PREVALENCE OF TOBACCO USE AMONG SCHOOL GOING ADOLESCENTS IN BHOPAL

Ritesh Rawat¹, Aditya Thakur²

HOW TO CITE THIS ARTICLE:

Ritesh Rawat, Aditya Thakur. "Prevalence of Tobacco use among School Going Adolescents in Bhopal". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 05, January 15; Page: 815-820, DOI: 10.14260/jemds/2015/117

ABSTRACT: BACKGROUND: Tobacco use is a major proven risk factor and contributes substantially to the rising epidemic of non-communicable diseases. **OBJECTIVE:** 1.To study the prevalence of the use of smokeless tobacco/smoking amongst the school going children.2. To study the risk factors associated with tobacco use in the adolescents. **MATERIAL AND METHODS:** This was a Cross-sectional study. By simple random technique one private and one government school were selected after enlisting all the schools of Bhopal. All the adolescent students of class ninth to twelfth standard were interviewed. Statistical analysis was done using proportions and chi – square test. **RESULT:** In this study the prevalence was 15.95%. Smoking is the most common form of using tobacco by adolescents than tobacco chewing. Main inducing factor for addiction was found to be self for fun (55%) than friends (36%). Tobacco consumption significantly associated with habit in relatives (Chi-square = 58.5 p value < 0.001). There were no significant association for tobacco use amongst the students of government and private schools. **CONCLUSION:** Habit in relatives and friends is major predisposing factor towards the addiction.

KEYWORDS: Adolescents, Smokeless/ smoking Tobacco, Prevalence.

INTRODUCTION: Tobacco is the most widely distributed and commonly used drug in the world, today. The smoking habit usually begins many young people start during adolescence; largely because they believe that tobacco chewing and smoking will boost their social acceptability. The overwhelming majority of smokers start using tobacco before the age of 19.

Tobacco use is a leading cause of preventable deaths world over, more so in developing countries nearly 70% of the world's smokers live in low- and middle- income countries. Nearly two-thirds of the world's smokers live in 10 countries, namely China, India, Indonesia, Russian Federation, the USA, Japan, Brazil, Bangladesh, Germany and Turkey.^[1] In India alone, nearly 1 in 10 adolescents in the age group 13-15 yr have ever smoked cigarettes and almost half of these reports initiating tobacco use before 10 yr of age.^[2]

The tobacco situation in India is unique because of a vast spectrum of tobacco products available for smoking as well as smokeless use.^[3] Smoking of cigarette particularly beedis and chewing tobacco (Smokeless use) is an age –old practice in India. The most common reasons cited for children to start using tobacco are peer pressure, parental tobacco habits and pocket money given to children.^[4] There are only a few studies on prevalence and initiation of smoking and smokeless tobacco use among children in our country.^[5,6] The present cross-sectional study was undertaken to determine the Prevalence of tobacco use among school going adolescents in Bhopal city in India.

ORIGINAL ARTICLE

OBJECTIVES:

1. To study the prevalence of the use of smokeless tobacco/smoking amongst the school going children.
2. To study the risk factors associated with tobacco use in the adolescents.

MATERIAL AND METHODS: A descriptive cross-sectional school based epidemiological study was conducted during September to November 2014 in Bhopal. Both the private and the government schools of Bhopal were enlisted first and from this list one school from private and one from government were selected as a study school by simple random sampling method. After taking prior permission from principal of the school, interview dates of the study were fixed. Written consent from the students was taken for the interview.

A pre-designed and pre-tested proforma was used for data collection and each and every student of 9th to 12th standard who was present at the time of interview was included in the study and confidentiality of each interview was maintained. The data was analyzed after assessing the sheets obtained from each student. This was followed by an educational lecture given to the same students with the aim of spreading awareness regarding the ill-effects of tobacco and the benefits and methods of quitting this undesired habit.

Characteristic	Number (N=351)	Percentage
Age group (years)		
15	0	0 %
16	114	32.48 %
17	119	33.90 %
18	93	26.50 %
19	25	7.12 %
School		
Govt.	145	41.31%
Private	206	58.68%
Educational level		
9th	46	13.11%
10th	110	31.34%
11th	169	48.15%
12th	26	7.41%
Religion		
Hindu	271	77.21%
Muslim	79	22.51%
Christian	1	0.28%

Table 1: Sociodemographic characteristics of the adolescent student

ORIGINAL ARTICLE

Tobacco Consumption (n=56)	
Type of Exposure:	
Tobacco chewing	11(19%)
Smoking	25(45%)
Tobacco chewing and smoking	20(36%)
Age of onset:	
11-12 years	5(8.9%)
12-13 years	9 (16%)
14-15 years	25 (44.6%)
16 years and above	17 (30.3%)
Origin of addiction:	
Friends	20(36%)
Self for fun	31(55%)
Relatives	5(9%)

Table 2: Distribution of adolescents as per their exposure to tobacco consumption

	Tobacco Consumption		
	Yes	No	p value
Habit in relatives			
Yes	34	43	<0.001
No	22	252	
Habit in friends			
Yes	30	169	<.75
No	26	126	
Type of family			
Joint	44	158	
Nuclear	12	137	<0.0005
Type of School			
Govt.	20	125	
Private	36 (N=56)	170 (N=295)	<0.5

Table 3: Different characteristics of adolescent student and tobacco use

RESULT:The total of 351 students was participated in the study and tobacco use in any form (smoking or chewing) was found in 56 (15.95%) students. Government school students comprised 41.3 per cent (145) of the subjects, while 58.7% (206) studied in private schools. More than 75 per

ORIGINAL ARTICLE

cent of the students belonged to Hindu families. About 65% students between the 16-17 year age group. Among the students, maximum (36.4%) participants were 17 years of age, followed by 16 and 18 years respectively. (Table-1)

45 % of the students were smoker and 36 % consumed both form of tobacco (Chewing and smoking). Majority (55%) of the students started smoking self for fun followed by 36 % because of compulsion from friends. Common age for initiation of tobacco use was 14-15 years in the study. (Table- 2)

Amongst the students tobacco consumption was significantly associated with habit of consumption in relative ($p < 0.001$) and in joint family members ($p < 0.0005$) but no significant association according to type of school. (Table- 3)

DISCUSSION: The study conducted on 351 students of class 9th-12th in schools of Bhopal and the Prevalence of tobacco use among the school going students was 15.95% which was almost near to study conducted by Rahul Sharma et al in New Delhi, it was 16.0%.^[7] The prevalence of ever tobacco use was 19.7% (95% CI 17.7 to 21.6) in the study in Nepal by Pradhan PMS et al^[8], higher prevalence was observed by Ankita Singh et al in their study i.e. 44%.^[9]

Smoking is the most frequent form of using tobacco by adolescents than Tobacco chewing. Naresh R et al found opposite to this in their study in Gujarat and main inducing factor for addiction was found to be friends (61.69%) but in our study mainly by self for fun followed by friends.^[10]

In our study the most common age of onset was found to be 14-15 yrs. The mean age for tobacco use initiation (smoking and chewing) in our study was found to be in consistency with studies from Kathmandu, Noida, and Kerala, India where the mean ages of onset were 14.15, 12.4 and 13.2 years, respectively.^[11,12,13] Early- and middle-adolescents are more vulnerable to initiation of tobacco use; hence, a target group is highlighted for early intervention to reduce the uptake of this habit.

Habit in relatives is significant predisposing factor towards the addiction. Our findings are in agreement with the observation by WHO that adolescents whose parents or siblings smoke or whose friends do so are particularly likely to use tobacco themselves.^[14] Jha (1994) too reported that examples set by siblings and parents, and peer pressure are strongly associated with tobacco use by young people.^[15] Other studies in India support the observation too.^[16,17] The results of a longitudinal study too emphasized that close friends', siblings', and parents' smoking were all important influences on children's smoking.^[18]

The present study differs from the previous research works in the finding that a sibling seen smoking was found to have a stronger effect on tobacco use by the adolescent than peer influence. This could be explained by the fact that in the context of Indian culture, the family still retains a considerable influence over the adolescent as compared to western countries, where the adolescents seek to gain independence quite early and relate more with their peer group.

A limitation of the present study is that the findings and their interpretations are restricted to adolescent students only. Further studies are needed that cover the groups of adolescents who are out of school or college, as the prevalence of health risk behaviors is likely to be higher among such adolescents.

ORIGINAL ARTICLE

CONCLUSION: The study revealed that tobacco use is prevalent among the adolescent students despite the existence of antitobacco regulations in the country. Tobacco consumption habit in relative and family type was significantly associated with tobacco use. Taking these factors into consideration, tobacco focused interventions should target vulnerable groups to prevent uptake of the habit and support abstinence among the users. Involvement of teachers, parents and nongovernment organizations (NGOs) are important steps in addressing these problems.

REFERENCES:

1. Detels R, Beaglehole R, Lansang MA, et al. Oxford Textbook of Public Health. New York: Oxford University Press, 2009.)
2. Sinha D1. N, Reddy KS, Rahman K, Warren CW, Jones NR, Asma S. Linking Global Youth Tobacco Survey (GYTS) data to the WHO framework convention on tobacco control: the case for India. Indian J Public Health 2006; 50: 76-89.) 1
3. Gupta PC. Tobacco control in India. 2. Indian J Med Res 2006; 123: 579-82.).
4. Mohan S, Sankara-Sarma P, Thankappan KR. Access to7. Pocket money and low educational performance predict tobacco use among adolescent boys in Kerala, India Prev Med 2005, 41: 685-92.)
5. Bhojani U4. M, Chander SJ, Devadasan N. Tobacco use and related factors among pre-university students in a college in Bangalore, India. Natl Med J India 2009; 22: 294-7.)
6. Kumar M, Poorni S, Ramachandran S. Tobacco use among 3. School children in Chennai city, India. Indian J Cancer 2006; 43: 127-31.
7. 7.Rahul Sharma, Vijay I, Grover, Sanjay Chaturvedi, tobacco use among adolescent students and the influence of role models; Indian journal of community medicine; April 2010; volume 35; issue 2; page no. 272-275.
8. Pradhan PMS, Niraula SR, Ghimire A, et al. Tobacco use and associated factors among adolescent students in Dharan, Eastern Nepal: a cross-sectional questionnaire survey. BMJOpen 2013; 3:e002123. Doi: 10.1136/bmjopen-2012-002123.
9. Ankita Singh, Dr. Rajul Vivek A study on tobacco use, its knowledge and practice among school going children in Ghaziabad district of Uttar Pradesh. Asian Journal of Modern and Ayurvedic Medical Science (ISSN 2279-0772)Vol.2, No.1, January 2013.
10. Kotwal A, Thakur R, Seth T. Correlates of tobacco-use pattern amongst adolescents in two schools of New Delhi, India. Indian J Med Sci. 2005; 59:243-52. [PubMed: 15988094]
11. Naresh R. Makwana, Viral R. Shah, Sudha Yadav; A Study on Prevalence of Smoking and Tobacco Chewing among Adolescents in rural areas of Jamnagar District, Gujarat State JMSR September 30, 2007.
12. Narain R, Sardana S, Gupta S, et al. Age at initiation & prevalence of tobacco use among school children in Noida, India: a cross-sectional questionnaire based survey. Indian J Med Res2011; 133:300-7.
13. Aryal UR, Deuba K, Subedi A, et al. Prevalence and determinants of cigarette students of Kathmandu Valley. Asian J Med Sci2010; 1:53-8.
14. Pradeepkumar AS, Mohan S, Gopalakrishnan P, et al. Tobacco use in Kerala: findings from three recent studies. Natl Med J India 2005; 18:148-53.

ORIGINAL ARTICLE

15. World Health Organization. The health of young people: A challenge and a promise. 2002 Geneva: WHO; Jha SS. Lifestyle related problems of youth. Indian J Soc Work. 1994; 55:3–12.
16. Kapoor SK, Anand K, Kumar G. Prevalence of tobacco use among school and college going Adolescents of Haryana. Indian J Pediatr. 1995; 62:461–6. [PubMed: 10829906].
17. Singh G, Sinha DN, Sharma PS, Thankappan KR. Prevalence and correlates of tobacco use among 10-12 year old school students in Patna district, Bihar, India. Indian Pediatr. 2005; 42:805–10. [Pub Med: 16141483].
18. Bricker JB, Peterson AV, Robyn Andersen M, Leroux BG, Bharat Rajan K, Sarason IG. Close Friends', parents', and older siblings' smoking: revaluating their influence on children's smoking. Nicotine Tob Res. 2006; 8:217–26. [Pub Med: 16766414].

AUTHORS:

1. Ritesh Rawat
2. Aditya Thakur

PARTICULARS OF CONTRIBUTORS:

1. Post PG Student, Department of Community Medicine, Gandhi Medical College, Bhopal.
2. PG Student, Department of Community Medicine, Gandhi Medical College, Bhopal.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Ritesh Rawat,
Flat No. 6,
Shalimar Lake Ridge Apartment,
PNB Colony, Idgah Hills,
Bhopal, Madhya Pradesh.
E-mail: drriteshrawat@gmail.com

Date of Submission: 30/12/2014.
Date of Peer Review: 31/12/2014.
Date of Acceptance: 08/01/2015.
Date of Publishing: 13/01/2015.