

Prevalence of Tobacco Consumption among the Adolescents of the Tribal Areas in Maharashtra

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ABSTRACT

Background: Tobacco consumption is one of the major preventable causes of tobacco related cancer. In India, tobacco related cancer accounts for half the total cancer cases among males and 20% of the cancer cases among women. The prevalence of tobacco consumption among the tribal youths is high.

Aim: To know the prevalence and the pattern of tobacco consumption among the adolescents of tribal areas.

Settings: Five tribal villages under the Primary Health Centre, Waradh, in the District Yavatmal, Maharashtra State, India.

Design: A community based cross sectional study.

Methods and Material: The study consisted of 502 adolescents of both the sexes. The data was collected on a predesigned proforma during the period from October 2009 to September 2010. After obtaining the consent of the subjects, the information which was related to their socio-demographic characteristics and tobacco consumption was collected. The statistical analysis was done by using the Chi square test and percentage.

Results: Overall, the prevalence of tobacco consumption among the adolescents of the tribal areas was 45.42%. 65.31% male and 26.46% female adolescents were habituated to it. All female, and majority of the male adolescents predominantly consumed a smokeless form of tobacco. Most of them (89%) started chewing tobacco / gutkha between 5-15 years of age. The females had started consuming tobacco at younger ages than the males. Social customs were the major influencing factor for the tobacco consumption, followed by peer pressure. The consumption of tobacco among the family members significantly ($p < 0.001$) increased the tobacco use among the adolescents.

Conclusion: The prevalence of tobacco consumption was high in the tribal adolescents. Social customs, peer pressure and the consumption of tobacco by the family members were the major contributing factors which emphasized the need of strengthening the information, education and communication (IEC) activities.

Key Words: Adolescents, Tribal, Chewing Tobacco/Gutkha

INTRODUCTION

Tobacco smoking and chewing are the main causes of lung cancer and oral cancer. Tobacco smoking and chewing are the second major causes of death in the world. The tobacco death toll is expected to double by 2025 from the present 5 million deaths (approx). At every 6.5th second, a person dies because of a tobacco related disease, globally [1].

The prevalence of tobacco use in India is continuously increasing, but there are considerable changes in the methods of its use. The most susceptible period for tobacco use in India is during adolescence and early adulthood (15-24 years) [2]. According to the Global Youth Tobacco Survey (GYTS) in Maharashtra, 12.9% adolescents (13-15 years) are currently consuming some tobacco product [3].

The theme for 'World No Tobacco Day-2008'- Tobacco Free Youth focuses on adolescents and called for the formation of youth groups and awareness building [4].

Focusing the primary prevention efforts on young adolescents in order to improve the overall public health in the near and distant future can be justified for several interrelated reasons such as various risk behaviours such as smoking, risky sexual behaviour and tobacco, alcohol and drug use, which are often adapted to in young adolescence. At the same time, it may be easier to include healthy behaviours at a young age rather than to modify the behaviour at later ages or after the onset of a disease [5].

There are few studies which denote the prevalence of tobacco consumption in the tribal adolescents. Hence, the present study was conducted to generate community based data on tobacco use among the tribal adolescents.

MATERIAL AND METHODS

The present cross sectional study was carried out from October 2009 to September 2010 in 5 tribal villages under the Primary Health Centre, Waradh, in Yavatmal District, Maharashtra State, India. This area was purposively selected as the author had worked as a Medical Officer at the Primary Health Centre (PHC), Waradh.

The PHC, Waradh has six sub centres, out of which one sub centre was randomly selected for the study. The Waradh sub centre has 5 villages which are situated 2 to 5 km away from each other. According to the Maharashtra State Co- op Tribal Development Corporation, the villages which were selected for the study, came under the tribal zone [6]. These villages were mostly inhabited by tribal people who belonged to the Kolam, Perdhan, Gond and Perkhii communities and they also had some non-tribal castes like Kunabi, Boudha, Dhanger, Sutar etc. In the study area, the total number of adolescents were 520, out of which 18 were not available during home visits in the study period and hence, 502 adolescents were included in the study.

Before starting the study, a permission was obtained from the District Health Officer, Yavatmal. After explaining the purpose of

study, informed consent was taken from all the adolescents and from parents in case of minors.

In each village, the numbering of the houses was carried out with the help of an attendant and family folders were prepared. The ages of the study subjects were confirmed from available age related proof and for those who did not have any proof, the approximate age according to their parents was considered. From the family folder, adolescent girls and boys of 10-19 years of age were included in study and they were interviewed face to face in the absence of their family members as per the availability of the respondents. The data was collected on a predesigned proforma, which was modified after a pilot study was conducted on 50 study subjects. The data which was related to their socio-demographic characteristics and tobacco consumption was collected from the adolescents. The socioeconomic status of the study subjects was determined as per the modified B.G. Prasad's classification and it was modified according to the All India Consumer Price Index (Rs.815) of the year 2010 [7].

The statistical analysis was carried out by using percentage and the Chi square test.

RESULTS

In the present study, there were 257(51.20%) female and 245 (48.80%) male adolescents. A majority of the adolescents were educated upto middle school, followed by high school and only 6.18% were illiterate. 80.87% adolescents belonged to nuclear families and 19.13% to joint families. More than half of the adolescents were from the Class V socioeconomic status and 40.04% were from Class IV [Table/Fig-1].

In the study area, 65.31% male and 26.46% female adolescents were found to consume tobacco products. A majority of the male adolescents (85.63%) consumed a smokeless form of tobacco i.e. dry tobacco and lime, gutkha and kharra and 14.38% had the habit

of smoking beedi/cigarettes. All the female adolescents consumed a smokeless form of tobacco and no one had the habit of smoking [Table/Fig-2].

It was observed that the minimum age of initiation of the tobacco chewing in the male adolescents of the tribal (kolam) community was 3 years of age. There was a high prevalence of chewing tobacco/gutkha at an early age. Out of the 160 male adolescents, in 76 (47.50%), tobacco/gutkha chewing was initiated at 11-15 years of age, in 65 (40.63%), it was initiated at 5-10 years of age and in 3 (1.87%), it was initiated at less than 5 years of age. Among the 68 female adolescents, in 5 (7.35%), tobacco/gutkha chewing was initiated at less than 5 years of age, in 41 (60.50%), it was initiated at 5-10 years of age and in 21 (30.88%), it was initiated at 11-15 years of age [Table/Fig-3].

Social customs were the major factors which influenced the tobacco intake in both the male and female adolescents. Peer pressure was the factor which was next to social customs in both the sexes. 26.47% female adolescents assumed that tobacco intake would give them relief from abdominal pain, especially during the menstrual periods. Abdominal pain relief, to get a better feeling and to concentrate on work were the subjective factors which contributed to the tobacco consumption [Table/Fig-4].

[Table/Fig-5] shows that the consumption of tobacco in the family members significantly ($p < 0.001$) increased the tobacco use among the adolescents.

DISCUSSION

Despite a remarkable world-wide progress in the field of diagnostics and curative and preventive health, still there are people living in isolation in natural and unpolluted surroundings, far away from civilization, with their traditional values, customs, beliefs and myth intact. They are commonly known as "tribals" [8].

Socio-demographic characteristics	Adolescent Males (%) (n = 245)	Adolescent Females (%) (n = 257)	Total (%) (n = 502)
Age (Years)			
Early Adolescent (10-13 years)	103 (42.04)	101 (39.29)	204 (40.64)
Middle Adolescent (14-16 years)	80 (32.65)	90 (35.01)	170 (33.86)
Late Adolescent (17-19 years)	62 (25.31)	66 (25.70)	128 (25.50)
Educational Status			
Illiterate	12 (4.90)	19 (7.40)	31 (6.18)
Primary	41 (16.73)	34 (13.22)	75 (14.94)
Middle School	111 (45.30)	115 (44.74)	226 (45.02)
High School	70 (28.57)	72 (28.02)	142 (28.28)
HSC & above	11 (4.50)	17 (6.62)	28 (5.58)
Family Type			
Nuclear	203 (82.85)	203 (78.98)	406 (80.87)
Joint	42 (17.15)	54 (21.02)	96 (19.13)
Socioeconomic status			
Class I	1 (0.41)	2 (0.78)	2 (0.78)
Class II	4 (1.63)	4 (1.55)	8 (1.59)
Class III	11 (4.49)	14 (5.45)	25 (4.98)
Class IV	102 (41.63)	99 (38.52)	201 (40.04)
Class V	127 (51.84)	138 (53.70)	265 (52.79)

[Table/Fig-1]: Socio-demographic characteristics of study subjects

Tobacco products	Male adolescents (n = 160)	Female adolescents (n = 68)	Total (n = 228)
Smokeless form of tobacco	137 (85.63%)	68 (100.00%)	205 (89.91%)
Smoke form of tobacco	23 (14.38%)	00 (00.00)	23 (10.45%)
Both forms of tobacco	18 (11.25%)	00 (00.00)	18 (7.90%)

[Table/Fig-2]: Pattern of tobacco consumption among adolescents

Age of initiation	Male adolescents (n=160)	Female adolescents (n=68)	Total (n=228)
< 5 Years	3 (1.87%)	5 (7.35%)	8 (3.52%)
5-10 Years	65 (40.63%)	41 (60.30%)	106 (46.70%)
11-15 Years	76 (47.50%)	21 (30.88%)	96 (42.30%)
16-19 Years	16 (10.00%)	01 (1.47%)	17 (7.48%)

[Table/Fig-3]: Age of initiation of consumption of tobacco among adolescents

Influencing Factors*	No. Male adolescents (%)	No. Female adolescents (%)	Total (%)
Social Custom	114 (71.25)	45 (66.18)	159 (69.74)
Peer Pressure	46 (28.75)	23 (33.82)	69 (30.26)
Better feeling	32 (20.00)	16 (23.53)	48 (21.05)
Abdominal pain relief	09 (05.63)	18 (26.47)	27 (11.84)
To concentrate on work	18 (11.25)	06 (08.82)	24 (10.53)

[Table/Fig-4]: Factors influencing tobacco consumption among adolescents

*Multiple responses

Adolescents	Family history of tobacco use		Total
	Yes	No	
Tobacco use	150	78	228
No Tobacco use	88	186	274
Total	238	264	502

[Table/Fig-5]: Association between tobacco consumption of family members and tobacco use by adolescents.

Chi Square Test: $\chi^2=56.59$, $p<0.001$; Significant

The World Health Organization defined "adolescence" as being between the ages of 10-19 years, encompassing the entire continuum of the transition from childhood to adulthood. It is the most critical period of the development, which is second only to the early childhood [9]. Cultural beliefs and social norms have a strong association with the use of tobacco and with their significant variation in different societies for tobacco consumption. The study area, being a tribal one, the prevalence of tobacco consumption was high in both the sexes (adolescent males-65.31% and adolescent females-26.46%). This was because the consumption of tobacco was a social custom in the tribal community. Overall, the prevalence of tobacco consumption in adolescents was 45.42%, which was quite similar to the findings of Surekha Kishore et al [10] and Dongare AR et al [11]. Vinita Singh et al [12] found that 5.4% of the children in the lower income group schools in the national capital territory of Delhi currently consumed tobacco products. On the other hand, Sinha DN et al [13] reported that 75.3% of the students who were aged 13 to 15 years in Mizoram were tobacco users. Adolescent boys consumed both smokeless and smoke form of tobacco, whereas the girls consumed the smokeless forms only. The present study demonstrated that the prevalence of tobacco consumption in the adolescent females was 26.46%. A similar range of findings were also reported by Surekha Kishore et al [10], Sinha DN et al [13] and Dongare AR et al [11]. A very prevalence of khaini / gutkha use was found among the adolescent girls of a primitive tribe in Orissa (77.4%) [14].

Though the prevalence of the consumption of the tobacco products was higher in male adolescents than in the female adolescents. The early initiation of tobacco consumption upto the age of 10 years was more in females. The initiation of chewing tobacco/gutkha at

10 years or earlier was also reported by several other authors as well [11],[12],[13].

The minimum age of initiation of the tobacco chewing in the male adolescents of a tribal (Kolam) community was found to be 3 years. This indicated that the factors which influenced the tobacco consumption were present in the home environment and within the community i.e. social customs. Lack of opposition from the father, mother or other family members as well as the peer group and the easy availability of tobacco and gutkha in small domestic shops in the villages were the contributing factors for the tobacco consumption. In the rural/tribal settings, the family members and neighbours who often asked young children to get tobacco from the nearby shops and the colourful, attractive packing of the tobacco products acted as other pro tobacco influences for newer children to take up the tobacco habit. Vinita Singh et al [15] also reported that children had a free access to the tobacco products for consumption from the shop or from the street vendors from where they purchased it.

The predominant factors which influenced the initiation of tobacco consumption in both the sexes were social customs, followed by peer pressure and as a means to concentrate on work. Sometimes mothers and grandmothers gave tobacco to the adolescent girls to ease their abdominal pain during menstruation [11].

Family influences are strongly responsible for shaping the personality of an individual and for having a lasting impression on the individuals' behaviour. Tobacco consumption was common in those adolescents whose parents also had the habit of tobacco/gutkha consumption. The habits of the family members are easily transmitted to their children, which was seen in this study and in other studies as well [12],[13],[15]

CONCLUSION

The prevalence of tobacco consumption was high in both the sexes in the tribal adolescents. All females and a majority of the male adolescents consumed a smokeless form of tobacco. The early initiation of tobacco consumption was higher in females as compared to the males. Social customs, peer pressure and the consumption of tobacco by the family members were the major contributing factors for the tobacco consumption in adolescents.

RECOMMENDATIONS

"The Cigarettes And Other Tobacco Products (Prohibition Of Advertisement And Regulation Of Trade And Commerce, Production, Supply And Distribution) Amendment Bill, 2007", restricts tobacco promotion and the sale of tobacco products to minors and protects non smokers in public places. These provisions need to be implemented vigorously.

Strengthening of the IEC activities is necessary to minimize the influence of social customs, peer pressure and the tobacco consumption by the family members. Behaviour change communication (BCC) should be established between the health workers and the adolescents to break down the habit of the consumption of tobacco/gutkha.

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