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Research Article

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Study on the Use of Tobacco among Adolescents at UHTC Sharifganj–A Cross-Sectional Study

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ABSTRACT

Background: Children smoke their first cigarette while attending middle or High school, though generally, smoking is most likely to begin during adolescence. The use of tobacco among adolescents is a significant public health concern due to its association with numerous health risks and the potential for long-term addiction. According to the Global Adult Tobacco Survey (GATS) conducted in 2016–17, the overall prevalence of smoking tobacco use is 10.38% and smokeless tobacco use is 21.38% in India. The aim is to conduct a cross-sectional study on the use of tobacco among adolescents at UHTC Sharif Ganj.

Methods: A cross-sectional study was conducted from January to March 2024 at Sharifganj (urban health training centre, Katihar Medical College), Katihar, among 300 adolescents between the age of 13-16 years using stratified random sampling. The data was collected using a pre-designed & pre-tested questionnaire and was analyzed using epi info.

Results: Among the studied population, 24% (71) were consuming tobacco, of which the maximum was around 16 years (n=46), i.e., 33.3%. Smoking was the most preferred way of consuming tobacco (n=30), i.e., 42.3%.

Conclusion: The findings of this study underscore the widespread use of tobacco among adolescents and highlight key demographic and social factors associated with tobacco use. Various interventions like Educational campaigns, Role model engagement, and socio-economic interventions were adopted to curb this trend.

Key-words: Tobacco, Smoking, Adolescents, Global Adult Tobacco Survey (GATS), Urban

INTRODUCTION

Children smoke their first cigarette while attending middle and High school, though generally, smoking is most likely to begin during adolescence. The use of tobacco among adolescents is a significant public health concern due to its association with numerous health risks and the potential for long-term addiction. Tobacco use is linked to increased mortality among adults, particularly in low- and middle-income countries, where the burden of tobacco-related illness and death is most significant [1]. In India, more than 1 million adults die each year due to tobacco use, accounting for 9.5% of overall deaths. The country faces a dual burden of tobacco use in the form of smoking and smokeless tobacco. According to the Global Adult Tobacco Survey (GATS) conducted in 2016–17, the overall prevalence of smoking tobacco use is 10.38% and smokeless tobacco use is 21.38%. Of all adults, 28.6% currently consume tobacco in either smoked or smokeless form, including 42.4% of men and 14.2% of women. [3]

Around 7 million of these deaths are directly related to tobacco consumption and about 1.2 million are caused by exposure to second-hand smoke.[4] Tobacco consumption in India leaves about 150 million people in poverty.[5] Premature deaths among tobacco users cost

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their families in terms of income, education, and health care, further driving them into poverty.[6]

The World Bank has stated that globally, around 82,000–99,000 children and adolescents start smoking tobacco daily. Approximately half continue to smoke into adulthood, and half of adult smokers pass away prematurely due to tobacco-linked illnesses.[7]

According to the World Health Organization (WHO), behaviors that start in adolescence, such as substance abuse, aggression, depression, dangerous driving, and sexual behavior, result in about 70% of premature deaths in adults.[8,9]

MATERIALS AND METHODS

Study Design- A cross-sectional study was conducted from January to March 2024 at the Urban Health Training Centre (UHTC) in Katihar, Bihar. By stratified random sampling, 300 teenagers aged 13-16 were selected.

Inclusion Criteria

- ✓ Adolescents between 13-16 years
- ✓ Adolescents who showed a willingness to participate in the study

Exclusion Criteria

- ✓ Adolescents not falling in the age group 13-16 years
- ✓ Adolescents who did not show a willingness to participate in the study

Data Collection- The data was collected using pre-designed and pre-tested semi-structured questionnaires, which were used to collect data on tobacco use, types of products used, frequency, socio-economic status, and attitudes towards tobacco. The WHO Global Youth Tobacco Survey (GYTS) input was also considered. The questionnaires were self-administered by participants and responses were kept anonymous.

In-depth interviews were also conducted for selected participants, providing qualitative data on reasons for tobacco use and peer influence.

Statistical Analysis- Data were analyzed using Epi info. Descriptive statistics presented prevalence rates. Chi-square tests and logistic regression analyses identified factors associated with tobacco use.

Ethical Consideration- The above study was approved by the Ethical Committee of the department before conducting the study. Every informed consent was obtained from the patients before the study.

RESULTS

The overall distribution of the adolescent population who participated in the study was (n=300). Out of which, tobacco consumption was prevalent in 71 (24%) and the remaining 229 (76%) were non-tobacco consumers (Fig. 1).

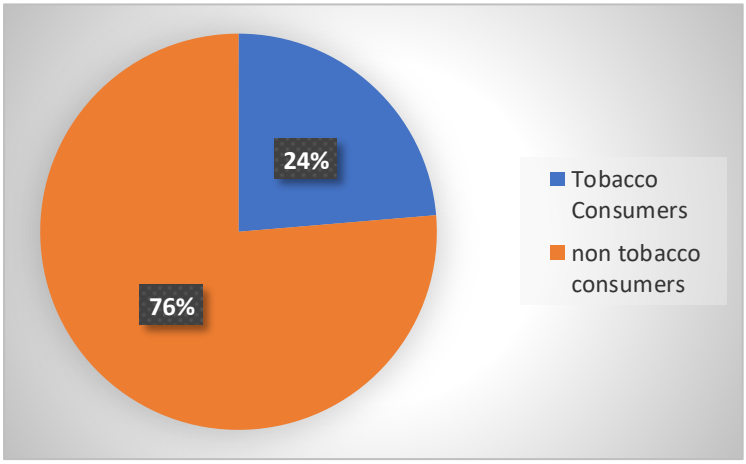

Fig 1: Prevalence of Tobacco Consumption among adolescents in urban field practice area

Table 1 shows the distribution of tobacco consumption among various age groups. It can be observed that the maximum percentage of tobacco consumers was of 16yrs. Of age (33.3%), whereas adolescents of 14 years of age contributed (12.06%) of the population. This association was found to be statistically significant.

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Table 1: Age Distribution of Tobacco Users

Age Group (years)	Tobacco Consumers	Percentage (%)	Non-Tobacco Consumers	Test of significance
16	46	33.3	92	X^2=13.78 p=0.001 dF=2
15	18	17.3	86	
14	7	12.06	51	

Table 2 depicts the type of tobacco (smoke /smokeless) consumed by study participants. Here, the maximum number of people were found smoking tobacco (30), whereas smokeless tobacco consumers were 27.

Table 2: Common Type of Tobacco Consumed by adolescents

Type of Tobacco	Number of Users	Percentage (%)
Smokeless	27	38.5
Smoke	30	42.3
Both	14	19.2

Table 3 shows various motivating factors that play a significant role in encouraging teenagers to adopt tobacco consumption. Out of these, the most influential people who inclined teenagers towards consumption of tobacco were actors who endorsed tobacco brands, with a percentage of 45.5%, followed by friends (29.5%).

Table 3: Influence of Role Models towards consumption of tobacco

Role Model	Number of Users	Percentage (%)
Father	16	22.5
Actor	32	45.5
Friends	21	29.5
Others	2	2.5

Table 4 shows the prevalence of tobacco consumption among adolescents in the Urban Field Practice Area. Table 4 depicts the Maximum number of tobacco consumers belonging to SES -IV in this study(n=29): 40.5%.

Table 4: Prevalence of tobacco consumption according to Socio-Economic Class Distribution in Urban Field Practice Area, Sharifganj

Socio-Economic Class	Tobacco consumers	Percentage (%)
Class 2	16	21.7
Class 3	5	7.5
Class 4	29	40.5
Class 5	21	30.3

DISCUSSION

The study examines the prevalence and patterns of tobacco use among adolescents, shedding light on age distribution, types of tobacco used, the influence of role models, and socio-economic class distribution. Here are the key findings and their implications: the study reveals that 23.5% of the sample population (300 individuals) are tobacco users, indicating a significant portion of adolescents engaging in tobacco consumption.

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This prevalence rate aligns with other regional and global studies, suggesting that tobacco use among youth remains a critical public health issue.

For instance, the prevalence of ever tobacco use was 19.7% in a study conducted in Nepal by Pradhan *et al.* [10]. In contrast, a higher prevalence was observed by Singh *et al*. in their research, which reported a 44% prevalence rate.[11] In a study done by Yadav and Dabar, the prevalence of ever tobacco users was reported as 31.3% [121-14]. In a study done by Shrivastav *et al.* the prevalence of tobacco consumption among school-going adolescents was reported to be 16%. [15]

Habit in relatives is a significant predisposing factor towards addiction. Our findings align with the observation by WHO that adolescents whose parents or siblings smoke or whose friends do so are particularly likely to use tobacco themselves. Jha also reported that examples set by siblings and parents and peer pressure are strongly associated with tobacco use by young people [16]. Other studies in India support this observation that was given by Singh *et al.* [17] & Kapoor *et al.* [18]

Tobacco use is more prevalent among lower socio-economic classes (Classes 4 and 5). This could be due to factors such as lower educational attainment, limited access to health information, and higher exposure to stressors that might lead to tobacco use as a coping mechanism. Addressing socio-economic disparities through targeted public health campaigns and support services is crucial [19,20].

CONCLUSIONS

The conclusion of this study underscores the widespread use of tobacco among adolescents and highlights key demographic and social factors associated with tobacco use. To curb this trend, comprehensive strategies should be implemented, focusing on increasing awareness about the risks of tobacco use, especially targeting younger adolescents before they reach the peak age of initiation. Leverage the influence of celebrities, peers, and parents to promote anti-tobacco messages. Strengthen regulations on tobacco advertising, especially in media consumed by adolescents, and enforce age restrictions on tobacco sales. Develop support programs for lower socio-economic groups to reduce stressors that may lead to tobacco use and provide alternative coping mechanisms. By addressing these areas, public health initiatives can more effectively reduce tobacco use among adolescents, ultimately leading to better health outcomes for this vulnerable population.

CONTRIBUTION OF AUTHORS

Research concept- Dr. Mukesh Nandan
Research design- Dr. Saumya Kumari
Supervision- Dr. Mukesh Nandan, Dr. Shahin
Materials- Dr. Saumya Kumari
Data collection- Dr. Mukesh Nandan, Dr. Shahin
Data analysis and Interpretation- Dr. Saumya Kumari
Literature search- Dr. Mukesh Nandan, Dr. Shahin
Writing article- Dr. Saumya Kumari
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Article editing- Dr. Saumya Kumari
Final approval- Dr. Mukesh Nandan, Dr. Shahin

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