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Original Research

Psychosocial Determinants of Tobacco Use among School Going Children in Lucknow City, India

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ABSTRACT:
Aim and Objective: Tobacco use is one of the major preventable causes of premature death and disease in the world.. In India alone, nearly 1 in 10 adolescents in the age group 13–15 year have ever smoked cigarettes and almost half of this report initiating tobacco use before 10 year of age. The present cross-sectional study was done to evaluate the Psychosocial Determinants of tobacco use among school going children of 10-18 years in Lucknow city, India. **Material and Method:** A descriptive cross-sectional epidemiological study was conducted among the school going children aged 10 to 18 years in Lucknow. The study was conducted in the government and private schools of Lucknow city. There are around 4000 schools in Lucknow city. Eligible school children were stratified according to age and gender, and randomly selected in proportion to the total number of 10 to 18 years old students to reach sample size of 1500 students. **Result:** The study comprised 1500 individuals. Data entered were qualitative in nature. The data was entered in SPPS 23.0 and Chi square was applied to see if there was any association between response and gender. 69.94% of the participants have experimented with cigarette smoking, even one or two puffs. The prevalence was higher among male. 56.7% of the population has used smokeless tobacco products associate with gender. **Conclusion:** These findings suggest the importance of intervention programs that promote positive peer influences, challenge misconceptions about social acceptance, and raise awareness about the dangers of tobacco use. Implementing peer-led educational initiatives, creating supportive social networks, and fostering a sense of belonging and self-esteem can help counteract the negative impact of peer influence.
Keyword: Smokeless Tobacco, Prevalence, Psychosocial, Adolescent

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INTRODUCTION

Tobacco use is one of the major preventable causes of premature death and disease in the world. A disproportionate share of the global tobacco burden falls on developing countries, where 84% of 1.3 billion current smokers reside. Nearly 70% of the world's smokers live in low and middle-income countries.[1] The tobacco situation in India is unique because of a vast spectrum of tobacco products available for smoking as well as smokeless use. The early age of initiation underscores the urgent need to intervene and protect this vulnerable group from falling prey to this addiction. In India alone, nearly 1 in 10 adolescents in the age group 13–15 year have ever smoked cigarettes and almost half of these reports initiating tobacco use before 10 year of age. Addiction to tobacco and harmful non-tobacco products by youth is assuming alarming proportion in India.[2] Recent studies have found that tobacco use is increasing among school children in India and a sizeable proportion of them experiment with drugs quite early in life[3]. Among the youth, late adolescents belonging to 16–19 years age group are particularly vulnerable due to increasing academic pressures, encouragement by peers, lure of popularity, and easy availability. Early initiation of substance abuse is usually associated with a poor prognosis and a lifelong pattern of deceit and irresponsible behavior.[4]

Therefore the present study was conducted with the objectives of finding the prevalence and patterns of tobacco use and the role of psychosocial determinants associated with tobacco use among school going children of 10-18 years in Lucknow City.

AIM AND OBJECTIVE

The present cross-sectional study was done to evaluate the Psychosocial Determinants of tobacco use among school going children of 10-18 years in Lucknow city, India

STUDY AREA

Lucknow is the capital city of the Indian state of Uttar Pradesh. The city stands at an elevation of approximately 123 meters (404 ft) above sea level. Lucknow district covers an area of 2,528 square kilometers (976 sq mi). Bounded on the east by Barabanki, on the west by Unnao, on the south by Raebareli and in the north by Sitapur and Hardoi, Lucknow sits on the northwestern shore of the Gomti River. According to the provisional report of 2011 Census of India, Lucknow city had a population of 2,815,601, of which 1,470,133 were men and 1,345,468 women. The city has a total literacy level in 2011 of 84.72% In Lucknow city, the total literate population totaled 2,147,564 people of which 1,161,250 were male and 986,314 were female. Study design; a descriptive cross-sectional epidemiological study was conducted among the school going children aged 10to 18 years in Lucknow.

METHODOLOGY

Lucknow city was divided into 5 geographical regions, North, South, West, East & Central zone. The study was conducted in the government and private schools of Lucknow city. There are around 4000 schools in Lucknow city. Schools from each region were randomly selected to obtain the desired sample size, such that there is an equal representation from each of the five zones. In the second stage, eligible school children were stratified according to age and gender, and randomly selected in proportion to the total number of 10to 18 years old students to reach sample size of 1500 students.

STUDY POPULATION

The age group was chosen based on several studies indicating that this age group is easily influenced by tobacco smoking. The prevalence of use of tobacco is higher in this age group. This is the age group which can easily be taught and awareness can be created. Inclusion criteria were 1) School going children of 10-18 years of Lucknow city 2) School going children of both genders 3) Children willing to participate in the study with consent from parents. Exclusion criteria were those children who refused to participate will be excluded and medically compromised children. Ethical clearance was given by the Institutional Ethical committee of Babu Banarasi Das College of Dental Sciences. Verbal Informed consent was obtained from the participating population and permission was taken from the school authorities. A pilot study was conducted on 50 participants to check the feasibility of the study and also to calculate the reliability of the study. The questionnaire was pretested on target population using Cronbach's alpha for reliability. The Cronbach's alpha came to 0.91 indicating an excellent reliability. Split half technique was also used to check for reliability. Examiner calibration and training of recording clerks has been done at the same time. The team of the survey consisted of administrators, coordinators, examiners and recorders participated in the pilot study. A pilot study saves precious time, identify potential difficulties and prompt modifications that may be necessary before the actual survey is initiated.

SAMPLING TECHNIQUE

A cluster random sampling technique was used to collect the sample. Cluster sampling is applicable when preparing the sampling frame is difficult. In it, geographical area is divided into small area called cluster like in our study Lucknow city was divided into geographical area: North, East, West, South and Central Population divided into several "clusters" in our study clusters are school Each cluster representative of the population Simple random sample selected from each. The samples are combined into one The advantage is that cost of study is reduced.

SCHEDULE

The collection of data was carried for study and should take 5-7 minutes in filling of the total questions. Daily and weekly schedules were prepared. The schedule was made available to school authorities. The schedules allowed for some flexibility, so that unexpected delays do not cause major upsets in the survey timetable. The plan for scheduling the time survey included: Introducing the examining team to the school director and class teachers concerned; travelling to the next school. Sample size was calculated based on previous study using G Power analysis. The level of confidence was kept at 95% with a margin of error (d) = 0.05.Power of the study = 80% and Proportion (p) = 19.6%. The total sample size came to 1385. It was rounded to make the sample size 1500. The calibration of the principal investigator was done by the research head that had conducted various epidemiological studies and has thorough knowledge of the subject. Research head that was trained in accordance with the recommended methods and have done several studies and survey on tobacco, tobacco cessation was appointed to act as a validator for the survey team.

INTRA-EXAMINER REPRODUCIBILITY

These subjects were pre-selected so that they collectively represent the full range of conditions

expected to be assessed in the actual survey. By comparing the results of the two examinations, the examiner can obtain an estimate of the extent and nature of the reliability of the questionnaire. Examiner was assisted by an alert and cooperative recording clerk who was seated close to the examiner, followed instructions precisely and neatly note down numbers and letters. Clear instruction was given to the clerk clear about recording the data on the assessment form. The meaning of the terms that will be used in the Performa was explained to the clerk and she were instructed in the coding systems so that, with practice, she will be able to recognize obvious mistakes or omissions made by the examiner. Before the survey begins, the clerk practiced recording the findings of a few preliminary examinations. Special instructions were given and additional practice was undertaken as the clerk was not familiar with the alphabetical or numerical symbols used on the assessment form. Failure to ensure that the recording clerk is making clear entries may result in confusion between codes later on in the process. Organizing clerk was to maintain a constant flow of subjects to the examiner(s) and to enter general descriptive information on the record forms. The organizing clerk also checked the finished records for accuracy and completeness, so that missing information may be obtained before the survey team moves to another location. This person was also be responsible for ensuring that the examiners have an adequate supply of questionnaire

QUESTIONNAIRE

Pre validated questionnaire from GATS survey by WHO was used. Adequate number of questionnaires was taken for the survey. A form of questionnaire was also formed on the internet through Google forms in case of any shortage questionnaire prepare in Google forms was used. The entire questionnaire was explained to the students and total confidentiality was assured. Study participants were instructed to choose only a single answer to each question. Considering the sensitivity of the topic, the school authorities were requested not to be present in the class during the procedure of filling the questionnaire

EXAMINATION AREA

The examination was carried in the class room or field of the school premises with consistent lighting. The principal investigator and Recording clerk will be present at the site. Teachers were not allowed near the examination area. An adequate supply of assessment forms, hardboard bases and clips, sharpened pencils, erasers and copies of the recording instructions, coding lists was readily available. It is very important that every examiner reviews each day's assessment forms on the same day, for completeness and accuracy of recordings. Questionnaire with all marked response were considered complete. Even if 1 response was missing the questionnaire was marked as no response or missing dat. The data collected were entered in IBM SPSS statistics 20 Descriptive analysis of qualitative variable is shown as number and percentages. Descriptive statistics represents the total number of participants, gender wise distribution, types of school: government or private. P value less than 0.05 was considered statistically significant. All the data were reported with exact p-values and 95% confidence intervals (CI) and 5% margin of error (z).

RESULT AND OBSERVATION

The study comprised 1500 individuals. Data entered were qualitative in nature. The data was entered in SPPS 23.0 and Chi square was applied to see if there was any association between response and gender. The study included more male patients compared to females as depicted in table 1. 69.94%of the participants have experimented with cigarette smoking, even one or two puffs. The prevalence was higher among male. The answer showed an association with gender. 65.73% of the population has experimented with tobacco products. This response was associated with gender (Table 2). 56.7% of the population have used smokeless tobacco products associate with gender (Table 3).

Table 1: Gender wise distribution of participants

Gender	Frequency	Percentage
Male	891	59.4%
Female	609	40.6%

Graph 1: Gender wise distribution of participants

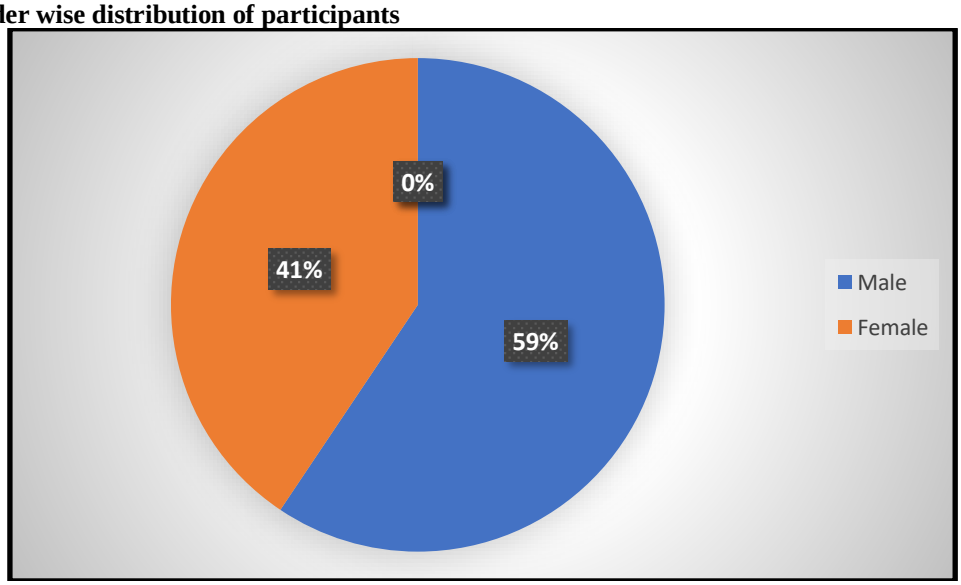


Table 2: Ever tried or experimented with any form of smoked tobacco products other than cigarettes?

Response	Frequency	Percentage	
Yes	986	65.73%	
No	514	34.27%	
Response	**Frequency Male (percentage)**	**Frequency Female (percentage)**	**Chi Square**
Yes	714 (72.41%)	272 (27.58%)	0.003
No	401 (78.02%)	113 (21.98%)	

Graph 2: Tobacco products other than cigarettes

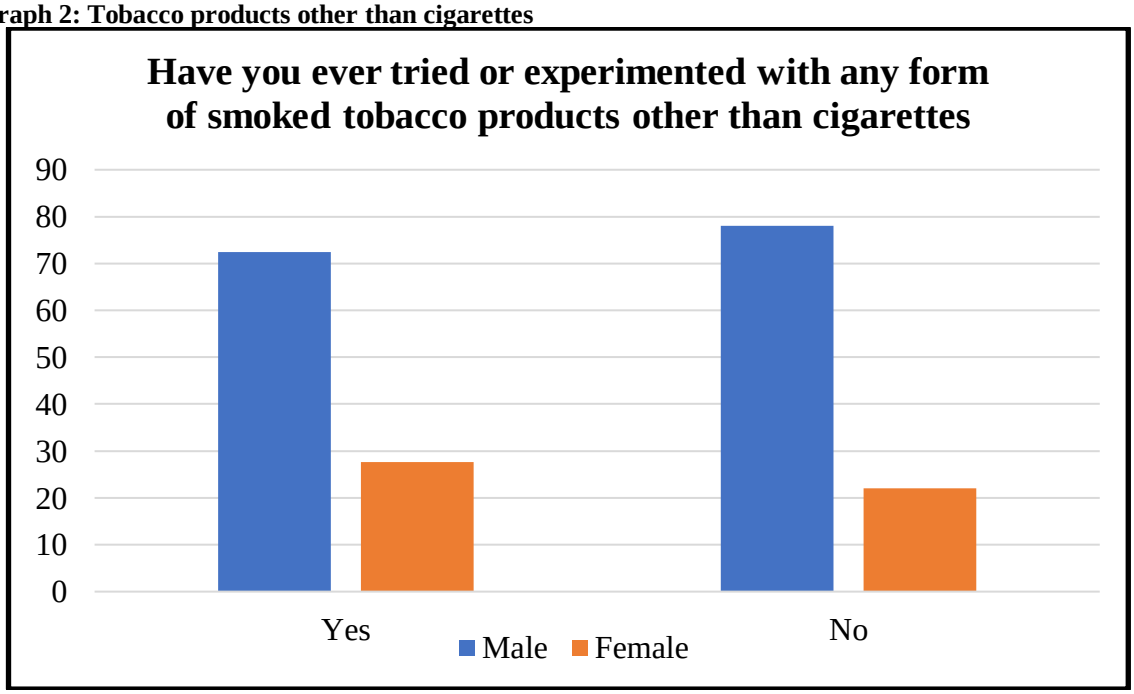
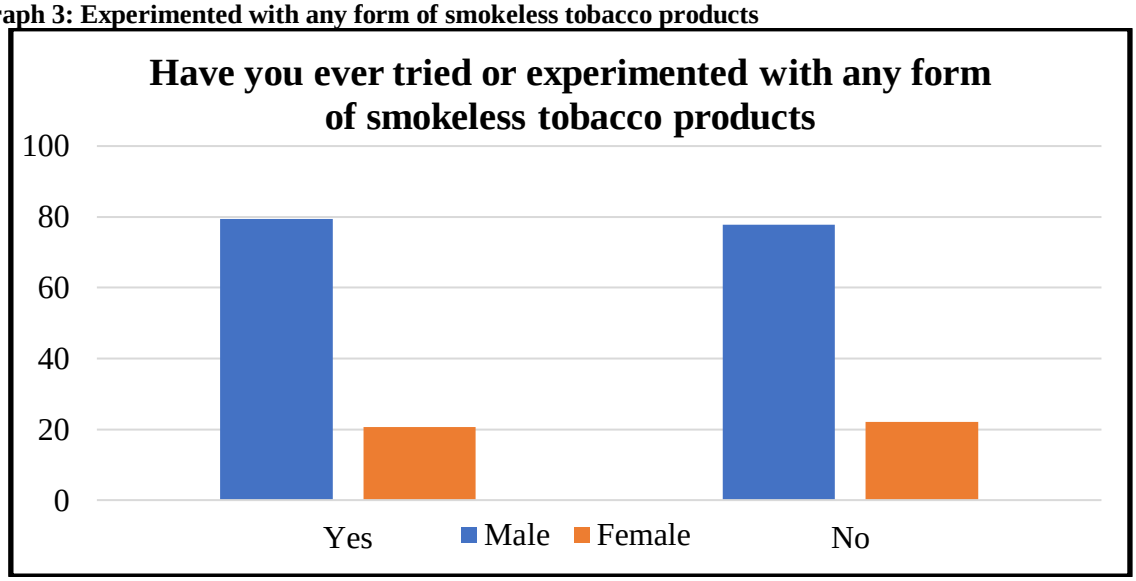


Table 3: Ever tried or experimented with any form of smokeless tobacco products?

Response	Frequency	Percentage	
Yes	841	56.07%	
No	659	43.93%	
Response	**Frequency Male (percentage)**	**Frequency Female (percentage)**	**Chi Square**
Yes	668 (79.43%)	173 (20.57%)	0.0002
No	513 (77.85%)	146 (22.15%)	

Graph 3: Experimented with any form of smokeless tobacco products



DISCUSSION

The discussion of the psychosocial determinants of tobacco use among school-going children aged 10-18 years provides an opportunity to analyze and interpret the study findings, understand the implications, and discuss potential strategies for addressing tobacco use in this population. Some of the research on adolescent smoking is grounded in theory, whereas other studies have a more empirical orientation. Four theoretical bases have been used to explain the initiation to and the acquisition of smoking. They include the rational approach as presented by Ajzen and Fishbein[5] social learning theory as found in the work of Bandura[6] emphases on social norms and attitudes as reflected by the research of Jessor and Jessor[7] and the developmentally oriented effective approach of Rosenberg[13] All of these explanations have found support in at least some studies; there is thus no one superior model that can be used to explain adolescent smoking. A complication for programme design is that the relevance of different types of variables, and possibly theoretical orientations, appears to vary depending on the stage of acquisition. Tobacco use, especially smoking, is a male-dominated phenomenon among children and adolescents in India unlike the West, where its distribution is equal among both genders. In some countries like China, Fiji, Jordan, and Venezuela, smoking is rather more common among females.[8] In our study, we have found ever tobacco use to be significantly higher among male students (20.6%) than female students (11.4%). Similar results have also been obtained in other studies done among school-going adolescents in Kolkata.[9] Family dynamics and parental behavior also plays a crucial role in children's tobacco use. Children with parents who smoke are more likely to engage in tobacco use themselves, indicating the need for targeted interventions for parents. Educating parents about the harmful effects of tobacco use, promoting positive parenting practices, and encouraging open communication within the family can be effective strategies. Additionally, providing support and resources for parents who want to quit smoking can contribute to creating a tobacco-free family environment. Psychological factors such as low self-esteem, stress, peer pressure, and maladaptive coping mechanisms were found to be associated with tobacco use among school-going children. Interventions should focus on enhancing self-esteem, teaching stress management techniques, promoting healthy coping mechanisms, and providing alternative strategies for dealing with peer pressure. Incorporating these elements into school curricula, extracurricular activities, and counseling services can help address the psychological determinants of tobacco use. The school environment and education were identified as important factors influencing tobacco use behaviors. The availability and accessibility of tobacco products in and around schools, along with inadequate anti-tobacco education, contribute to higher rates of tobacco use among students. Implementing comprehensive tobacco-free policies in schools, enforcing regulations on tobacco advertising near schools, and conducting anti-tobacco education programs can create a supportive and tobacco-free environment. Additionally, providing cessation support for students who want to quit smoking can be effective in reducing tobacco use prevalence. The findings of this study have implications beyond the immediate tobacco use behaviors of school-going children. Tobacco use at a young age can establish a lifelong habit and increase the risk of tobacco-related diseases later in life. Therefore, understanding the psychosocial determinants of tobacco use in this population can contribute to long-term public health efforts aimed at reducing the overall burden of tobacco-related diseases. Tobacco is used in a variety of forms in India. In the current scenario, the cigarette was commonly used by youth followed by bidis. This is in contrast to the most commonly used products

reported nationally which are khaini (smokeless form) and bidis (smoking form).[10] However, the finding needs to be interpreted with caution as very few participants reported the question on forms of tobacco used by them. The knowledge about electronic cigarettes among youth in the GATS-2 survey was limited as only 4.4% of them reported having heard of or seen them. Also, out of those who had heard of or seen electronic cigarettes, only 4 reported using them on a less-than-daily basis. These results need to be interpreted in light of existing global evidence suggesting dynamic and evolving patterns of e-cigarette use among youth, based on which India has recently banned e-cigarettes in the country.[11] The odds of using any form of tobacco were higher among rural youth. This is consistent with findings from studies done elsewhere in India.[7] Social acceptability of tobacco, particularly smokeless forms since ancient times, made it widely prevalent in rural areas. But it is worthwhile to state that there exist geographic variations concerning tobacco use across the country. However, the health of people living in rural areas is impacted more by tobacco use due to socioeconomic factors, culture, policies, and lack of proper health care.[14]

CONCLUSION

The psychosocial determinants of tobacco use among school-going children aged 10-18 years encompass a range of factors including peer influence, family dynamics, psychological factors, school environment, and media influence. By addressing these determinants through targeted interventions and comprehensive strategies, we can effectively prevent and reduce tobacco use among this vulnerable population. Creating supportive environments, promoting positive peer influences, raising awareness, and providing cessation support are key steps towards achieving a tobacco-free future for school-going children.

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