

Smoking Amongst Young College Girls in Mumbai: Prevalence and Predisposing Factors

Shivani Chowdhury Salian¹, Binal Kevadia²

Abstract

Purpose of the Study: This study was conducted to determine the prevalence of smoking, knowledge about the ill effects of smoking on health, and the influence of family members' smoking habits among college female students.

Materials and Methodology: The cross-sectional survey was carried out amongst 1000 young college-going girls in and around Mumbai to know the prevalence of cigarette smoking amongst young college girls between 18 and 25 years, with reference to the factors that caused the initiation of smoking, daily smoking activities, the desire levels of smoking, psychological mind set and the quit rates. Other factors like the common age at which females tend to begin smoking are also looked into. Data was collected via a questionnaire, which was designed and validated indigenously. This survey would thus be a stepping stone for future studies to be conducted on this topic.

Outcome Measures: Self-reports of cigarette smoking in the past 30 days and in the past year, age at smoking first cigarette, and number of attempts to quit.

Results: Descriptive analysis was done using SPSS version 18. In the present study, 1000 samples were taken out of which 13% college girls were cigarette smokers while 87% subjects did not smoke cigarettes. Girls from all three major courses of study had participated in the study (science, commerce and arts) of which 68% were science students. 3% subjects smoked only cigarettes while 10% consumed both cigarette and hookah.

Conclusion: The study concludes that the prevalence of smoking amongst girls varies in different subject streams and that family and friends have a great influence on individuals starting or stopping smoking. Extensive health education programs are needed to educate young women on the health hazards of smoking and help stop them from smoking. Also, the main cause of initiation of smoking was friends' influence and encouragement; the next cause being studies' stress while few subjects started smoking out of curiosity and just to try, and a few girls started just for fun. It was also ascertained that peer pressure does cause young girls to initiate smoking.

Keywords: Community, Young Population, Girls, Smoking, Desire

¹Prof and HOD, Department of Electrotherapy and Electrodiagnosis, ²Physiotherapy Intern, School of Physiotherapy, D.Y. Patil University, Nerul, Navi Mumbai.

Correspondence: Dr. Shivani Chowdhury Salian, Department of Electrotherapy and Electrodiagnosis, School of Physiotherapy, D. Y. Patil University, Nerul, Navi Mumbai.

E-mail Id: chowdhury.shivani@gmail.com

Orcid Id: <https://orcid.org/0000-0003-4704-2868>

How to cite this article: Salian SC, Kevadia B. Smoking Amongst Young College Girls in Mumbai: Prevalence and Predisposing Factors. *Ind J Youth Adol Health* 2017; 4(4): 17-23.

Digital Object Identifier (DOI): <https://doi.org/10.24321/2349.2880.201726>

ISSN: 2349-2880

Introduction

Smoking, as we all know, has now in this 21st century, become an enemy of a healthy lifestyle. More and more people not only throughout India but even all over the world are getting addicted to smoking every day. In India, tobacco usage in women has doubled in the last 5 years, according to the Global Adult Tobacco Survey. The survey also found that the frequency of cigarette smoking per day by women is higher than the frequency of 6.1 by men.¹

The study, titled 'Smoking Prevalence and Cigarette Consumption in 187 Countries – 1980-2012' was carried out by the Institute for Health Metrics and Evaluation at the University of Washington and released last year. According to the sobering finding of this global tobacco study, the number of women smokers in India went up from 5.3 million in 1980 to 12.7 million in 2012. Cigarette consumption in India is falling steadily even as the number of women smokers is rising, making it home to the second-largest number of female smokers after the United States.²

The trend of increase in female smoking rates, meanwhile, is a global one with some rare exceptions like Japan where rates have stayed constant over the years. The Atlas estimates that lung cancer is now killing more women than breast cancer and smoking rates are particularly increasing among young girls in many countries.³

The woman wants to assert her freedom in today's world; she wants to emulate all the wrongs that man perpetuates in this world. Somewhere instead of showing a new path, an 'educated and liberal' woman's psyche and definition of power, freedom and expression is tied to man's world.

There are different factors and reasons that have made the young female population get so much involved in the smoking habits. It has become a topic of priority for professionals working in the health sector all over India to take interest in this important matter and help find an effective solution for it.

All the myths that women, especially the younger group, who believe in the sophistication of smoking and its gender allure need to be told about this false belief and live a more healthier and safe lifestyle for themselves and for their better future.

Therefore, through the present survey, we tried to observe and report various perceptions of college-going young girls regarding the habit of smoking. We have also assessed various other factors that lead them into adopting this habit, the common age at which they begin smoking, reasons for adopting the same, and whether they have

considered quitting smoking. We aim at taking this survey to the next level in future by providing counselling to those who have opted and thought positive in the direction of quitting this habit.

Aim of the Survey

To assess the incidence of smoking amongst young college girls within the age group of 18–25 years; also to observe and report the probable causes of smoking among young college girls and how many of the female smokers have actually given a thought to quit smoking.

Material and Methodology

A cross-sectional community-based survey was conducted amongst 1000 young college girls between 18 and 25 years of age from the faculty of Arts, Commerce, Science; professional courses from Medical, Dental, Occupational therapy, Physiotherapy, Engineering, Biotechnology, Law, Designing, Pharmacy, Chartered accountant (CA) and Company Secretary (CS) courses from colleges across Mumbai city. Data was collected via a questionnaire distributed to and collected from the included population. Also through Google form, face validation of the questionnaire was carried out by an expert Dr. Rohan Bartake from Community Health Department of Asian Cancer Hospital. The protocol of the survey was validated by the ethics committee of School of Physiotherapy, D.Y. Patil University, Nerul, Navi Mumbai. Filled and return copies were collected and considered to be from the ones who consented to be a part of this survey. Questionnaires were distributed to the girls who had agreed to participate by a therapist and were collected by someone else on some other day to avoid any biases in data collection. Forms collected from girls above 25 years of age and below the age group of 18 years were excluded from the data. The survey procedure was designed to ensure confidentiality and voluntary participation. The answer sheet did not contain any information on the identity of the student or of the college. The filled questionnaires were collected, analyzed and graphically represented.

Observations and Results

Observations were tabulated and descriptive analysis was done using SPSS software version 20.

Demographic information was tabulated and the mean, median and mode were assessed and the percentage of female students was noted. Table 1 depicts the demographic data of the participants who responded to the questionnaire. The mean age of the students who participated in the study was 20 years.

Table 1. Distribution of Number of Girls from Different Age Groups

Age (Years)	Number of Students	%	Mean	Median	Mode
18	235	24	20.25	20	21
19	160	16			
20	140	14			
21	243	24			
22	111	11			
23	51	5			
24	34	4			
25	27	3			
Total (N)	1000				

The study population was grouped into three major fields of arts, science and commerce to classify subjects according to their fields and courses. The courses were further sub-classified into specialties as shown in Table 2. Amongst

the sample population, it was observed that 680 college girl students were from the faculty of science; a total of 230 students were from commerce and lastly, 90 students belonged from arts faculty.

Table 2. Classification of the Subjects According to Their Faculties and Specialties

Faculty	Course	No.	%	Mean	Median	Mode
Science	1=Medical	40	6	61.82	24	5 (according to the numerical value given to the courses falling under the faculty of science)
	2=Engineering	114	17			
	3=Biotech	11	2			
	4=Dentistry	24	3			
	5=Physiotherapy	396	58			
	6=Ayurveda	5	1			
	7=Occupational Therapy	33	4			
	8=BSc	37	5			
	9=Junior College science	12	2			
	10=Pharmacy	4	1			
	11=Nutrition and health	4	1			
Total		680				
<i>BSc: Bachelor of Science</i>						
Commerce	1=CA	26	11	19.17	14	2 (according to the numerical value given to the courses falling under the faculty of commerce)
	2=BCom/MCom	70	30			
	3=BA	40	17			
	4=LLB	6	3			
	5=Journalism	6	3			
	6=BMM	4	2			
	7=BFM	3	1			
	8=BMS	22	10			
	9=BAF	5	2			
	10=Economics	2	1			
	11=Business management	24	10			
	12=Junior college commerce	22	10			
Total		230				
<i>CA: Chartered accountant, BCom: Bachelor of commerce, MCom: Master of Commerce, BA: Business administration, LLB: Bachelor in Law, BMM: Bachelor of Mass Media, BFM: Business Forms Management, BMS: Bachelor of Management studies, BAF: Bachelor in Accounting and Finance</i>						
Arts	1=Animation	1	1	12.86	5	5 (according to the numerical value given to the courses falling under the faculty of arts)
	2=Architecture	10	11			
	3=Fashion designing	8	9			
	4=Interior designing	5	6			
	5=Junior college arts	61	68			
	6=Psychology	4	4			
	7=Hospitality	1	1%			
Total		90				

The preference of cigarette and hookah smoking was observed in the study population. Table 3 shows the number and percentage of students who smoked hookah, cigarettes, both or none. It was observed that a total of 29% of students

accepted to be smoking some type of tobacco on regular basis. In all, 292 young girls with a mean age of 20 years smoked some form of tobacco. 71% students were non-smokers.

Table 3. Number and Percentage of Subjects who Responded Positively to the Smoking Questionnaire

Consumption Preference	Number of Students	% of Students
1=Only cigarette	33	3
2=Only hookah	157	16
3=Both	102	10
4=None	708	71
Total	1000	

A further detailed classification was done to observe the brand of cigarettes that they prefer to consume. Table 4 shows the number, percentage and the mean, median

and mode value that were observed in this study. It was observed that maximum females preferred to smoke the Marlboro brand of cigarettes.

Brand of Cigarette	Number	%	Mean	Median	Mode
1=Wills Classic	21	16	26.4	22	3 (according to the numerical value given to the categories of brands of cigarette)
2=Gold Flake	22	17			
3=Marlboro	54	41			
4=Four Square	13	9			
5=Any brand available	22	17			
Total	132				

The main focus of this study was to find out reasons that made the subjects try smoking a cigarette for the first time. Table 5 tells us about various reasons that motivated the subjects to smoke for the first time, the classification of

the subjects according to it. It was observed that friends were main reason to encourage the subjects to try cigarette smoking.

Table 5. Number, Percentage, Mean, Median and Mode of the Subjects According to the Reasons that Made Them Smoke a Cigarette for the First Time

Reasons to First Start Smoking	Number	%	Mean	Median	Mode
1=Friends	36	27	22	19	1 (according to the numerical value given to the categories of reasons to first start smoking)
2=Curiosity to try	22	17			
3=Fun	16	12			
4=Peer pressure	15	11			
5=Stress and studies	33	25			
6=Nothing in particular	10	8			
Total	132				

The rest of the observations obtained from the study were segregated into four categories and into a frequency intervals of age:

- Personal factors
- Social factors
- Psychological factors

- Efforts to quit smoking

Each category gives detailed information about how cigarette smoking by them or their family and friends has affected the daily lives of the subjects and if they have ever tried to quit smoking. Tables 6, 7, 8 and 9 given below will help us to know about these categories.

Table 6. Representation of the Results Obtained under the Domain of Personal Factors

Domain	Question	Response	Result in %
Personal Factors	At what age did you start smoking cigarette for the first time?	14–17 years	25
		18–20 years	69
		21–23 years	6
	How many cigarettes do you smoke in a day?	<5 (everyday)	64
		5–10 (everyday)	27
		>10 (everyday)	2
		Not specific	3
		Rarely in a week	4
	How much money do you spend every day on cigarettes?	<=25 Rs	29
		<=50 Rs	37
		<=75 Rs	20
		<=100 Rs	11
		101–500 Rs	3
	Greatest desire to smoke cigarette on the scale of 1–10	1–3	76
		4–7	19
		8–10	5
	During what time of the day you have the strongest desire to smoke a cigarette?	Early morning	11
		Afternoon	25
		Evening	64
Where do you prefer to smoke a cigarette?	Washroom	2	
	At home	5	
	Cafes	16	
	Generally along with friends	77	

According to the results acquired for questions regarding personal factors (Table 6), 33% of the subjects started smoking cigarette for the first time between the age group of 14 and 17 years. 69% of the girls smoked first time around the age of 18 to 20 years and 6% girls started smoking cigarette for the first time between the age group of 21 and 23 years.

Also, maximum number of girls smoked less than five cigarettes a day spending around less than or equal to

50 rupees a day. Maximum number of girls had a mild to moderate desire of smoking ranging from 1–7 on a 10 point scale. Most of the girls smoked more in the evening (64%). 77% girls generally mentioned that they smoked with friends.

Table 7 explains the distribution of factors such as influence of parents, relatives and friends on their habit of smoking. It is evident that friends are a strong influencing factor amongst young college-going female smokers.

Table 7. Representation of the Results Obtained under the Domain of Social Factors

Domain	Questions	Response	Results in %
Social Factors	Do any of your parents smoke cigarette?	Yes	11
		No	89
	Distribution of the fathers who smoke cigarette	Fathers of those girls who smoke cigarette	24
		Fathers of those girls who do not smoke cigarette	76
	Do any other members of your family smoke cigarette?	Yes	20
		No	80
	If yes, mention the members who smoke cigarette?	Uncle	49
		Aunt	2
		Sibling	34
		Cousins	7
		Grandfather	8
	Do any of your current friends smoke cigarette?	Yes	60
		No	40
	Do all your female friends smoke?	Yes	8
No		59	
Some		33	

Table 8. Representation of the Results Obtained under the Domain of Psychological Factors

Domain	Questions	Response	Results in %
Psychological Factors	Do you think boys find it appealing if girls smoke?	Yes	30
		No	70
	Do you smoke more when you are around with boys?	Yes	17
		No	83
	Do you know about the adverse effects of smoking on your health?	Yes	95
		No	5

Table 8 enlists the response percentage of the subjects concerning the psychological domain, i.e., factors like influence of smoking on the opposite gender and their awareness regarding the ill effects of smoking.

30% girls thought that the boys find it appealing if they smoked, and most of them were aware of the ill effects of smoking.

Table 9. Representation of the Results Obtained under the Domain of Efforts to Quit Smoking

Domain	Questions	Response	Results in %
Efforts to quit smoking	Have you ever tried to quit cigarette smoking?	Yes	36
		No	64
	If yes, how many times did you try to quit smoking before?	1 to 5 times	73
		6 to 10 times	9
		Many times	18
	Did you succeed in quitting cigarette smoking?	Yes	45
		No	55
	If yes, for how long did you stop smoking cigarette?	<1 month	12
		1 to 6 months	61
		7 to 12 months	12
		>1 year	15
	Which methods did you use to quit smoking cigarette?	Medication	31
		Counselling and rehab	28
		Nicotine gum	36
		Other methods – bad health and will power	5
	Greatest desire to quit smoking cigarette, on a scale of 1 to 10	1 to 3	33
		4 to 7	29
		8 to 10	38

According to the responses from Table 9, it is evident that 36% of girls have tried to quit cigarette smoking and surprisingly 64% subjects have not tried to quit cigarette smoking or did not wish to give up the habit.

students. 3% subjects smoked only cigarettes while 10% consumed both cigarette and hookah.

Discussion

This survey study is aimed to assess the incidence of smoking amongst young college-going girls between the age group of 18 to 25 years. According to a global tobacco study, the number of women smokers in India went up from 5.3 million in 1980 to 12.7 million in 2012.² In the present study, 1000 samples were taken, out of which 13% subjects were cigarette smokers while 87% subjects did not smoke cigarettes. Girls from all three major courses of study had participated in the study out of which 68% were science

Girls between the age of 18 and 21 years show maximum incidence of initiation of smoking according to the present survey. This may be due to the excitement of entering the adult life or due to excessive load of studies that increases at this age. According to the present study, maximum number of subjects, i.e., 27% subjects first started smoking due to their friend’s influence and encouragement while 24% started smoking cigarettes due to stress of studies. 11% of girls first starting smoking due to peer pressure. According to a study conducted by Soteriades and DiFranza⁴ in Massachusetts, the risks regarding smoking among adolescents increased up to 28% with each step down in the education of parents. Likewise, the risk of adolescent

smoking shot up to 30% with each step down in the income of parents. In general, smoking status of parents is the intermediary of these both associations. In the present study, parental influence does not seem to be a factor in young college girls smoking cigarettes.

According to the present study, 30% of the subjects agreed that boys find it appealing if girls smoke while 70% subjects oppose this view. Not only that, out of the cigarette-smoking subjects, 17% agreed that they smoked more when boys were around. 95% of the girls responded that they knew about the adverse effects of cigarette smoking on their health. Female smoking has enormous consequences not only for women's health, and economic wellbeing, but also for their families. The health effects of smoking for women are more serious than for men. In addition to the general health problems common to both genders, women face additional hazards in pregnancy, female-specific cancers, such as cancer of the cervix, and exposure to passive smoking. In India, although there are currently lower levels of tobacco use among women, smoking among girls is already on the rise in some areas. The spending power of girls and women is increasing so that cigarettes are becoming more affordable. The social and cultural constraints that previously prevented many women from smoking are weakening, and women-specific health education and quitting programmes are rare. Furthermore, evidence suggests that women find it harder to quit smoking. The tobacco companies are targeting women by marketing light, mild, and menthol cigarettes, and introducing advertising directed at women. The greatest challenge and opportunity in primary preventive health in India is to avert the predicted rise in smoking among women. Apart from the health risks that women share with men, women face additional hazards like adverse pregnancy outcomes, female-specific cancers, such as cancer of breast, cervix, and increased cardiovascular risks.⁵ In the present study, 34% of subjects tried to quit cigarette smoking out of which 45% were successful to quit smoking. 36% of subjects used nicotine gums to help them quit while 28% underwent counselling and rehab to help them quit smoking. The positive result found here is that 38% of the subjects who smoked cigarettes still have the strongest desire to quit smoking in the near future.

Conclusion

292 (29%) young girls studying in various faculties of courses in colleges responded positive to smoking. According to the present study, the main cause of initiation of smoking was

friends' influence and encouragement, the next cause being studies' stress while few subjects started smoking out of curiosity and just to try and a few girls started just for fun. It was also ascertained that peer pressure does cause young girls to initiate smoking. Also, a huge population of girls tried to quit smoking, out of which most were successful to quit. And a few who were able to quit smoking for at least 1 to 6 months were reinitiated into smoking later on.

Smoking continues to remain a major cause of morbidity and mortality from respiratory disorders, as well as several other diseases including cancers. There is a strong need to augment efforts to control the tobacco epidemic.

Significantly, a large number of students expressed a desire to quit. It is, therefore, important to target this population and provide education and help. Both tobacco control and tobacco cessation activities continue to remain important public and personal health issues.

Acknowledgment

We extend our sincere gratitude to Dr. Rohan Bartake, Coordinator of Community Health & Comprehensive Care in Somaiya Ayurvihar – Asian Cancer Institute, Mumbai, for helping us validate our questionnaire used in the study.

Conflict of Interest: None

References

1. Puri M. Smoking: Habit or Fashion for Indian Women. *International Multidisciplinary e-Journal* 2012; ISSN 2277-4262.
2. Nagarajan R, Thakur A. Smoking dips 10% in 2 years in India but women smokers up sharply. *The Times of India* Dec 28, 2015.
3. Ghosh. Smoking rates down among Indian men, up among women. The fifth edition of Tobacco Atlas; Global Adult Tobacco Survey factsheet for India 2009-2010, March 20, 2015.
4. Soteriades ES, DiFranza JR. Parent's socioeconomic status, adolescent's disposable income and adolescent's smoking status in Massachusetts. *American Journal of Public Health* 2003; 93(7): 1155-60.
5. Goel S. Smoking trends among women in India: Analysis of nationally representative surveys (1993-2009). *South Asian J Cancer* Oct-Dec 2014; 3(4): 200-02.

Date of Submission: 2017-9-04

Date of Acceptance: 2017-10-10