PROFILE AND PATTERN OF LIFE FOR COLLEGE GOING SMOKERS & NON-SMOKERS STUDENTS

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Tobacco use leads most commonly to diseases affecting the heart, liver and lungs. It also causes peripheral arterial diseases and high blood pressure. The coughing throat irritation and shortness of breath caused by smoking have always been obvious. Smoking on college campus has become an important public health issue and there has been increase in campus wide smoking bans and other preventative programs to reduce the rates of students smoking. Adolescents Students are the most vulnerable population to initiate tobacco use. It is now well established that most of the adult users of tobacco start tobacco use in adolescence. There has been a perceptible fall in smoking in the developed countries after realization of harmful effects of tobacco. The tobacco companies are now aggressively targeting their advertising strategies in the developing countries like India. The majority of lifelong smokers begin smoking habits before the age of 24, which makes the college years a critical time. Smoking increases the risk for several types of cancer. The risk of dying from lungs cancer is more than 22 times higher among males who smoke cigarettes and approximately 12 times higher among female compared with never smokers. It is estimated that between 1995-2025 tobacco-related diseases will cost medicare about $ 800 billion (Arday et al.2002). Research has found that a history of cigarette use is associated with poorer self reported physical and mental health. (Garces et al.2004.)

Tobacco use in children and adolescents is reaching pandemic levels. The World Bank has reported that nearly 82,000–99,000 children and adolescents all over the world begin smoking every day. About half of them would continue to smoke to adulthood and half of the adult smokers are expected to die prematurely due to smoking related diseases. If current smoking trends continue, tobacco will kill nearly 250 million of today's children. (Gopalan et al. 1989). Tobacco companies are more heavily targeting this population through print, media, specially item distribution and sponsorship of public entertainment events. Smoking can cause cancer, heart disease, stroke, asthma and a wide variety of other diseases. If smoking pattern continuous, the annual number of people dying of smoking related diseases globally will double from 5-10 Million death by 2020. In India, 2200 persons die every day from tobacco related diseases. 70% of tobacco smoked in India is in form of Bidis. Bidis kill 6, 00,000 people in India every year. There has been a recent trend of college students to start smoking (Wechsler et al, 1998, Warren et al. 2000). This trend may stem, at least in part, from targeting of college, students by the tobacco industry.

Tobacco is smoked in the forms of **beedis** and cigarettes or by using devices like **hooka, hookli, chhutta, dhumti, or chillum**. Smoking of cigars and pipes are not common in India, as they are in most western countries.

Cigarette smoking is common in urban areas. Both locally manufactured and imported brands of cigarettes are available. **Beedi** is a cheap smoking stick, handmade by rolling a dried, rectangular piece of tendu leaf with 0.15–0.25 g of sun-dried, flaked tobacco. Beedis are commercially available in small packets.

Hooka (A hubble bubble Indian pipe) is an indigenous device, made out of wooden and metallic pipes, used for smoking tobacco. Hooka smoking is a common method of socializing among the village folk, especially in the Northern and Eastern parts of India. However, it is not popular among adolescents, because the adults generally discourage younger population from using hooka. **Hookli** is a short clay pipe-like device, being about 7 cm long, and is used for smoking tobacco in some parts of the country.

Chhutta is a coarsely prepared roll of tobacco (cheroot), smoked with the burning end inside the mouth (reverse chhutta smoking). Its use is prevalent in coastal areas of the province of Andhra Pradesh in southeastern India.

Dhumti is a cigar-like product made by rolling tobacco leaves inside the leaf of jackfruit tree. Occasionally, dried leaf of a banana plant is used. Dhumti smoking is quite popular in the Goa province of the Western India.

Chillum is a conical clay-pipe of about 10 cm long. The narrow end is put inside the mouth, often wrapped in a wet cloth that acts as a filter. This is used to smoke tobacco alone or tobacco mixed with *ganja* (marijuana) in northern parts of the country.

American Journal of public Health reported on the Analysis of tobacco industry documents that the industry recognizes the transition stage to college is stressful for young adults and thus provides a marketing opportunity to encourage new smokers and solidify existing patterns of smoking. (Ling & Glantz 2002). Most of the students start smoking from their college life. In this stage, everyone wants its own identity among his friends and also in society (Kristine 2001.)

Therefore, an attempt has been made to find out effect of smoking on health status, on nutrition and life style of college going students.

Selection of City: The Prayagraj city of Uttar Pradesh was selected purposively for the investigation.

Selection of College: From Prayagraj, five colleges were selected purposively because it was convenient for authentic collection of data for the study.

Selection of Respondents: Total 100 respondents were selected randomly, in which 50 were smokers and 50 were non-smokers. 10 smokers and 10 non-smokers were selected from each college. Thus contributing 100 by random selection.

Collection of Data: Questionnaire-cum-interview method was used for data collection as it is reliable method to elicit information about health status, nutrient intake and life style of college going smokers and non-smokers.

Statistical Analysis: Statistical tools viz. Percentage, Mean and Chi-Square test were used for statistical analysis.

Result and Discussion: From the study it was reported that maximum respondents' i.e.64.5 percent smokers and 35.5 percent non-smokers were between the age group of 25 years and above. 65 percent smokers were in graduation and 35 percent were in post graduation. In non-smokers groups, 72.5 percent were in graduation and 27.43 percent were in post graduation.

Table-1: Distribution of Respondents on the Basis of Physical Assessment

S.No.	Particulars	Smoker group N=50			Non Smoker group N=50		
		Mean	S.D	r' Value	Mean	S.D	r' Value
1	Height(cm)	168	7.5	-0.1751	165.8	6.2	-0.0689
2	Weight (kg)	57	6.5	0.2951*	56.8	5.5	0.0155
3	BMI	20.2	2.4	0.3905*	20.5	2.3	0.0473

* 5% significant level

In the above table, the Mean BMI of the smokers and non-smokers was 20.2 and 20.5 respectively. The r' Value for the smokers is 0.3905 which is significant which shows that the BMI increases with age and for the non-smokers group, r value is 0.0473 which is non-significant.

Table-2: Distribution of Respondents on the basis of health problems

S.No.	Health Problems	Smoker Group N=50		Non-Smoker group N=50	
		Frequency (n)	Percent	Frequency n)	Percent
1	Cough	4	8	2	4
2	Burning Sensation	9	18	1	2
3	Headache	17	34	15	30
4	Teeth problem	08	16	02	04
5	None	12	24	30	60
	Total	**50**	**100**	**50**	**100**

Table 2 shows that 34 percent smokers suffered from headache and 30 percent of the non-smokers suffered from headache. 16 percent smokers and 4 percent non-smokers suffered teeth problem and 18 percent smokers suffered from burning sensation whereas in non-smokers group only 2 percent non-smokers suffered sensation in digestive track. Total tooth loss is common among smokers. (Chaloupka 1999).

Table-3 Distribution on the Basis of Food Habits

S. No.	Food Habits	Smokers Group N=50		Non-Smokers Group N=50	
		Frequency	Percent	Frequency	Percent
1.	Vegetarian	23	46.0	35	70.0
2.	Non Vegetarian	27	54.0	15	30.0
		50	100.0	50	100.0

Chi-Square test   11.052 $p < 0.05$

It was found from the study that in smokers most of the smokers i.e.54 percent user non vegetarian whereas in non-smokers group only 30 percent were non vegetarian. (Allam and Gorty 1992). WHO reported that dietary habits varied between the smokers and non-smokers. Comparisons of the dietary habits of the two groups revealed that majority of the smokers were non vegetarian as compared to non-smokers. The observed value of chi-square is 11.052 which is significant shows that smokers preferred non vegetarian food.

Table-4 Distribution of Nutrients intake in Respondents

S.No.	Nutrients Units	Smokers group N=50			Non-Smokers group N=50		
		Mean	RDA	Deficient	Mean	RDA	Deficient
1.	Energy(kcal)	2244	2425	-7	2131	2425	-14
2.	Protein (gm)	68.9	60	+13	67.6	60	+11
3.	Fat.(gm)	51.3	20	+61	43.3	20	+54
4.	Vitamin-C (mg)	54.7	40	+ 27	72.4	40	+45

It was found from the above study that mean intake of nutrient such as energy was 2244 kcal and 2131 kcal in smokers and in non-smokers group respectively. Protein consumption was 68.9 gm and 67.6 gm in smoker and in non-smokers groups respectively. Fat intake was 51.3 gm in smokers group and 43.3 gm in non-smokers group Cade and Barrie (1990) reported that the dietary habits of smokers and non-smokers are also seem to be varied considerably. The daily energy, fat and CHO intake is found to be higher in smokers then in non-smokers. Consumption of vitamin-C was found to be 54.7 mg and 72.4 mg

respectively in smokers and in non-smokers group. (Subr & Harla 1993) reported that smokers ate half the amount of citrus fruit than did non-smokers. It was reported that vitamin C intake were 24-30 % lower among smokers compared with non-smokers.

Table-5   Distribution on the basis of reason of Skipping Meal

S. No.	Reasons	Smokers group N=50		Non-smokers group N=50	
		Frequency	Percent	Frequency	Percent
1.	Lack of Time	15	50.0	14	56.0
2.	Economic Problem	-	-	-	-
3.	Eating something in between meal	10	33.3	7	28.0
4.	Lack of appetite	5	16.7	4	16
	Total	**30**	**100**	**25**	**100**

Chi-Square test   6.52 $p < 0.05$

It reveals that among respondents 33.3 percent smokers and 28 percent non-smokers skipped their meal due to eating something in between meals and 16.7 percent smokers and 16 percent non-smokers skipped their meal due to lack of appetite. The observed value of chi-square is 6.52, which is significant which shows that maximum number of the smokers were skipped their meal due to different reasons in comparison to non-smokers.

Tobacco industry documents provide an important source of information on industry activities. Academic studies of industry documents and youths have focused on proving that the tobacco industry targeted youths in its advertising. It was analyzed that tobacco industry documents to determine why the industry developed youth programs, to describe the themes that were pursued and how these programs were used, and to find evidence of whether these programs reduce youth smoking. The purpose of the industry's youth smoking prevention programs is not to reduce youth smoking but rather to serve the industry's political needs by preventing effective tobacco control legislation, marginalizing public health advocates, preserving the industry's access to youths, creating allies within policymaking and regulatory bodies, defusing opposition from parents and educators, bolstering industry credibility, and preserving the industry's influence with policymakers. Industry programs portray smoking as an adult choice and fail to discuss how tobacco advertising promotes smoking or the health dangers of smoking. The industry has used these programs to fight taxes, clean-indoor-air laws, and marketing restrictions worldwide. There is no evidence that these programs decrease smoking among youths. Therefore it was found that Tobacco industry youth programs do more harm than good for tobacco control. The tobacco industry should not be allowed to run or directly fund youth smoking prevention programs. (Landman et al 2002)

Conclusion:

On comparing the health status it was found that large number of smokers reported high blood pressure, high pulse rate in comparison to non-smokers and was reported to health problems like headache, teeth problem, burning sensation and cough problem than non-smokers. Study reveals that dietary habits differ in both groups. On assessing the dietary intake of both groups, it was concluded that most of the smokers were non vegetarian. They were irregular in their meal intake due to lack of time eating something in between meals and had lack of appetite. The energy intake was lower in both group in comparison to recommended dietary allowances but protein, fat and vitamin-c intake was found to be higher than recommended dietary allowances. The nutrient intake like energy, protein and fat was higher in smokers groups whereas vitamin-c intake was higher in non-smokers group. Smokers also reported greater frequency of disturbance in their life.

Recommendation:

- Students should be discouraged for smoking.
- Students should be encouraged to have nutritious diet and avoid fast food.
- Special classes for them like personality development, nutritional, self care, yoga and meditation should be organised.
- Yearly medical check up should be done at college level.
- Guardians should be aware about their child.

References:

1. Kristine, M.G., "Alcohol and Tobacco-A Delay duo", American Journal of Nutrition, 37 (2), 2001, p.187-188.
2. Frank J Chaloupka, "Curbing the Epidemic: Governments and the Economics of Tobacco Control." The World Bank; Tobacco control, 8; 1999, p.196-201.
3. Arday, D. R., Pauline L. Chin J., & Preston J A., "Smoking Patterns Among Seniors and the Medicare Stop Smoking Program" Journal of the American Geriatric Society, 50(10), 2002; p.1689-1697.
4. Garces, Y.I., Schroeder, D.R., Nirelli, L.M , Croghan, G.A., Croghan, I. T., Foote, R.L. & Hurt, R.D., "Tobacco use outcomes among patients with head and neck carcinoma treated for nicotine dependence , A matched-pair analysis" Journal of Cancer,101(1) 2004, p.116-124.
5. Ling, P.M. and Glantz, S.A. "Why and How the Tobacco Industry Sells Cigarettes to Young Adults: Evidence from Industry Documents". American Journal of Public Health, 92, 2002, p.908-916.
6. Gopalan, Ramashastri, B.U. and Balasubramanian, S.C., "Nutritive Value of Indian Foods, National Institute of Nutrition", Indian Council of Medical Research, 1989,p.47-98.
7. Allam. A. & Gorty P.V., "Illiteracy, Ignorance and Willingness to quit smoking villages in India," Jpn Journal Cancer Res, 84 (4), 1992, p.340-3.
8. Warren CW, Riley L, Asma S, Eriksen MP, Green L, Blanton C, Loo C, Batchelor S. & Yach D. "Tobacco use in youth: a surveillance report from the Global Youth Tobacco Survey Project". Vol. 78. Bulletin of World Health Organization; 2000. p. 868–876.
9. Cade. M.J. and Barrie, "Smoking and Diet, is the diet of smokers adequate", proc. Nutr. Soc., 49(1-5), 1990, p.419.
10. Subr. A.F., Harla. L.C., "Nutrient and Food Group intake by Tobacco use status, A Survey", Ann.N.4 Acad, Sci, 686, 1993, p.310-21.
11. Gupta PC. Survey of socio-demographic characteristics of tobacco use among 99598 individuals in Bombay, India using handheld computers. Tobacco Control. 1996;5: p.114–120.
12. Bhonsle RB, Murti PR, Gupta PC, Mehta FS. Reverse dhumti smoking in Goa: an epidemiological study of 5449 villagers for oral precarious lesions. The Indian Journal of Cancer. 13, 1976, p. 301–305.
13. Wechsler, H., Rigotti, N.A., Gledhill-Hoyt. J. & Lee H, "Increased levels of cigarette use among college students. A cause for national concern", Journals of the American Medical Association, 280, 1998, p.1673-78.
14. Landman, A., Ling, P.M. & Glantz, S.A. "Tobacco industry youth smoking prevention programs: protecting the industry and hurting tobacco control" Am J Public Health, 92(6), 2002, p.917-30.
15. http:// www.jrussellshealth.com
16. http://www.lifeonline.org