

# A Study on Prevalence of Tobacco Use among Children: A Literature Review

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## Abstract

The present paper reviewed majority of the studies Rani, 1999; Ball, 2003; Gupta, 2004; Daravuth, 2008; Thomas, 2009 and Synnove, 2009 which were based on tobacco consumption. The review of literature found that most of the studies on present topic focused only on adult population and that too are medically oriented. However there are few studies which cover social factors such as Viswanath (2006), Ram (2003), Surendra (2007) and Kumar (2008). Actually the impact of tobacco seems at latter stage of life, therefore majority of the studies focused on the adult age group and young age group been neglected by the most of researchers. But here attempts are made to review on tobacco consumption among children in India as well as other western countries to understand the present scenario on the consumption of tobacco among children. The period wise studies specific on the children population are as follows.

**Keywords:** Tobacco; Drug abuse; Asthma

## International Scenario

Studies' pertaining to tobacco use shows that tobacco consumption had been a problem from long back not only in our country but it's becoming a global problem. The following section discussed about global problem of tobacco which revealed that prevalence of tobacco found in all most every part of western countries.

## An overview on the prevalence of tobacco use among children

In 1982, a collaborative survey of World Health Organization, Department of Health Promotion and National University of Ireland has done on 11 to 15 year-old school children. The survey comprised European, Russian and Scandinavia countries. The study found that the rates for tobacco experimentation were lowest for the 11 year-olds and, in most countries, less than 20% of children in this age group had ever tried cigarettes. Consistent differences between countries emerged. For example, Greece, Flemish speaking Belgium and Portugal have the lowest rates of experimentation at the age of 11 year and at age 13 year. On the other hand, Greenland and the Slovak Republic have the two highest rates at age 11 (39% and 38%), and they are both in the top three at age 13 (73% and 58%) and 15 (86% and 75%). Regular smoking also increased substantially across age groups. No country exceeded a daily smoking rate of 2% for 11 year olds, while most countries were fewer than 10% at age 13 and 30% at the age of 15 year. Large increases were found in every country between age 13 and 15 years, but in some countries this was also the case between ages 11 and 13 years [1,2]. For example, both Northern Irish and Welsh data illustrate a 1% rate at age 11 year, a 9% rate at age 13 year and a 23% rate at age of 15 year. These daily smoking data also illustrate inter country differences. This was most striking amongst 15 year-old girls, where the rates range between 6% in Lithuania to 56% in Greenland. Interestingly, girls in Greenland report more daily smoking than boys in all three age groups. Girls were also reported higher rates of daily smoking than boys in a number of other countries. However, no countries showed a decrease in weekly smoking after every four years. The present report was silent about the difference of prevalence according to country wise.

A Cross-sectional school-based survey [3] reported in London that 41.4% of students had tried smoking in the 6<sup>th</sup> class, with prevalence increasing from 21% in class 6<sup>th</sup> to 60% in class 12<sup>th</sup>. Smokeless tobacco was reported by 19.3% students, with prevalence increasing from 12%

in class 6<sup>th</sup> to 29% in class 12<sup>th</sup>. The prevalence of regular use ( $\geq$  once/week) of smokeless tobacco was one-third that of cigarette smoking, 4% (n=21) and 12% (n=66) respectively. Smoking initiation began as early as kindergarten, with 16% initiating by 4<sup>th</sup> grade and 43% initiating by 6<sup>th</sup> grade. Smokeless tobacco initiation began as early as second grade, with 11% having tried chewing tobacco by 4<sup>th</sup> grade and 33% by 6<sup>th</sup> grade. The study concluded that initiation of smoking and smokeless tobacco use began in early elementary school of rural area of London. It concluded that there was a need of tobacco prevention strategies in early elementary school and addresses both smoking and smokeless tobacco use. A study [4] assessed the prevalence and correlates of tobacco use among high school students in Buenos Aires, Argentina on 3909 children of 8<sup>th</sup> and 11<sup>th</sup> graders of public and private schools. The study revealed that among 8<sup>th</sup> and 11<sup>th</sup> graders, 20% and 43%, respectively, were classified as current smokers. Overall, 29% of males and 32% of females were found current smokers. Students attending public schools were more likely to smoke than those in private schools. Current smoking was associated with having a best friend who smokes, reporting that more than 50% of friends of the same sex smoke, having positive attitudes and beliefs toward smoking, and having a positive intention to smoke within the next year. The study concluded that over 20% of the 8<sup>th</sup> graders in the sample were current smokers and the use of tobacco mind-altering chemicals has deleterious effects on school performance. Students under the influence of tobacco are not ready to learn and are at risk of long-term impairment of cognitive ability and memory.

In Israel, a study [5] on tobacco smoking via a water-pipe among school students reported that 41% smoke a water-pipe at various frequencies and 22% smoke at least every weekend. The study found

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that Water-pipe smoking was 3 times more frequent than cigarette smoking. Surprisingly it found that girls were heavier smokers than boys, of either water pipe or cigarette smoking. The main reasons for water-pipe smoking were the pleasure achieved and the intimacy that it adds to the youngsters' meetings. 30% of all the school students believed that water-pipe smoking is not healthy, but at least 70% believes it was less harmful than cigarettes. According to regular users, 40% of their parents were current or ex-smokers of water-pipes, in contrast with 10% of parents to non-smoking students and about a quarter of the students who smoke also do so together with their parents. The study shows that tobacco smoking via water-pipes was a very common phenomenon among middle and high school students in Israel. School students and their parents perceive that tobacco smoking via water-pipe was much safer than cigarette smoking. Tobacco got the social sanction in Muslims countries which could be one of the major reasons of high prevalence of tobacco use in Israel. On the other hand, in Sweden, a Survey reported that (Swedish Council for information on alcohol and other drugs, 2003) snuff use was the most common form of tobacco use among school students. This study shows that about 20% of Swedish boys use tobacco regularly, as do boys in other European countries. However; specific patterns of tobacco use differ strikingly between Swedish boys. For example, in Europe (14%), but still close to the average for all other countries (19%, range 11% in Greece to 29% in Germany). In contrast, the prevalence of smoking among girls is almost 2.5 times that of boys in Sweden. In this study ratio has been below 2.0 only once in the last 10 years, and it reached a high of 3.3 in 2003. The study shows that Swedish parental tobacco use influences tobacco use by children. For example, boys whose father used snuff were three times more likely to use snuff compared with boys whose fathers were tobacco-free. Similarly, mothers' smoking was associated with smoking in their children. The present study revealed that tobacco in form of snuff was a major problem among school children rather than cigarette smoking.

A National sectional survey Patricia, 2007 was reported in Scotland on "Changes in child exposure to environmental tobacco smoke (CHETS) study after implementation of smoke-free legislation". The objective of the study was to detect any change in exposure to secondhand smoke among primary school children after implementation of smoke-free legislation in Scotland. A cross sectional, class based surveys carried out in the same schools before and after legislation. The study found 39% reduction after the introduction of smoke-free legislation in Scotland. The study concluded that the Scottish smoke-free legislation has reduced exposure to secondhand smoke among young people. The study concluded that the Scottish smoke-free legislation has thus had a positive short term impact on young people's health, but further efforts are needed to promote both smoke-free homes and smoking cessation.

The above studies show that prevalence of tobacco consumption has become a major problem in almost every part of the world. However the prevalence rates are different from country to country.

## National Scenario

In the following section an attempt has made to understand the prevalence and pattern of tobacco use among school students from last two decades to present scenario. The studies in this section have been categorized into different categories, namely, (1) the prevalence of tobacco consumption among students (2) the age of initiation and mean age of tobacco users (3) source of tobacco product (4) influencing factor (5) frequency of tobacco use and (6) Reason of tobacco consumption among students.

## Prevalence of Tobacco Consumption among Students

In India, the prevalence of tobacco use among children varied from time to time. It was found that before 1987 studies [6] mentioned that cannabis was found to be consumed by 92% and only 10% consumed tobacco by young population. The studies showed that at that period of time "cannabis" was the most commonly used drug among adults as well as the young population (14 to 18 years). The work done after 1987 [7] found that tobacco consumption was prevalent among 22% boys and 13% girls. During 1998 to 2000, the researches Gupta, Jindal and Aggarwal, 1998; Madan, Poorni and Ramachandran, 2000 shows that tobacco consumption was become the major problem in India. The studies revealed that substantial proportion of population of India had become current or past smoking user with higher prevalence among (35%) boys than (22%) girls. The studies also found that the proportion of boys using tobacco (including experimenters) was significantly higher in private English medium schools (22.5%) than in private Indian language schools (6.9%) or municipal Indian language schools (13.8%). After that, [8] reported 60% tobacco prevalence among boys and 40% girls. 14.8% were regular users and it was more prevalent in late adolescent (14-18 years) as compared to early adolescent (10-13 years).

In 2005, Global Youth Tobacco Survey (GYTS) was conducted an international initiative to investigate the tobacco use in school going youth of 13 to 15 years of age. This report showed the prevalence of tobacco consumption in all most each state of India. The study sample consisted of 9319 students out of the total eligible population of 30488 from 100 schools. The study found that the prevalence of ever-use of tobacco varied between 2.9 % to 8.5% in boys and 1.5% to 9.8% in girls. The prevalence was highest in Chandigarh and lowest in Punjab. It found the current tobacco use (any product) was 63% in Nagaland to 36.1% in Assam. Current smokeless tobacco use ranged from 49.9% in Nagaland to 25.3% in Assam. Mizoram reported the highest current smoking (34.5%, mainly cigarette) and Assam reported the lowest (19.7%, again mainly cigarette). The study found that tobacco use was very high, even among girls, in all eight states in the North-eastern part of India. Similarly in Delhi

## Influencing factors and reason of tobacco consumption among students

The studies show the time wise changing influencing factors of tobacco use among students. Earlier Aghi,1982 peer pressure and parental addiction were found to be an important factor of determining the use of tobacco by students. After that, from 1991 onwards the studies revealed that [9] revealed that along with parental and friend addiction, media and stress are also one of the important factors of tobacco use by students. Studies also showed statistically significant association between gender, type of school, risk taking attitude and use of tobacco.

Recently studies UCMS, 2010; Naresh, et al.2010 pointed out that tobacco use by adolescents had strong association with their having seen various role models ever tobacco user like film heroes, politicians etc.

Few studies [10] also reported the dynamics of tobacco use in urban and rural areas. The studies reported that in urban areas the young often smoke because their peers smoke. Their most common reason was their film hero who smokes. In the rural areas many people were unaware of the hazards of smoking. Tobacco was believed to be able to cure toothache. Advertisements for cigarettes were not to be found in

villages, nor were health warnings against tobacco use. A bundle of beedi does not have any warning. Illiteracy however would be an impediment to a warning's effectiveness. Gujarati village boys start smoking from the ages of 9 and 10 onwards, seeing their parents smoke. Young rural boys often take to smoking to appear modern, open minded, tough and smart and often to show that they are educated. Students generally believed that tobacco gives relief from gas, stomach acidity, headache and indigestion. Young boys who work in agriculture begin smoking because others are smoking and local employers in shops give beedi to young boys to attract them to work in their shops. Gossip groups, commonly seen in rural areas, are conducive to smoking.

### Source of Tobacco Product

The studies Kotwal and Thakur, 2003; AIIMS, 2000 ; Singh, 2006; Bhojani, et al.2009 found that the nearly 80% students freely purchased tobacco products from shops located nearer their school and home, some students found from their own homes and few borrowed from friends or relatives.

### Pattern of tobacco among students

The studies shows time and place wise pattern of tobacco consumption among students. Before 1990 the studies Mohan, et al. 1987 mentioned "mishri" and "creamy snuff" was the most common form of tobacco in almost all part of India. After that studies Jayant, 1991; AIIMS, 2000; Kumar, 2010 reported cigarette as a most common form of tobacco among students in the metropolitan cities. Whereas place like Bihar and Uttar Pradesh Kotwal and Thakur, 2003; Sinha, Gupta and Pednekar, 2004 found maximum consumption of smokeless tobacco in the form of red tooth powder (77%), followed by Khaini (57.1%) and (41.3%) toothpowder. In smoke form of tobacco, beedi smoking found most common among both in girls and boys.

### Age of initiation of tobacco use and the mean age of tobacco users

Majority of the studies Jayant, 1991; Muttappallymyalil, et al. 2007; Hadaye, 2006 revealed that the mean age of both smoke and smokeless form of tobacco users was 14-16 years. The initiation of tobacco starts at the age of 12 years in both the forms except north east states, where initiation of tobacco reported at the age of 10 year Sinha, Gupta and Pednekar, 2004; Mukherje, et al. 2006; Kumar et al. 2010.

### Conclusion

The literature reviewed shows that tobacco consumption has become a major problem among young generation and it has been continuously growing in almost all states of the country. The majority of the studies covered one forms either smoking or smokeless form of tobacco among students. The studies revealed that smoking form of tobacco has become most popular among students in comparison of other forms. Review shows that the mean age of regular users was 14-16 years and initiation age was 12 years. Most of the studies reported lack of proper implementation of law which needs to be focused by policy implementers. The parents and schools is also an important part to influence the children in their socialization but they were not being covered by any study. Further, review reflects that although all the studies recommended that consumption of tobacco is the major problem among adolescents but no empirical evidence were found on the pattern of consumption, opinion of school in that connection, so far, neither the awareness level of such school children has been focused in any investigation conducted till date.

### References

1. Aghi MB (1998) Psychological Aspects of Acquiring and Cessation of Tobacco Habits in India. *World Smoking Health* 12: 4-7.
2. Aleaz A (2001) National Household Survey on Drug Abuse and Mental Health Services. *Australian Institute of Health and Welfare* 4: 133-145.
3. Bachiman, K (2002) Influence of Cigarette Smoking on the overall Perception of Dental Health among Adult aged. *Journal of Dental Research* 75: 274-92.
4. Centers for Disease Control and Prevention (CDC) (2001) Nonfatal Unintentional Medication Exposures among Youth Children, United States.
5. Chaturvedi P (2009) Tata Memorial Hospital, Mumbai Health and Health Behavior among Young People Reported Smoking among School Children in Europe and North America, *World Smoking Health* 8:200-219.
6. Gajalakshmi CK, Jha Ranson P, Nguyen MK (2000) Global patterns of smoking and smoking attributable to mortality. Oxford University Press.
7. Gupta, D, Aggarwal AN, Jindal SK (1988) Pulmonary Effects of Passive Smoking. *The Indian Experiences. Tobacco Induced* 1: 127-134.
8. Gupta PC (2004) Survey of Socio Demographic Characteristics of Tobacco Use among Children in Bihar. *Tobacco Control* 15: 114-120.
9. Gupta A, Narang C, Gupta S, Singh U ( 1986) Drug Abuse among Rickshaw Pullers in Industrial Town of Ludhiana. *Indian Journal of Psychiatry* 28: 145-149.
10. Gupta PC, Pednekar MS (2005) Social disparities in tobacco use in Mumbai, India: the roles of occupation, education, and gender. *Am J Public Health* 95: 1003-1008.