Research Article

Age at initiation and the role model influencing on use of tobacco among school going children in Surendranagar, Gujarat, India

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ABSTRACT

Background: Tobacco use among school children is becoming a serious problem in developing countries. The early age of initiation underscores the urgent need to intervene and protect this vulnerable group from falling prey to this addiction. The present study was undertaken to assess the prevalence of tobacco habits, determine the age of initiation and compare with current use and to find out the role models influencing tobacco use.

Methods: A cross sectional study conducted in both private and government schools selected by random sampling. Each class had an enrolment of 50 students and all the students were interviewed through pre - tested questionnaire and clinical examination was conducted to find out health hazards due to tobacco consumption .

Results: About 17.31% of the students had smoked cigarettes/bidis 28.10% had tried smokeless form of tobacco use. Children were smoking significantly more in the group who had started using tobacco from <11 years (59%) compared to after 11 years ($p<0.05$). Role models significantly influence on their tobacco usage ($p<0.05$). Most common role model observed were father followed by favourite celebrities and others. Commonest health hazards found with tobacco consumption were oral problems.

Conclusions: Our findings indicate a recent downward shift in the age at initiation of tobacco uptake. Such data need to be collected from different parts of the country to develop anti-tobacco campaigns and take policy decision.

Keywords: Age at initiation, Prevalence, Smoking, Smokeless tobacco

INTRODUCTION

Tobacco is estimated to have killed 100 million people in the 20th century and continues to kill 5.4 million people every year and this figure is expected to rise to 8 million per year by 2030, 80% of which will occur in the developing countries.¹ In India alone nearly 1 in 10 adolescents in the age group 13=15 years have ever smoked cigarettes and almost half of these reports initiating tobacco use before 10 year 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. There are only a few studies on

prevalence and initiation of smoking and smokeless tobacco use among children in our country.^{4,5} The risks of tobacco use are highest among those who start early and continue its use for a long period. The early age of initiation underscores the urgent need to intervene and protect this vulnerable group from falling prey to this addiction.

There is an urgent need to curb tobacco use amongst school children from the early adolescent age so that such bad habits can be easily nipped in the bud. Hence this study was conducted to find out the age of initiation of tobacco use, to estimate the prevalence of tobacco use amongst school children, role models influencing their use and the health hazards related to it.

METHODS

It was a cross-sectional study. All schools were registered first and from the list one school from private and one school from government were selected for the study by random sampling. Students of 5th to 9th standards of the selected schools formed the study group. Prior permission was sought from the principal. School record was used for getting reasonable accuracy in age assessment. A pre-designed and pre-tested proforma was used for data

collection. Clinical examination was done to assess the health hazards due to tobacco.

RESULTS

17.31 % students ever tried cigarettes/bidis among them 5.09% were still smoking, whereas (28.10%) students ever tried smokeless form of tobacco out of them 13.64% of the students continued (Table 1).

Table 1: Prevalence of tobacco consumption in school children (n=491).

Tobacco consumption	Government school (n=244)	Private school (n=247)	Total (n=491) Frequency (%)
Ever tried cigarettes/bidis	59 (24.18%)	26 (5.2%)	85 (17.31%)
Current cigarettes/bidis (≥ 1 time in 30 days)	17 (6.96%)	08 (3.23%)	25 (5.09%)
Ever tried cigarettes/bidis	89 (36.47%)	49 (19.83%)	138 (28.10%)
Current smokeless tobacco (≥ 1 time in 30 days)	51 (20.90%)	16 (6.47%)	67 (13.64%)

There is a significant difference between tobacco consumption among both the Government and the private school students ($\chi^2=16.924$, $P<0.0001$).

Table 2: Tobacco consumption among school children in association with their age at initiation (n=491).

Age at initiation of tobacco consumption	Current tobacco use		Total
	Yes	No	
≤ 11 years	49 (12.3%)	14 (87.7%)	63 (59%)
>11 years	43 (41.9%)	385 (58.1%)	428 (41%)
Total	92	399	491 (100%)

There is a significant association found between age at initiation of tobacco consumption and their current tobacco use ($\chi^2=165.45$, $p<0.05$).

Table 3: Influence of role models on the tobacco consumption among school children (n=491).

Role models ever observed	Tobacco consumption		Total
	Yes	No	
Yes	68 (12.3%)	155 (87.7%)	223 (45.4%)
No	24 (41.9%)	244 (58.1%)	268 (54.6%)
Total	92 (18.7%)	399 (81.3%)	491 (100%)

There is a significant association found between age at initiation of tobacco consumption and their current tobacco use ($\chi^2=37.08$, $p<0.05$).

Figure 1: Role models ever observed tobacco consuming by school children (n=491).

Figure 2: Types of health hazards found in school children consuming tobacco of both government and private school (n=92).

School children who initiate tobacco consumption at ≤ 11 years had significant association with their current status of tobacco use. ($\chi^2=165.45$, p value, 0.05) (Table 2). 18.53% students observed their fathers as role model for tobacco consumption followed by their favourite celebrities (18.32%), best friend (10.38%) etc. (Figure 1).

Role models significantly influence on the tobacco usage by school children suggests that school children who were influenced by their favourite role models consuming tobacco were higher in number as compared to the school children who were not ($\chi^2=37.08$, $p<0.05$) (Table 3).

The most common health hazards found in school children were oral problems (22.82%) followed by frequent cough problems (14.13%), teeth staining (11.95%) etc. A significant difference was found between government and private school children. ($\chi^2=21.33$, p value <0.05) (Figure 2).

DISCUSSION

The number of people in the age group of 18 years and younger in the world today is 2.4 billion, which is the largest generation in history. Everyday about 80,000 to 100,000 young people initiate smoking most of them in the developing countries.⁶ Of 1000 teenagers who smoke today, 500 will eventually die of tobacco related diseases; 250 in their middle age and 250 in their old age.⁷

Most tobacco users start using tobacco before the age of 18 years, while some start as young as 10 years.⁸ The early age of initiation underscores the urgent need to intervene and protect this vulnerable group from falling prey to this addiction. The risks of tobacco use are highest among those who start early and continue its use for a long period. The challenges of the tobacco epidemic in India are complex; due to great diversity in forms of tobacco used and marked variations in prevalence and patterns of tobacco use. The Global Youth Tobacco Survey (GYTS), supported by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), conducted during the years 2000-2004 in India, is the first survey that provides state wise data on youth (13-15 years), using a standardized methodology.

The prevalence figures of ever and current tobacco use varied across states, as per GYTS results. Current prevalence of tobacco use, in any form, among school going youth (age 13-15 years) in India is 17.5%. Current smokeless tobacco use was reported by 14.6% (range: 2.0% 55.6%) and current smokers were 8.3% (range: 2.2%- 34.5%).⁹ In present study prevalence of smokeless form of tobacco was 13.64% and of smoking was 5.09% which was similar to that. A study carried out in Noida in which mean age of initiation of tobacco products was 12.3 years and the result is significantly associated with their current tobacco consumption.¹⁰ Similarly in our study there is a significant association found between the

age of initiation of tobacco consumption ≤ 11 years and their continued practice ($p<0.05$).

A study carried out in South India showed the most common health hazards due to tobacco were staining of teeth and oral problems which was similar to our study.¹¹ A study carried out by Preeti Soni et al. in which the most common influencing factors for tobacco consumption were media (39%), 27.2% by friends, 19.7% were family members followed by school staff (13.9%).¹² In present study also father (18.53%), favorite celebrities (18.32%) followed by the best friends (10.38%) were the commonest role models for the school children for their tobacco consumption was found.

CONCLUSION

There is ample evidence globally that other factors, in the social environment of a child, directly affect the behaviour of young people. Among non-smoking, non-susceptible adolescents, viewing a favourite cigarette advertisement makes children two times more vulnerable to smoke after 3 years, as compared to those who do not view a favourite cigarette advertisement. School and community level norms and role models that are non-supportive of tobacco use are effective deterrents which influence a young person to not start or to quit tobacco use.

The study highlights rising prevalence of tobacco addiction among and early uptake of these habits. Health awareness, psycho-behavioral change and education programs, strict enforcement of laws to ban sale of these products to the under-aged are urgently needed to curb these habits before they assume epidemic proportions.

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