.001
	2-5 mins	220 (78.5%)	68 (62.96%)	152 (88.37%)	
	>5 mins	22 (7.8%)	12 (11.11%)	10 (5.81%)	
How frequently mouthwash/ freshener is used	Never	90 (32.1%)	30 (27.78%)	60 (34.89%)	χ^2=10.6 (df=2); p=0.005
	Occasionally	184 (65.7%)	72 (66.67%)	112 (65.11%)	
	Frequently	6 (2.1%)	6 (5.56%)		
Do you perform interdental cleaning	Yes	132 (47.1%)	52 (48.15%)	80 (46.5%)	χ^2=0.071 (df=1); p=0.789
	No	148 (52.8%)	56 (51.85%)	92 (53.4%)	
Method of interdental cleaning	Flossing	92 (32.8%)	24 (22.2%)	68 (39.53%)	χ^2=80.6 (df=3); p<0.001
	Interdental toothbrush	28 (10%)	38 (25.93%)	0	
	Toothpick	80 (28.5%)	16 (14.81%)	64 (37.2%)	
	Any other	80 (28.5%)	40 (37.04%)	40 (23.25%)	

Table 3: Eating habits of dental students.

Question	Options	Total No. (%age)	Total no of Males (%age)	Total no of females (%age)	"p" value
Skipping breakfast	Not often	146(52.1%)	54(50%)	92 (53.4%)	χ^2=0.138 (df=1);
	Often	138 (49.2%)	54 (50%)	84 (48.8%)	p=0.710
Dietary pattern	Regular	172 (61.4%)	60 (55.5%)	112 (56.6%)	χ^2=2.99 (df=1);
	Irregular	106 (37.8%)	48 (44.4%)	58 (33.7%)	p=0.084
Eating until full	Not often	152 (54.2%)	48 (44.4%)	104 (60.4%)	χ^2=6.86 (df=1);
	Often	128 (61.5%)	60 (55.5%)	68 (39.5%)	p=0.009
Consumption of fresh fruits	Not often	166 (59.2%)	74 (68.5%)	92 (53.4%)	χ^2=4.42 (df=1);
	Often	114 (40.7%)	38 (20.2%)	80 (46.5%)	p=0.035
Consumption of junk food	Not often	108 (38.5%)	42 (38.8%)	66 (38.3%)	χ^2=0.075 (df=1);
	Often	172 (61.4%)	66 (61.1%)	106 (61.6%)	p=0.931
Consumption of sweet food	Not often	136 (48.5%)	52 (48.1%)	84 (48.8%)	χ^2=0.013 (df=1);
	Often	144 (51.4%)	56 (51.8%)	88 (51.5%)	p=0.911
Consumption of soft drinks	Not often	124 (44.2%)	40 (37.0%)	84 (48.8%)	χ^2=3.74 (df=1);
	Often	156 (55.7%)	68 (62.9%)	88 (51.1%)	p=0.053
Frequency of going to canteen in a day	Once	190 (67.8%)	54 (50%)	136 (79%)	χ^2=26.9 (df=2);
	Twice	56 (20%)	36 (33.3%)	20 (11.6%)	p<0.001
	More than twice	34 (12.1%)	18 (16.6%)	16 (9.30%)	
In between classes like to munch on	Toffee	102 (36.4%)	34 (31.4%)	64 (39.5%)	χ^2=1.67 (df=2);
	Chewing gum	72 (25.7%)	32(29.6%)	40(23.2%)	p=0.433
	Nothing	106 (37.8%)	42 (38.8%)	64 (37.2%)	
To relieve stress	Eat sweets	60 (21.4%)	20 (18.5%)	40 (23.2%)	χ^2=34.3 (df=1);
	Smoke	20 (7.14%)	20 (18.5%)	0	p<0.001
	Others	200 (71.4%)	68 (63%)	132 (76.7%)	
Frequency of going out with friends/family to eat in a week	Once	136 (48.5%)	36 (33.3%)	100 (58.1%)	^{2}=26.0 (df=2);
	Twice	82 (29.2%)	32 (29.6%)	50 (29%)	p<0.001
	More than 2 times	62 (22.1%)	40 (37.03%)	22 (12.7%)	
Smoking habit/chewing tobacco	Yes	14 (5%)	14 (12.9%)	0	χ^2=34.3 (df=2);
	No	260 (92.8%)	88 (81.4%)	172 (100%)	p<0.001
	Occasionally	6 (2.14%)	6 (5.5%)	0	
Do you have a sweet tooth	Yes	144 (51.4%)	52(48.14%)	92 (53.4%)	χ^2=0.757 (df=1);
	No	136 (48.5%)	56 (51.8%)	80 (46.5%)	p=0.384
Craze for deserts/something sweet after meals	Yes	162 (57.8%)	78 (72.2%)	84 (48.8%)	^{2}=14.9 (df=1);
	No	108 (42.1%)	30 (27.7%)	88 (51.1%)	p<0.001
Eating fatty foods	Not often	108 (38.5%)	42 (38.8%)	66 (38.3%)	χ^2=0.075 (df=1);
	Often	174 (61.4%)	66 (61.1%)	106 (61.6%)	p=0.931
Fibrous diet	Often	146 (52.1%)	54 (50 %)	92 (52.4%)	χ^2=0.324 (df=1);
	Not often	134 (47.8%)	54 (50%)	80 (46.5%)	p=0.570
Have u left food at any point of time to lose weight (anorexia nervosa)	Yes	82 (29.2%)	36 (23.3%)	46 (26.7%)	χ^2=1.39 (df=1);
	No	198 (70.7%)	72 (66.6%)	126 (73.2%)	p=0.238
Overeating (bullimea)	Yes	72 (25.7%)	40 (37.03%)	32 (18.6%)	χ^2=11.8 (df=1);
	No	208 (74.2%)	68 (62.96%)	140 (81.3%)	p=0.001
Are you fitness freak	Yes	122 (43.5%)	62(57.4%)	60 (34.8%)	χ^2=10.3 (df=1);
	No	158 (56.4%)	46 (42.5%)	112 (65.1%)	p=0.001
You are	Vegetarian	90 (32.1%)	26 (24.07%)	64 (37.2%)	χ^2=5.25 (df=1);
	Non-vegetarian	190 (67.8%)	82 (75.92%)	108 (62.7%)	p=0.022
	Both		0	0	

Table 3 showed the eating habits of dental students where 61.4% of them followed a regular dietary pattern and 52.1% of them did not have a tendency to skip their breakfast in the morning. Infrequent consumption of fresh fruits and the

fibrous food was found to be more in male students than female students (68.5% and 50% respectively). Frequent consumption of sweet food (51.4%), soft drinks (55.7%), fatty food (61.4%) and craze for desserts after meals (57.8%)

were reported in both the groups. The study showed that a maximum number of dental students were non-smokers (92.8%), and 29.2% of dental students had anorexia nervosa, i.e., had left food at some point of time to lose weight. The results obtained in questions related to the frequency of going the to the canteen in a day, and methods of relieving stress, frequency of going out with family/friends to eat at the weekend were strongly significant. Statistical significant

results obtained when questions related to the overeating and physical activity (fitness freak) were asked, and 37.03% and 57.4% of the male students replied in positive, respectively.

Table 4 depicts the periodontal health status of dental students showing calculus index score of zero, modified gingival index score of zero, bleeding on probing and positive fremitus test in 55%, 52.8%, 36.4%, and 25.7%, respectively.

Table 4: Periodontal health status

Question	Options	Total No. (%age)	Total no of Males (%age)	Total no of females and %age	"p" value
Plaque index score	Score 0	-	-	-	$\chi^2=0.091$ (df=1); p=0.763
	Score 0-0.9	142 (50.7%)	56 (51.85%)	86 (50%)	
	Score 1-1.9	138 (49.2%)	52 (48.14%)	86 (50%)	
	Score 2-2.9	-	-	-	
Calculus (Miller 1987)	Score 0	154 (55%)	68 (62.96%)	86 (50%)	$\chi^2=9.78$ (df=2); p=0.008
	Score 1	80 (28.5%)	32 (29.62%)	48 (27.9%)	
	Score 2	44 (15.7%)	8 (7.40%)	36 (20.9%)	
Modified gingival index (Lobeene & Wetherford, 1986)	Score 0	148 (52.8%)	64 (59.25%)	84 (48.8%)	$\chi^2=14.6$ (df=3); p=0.002
	Score 1	96 (34.2%)	24 (22.2%)	72 (41.8%)	
	Score 2	26 (9.2%)	16 (14.8%)	10 (5.81%)	
	Score 3	10 (3.57%)	4 (3.70%)	6 (3.48%)	
	Score 4	-	-	-	
Bleeding on probing	Score 0	102 (36.4%)	50 (46.29%)	52 (30.2%)	$\chi^2=7.39$ (df=1); p=0.007
	Score 1	178 (63.5%)	58 (53.70%)	120 (69.7%)	
Probing pocket depth (>4 mm)	Present	98 (35%)	36 (73.3%)	62 (36.0%)	$\chi^2=0.215$ (df=1); p=0.643
	Absent	182 (65%)	72 (65.45%)	110 (63.9)	
Clinical Attachment loss	Present	84 (30%)	34 (31.48%)	40 (23.2%)	$\chi^2=2.61$ (df=1); p=0.106
	Absent	194 (69.2%)	72 (66.66%)	132 (76.74%)	
Incidental attachment loss	Score 0	214 (76.4%)	72 (66.66%)	142 (82.5)	$\chi^2=9.30$ (df=1); p=0.002
	Score 1	66(23.5%)	36 (33.3%)	30 (17.4)	
Furcation involvement	Score 0 (no furcation involvement)		0	0	-
Occlusion	Angle's 1	262 (93.5%)	98 (90.74%)	164 (95.3)	$\chi^2=2.34$ (df=1); p=0.126
	Angle's II divI	18 (6.4%)	10 (9.25%)	8 (4.65)	
TFO (Fremitus test)	Present	72 (25.7%)	16(14.8%)	56 (32.5)	$\chi^2=10.9$ (df=1); p=0.001
	Absent	208 (74.2%)	92 (85.18%)	116 (67.4)	
Mucogingival problem		190 (67.8%)	66(61.1%)	124 (72.09)	$\chi^2=3.67$ (df=1); p=0.055
a). Abberant frenum attachment (Tension test & blanching)	Test +ve				
	Test -ve	90 (32.1%)	42(38.8%)	48 (27.9)	
b). Type of frenum attachment	Mucosal	252 (90%)	98(90.74%)	154 (89.5)	$\chi^2=6.21$ (df=1); p=0.013
	Gingival	10 (3.5%)	0	10 (5.81%)	
	Papilllary	18 (6.4%)	10(9.25%)	8 (4.65)	
c). Width of attached gingiva	<3.5mm	30(10.7%)	10(9.25%)	20 (11.6)	$\chi^2=1.87$ (df=2); p=0.3292
(i) Maxillary anteriors	3.5-4.5	198 (70.7%)	72 (68.5%)	124 (72.09)	
	>4.5	52(18.5%)	24 (22.2%)	28 (16.2)	
ii) Mandibular premolars	<1.8	90 (32.1%)	34 (31.4%)	56 (32.5)	$\chi^2=1.53$ (df=2); p=0.465
	1.8-1.9	108 (38.5%)	38 (35.18%)	70 (40.6)	
	>1.9	82 (29.2%)	36 (33.3%)	46 (26.7)	
d). Gingival Recession	Class I	50 (17.8%)	20(18.5%)	30 (17.4)	$\chi^2=0$ (df=1); p=1
	Class II	20 (7.14%)	8(7.40%)	12 (6.97)	

DISCUSSION

To the best of our knowledge, this is the first study conducted in North India showing eating habits and periodontal health status of dental students. Evidence suggests the early establishment of habits and preferences occurs for a variety of behaviours including media use, and music listening as well as food choice.[5] Body mass index has been widely used to assess general body composition. It increases with age (25–27), and children aged 7-15 years with normal body mass index may become overweight or obese adults. The World Health Organization recommends that national public health programs should incorporate oral health promotion and disease prevention based on the common risk factors approach. The evaluation of body mass index on a regular basis should be included at health and oral examinations in universities.[13] The World Health Organization (WHO) BMI cut-offs of 25 kg/m² for overweight should be retained as the international classification. However, the WHO expert consultation also reported that Asians generally have a higher percentage of body fat than do white people of the same age, sex, and BMI, and the proportion of Asian people with risk factors for type 2 diabetes and cardiovascular disease is substantial, even below the existing WHO cut-off of 25 kg/m². Therefore, we used a BMI cut-off of 23 kg/m² for overweight, following the recommendations of the WHO.[14-16]

In the present study 54.28%, of students were of normal weight while only 36.42% of students were overweight. It was seen that the male population were more overweight than the female population (61.11% and 21.17%) respectively. The results are similar to studies conducted by Al- Zahrani *et al.*[17] and Takaaki *et al.*[14] In the present study it was found that 51.4% of students brushed their teeth twice a day, that is similar to Harada *et al.*[6] The use of interdental cleaning devices was 47.1%, that was much higher as compared to a study done by Oshima *et al.*,[18] thus indicating the students were aware the use of interdental cleaning aids. Females should be more apt to brush their teeth more frequently and use extra cleaning devices as concluded in studies done by Sakki *et al.*,[19] but the present study has reported the vice versa.

When eating habits were concerned, it was found that there were unhealthy dietary habits among dental students, such as low fruit consumption, frequent consumption of high-fat snacks and skipping breakfast, eating less of vegetables and fewer fruits on a daily basis, whereas, having increased intake of high-fat and high-calorie foods, similar to Tomofuji *et al.*[20] These could be a risk factors for overweight and obesity thereby being a risk factor for periodontitis.[6]

Eating disorders are a group of psychopathological disorders affecting patient relationship with food and her ∕ his body, which manifests through distorted or chaotic eating behaviour.[21] In particular anorexic patients, feel the obsessive need to decrease their body weight, so they tend to achieve weight control mainly by food abstention, which can be sometimes associated with intensive physical activity. On the other hand, the bulimic patient strongly fears to put on weight, but initially has occasional episodes of binge eating, which represents a form of expression of anxiety, depression and ∕ or loneliness; the perceived loss of control over food intake strengthens this fear, so patient eliminates the food that has just been eaten by self-induced vomiting.[22]

Nevertheless, patients' affected by eating disorders may have poor oral hygiene, which may lead to gingival inflammation and potentially predisposition to periodontitis.[22] About physical fitness, male population had significantly higher proportion than females. The findings are similar to a study done by Fukai *et al.*[23]

The present study shows certain indicators for periodontitis: overweight students, the presence of incidental attachment loss (IAL), decreased the width of attached gingiva, the presence of class II malocclusion, aberrant frenum attachment, positive fremitus test, the presence of bleeding on probing. The presence of these findings reveals the risk factors for periodontal diseases. Bleeding on probing (BOP) was found to be significantly higher in both genders similar to a study done by Kongstad *et al.*[24] Incidental attachment loss (IAL) as found in the present study represents initial clinical presentations of localized forms of early onset Periodontitis (EOP) and may be considered as a high-risk group for EOP.[11]

Since it was a cross-sectional study with small sample size, therefore, individual assessment and impact of various categories of BMI (underweight, normal weight and overweight) could not be made. Nevertheless, within the limitation of the study, it can be concluded that through proper education, motivation as well as through early detection of these risk factors, the occurrence of future periodontal diseases can be reduced.

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