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Original Article

Prevalence, risk factors, attitude on tobacco use and knowledge on hazards among adolescents in Karnataka, India

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Abstract

Background: Tobacco consumption remains the single largest leading cause of preventable deaths & diseases. Tobacco consumption is a major risk factor for more than 25 diseases like coronary heart diseases, carcinomas, Bronchitis etc, and also causes economic& social deterioration. Adolescents are the most vulnerable population to initiate tobacco use. It is important to understand various factors that influence and encourage young teenagers to start smoking or to use other tobacco products.

Objectives: To know the prevalence, initiating factors, behavioural patterns and determinants of tobacco use.

Materials and Methods: A cross sectional study, data collected by personal interview of 1536 adolescents between the ages of 10-19 year.

Results: Prevalence of tobacco use in this adolescent sample was 11.13% (171 out of 1536 subjects); 20.41% among males and 0.42% among females. The prevalence increased over the adolescent period – from 14.81% in the age group of 14 – 15 years to 68.42% among the age group of 18 – 19 years. The prevalence was 51.61% in illiterates compared to 7.58% in literates. Prevalence was higher among illiterate parents (8.87%) in

comparison to those educated parents. Majority opined (50.29%) that the main reason for starting tobacco use was influence of their parents and relatives, followed by friends (45.03%). Other attributions were Show off (36.84%), curiosity (32.75%),movies (31.58%) and advertisements (5.26%).

Conclusion: Tobacco use is present in a sizeable proportion of the adolescent population. Most started the abuse early and were aware of the hazards of tobacco. The adolescents perceive that their parents, relatives and friends as important factors for their tobacco use. Initiation of

Key Words: prevalence, tobacco use, adolescents.

Introduction

Global scenario:

Presently tobacco contributes to 4 million deaths per year globally. A recent study by WHO has cautioned that unless smoking patterns change, one billion people are expected to die from smoking habit in the 21st century which is ten times more than those killed in tobacco throughout the 20th century [1]. According to WHO tobacco kills more people annually than AIDS, alcohol, drugs and accidents put together [1]. WHO estimates that, unless current smoking patterns are reversed, by the decade 2020-2030 tobacco will be responsible for 10 million deaths per year, 70% of them occurring in developing countries. Scientific evidence has been accumulating since early 1050's and more than 25 diseases are now known or strongly suspected to be causally related to smoking [4].

Indian scenario:

In India, deaths attributing to tobacco are expected to rise from 1.4% of all deaths in 1990 to 13.3% in 2020. Tobacco kills between 8-9 lakh people each year in India. These will multiple many folds in the next 20 years [1]. Today of the 1.1 billion people who smoke worldwide, 182 million (16.6%) live in India. Tobacco consumption continues to grow in India at 2-3% per annum [5]. Only about 20% of the total tobacco consumed in India is in the form of Cigarettes. About 40% are in the form of Bidis and the remaining 40% are consumed as chewing tobacco, Panmasala, snuff, hookly, chutta, dhumti and other tobacco mixtures featuring ingredients such as Areca nut [6].

Hence this paper intends to evaluate the initiating factors to study behavioural patterns and determinants of tobacco use among adolescents.

Materials and Methods

This cross sectional study was conducted among adolescents of Hosur for a period of one year. Hosur is part of Belgaum city with the population of 7,000 and about 05 km from JNMedical College,Belgaum. During the study period all the houses were visited and all the 1536 adolescents (10-19 yrs age group) [3] were interviewed. A detailed questionnaire was prepared and was pre-tested and validated during the pilot study. It consisted of three sections. Section one had included information on socio-demographic variables. Section two had contained information on tobacco use. Section three assessed the knowledge regarding hazards of tobacco.

Statistical Analysis: Apart from the descriptive, Chi-square and Z –tests were used for analysis of categorical data analysis.

Results

A total of 1536 subjects were interviewed. Out of 1536 adolescents 823(53.58 %) were males and 713(46.42%) were females. 13.87%of theadolescentswere in the 10-11 age group and 8.66% in 18-19 age group. The demographic characteristics are described in table-I.

Table- I: Demographic characteristics of adolescents

Demographic profile	No (%) Total n= 1536
Gender	
Males	823 (53.58)
Females	713 (46.42)
Religion	
Hindu	1253 (81.58)
Muslim	235 (15.29)
Jain	41 (2.67)
Christian	7 (0.46)
Educational status	
Illiterate	124 (8.07)
Primary	691 (44.99)
High school	385 (25.07)
College	336 (21.87)
Educational status of parents	
Illiterate	981 (41.99)
Primary	796 (33.99)
High school	351 (15.03)
College	210 (8.99)
Type of family:	
Nuclear	524 (34.11)
Joint	408 (26.56)
3 Generation	542 (35.29)
Broken	62 (4.04)
Socio – economic class	
I	159 (10.35)
II	537 (34.96)
III	466 (30.34)
IV	313 (20.38)
V	61 (3.97)

In the present study the overall prevalence of tobacco use among adolescents was 11.13% (n – 171). It was20.41% (n – 168) in males and 0.42% (n -3) in females. This difference in prevalence of tobacco use between sexes was statistically significant (Z= 12.42 P=0.000000).

Among the adolescents of Hosur who were users of tobacco, majority started using tobacco from 13 years onwards. Early onset was as low as 10 years. Majority of the subjects started with gutkha (n = 75, i.e. 45.62%) and 85% of them started with gutkaas the odour was less. However, among the 171 adolescent tobacco users, the rate of tobacco usewas low among those below the age of 14 years (n = 4, i.e. 2.33%) and high in the 18 to 19 age group (n = 54, i.e. 31.57%), indicating a significant increase in prevalence with age (X^2 for trend = 289.684; P = 0.000000). Prevalence among the illiterate adolescentswas significantly more than literate adolescents - 51.61% and7.58% (Z = 14.95 P = 0.000000).

In the present study the prevalence rate was significantly higher among adolescents of parents who were illiterate (8.87%) than the adolescents of parents with college education (2.86%) It indicated a significant inverse relation between educational status of the parents and the prevalence of tobacco use in their adolescent offspring (X^2 = 10.223641 DF = 3 P = 0.013318).

In this study the prevalence of tobacco use was very high (n = 116, i.e. 29.29%) among adolescents of the working class when compared to adolescentsof the nonworking class (n = 55, i.e. 4.82%) (Z=13.34 P = 0.000000). There was a trend for adolescents

from non-nuclear families to use tobacco more than those from nuclear families (12.45% vs 8.59%) ($X^2 = 5.559$ DF = 3 P = 0.135128).

In our study 32.7% (56 out of 171) of the users were using tobacco at the time of interview and majority of the subjects used smokeless tobacco (gutkha) (48.21%) followed by cigarette (26.79%) and beedi (25.00%). It was interesting to note among those current users majority (n -31; 55.36%) used only one beedi / cigarette / gutkha pack(unit) per day. 15 (26.79%) of them used1-5 units per day and 10 (17.86%) used> 5 units per day. There was not much difference between the pattern of use of beedies and cigarettes. 33 (58.53%) wanted to quit the tobacco habit and 23 (41.07%) did not feel the need to stop.

The reasons attributed by the adolescents for starting tobacco used isshown in Table-II. Their knowledge of the hazards of tobacco is elaborated in Table III.

Table-II: Reason for Starting Tobacco

Reason	no (%)
Parents & relatives	86 (50.29)
Friends	77 (45.03)
Show-off	63 (36.84)
Curiosity	56 (32.75)
Movies	54 (31.58)
Boredom	12 (07.01)
Fun	11 (06.43)
Advertisements	09 (05.26)

Table-III Knowledge on Hazards of Tobacco (n=1536)

Variables		Male No (%)	Female No (%)
1.	Is tobacco injurious to health?		
	Yes	411 (49.94)	383 (53.72)
	No	219 (26.61)	191 (26.79)
	Don't know	193 (23.45)	139 (19.49)
2.	Diseases caused by tobacco:		
	Cough & breathlessness	328 (79.81)	298 (77.81)
	Cancer	164 (39.90)	147 (38.38)
	Heart diseases	131 (31.87)	107 (27.94)
	Others	89 (21.65)	72 (18.79)
3.	Is passive smoking injurious to health?		
	Yes	477 (57.96)	416 (58.35)
	No	189 (22.96)	149 (20.90)
	Don't know	157 (19.08)	148 (20.75)
4.	Source of knowledge:		
	Teacher	321 (78.10)	318 (83.03)
	Parents & Relatives	205 (49.88)	199 (51.96)
	Warnings on packets	98 (23.84)	84 (21.93)
	Media	88 (21.40)	76 (19.84)
	Health personnel	28 (06.81)	27 (07.05)

Discussion

Tobacco use is a socially accepted habit in many segments of the Indian society. Tobacco use in India is increasing but there are considerable changes in types and methods by which it is used [4]. Tobacco use is the leading preventable cause of death and disability in India. The assessment of the prevalence of tobacco use among adolescents, evaluating the initiating factors, behavioral pattern and imparting of health education is the first step in developing a programme for prevention and control of Tobacco use. Keeping in view this fact and the lack of studies in this direction in South India, the present study was undertaken in a South Indian, sub-urban area.

A study conducted among children in rural areas of southern Tamilnadu, rural Gujarat and Karnataka found that 15.3% of adolescents who used tobacco were working in their study group [8].

The overall prevalence of tobacco use among the adolescents of this study was 11.13%, with predominantly males using tobacco. In males 20.41% and in females it is 0.42%. A similar study conducted in Managlore, the prevalence of tobacco use among 17-24 yrs adults was 33.1% among males [4] and among the school / college going adolescents of Haryana showed that prevalence of smoking was 7.1% among 10-15 years age group adolescents. 14.2% males 2.3% female students reported to have smoked at any time in the past [7].

The present study reveals that the prevalence of tobacco use increased with higher age group. Similar study conducted in Kuwait, shows that 19.5% (60) started using

tobacco at the age of 10-14 yrs and the prevalence increased to 55.6% (188) at the age of 15-19 yrs [9].

A significant association between Tobacco and educational status was found in the present study. A similar study conducted among school going adolescents in Tunisia showed that school going adolescent smoke less (18.1%) compared to those who do not attend the school (38.4%) [10].

Tobacco use was found to be significantly associated with socio-economic status. Prevalence being much higher among both the extreme socioeconomic classes of population. Similar results seen in a study conducted in Barcelona [11].

The present study and the study conducted in Haryana indicate similar significant association between Tobacco use and occupational status [7].

There is no association between types of family and prevalence of tobacco use was found in the present study. A study conducted among 12 – 19 years age group in Porto of Portugal shows that a significantly higher risk of smoking was associated with the monoparental family (only the mother) 27.0% compared to nuclear families 20.4% [12].

A significant association between prevalence of tobacco use and educational status of their parents.A study conducted among students age 10-14 years in Ajmer, Rajasthan showed that 14.2% of smoker belonged to literate fathers where as 27.2% belongs to illiterate fathers. 15.8% of smokers belonged to literate mothers and 20.7% of smoker belongs to illiterate mothers [13].

It was found in the current sample that among the current tobacco users majority usedone Gutkha packet / Beedi / Cigarette and very of few of them used >5 per day. On the other hand the Haryana, study reported that, out of 166 ever smokers, 12% smoked <1 cigarette /week 18% used 2 – 6 /week and 29% used daily [7].

It has been observed that 80% of smokers do start smoking between their 10-14 yrs [13].In the present study too it was found that majority of the adolescents started using tobacco from their13th year onwards.

In keepingwith the study where 67.5% of fathers, 23.5% of mothers, 33.7% of brothers, 4.8% of sisters, and 54.0% of friends were users of tobacco [7] there were more fathers than mothers in the present study who had tobacco use.

The stated reason for starting tobacco use in majority of ever users was influence of their parents and relatives followed by friends, Show off, curiosity, boredom, and fun. The study also revealed that the movies and advertisements were other influencing factors for starting tobacco. A similar study conducted in Mangalore revealed that 77.3% are influenced by TV and advertisement, 13.6% by parents or brothers, 47.7% by easy availability of cigarette and 34% were influenced by friends [4]. in Rajasthan 22% for sake of fun, 13% influenced by friends, 3% curiosity, 2% to look impressive [13].

Knowledge regarding the hazards of tobacco use was present in majority of the adolescents, with no difference between males and females. Work from Southern Tamilnadu, Rural Gujarat and Bangalore, also reveals that as high as 44% of boys and 66% of girls revealed that tobacco use was injurious to health [8]. Adolescents reported of

tobacco causing cough and breathlessness followed by diseases related to heart and other diseases. Subjects also knew that passive smoking was injurious to health. A study conducted among students of Art College of Mangalore, Dakshina Kannada, showed that 67% knew that smoking was a risk factor for heart attack, 93.2% knew that it could induces lung cancer and 60.8% knew that smoking in pregnancy could lead to low birth weight infants and even 34.1% knew that it was a factor for gastrointestinal malignancy [4].

Regarding the source of knowledge majority of them got the information from the school teachers compared to parents and relatives, media, warnings on the cover and Health personnel. According to Arizona Youth Tobacco Survey, 82.9% of all respondents reported that they had seen or heard this type messages from the TV and 67.8% of those surveyed received antismoking messages from the school [14].

It was found that in our study, majority of the current users wanted to quit the tobacco, whereas in the Haryana study only 36.1% students wanted to quit the smoking and 11.1% said ‘no’ to stopping; rest were undecided [7].

Recommendations

Based on the observations and conclusions of the present study the following recommendations are made regarding prevention and control of tobacco use.

Children and adolescents are the target victims of tobacco addiction, so based on the findings early education should be initiated in the schools and colleges. Such programmes should focus on the hazards of both smoke and smokeless tobacco. It should

also include promotional campaigns, early identification of the users, providing treatment and counselling to both the adolescents and their parents/ guardian who so ever is a tobacco victim.

The findings of the study reflect that a large proportion of the young tobacco users are illiterate, have fathers/relatives/friends who use tobacco and are influenced by the media. Hence education material regarding hazards of tobacco use should be displayed in all public places media of advertisements. Health care providers should take the responsibilities to educate all individuals regarding the health hazards of tobacco through audio, video, information technology and print. Social responsibility to be stressed by banning advertisements and sponsorshipsthat directly or implicitly promote tobacco use.

Considering that the majority of respondents were willing to quit the tobacco, it is recommended that all concerned agencies/ stakeholders like the schools, youth organization should emphasize on initiation in cessation, various counselling and other health education sessions for those users.

There should be total political and social commitment to eradicate the abuse of tobacco from the community. Thus it is concluded that a large-scale multicentric study should be undertaken to confirm the findings and appropriate strategies be developed regarding prevention and control of tobacco abuse amongst adolescents in the community.

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