

The Impact of Lifestyle on Oral Health Status of Adolescents in Bhopal City, India

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ABSTRACT

Purpose: To assess the impact of lifestyle on Oral health status of Adolescents in Bhopal City, India.

Material and Methods: A convenience sample of 17-23 year old college going adolescents from one Arts institute in Bhopal city were selected for the study. Self reported, close ended questionnaire for adolescents to assess their general and oral health status and lifestyles like smoking, use of alcohol and physical activity was used. Descriptive statistics and Chi-square test were applied. Spearman's R and Pearson's test of Correlation were used.

Results: Out of the total study population, 53.54% were males and 46.45% were females. There was a significant association between lifestyle habits of tobacco and alcohol use and Oral hygiene practice of tooth brushing ($p < 0.05$) and the use of other cleansing aids ($p < 0.05$) among both male and female study subjects.

Conclusion: Hence, it can be suggested lifestyle is significantly associated with the oral hygiene practices of adolescent population. The lifestyle of the adolescent population is a dramatic public health concern. These maladapted habits track into later life as predictors of increased Oral health problems. Hence, it required that the dentists are aware of the influence of lifestyles on oral health status of adolescents and should take appropriate measures to alleviate this issue.

Keywords: Lifestyle factors, tobacco habit, alcohol consumption, physical activity, Oral hygiene practices, oral health knowledge

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I. INTRODUCTION

The term 'lifestyle' is a diffuse which is composed of cultural and behavioural patterns and lifelong personal habits (e.g., physical activity, diet, smoking, alcoholism) that have developed through processes of socialization. Lifestyles are imbibed through communal interface with parents, peer groups, friends and siblings and through school and mass media.¹

Healthy lifestyles are fundamental to public health and involve activities which maintain a balanced health status of the individual while risk behaviour relates to actions which have negative impact on health.²

Life style habits like tobacco and alcohol consumption are major factors for many oral disorders like oral cancer, mucosal lesions, gingival and periodontal disease and dental caries. Available evidence suggests that the risks of oral diseases increase with greater use of tobacco and that quitting the use can result in decreased risk. All of the major forms of tobacco used —cigarettes, cigars, pipe tobacco, and smokeless tobaccos (chewing tobacco and snuff)—have oral health consequences.²

According to World Bank, tobacco use in children and adolescents are reaching pandemic levels and most of them carry this behaviour into their adulthood resulting in smoking related illnesses and premature deaths.¹

Adolescents are highly vulnerable to deleterious lifestyle habits. It is now well established that most of the adult users of tobacco start tobacco use in childhood or adolescence. It is important to understand various factors that influence and encourage young teenagers and adolescents to imbibe wrongful lifestyle habits and analyze its impact on oral health.¹

The emergence of the impaired lifestyle habits, with its future implications, prompted this study to be conducted in the Adolescent population of Bhopal city. The objective of this study was to determine the impact of tobacco use on oral health of adolescents of Bhopal City.

II. MATERIALS AND METHOD

This is an institute based cross sectional survey conducted in an arts school of Bhopal city. Total students were of 1500 students in the age group of 17 to 21 years. The study population was chosen by convenience sampling.

A pilot study was conducted involving 20 students who were not included in the main study, aiming to test the proposed methodology.

The final sample size was 310 subjects.

Ethical clearance was taken from the college. Permissions for conducting this study were taken from Director of College Education, College Authorities and the subjects.

Inclusion criteria:

1. Students present on the day of Survey
2. Students between the ages of 17-23 years

Exclusion criteria:

1. Students absent on the day of survey
2. Students not willing to participate in the study

A self designed, close ended, structured questionnaire was used for collection of data which included the following variables: (a) self-assessment of general health status, (b) self-assessment of oral health status, (c) self-reported oral hygiene practices, (d) lifestyles: smoking, use of alcohol and physical activity, (e) oral health knowledge and attitudes, (f) dental visits and (g) visit to physician. The questionnaires were completed by the students themselves in their classrooms, and teachers supervised the procedure. The questionnaire was formulated in English.

The collected data were coded, and a statistical analysis was carried out by using Microsoft Excel 2007 and Statistical Package of Social Science (SPSS 20). Analysis of the data was carried out by frequency distributions. Descriptive statistics and Pearson's R and Spearman's Correlation were also applied.

III. RESULTS

The present study was conducted among adolescents in the age range 18-24 years. The

associations between Lifestyle habits and Oral health knowledge, attitude and practices among the study subjects were assessed among 310 participants. The study participants consisted of both Male and Female students. Out of the total 91.93% of under graduate students, 54.03% were males and 45.96% were females and out of the total 8.06% of Post graduate students 48% were males and 52% were females.

The association between Oral hygiene practice of using Tooth brush and tooth paste to clean ones teeth and lifestyle habit of tobacco use especially the frequency of tobacco use between the 94.57% male and 100% female subjects was found to be statistically significant ($p=0.011$). There was also a significant association between the Oral hygiene practice of the use of tooth brush and tooth paste as tooth cleaning aids and the time of alcohol consumption between the male and female subjects ($p=.002$). There was a significant association between the oral hygiene practices of the frequency of brushing and the lifestyle habit of frequency of tobacco use among the male and female subjects ($p=.001$). Among the male and female subjects, there was no significant association between oral hygiene practice of rinsing after meals and any of the life style habits. But the association between the use of other cleansing aids like dental floss and the reasons for starting the use of tobacco among both male and female subjects was found to be statistically significant ($p=.043$). (Table 1 A & B)

Among the male subjects (41.93%) with the habit of tobacco use, there was a clear significant association between the lifestyle habit of tobacco use and the practice of the use of other cleansing aids ($p=.026$). The life style habit of not using tobacco and the oral hygiene knowledge of the use of other cleansing aids were found to be statistically significant ($p=.007$) among both the male (88.33%) and female (94%) subjects . There was no significant association between the harmful effects of tobacco, reasons for tobacco and alcohol use and the Oral health knowledge, attitude and practices of the study subjects. The association between the efforts imparted to stop friends from the habit of tobacco use and the oral hygiene knowledge of brushing twice daily, rinsing after meals and the use of other cleansing aids to keep ones mouth clean were found to be significant among the study subjects ($p=.009$, $p=.001$, $p=.041$ respectively). There was a significant association between the frequency of tobacco use and the oral hygiene practice of brushing twice daily ($p=.002$) among both the male and female subjects. There was a significant association between the lifestyle habit of alcohol use and the oral hygiene knowledge of the requirement of brushing twice daily among both the male (27.33%) and female (15.07%) study subjects ($p=.018$). The lifestyle habit of frequency of alcohol use and the oral hygiene

practice of brushing twice daily among the study subjects were found to be statistically significant ($p=.048$). (Table 2 A, B & C).

The Pearson's product moment correlation and Spearman's correlation between Life style habits and Oral Hygiene Knowledge, Attitude & Practices among adolescent study population was determined. There was a significant correlation between Tobacco use and the awareness about rinsing mouth after meals ($p=.034$). The correlation between use of tobacco and the practice of brushing twice daily and the use of other cleansing aids was statistically significant ($p=.012$ and $p=.012$ respectively). The correlation between the reasons for not using tobacco and the awareness regarding the use of other cleansing aids was statistically significant ($p=.004$). The correlation between the efforts imparted to stop friends from the use of tobacco and oral hygiene knowledge of brushing twice daily, rinsing mouth after meals and use of other cleansing aids were statistically significant ($p=.004, p=.000$ and $p=.035$ respectively). The correlation between the efforts imparted to stop friends from the use of tobacco and the oral hygiene practice of using other cleansing aids was also found to be statistically significant ($p=.040$). The correlation between frequency of tobacco use and the practice of brushing twice daily and the frequency of tooth brushing were statistically significant ($p=.000$ and $p=.002$ respectively). The correlation between lifestyle habit of alcohol use and the awareness regarding brushing twice daily were statistically significant ($p=.012$). The frequency of alcohol use and the practice of brushing twice when correlated, was found to be statistically significant ($p=.000$). However there was no correlation between the lifestyle habits of the awareness regarding the harmful effects of tobacco and the reasons for tobacco and alcohol use with the Oral Hygiene Knowledge, Attitude & Practices among adolescent study population. (Table 3-A, B, C & D)

IV. DISCUSSION

It is generally thought that lifestyle habits of smoking and the use of smokeless tobacco may have a detrimental impact on general and oral health. Several studies world-wide have denominated tobacco use as a risk factor for coronal and root caries and disclosed increased caries rates in tobacco smoking young adults, adults, and elderly.^{2, 3, 4} At present, little is known regarding the impact of tobacco on oral health among adolescents and the factors that may influence them. Hence this study was undertaken to analyze the lifestyle habits among adolescents and its impact on oral hygiene practices, knowledge and behaviour among the adolescents in Bhopal City, Madhya Pradesh.

In the present study, an attempt was made to determine the association between lifestyle habits and

Oral health knowledge, attitude and practices. An association was found between alcohol consumption and use of tooth brush and tooth paste, frequency of use of tobacco and knowledge regarding brushing twice daily among adolescents.

The frequency of brushing twice daily and use of dental floss were associated with tobacco consumption. Adolescents who had the habit of tobacco consumption, brushed their teeth twice daily (22.08% males and 6.25% females), and used inter dental cleansing aids like dental floss (41.93%). This could be attributed to poor oral health behaviour among tobacco users.

Adolescents who used tobacco and those who never used tobacco did not report any reason for its use ($p<.05$). Our results reveal that non users of tobacco who made some efforts to stop their friends from using tobacco, showed positive oral health behaviour like brushing twice daily and rinsing mouth after every meal.

A positive correlation was found between the frequency use of tobacco and alcohol and oral health knowledge and practices like brushing twice daily, rinsing after every meal and use of inter dental aids like dental floss. These correlations were statistically significant ($p<.05$).

Mbawalla HS et al (2010)⁵ in their study found a significant association between oral hygiene status and smoking with a moderate frequency (prevalence/occurrence) of poor oral hygiene status, high rates of daily tooth brushing with low rates of smoking which is in accordance with this study. Hellqvist L (2012)⁶ was of the opinion that tobacco users had less frequent dental visits and poorer oral hygiene habits than non-tobacco users. This is in corroboration with the present study. Singh SS et al (2013)⁷ in their study viewed that nicotine habits such as Gutkha" (flavored tobacco) and "Gul manjan"(a dentifrice), and "Bidi" (unfiltered tobacco wrapped in dried "tendu" leaf) have an negative effect on Oral health and showed marked association between lack of scientific dental awareness and high prevalence of tobacco habits. This was in coherence with the present study. In the study by Cinar AB et al (2011)² the association between smoking and oral hygiene practices and attitude were not in association which is in coherence with this present study. Irigoyen-Camacho ME et al (2013)⁸ found a significant association between oral hygiene and tobacco consumption among Mexican adolescents which is in accordance with this study. Petersen PE et al (2008)⁹ suggested a close association between lifestyle habits of smoking or other tobacco usage with oral hygiene practices, which is in unison with this study. In accordance with this study, Purohit B et al (2012)¹⁰ also found a significant association between the lifestyle habit such as smoking and alcohol consumption with Oral health behaviours.

General health and within it, dental health reflect individual health habits and general health behaviour in many ways. Changes in life and the dynamics of living can affect oral health habits and consequently dental health. There are many biological, social and psychological variables working in unison that effect the oral hygiene knowledge, attitude and practices and its connection to lifestyle factors among adolescent population.

Lifestyle may influence general health and oral health behaviour of an individual. Modifying lifestyle increasingly demonstrated in clinical and general populations has resulted in neglect in practice behaviours relevant to health include physical activities, diet, sleeping, smoking, drinking and drug consumption.¹¹ Deleterious habits like alcohol and tobacco consumption can be influenced by lifestyle of the adolescent which in turn is influenced by the family, peers and close associates.¹²

V. LIMITATIONS OF THE STUDY

Limitations of this study can be attributed to the self reported Questionnaire survey procedure followed. As the lifestyle habits like tobacco and alcohol consumption are not culturally accepted behaviours in Indian society, the reporting regarding these habits by the study subjects would have had its limitations. Clinical evaluation of Dental caries and Periodontal status of the adolescents could have

improved the result outcome. The study population included more Undergraduate students when compared to post graduate students. An equal inclusion of students of different educational cadre could have had an impact on the results. As only one institute of Bhopal city was included in the study population, the present results are applicable only to that study group. Inclusion of various groups of study subjects from different institutes, in different zones of Bhopal city would have yielded more generalizable results.

VI. CONCLUSION

A significant association was found between tobacco and alcohol consumption and use of tooth brush and tooth paste and the use of other cleansing aids like dental floss, frequency of use of tobacco and knowledge regarding brushing twice daily among adolescents. The oral health of adolescents, especially those with risk habits is a public health concern and education regarding the deleterious effects of tobacco and alcohol consumption should be imparted to this population. Regular dental and oral check up should be made a priority for this group. Continuous monitoring and regular review of this population is mandatory for betterment of general and oral health of these adolescents in the future.

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Table 1-Association between Oral Hygiene Practices and Life Style Habits (A)

Oral Hygiene Practices	Gender	Use of Tobacco N (%)	Reason of Tobacco use N (%)	Aware of harmful effects of tobacco N (%)	Stopping friends from tobacco use N (%)	Frequency of tobacco use N (%)	Reasons for Starting tobacco Use N (%)	Alcohol consumption N (%)	Time of Alcohol consumption N (%)	Reason for Alcohol use N (%)
Tooth Paste and Tooth brush	Male	36 (21.68%)	134 (80.72%)	163 (98.19%)	130 (78.31%)	157 (94.57%)	5 (3.01%)	48 (28.91%)	159 (95.7%)	159 (95.78%)
	Female	9 (6.25%)	134 (93.05%)	144 (100%)	103 (71.52%)	144 (100%)	144 (100%)	24 (16.66%)	144 (100%)	140 (84.42%)
Statistical Significance	χ^2 value	3.317 P=0.069(NS)	0.647 P=0.421(NS)	-	0.310 P=0.578(NS)	6.413 P=0.011(S)	0.095 P=0.758(NS)	1.939 P=0.164(NS)	9.615 P=0.002(S)	0.75 P=0.784(NS)
Frequency of brushing	Male	24 (14.45%)	83 (50%)	100 (60.24%)	76 (45.78%)	100 (60.24%)	3 (1.8%)	31 (18.67%)	97 (58.43%)	96 (57.83%)
	Female	6 (4.16%)	71 (49.30%)	78 (51.16%)	55 (38.19%)	78 (51.16%)	78 (51.16%)	14 (9.72%)	78 (51.16%)	77 (53.47%)
Statistical Significance	χ^2 value	0.175 P=0.679(NS)	0.059 P=0.844(NS)	-	1.911 P=0.167(NS)	11.073 P=0.001(S)	0.000 P=0.991(NS)	0.092 P=0.761(NS)	0.000 P=0.991(NS)	2.705 P=0.100(NS)

Table 1-Association between Oral Hygiene Practices and Life Style Habits (B)

Rinsing after meals	Male	25(15.06%)	95(57.22%)	116(69.87%)	93(56.02%)	110(66.26%)	03(1.8%)	35(21.08%)	114(68.67%)	114(68.67%)
	Female	3(2.08%)	86(59.72%)	89(61.8%)	62(43.05%)	89(61.8%)	89(61.8%)	19(13.19%)	89(61.8%)	85(59.02%)
Statistical Significance	χ^2 value	0.392 P=0.531(NS)	0.107 P=0.743(NS)	-	0.101 P=0.750(NS)	0.871 P=0.357(NS)	0.239 P=0.625(NS)	0.000 P=0.982(NS)	2.187 P=0.139(NS)	.770 P=0.380(NS)
Other cleansing aids Like Dental Floss	Male	13(7.83%)	28(16.86%)	31(18.67%)	28(16.86%)	29(17.46%)	2(1.2%)	14(8.43%)	30(18.07%)	31(18.67%)
	Female	0	16(11.11%)	17(11.8%)	14(9.72%)	17(11.8%)	17(11.8%)	03(2.08%)	17(11.8%)	15(10.41%)
Statistical Significance	χ^2 value	7.832 P=0.005(NS)	1.605 P=0.205(NS)	-	2.732 P=0.098(NS)	0.471 P=0.492(NS)	1.544 P=0.214(NS)	4.097 P=0.043(S)	0.006 P=0.938(NS)	0.941 P=0.332(NS)

Table 2- Association between Life style habits and Oral Hygiene Knowledge, Attitude and Practices (B)

Lifestyle Habits/ OHKAP	Aware of Brushing twice daily		Aware of Rinsing after meals		Aware of use of other cleansing aids		Dental visit		Regular Dental check up		Physician visit		Hospital admission		Brushing twice daily		Frequency of tooth brushing		Rinse after meals		Use of other cleansing aids	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Tobacco use N (%)	34 (22.66%)	7 (5.5%)	31 (21.08%)	9 (6.42%)	31 (25.83%)	6 (8%)	23 (27.38%)	4 (4.9%)	7 (24.13%)	1 (3.4%)	15 (27.7%)	6 (8.57%)	10 (30.3%)	4 (9.5%)	36 (22.0%)	9 (6.25%)	24 (24%)	6 (7.69%)	25 (55%)	3 (3.37%)	13 (41.93%)	0
Statistical Significance χ^2 value	0.183 P=0.618(NS)		4.506 P=0.062(NS)		1.617 P=0.226(NS)		0.396 P=0.634(NS)		0.104 P=0.814(NS)		0.506 P=0.519(NS)		0.832 P=0.362(NS)		6.248 P=0.061(NS)		0.931 P=0.424(NS)		1.063 P=0.318(NS)		6.276 P=0.026(S)	
Reason for not using tobacco N (%)	126 (84%)	117 (92.85%)	123 (83.67%)	130 (92.85%)	106 (88.33%)	94 (94%)	69 (82.14%)	73 (90.12%)	24 (82.75%)	26 (89.65%)	47 (87.03%)	65 (92.85%)	27 (81.81%)	41 (95.34%)	134 (82.2%)	134 (93.0%)	85 (83%)	71 (91.02%)	95 (89%)	86 (81%)	28 (90.32%)	16 (94.11%)
Statistical Significance χ^2 value	0.891 P=0.407(NS)		1.895 P=0.181(NS)		8.391 P=0.007(S)		0.592 P=0.495(NS)		0.095 P=0.826(NS)		1.584 P=0.226(NS)		0.386 P=0.691(NS)		0.436 P=1.000(NS)		0.310 P=0.608(NS)		0.420 P=0.588(NS)		0.932 P=0.478(NS)	
Harmful effects of tobacco N (%)	150 (100%)	126 (100%)	147 (100%)	140 (100%)	120 (100%)	100 (100%)	84 (100%)	81 (100%)	29 (100%)	29 (100%)	54 (100%)	70 (100%)	35 (100%)	43 (100%)	163 (100%)	144 (100%)	100 (100%)	78 (100%)	116 (100%)	89 (100%)	31 (100%)	17 (100%)
Statistical Significance χ^2 value	Not statistically significant on computation.																					

Lifestyle Habits/ OHKAP	Aware of Brushing twice daily		Aware of Rinsing after meals		Aware of use of other cleansing aids		Dental visit		Regular Dental check up		Physician visit		Hospital admission		Brushing twice daily		Frequency of tooth brushing		Rinse after meals		Use of other cleansing aids	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Stop friends from tobacco use N(%)	122 (81.33%)	94 (74.6%)	124 (84.35%)	101 (72.14%)	101 (84.16%)	73 (73%)	72 (85.71%)	38 (71.6%)	24 (82.75%)	18 (62.06%)	48 (88.88%)	50 (71.42%)	30 (90.9%)	32 (74.41%)	130 (79.75%)	103 (71.5%)	76 (76%)	55 (70.51%)	93 (80.17%)	62 (69.6%)	28 (90.32%)	14 (82.35%)
Statistical Significance χ^2 value	8.266 P=0.009(S)		14.157 P=0.001(S)		4.457 P=0.041(S)		1.710 P=0.232(NS)		0.448 P=0.500(NS)		1.175 P=0.349(NS)		1.829 P=0.218(NS)		0.138 P=0.566(NS)		1.114 P=0.348(NS)		0.013 P=1.000(NS)		4.234 P=0.044(S)	
Frequency of tobacco use N(%)	144 (96%)	126 (100%)	141 (95.91%)	140 (100%)	114 (95%)	100 (100%)	78 (92.85%)	81 (100%)	26 (89.65%)	29 (100%)	51 (94.44%)	70 (100%)	30 (90.9%)	43 (100%)	137 (96.31%)	144 (100%)	100 (100%)	78 (100%)	110 (94.82%)	89 (100%)	29 (93.54%)	17 (100%)
Statistical Significance χ^2 value	0.001 P=0.360(NS)		0.492 P=0.420(NS)		0.756 P=0.678(NS)		3.036 P=0.126(NS)		2.746 P=0.124(NS)		0.024 P=1.000(NS)		1.302 P=0.368(NS)		13.254 P=0.066(NS)		9.657 P=0.002(S)		1.226 P=0.430(NS)		0.937 P=0.297(NS)	
Reason for tobacco use N(%)	4 (2.66%)	126 (100%)	5 (3.4%)	140 (100%)	4 (3.33%)	100 (100%)	2 (2.38%)	81 (100%)	0	29 (100%)	1 (1.85%)	70 (100%)	1 (3.03%)	43 (100%)	5 (3.06%)	144 (100%)	3 (3%)	78 (100%)	3 (2.58%)	89 (100%)	2 (6.45%)	17 (100%)
Statistical Significance χ^2 value	0.425 P=0.443(NS)		0.407 P=1.000(NS)		0.201 P=1.000(NS)		0.357 P=0.668(NS)		1.170 P=0.388(NS)		0.847 P=0.652(NS)		0.056 P=1.000(NS)		0.050 P=1.000(NS)		0.014 P=1.000(NS)		0.085 P=1.000(NS)		2.5334 P=0.173(NS)	

Lifestyle Habits/ OHKAP	Aware of Brushing twice daily		Aware of Rinsing after meals		Aware of use of other cleansing aids		Dental visit		Regular Dental check up		Physician visit		Hospital admission		Brushing twice daily		Frequency of tooth brushing		Rinse after meals		Use of other cleansing aids	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Alcohol use N(%)	41 (27.33%)	19 (15.07%)	44 (29.93%)	23 (16.42%)	35 (29.16%)	13 (13%)	32 (38.09%)	9 (11.11%)	8 (27.58%)	5 (17.24%)	18 (33.33%)	15 (21.42%)	9 (27.27%)	9 (20.9%)	48 (29.44%)	24 (16.66%)	31 (31%)	14 (17.94%)	35 (30.17%)	19 (21.34%)	14 (45.16%)	3 (17.64%)
Statistical Significance χ^2 value	6.293 P=0.018(S)		0.589 P=0.450(NS)		1.757 P=0.190(NS)		0.185 P=0.691(NS)		0.083 P=0.865(NS)		0.855 P=0.415(NS)		0.002 P=1.000(NS)		3.053 P=0.143(NS)		0.457 P=0.590(NS)		2.033 P=0.162(NS)		4.166 P=0.064(NS)	
Frequency of alcohol use N(%)	4 (2.66%)	126 (100%)	4 (2.72%)	140 (100%)	4 (3.33%)	100 (100%)	2 (2.38%)	81 (100%)	2 (6.89%)	29 (100%)	2 (3.7%)	70 (100%)	3 (9.09%)	43 (100%)	4 (2.45%)	144 (100%)	3 (3%)	78 (100%)	2 (1.72%)	89 (100%)	1 (3.22%)	17 (100%)
Statistical Significance χ^2 value	0.425 P=0.443(NS)		1.171 P=0.322(NS)		0.201 P=1.000(NS)		0.357 P=0.668(NS)		1.515 P=0.236(NS)		0.000 P=1.000(NS)		3.458 P=0.097(NS)		19.208 P=0.048(S)		0.014 P=1.000(NS)		1.549 P=0.341(NS)		0.079 P=0.571(NS)	
Reasons for alcohol use N(%)	2 (1.33%)	4 (3.17%)	4 (2.72%)	4 (2.85%)	2 (1.66%)	4 (4%)	2 (2.38%)	1 (1.23%)	0	3 (10.34%)	0	4 (5.71%)	0	3 (6.97%)	4 (2.45%)	4 (2.77%)	4 (4%)	1 (1.28%)	2 (1.72%)	4 (4.49%)	0	2 (11.76%)
Statistical Significance χ^2 value	1.656 P=0.215(NS)		0.658 P=1.000(NS)		0.065 P=1.000(NS)		0.816 P=0.481(NS)		1.906 P=0.173(NS)		0.342 P=0.718(NS)		0.748 P=0.411(NS)		0.080 P=1.000(NS)		0.087 P=1.000(NS)		0.289 P=0.721(NS)		0.568 P=0.359(NS)	

Table 3- Pearson's R and Spearman's Correlation between Life style habits and Oral Hygiene Knowledge, Attitude & Practices - (A)

Lifestyle Habits/ Oral Hygiene Knowledge, Attitude & Practices		Aware of Brushing twice daily	Aware of Rinsing after meals	Aware of use of other cleansing aids	Dental visit	Regular Dental check up	Physician visit	Hospital admission	Brushing twice daily	Frequency of tooth brushing	Rinse after meals	Use of other cleansing aids
Tobacco use	Pearson's R	-.024 P=.670(NS)	-.121 P=.034(S)	0.072 P=.205(NS)	0.036 P=.530(NS)	-.018 P=.748(NS)	0.040 P=.479(NS)	0.052 P=.363(NS)	-.142 P=.012(S)	0.055 P=.336(NS)	-.059 P=.304(NS)	0.142 P=.012(S)
	Spearman's Correlation	-.024 P=.670(NS)	-.121 P=.034(S)	.072 P=.205(NS)	.036 P=.530(NS)	-.018 P=.748(NS)	.040 P=.479(NS)	.052 P=.363(NS)	-.142 P=.012(S)	.055 P=.336(NS)	.059 P=.304(NS)	.142 P=.012(S)
Reason for not using tobacco	Pearson's R	0.054 P=.347(NS)	0.078 P=.170(NS)	0.165 P=.004(S)	-.044 P=.443(NS)	-.018 P=.758(NS)	.071 P=.209(NS)	.035 P=.536(NS)	-.038 P=.511(NS)	-.052 P=.579(NS)	.057 P=.519(NS)	.055 P=.336(NS)
	Spearman's Correlation	.054 P=.347(NS)	.078 P=.170(NS)	.165 P=.004(S)	-.044 P=.443(NS)	-.018 P=.758(NS)	.071 P=.209(NS)	.035 P=.536(NS)	-.038 P=.511(NS)	-.052 P=.579(NS)	.057 P=.519(NS)	.055 P=.336(NS)
Harmful effects of tobacco	Pearson's R Spearman's Correlation	No Correlation seen										

Table 3- Pearson's R and Spearman's Correlation between Life style habits and Oral Hygiene Knowledge, Attitude & Practices - (B)

Lifestyle Habits/ Oral Hygiene Knowledge, Attitude & Practices		Aware of Brushing twice daily	Aware of Rinsing after meals	Aware of use of other cleansing aids	Dental visit	Regular Dental check up	Physician visit	Hospital admission	Brushing twice daily	Frequency of tooth brushing	Rinse after meals	Use of other cleansing aids
Stop friends from tobacco use	Pearson's R	.163 P=.004(S)	.214 P=.000(S)	.120 P=.035(S)	.074 P=.192(NS)	-.038 P=.505(NS)	.062 P=.280(NS)	.077 P=.177(NS)	.021 P=.711(NS)	-.060 P=.293(NS)	-.006 P=.910(NS)	.117 P=.040(S)
	Spearman's Correlation	.163 P=.004(S)	.214 P=.000(S)	.120 P=.035(S)	.074 P=.192(NS)	-.038 P=.505(NS)	.062 P=.280(NS)	.077 P=.177(NS)	.021 P=.711(NS)	-.060 P=.293(NS)	-.006 P=.910(NS)	.117 P=.040(S)
Frequency of tobacco use	Pearson's R	.016 P=.777(NS)	.040 P=.485(NS)	-.049 P=.386(NS)	-.099 P=.082(NS)	-.094 P=.098(NS)	-.009 P=.876(NS)	-.065 P=.255(NS)	.207 P=.000(S)	.177 P=.002(S)	-.063 P=.270(NS)	-.055 P=.335(NS)
	Spearman's Correlation	.016 P=.777(NS)	.040 P=.485(NS)	-.049 P=.386(NS)	-.099 P=.082(NS)	-.094 P=.098(NS)	-.009 P=.876(NS)	-.065 P=.255(NS)	.207 P=.000(S)	.177 P=.002(S)	-.063 P=.270(NS)	-.055 P=.335(NS)

Table 3- Pearson's R and Spearman's Correlation between Life style habits and Oral Hygiene Knowledge, Attitude & Practices (C)

Lifestyle Habits/ Oral Hygiene Knowledge, Attitude & Practices		Aware of Brushing twice daily	Aware of Rinsing after meals	Aware of use of other cleansing aids	Dental visit	Regular Dental check up	Physician visit	Hospital admission	Brushing twice daily	Frequency of tooth brushing	Rinse after meals	Use of other cleansing aids
Reason for tobacco use	Pearson's R	-.037 P=.516(NS)	.036 P=.525(NS)	.025 P=.655(NS)	-.054 P=.352(NS)	-.061 P=.281(NS)	-.052 P=.359(NS)	-.013 P=.814(NS)	.013 P=.824(NS)	.007 P=.907(NS)	-.017 P=.771(NS)	.087 P=.127(NS)
	Spearman's Correlation	-.037 P=.516(NS)	.036 P=.525(NS)	.025 P=.655(NS)	-.054 P=.352(NS)	-.061 P=.281(NS)	-.052 P=.359(NS)	-.013 P=.814(NS)	.013 P=.824(NS)	.007 P=.907(NS)	-.017 P=.771(NS)	.087 P=.127(NS)
Alcohol use	Pearson's R	-.142 P=.012(S)	-.044 P=.444(NS)	-.075 P=.186(NS)	.024 P=.660(NS)	-.016 P=.774(NS)	.053 P=.357(NS)	-.002 P=.965(NS)	-.099 P=.081(NS)	.038 P=.500(NS)	.038 P=.500(NS)	.116 P=.041(NS)
	Spearman's Correlation	-.142 P=.012(S)	-.044 P=.444(NS)	-.075 P=.186(NS)	.024 P=.660(NS)	-.016 P=.774(NS)	.053 P=.357(NS)	-.002 P=.965(NS)	-.099 P=.081(NS)	.038 P=.500(NS)	.038 P=.500(NS)	.116 P=.041(NS)

Table 3- Pearson’s R and Spearman’s Correlation between Life style habits and Oral Hygiene Knowledge, Attitude & Practices (D)

Lifestyle Habits/ Oral Hygiene Knowledge, Attitude & Practices		Aware of Brushing twice daily	Aware of Rinsing after meals	Aware of use of other cleansing aids	Dental visit	Regular Dental check up	Physician visit	Hospital admission	Brushing twice daily	Frequency of tooth brushing	Rinse after meals	Use of other cleansing aids
Frequency of alcohol use	Pearson's R	-.057 P=.516(NS)	-.061 P=.281(NS)	.025 P=.655(NS)	-.034 P=.552(NS)	.070 P=.220(NS)	.000 P=1.000(NS)	.106 P=.063(NS)	-.249 P=.000(S)	.007 P=.907(NS)	-.071 P=.215(NS)	.016 P=.779(NS)
	Spearman's Correlation	-.057 P=.516(NS)	-.061 P=.281(NS)	.025 P=.655(NS)	-.034 P=.552(NS)	.070 P=.220(NS)	.000 P=1.000(NS)	.106 P=.063(NS)	-.249 P=.000(S)	.007 P=.907(NS)	-.071 P=.215(NS)	.016 P=.779(NS)
Reasons for alcohol use	Pearson's R	-.073 P=.199(NS)	.046 P=.419(NS)	.014 P=.800(NS)	-.051 P=.368(NS)	.078 P=.168(NS)	.033 P=.560(NS)	.049 P=.389(NS)	.016 P=.778(NS)	.017 P=.769(NS)	.031 P=.593(NS)	.043 P=.453(NS)
	Spearman's Correlation	-.073 P=.199(NS)	.046 P=.419(NS)	.014 P=.800(NS)	-.051 P=.368(NS)	.078 P=.168(NS)	.033 P=.560(NS)	.049 P=.389(NS)	.016 P=.778(NS)	.017 P=.769(NS)	.031 P=.593(NS)	.043 P=.453(NS)

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