

## ORIGINAL ARTICLE

### FACTORS LEADING TO THE THE INITIATION OF SMOKELESS TOBACCO USE AMONG ADOLESCENTS

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#### Abstract

Tobacco addiction of a large number of adults has been initiated during the adolescence. The most recent Government of India's National Sample Survey data shows that there are 184 million tobacco consumers in India. About 40% of them use smokeless tobacco (ST). It's been medically proven that prolonged use of chewing tobacco can lead to oral cancer and other oral diseases. Considering the enormous health implications associated with tobacco use, this study was designed to find out the prevalence and the linkage of the demographic and psychological factors to the ST use in adolescents of India.

**Material & Methods:** Eight Hundred and seven higher secondary school children aged 12-18 years were surveyed by using an anonymous pre-tested self-report questionnaire. The prevalence and the linkage of the demographic & psychological factors to ST use in adolescents of Western Uttar Pradesh, India was determined.

**Results:** In the present study the prevalence rate for ST was found to 40.3%, which is influenced from parents and teachers. The children are aware of the habit being bad and harmful but still continue it. Poor academic performance, prolonged TV watch, amount of pocket money and the place (neighborhood) are found to be factors associated.

**Conclusion:** Adolescents who are exposed to influences from parents (father) or teachers in school acquire the habit of ST use. The study highlights certain factors which can form basis for early intervention targeting vulnerable group of adolescents thus identified, to prevent or discourage them from picking up the habit so that this does not progress to become addiction into adulthood thus paving way for diseases in adulthood.

#### Introduction

The harmful effects of tobacco have been recognized over the last several decades. Tobacco use in children and adolescents is reaching pandemic proportions. India is the third largest producer and consumer of tobacco in the world. The country has a long history of tobacco use. Tobacco is used in a variety of ways in India; its use has unfortunately been well recognized among the adolescents (1). Tobacco addiction of a large number of adults has been initiated during the adolescence. National Household Survey of the drug and alcohol abuse in India 2002 has quoted the prevalence of tobacco use among 12-18 years old as 55.8% (2). According to the most recent Government of India's National Sample Survey data, there are 184 million tobacco consumers in India. About 40% of them use smokeless tobacco (ST), 20% consume cigarettes, and another 40% smoke beedis (3). The 2009 Youth Risk Behavior Surveillance Survey (YRBSS), depicted that 8.9% of students had used ST in the 50 US states and the District of Columbia(4)

Smokeless tobacco use includes snuffing, paan masala, gutka and chewing of tobacco in different forms. (1) ST is kept in mouth and person sucks on the tobacco juices, spitting often to get rid of the saliva that builds up. This allows nicotine, a drug one can become addicted to, to be absorbed into the bloodstream through the oral mucosa. This doesn't even need to be swallowed. It's been proven that prolonged use of chewing tobacco can lead to oral cancer. But cancer from chewing tobacco doesn't just remain confined in the oral cavity. Some of the carcinogens in the tobacco can get into the stomach, esophagus, and into urinary bladder (5). According to the Center for Diseases Control (CDC), each year about 30,000 Americans learn they have oropharyngeal cancers, and nearly 8,000 die of these diseases due to use of ST (5).

Considering the enormous health implications associated with tobacco use, it is of utmost importance to understand the factors leading to its use and to plan strategies to reduce its intake. This is especially relevant for the developing countries like India, where tobacco use continues to be common not withstanding the recognition of harmful consequences. This study was designed to find out the prevalence and the linkage of the demographic and psychological factors to the ST use in adolescents of India.

#### Methods and Materials

Eight hundred and seven higher secondary school children aged 12-18 years were surveyed by using an anonymous pre-tested self-report questionnaire and it was endeavored to know the prevalence and the linkage of the demographic & psychological factors to the ST use in adolescents of India. The government as well as private sector schools of western Uttar Pradesh were included in the study. Personal indulgence in ST use was measured. The evaluation was performed in one to one basis. All students were stressed at the time of questioning that they should respond, only in the non-play situation. A three point scale (yes / no / can't say) was used to know the involvement in the habit. SPSS 11.0 software was used for analysis and chi - square tests were calculated.

#### Results

The prevalence of tobacco use was 53.5% .Out of 807 students 174 (40.3%) were using ST. Male and female users were 108 (62.1%) and 66 (37.9%) respectively. The factors associated and the age of initiation of ST is depicted in Table 1.

#### Discussion

Use of ST amongst adolescent population in developing country like India is quite high. In the present study the prevalence rate for ST was found 40.3% which is a significant segment of students as also similarly reported by Arora et al (6) and which is higher than the reporting of 8.9% in the USA (4,5). A prevalence of use of tobacco in any form among students having exposed to risk of oral health disorder

**Table 1: Factors associated with smokeless tobacco consumption in children**

Factors associated with smokeless tobacco use	Tobacco use in children	
	Boys (n=108)	Girls (n=66)
Tobacco use in father	69(63.9%)	33 (50%)
Tobacco use in teacher	64(59.2%)	27(40.9%)
Tobacco use in peers	60(55.5%)	28(42.4%)
Poor academic performance (< 40% marks)	38(35.2%)	39(59.1%)
Watching TV (> 2hours/day)	57(52.8%)	32(48.5%)
Pocket money per month • No Pocket Money • Rs.250-500	- 39(36.1%)	27 (40.9%) -
Awareness of it being a bad habit	87(80.5%)	51(77.3%)
Neighbourhood as place of consumption	69(54.2%)	48(62.6%)
Age of initiation of ST use		
12 - 14 years	9 (8.3%)	3 (4.5%)
14 - 16 years	54 (50%)	45 (68.2%)
16 - 18 years	45 (41.7%)	18 (27.3%)

was found to be 21.3 % by Kotwal A et al (8). Pal et al studying prevalence in 13-15 years old adolescents found it to be 14% in males and 6.3% in females (8). The usage prevalence of 37.6% in any form was 46.3% in males and 31.6% in females as reported by Madan kumar PD et al in South India (9). Another study from same region by Muttappallymyalil et al reported minimum age of initiation of use was 12 years and maximum was 14 years with more than 50% smokeless tobacco users starting their habit at the age of 12 years, 38.5% of them starting at the age of 13 years and remaining at the age of 14 years. However, none of the females were found using tobacco which is widely at variance with findings of others and our study too (10). It may be attributed to the regional difference in culture. The age group of 14-16 yrs was the highest in initiation of use in our study which confirmed the findings of Chadda et al (3). In our study too it was found that the use was mostly amongst teenaged population. A significant influence was learning the habit from teachers in school, parents at home and peers in neighborhood, which confirms the previous reports (11,12). It was practiced in backyards of home and neighborhoods. Despite the awareness that the habit is bad yet it persisted. It has continued despite monetary constrains of not able to buy tobacco yet it was practiced may be after borrowing, stealing, begging or being provided by peers. These points to the nature of addiction which leads to its use in adulthood as a continuum of habit acquired in adolescence. This habit was more prevalent among those with poor scholastic performance and also linked to prolonged watching of TV. The habit was influenced by peers, was initiated out of curiosity or could be an inherent quiet

desire to impress others including opposite sex. This is similar to the previous findings (13).

Another important aspect noticed in the use of ST is the facilitator nature of the habit as it does not attract any attention as the use was found as an alternative to smoking which is more prominent and noticeable in society. Also smoking is widely being condemned and discouraged thus switching to smokeless form is an attractive alternative. This fact was also found in a US study (14). In a small measure the habit could be an inherent desire to look grown up and an expression of carefree attitude or experience of freedom from the authority.

This paper highlights the modifiable factors that effect the initiation of this habit, its perpetration, its addictive nature to influence future behavior and development of the individual and the disease profile in adult hood and that can be intercepted at school level by appropriate interventions aimed at a target population.

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