

Assessment of Mean Age and Source of Inspiration for Acquiring the Habit of Tobacco and Cigarettes in the Local Residents of Bairagarh-Chichali, Bhopal

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ABSTRACT

Background: Causes of tobacco addiction within communities are essential for fostering a healthier, tobacco-free future. This study collects crucial information for the development of smoking prevention and cessation programs targeted at-risk populations in comparable rural and semi-urban areas of India. The study aimed to assess the mean age and the factors that led the locals of Bairagarh-Chichali to develop a tobacco use habit.

Methods: The male and female residents aged 14-40 were included. A pretested validated self-administrated questionnaire was used to gather the information during October -December 2023 by collecting the filled questionnaires.

Results: Among the age group of 14-24 years, 183 out of the 201 participants were current tobacco users. The mean age of initiation for this group was 18.7 years. In the age group of 25-40 years, 243 participants (88.36%) were currently habitual. The mean age for this group was 19.9 years. Among the total 476 participants, 426 were currently using some kind of tobacco product. A significant correlation was seen between the habitual distribution of group I participants in relation to gender.

Conclusion: In conclusion, the findings of this study highlight the significant impact of tobacco use on (specific aspect studied), emphasizing the need for targeted public health interventions and policy measures to mitigate its adverse effects. Further research is recommended to explore additional variables and long-term consequences.

Key-words: Adolescent, Bairagarh Chichli, Bhopal, Smoking, Tobacco and cigarette

INTRODUCTION

Tobacco and cigarette usage remain a major global cause of death and diseases, with serious detrimental effects on oral health. Smoking is a leading preventable risk factor for cancers, lung disease, cardiovascular problems, and other chronic illnesses that can take over 15 years off a person's lifespan on average^[1,2].

Tobacco consumption is estimated for 1.35 million deaths annually. The rate of tobacco consumption in India is notably alarming,^[3] as the Global Adult Tobacco Survey indicates that 29% of adults, equating to 267 million individuals, are identified as users^[4]. The small community of Bairagarh Chichali in Bhopal, Madhya Pradesh, has become a significant area of concern.^[5]

Medical professionals at the adjacent Mansarovar Dental College and Hospital have noted an increasing incidence of patients from this locality suffering from oral health problems associated with tobacco use, such as swollen and painful gums, ulcerations, leukoplakia, and even squamous cell carcinoma. The swift rise in these cases over the last two years has led to an inquiry into the

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factors contributing to tobacco consumption among the residents of Bairagarh Chichali.

This research seeks to offer essential insights that will inform smoking prevention and cessation initiatives aimed at at-risk populations within comparable rural and semi-urban communities in India. Tackling the underlying factors contributing to tobacco dependence at the community level is vital for promoting a healthier, tobacco-free future.

Comprehending the mean age, at which these habits are initiated, along with the sources of inspiration, can offer valuable insights into the motivations behind individuals adopting these behaviors [5]. This understanding can significantly contribute to the formulation of effective prevention and intervention strategies hence this research aimed to assess the mean age at which individuals begin using tobacco or cigarettes and determine the main sources of motivation and influence that contribute to this behaviour among the residents of Bairagarh Chichli.

This research will further gather essential insights helpful in the formation of smoking prevention and cessation initiatives aimed at-risk populations within similar rural and semi-urban communities in India. Tackling the underlying factors contributing to tobacco dependence at the community level is vital for promoting a healthier, tobacco-free future. This study aimed to assess the mean age and the factors that led the locals of Bairagarh Chichli to develop tobacco use habits.

MATERIALS AND METHODS

Research Design- The study was conducted in the Bairagarh Chichli area using a questionnaire-based survey. A pre-tested, validated, self-administered questionnaire was used to collect information regarding tobacco consumption, its inspiration, and the age at which individuals started the habit. The survey was carried out manually by visiting the field regularly for a month, primarily in the evenings after working hours to ensure better interaction with residents. Additionally, patients from the target area visiting the Dental College for various treatment procedures were also included in the survey during college hours. To maximize coverage

and include the remaining target population, free dental camps were organized twice a month.

Exclusion Criteria

- ❖ Age: Participants below 14 years and above 40 years of age were excluded from the study.
- ❖ Severely ill patients are not fit to participate in the survey.
- ❖ Those residents who do not exhibit the habits of tobacco consumption.
- ❖ Improper & incomplete survey questionnaire submissions were excluded.

Inclusion Criteria

- ❖ Participants aged between 14-40 years.
- ❖ Both males and females were included.
- ❖ Only the residents of Bairagarh-Chichali were included.
- ❖ Target population who are permanent residents of the Bairagarh Chichli

Statistical Analysis- The collected data was transferred and analyzed using IBM SPSS Statistics version 27.0. A total of 476 completed questionnaires were gathered and thoroughly examined for analysis.

Ethical Approval- Ethical approval for the study was obtained from the Institutional Ethical Committee. Following the necessary approvals, the study commenced on October 1, 2023. Before participation, verbal informed consent was obtained from all participants to ensure their voluntary involvement in the research.

RESULTS

A total of 476 filled questionnaires were analyzed using IBM SPSS Statistics version 27.0. The results of the study are summarized in two parts, focusing on two main objectives: (1) determining the mean age at which individuals acquired the habit of tobacco and cigarette consumption, and (2) identifying the sources of inspiration for the habit. Among the 476 subjects, 312 (65.54%) were males, while 164 (34.45%) were females (Fig. 1).

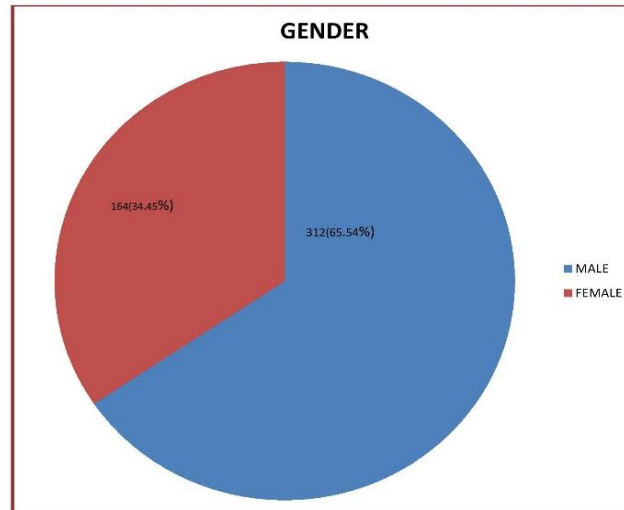


Fig 1: Sample gender distribution

Table 1 shows the habitual and non-habitual patterns among the participants at present in the study. In Group 1 (14-24 years), 183 out of the 201 participants (91.04%) were current tobacco users. The mean age of initiation for this group was 18.7 years (SD= ±4.5). In Group 2 (25-

40 years), 243 out of 275 participants (88.36%) were currently habitual. The mean age for this group was 19.9 years. Among the total 476 participants, 426 were currently using some kind of tobacco product.

Table 1: Habit distribution among groups

Groups	Currently habitual	Currently non-habitual	Total	Mean age of acquiring habit
Group 1 (14-24years)	183(91.04%)	18 (8.96%)	201	18.7±4.5 years
Group 2 (25-40 years)	243(88.36%)	32(11.64%)	275	19.9 years
Total	426(89.50%)	50(10.50%)	476	

Table 2 shows gender-wise distribution of habit among the Group 1 participants. A significant correlation was seen among the habitual distribution of group I participants with gender. The chi-square statistic is 4.20. The *p*-value was 0.04.

Across the full sample of 476 participants, the most common source of inspiration and influence for starting tobacco/cigarette use was peer pressure. The various sources are shown in Fig. 2.

Table 2: gender-wise habit distribution

	Habitual	Non-habitual
Males	107	6
Females	76	12
Total	183	18

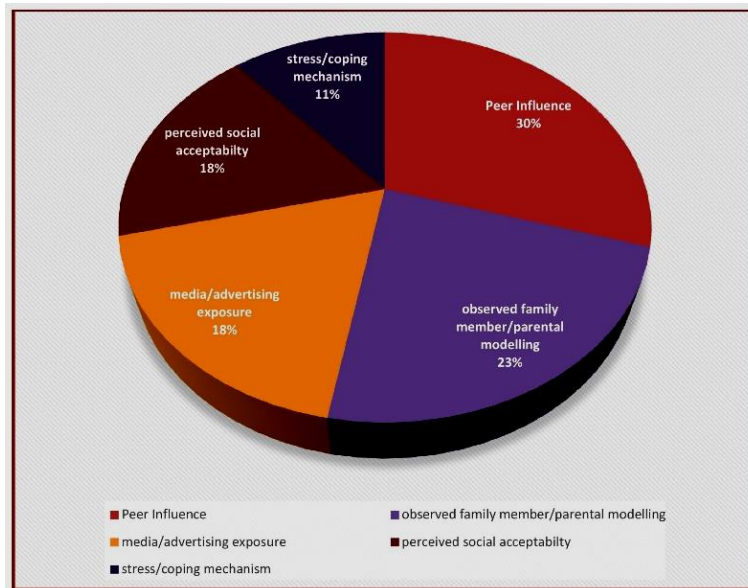


Fig. 2: Source of inspiration for tobacco consumption

DISCUSSION

The results of the study showed male dominance in tobacco consumption. This difference could be due to the socially unacceptable behaviour of females about tobacco consumption. Psychosocial factors influencing gender disparities encompass social desirability in the perception of smokers, while biological factors include variations in nicotine sensitivity. Psychobiological interpretations suggest that distinct biological effects lead to varying experiences with tobacco. A thorough investigation is essential to gain insights into the gender differences associated with tobacco product usage.

The Global Adult Tobacco Survey conducted in 2016-17 revealed that in India, 38.7% of smokers began smoking between the ages of 18 and 24. My research corroborates this data, indicating that the initiation of smoking frequently takes place during late adolescence or early adulthood. According to this study, the primary factor influencing this behavior was identified as Peer Influence, accounting for 30% of the responses^[6].

The results in this study also align with the study done among the children in Mysore and found the primary reason for influence was peer pressure. This peer pressure is seen more among the students of schools and colleges^[7].

Among other sources, the data from the Global Youth Tobacco Survey in India underscores the significant impact of heightened tobacco advertising and promotion on the initiation of tobacco use among young individuals^[8,9].

Tobacco consumption has been linked to academic underachievement among the youth in Delhi, indicating that social factors may contribute to this issue.^[10] A lower mean age was observed in this study which differentiates from the finding shown by Secker-Walker *et al.* in the study done by them in Andhra Pradesh.^[6]

Social Cognitive Theory, as proposed by Bandura, highlights the process by which individuals acquire behaviors through their interactions with the environment, particularly through observational learning and the modeling of the attitudes and behaviors of others. The impact of peers, family, and media portrayals serves to expose young people to smoking behaviors that they may subsequently emulate. The findings regarding the average age are consistent with previous national and regional studies, emphasizing the importance of the late teenage to early twenties phase for intervention. The age groups identified in the study align with this phase of psychosocial development, characterized by a desire for rebellion and adulthood, as well as susceptibility to peer influences, all of which contribute to experimental problem behaviors. According to the study by Narain *et al.*^[11], the mean age of initiation of these habits was around 12.4 years. Nearly 70 per cent of boys and 80 per cent of girls ≤ 15 yr initiated the habit of tobacco before the age of 11 yr which opposes the findings of this study. The differences in initiation age could be due to more exposure and peer pressure in tier-I developed cities like Noida. In the study done by Ahmed *et al.*^[12] an anonymous, self-

administrated questionnaire was given to 238 fifth- and sixth-graders in a middle-class neighbourhood school. The mean age at initiation was found to be almost half of our obtained result ranging between 6-11 years (mean 8.5 years). The higher difference in results can be linked to the study being performed in two opposite racial groups. Our study findings fully collide with the results of Cheng *et al.* [13] in the study done in U.S born people which shows peak incidence at age about age 18 years. The study also shows US-born males had a higher incidence of starting to smoke cigarettes regularly than females. The results also show that disparities in young adult smoking initiation existed according to sex, race, and educational attainment. The use of alcohol and illegal drugs was associated with smoking initiation. Freedman KS stated that the risk of smoking initiation among young adults increased under the following circumstances: exposure to smoking. The use of alcohol and illegal drugs was associated with smoking initiation. The risk of smoking initiation among young adults increased under the following circumstances: exposure to smoking, boredom or stress while serving in the military, attending tobacco-sponsored social events while in college, and exposure to social norms and perceptions that encourage smoking [14]. Mishra *et al.* [15] observed that the smoking prevalence in women born after 1960 was about half of the prevalence in women born before 1950. No changes have been seen in Female smoking patterns in the last 15 years.

CONCLUSIONS

This research sought to evaluate the average age at which individuals in the Bairagarh Chichali area begin smoking or developing tobacco-related habits, as well as to identify possible influences on these behaviors among the local population. The results provide essential insights that are crucial for the development of focused intervention strategies.

The findings highlight late adolescence and early adulthood as significant periods of susceptibility for the initiation of smoking behaviors. The interpretations suggest that distinct biological effects lead to varying experiences with tobacco. A thorough investigation is essential to gain insights into the gender differences associated with tobacco product usage. Delaying or preventing initiation during this window could lead to

substantial long-term impacts on reducing smoking prevalence.

RECOMMENDATIONS

Increased federal investment in tobacco prevention and treatment is crucial. Effective youth education campaigns and stricter regulations on emerging tobacco products, like e-cigarettes, are needed. More research on tobacco's health effects should be encouraged. Clinics, including dental offices, must implement tobacco user identification to detect early signs of oral cancer.

LIMITATIONS

Due to the cross-sectional nature of the study and the design, we were unable to determine a time correlation between the advice and the successful progress of the advice. Selection bias can be present to some extent because this study only included the sample population from one specific area.

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