# SOCIO-ECONOMIC DRIVERS OF SMOKING AMONG YOUNG MALE STUDENTS: A CASE STUDY FROM PAKISTAN

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ABSTRACT

*This study aims to assess the socio-economic drivers of smoking among male students in Pakistan. Key factors such as residency, family smoking behavior, and social relations have been identified as significant influences on cigarette consumption. The residency variable reveals that students living in hostels are more likely to start smoking compared to those residing at home, as the hostel environment often exposes them to peer pressure and permissive attitudes toward smoking. Family smoking behavior also plays a crucial role, with students whose family members smoke being more likely to adopt the habit. Additionally, social relations have a positive impact on smoking, as students who spend more time with smoker friends are at greater risk of initiating smoking. Conversely, involvement in extracurricular activities and staying busy with productive tasks can reduce cigarette consumption, providing a healthier alternative to smoking. The findings highlight the importance of addressing these socio-economic factors to effectively reduce smoking prevalence among male students in Pakistan.*

**Keywords:** *Smoking, Residency, Family Smoking Behavior, Social Relation, Income, Community, Education Level.*

## INTRODUCTION

Cigarette smoking was introduced in Pakistan over 300 years ago by an English ambassador through the court of Akbar the Great. The king developed a liking for tobacco, which quickly spread among his subjects [Ball K (1983)]. By 1989, 87% of 47 brands of cigarettes in Pakistan had tar and 78.7% had nicotine concentrations above the international safety limits of 20 mg/cigarette for tar and 2 mg/cigarette for nicotine [Asghar et al. (1989)]. The growth of the tobacco industry, driven by multinational companies, has been rapid, expanding at a rate of 5% per year in Pakistan [Ministry of Health, Government of Pakistan (1993)], reflecting the global trend in cigarette production, which increased by 2.2% annually over the past two decades, surpassing the population growth rate of 1.7% [Crofton J (2002)]. Cigarette smoking has become a leading cause of the global lung cancer epidemic, with about 1.3 billion smokers worldwide, 80% of whom live in developing countries [http://www.cancer.org]. Pakistan, like many developing nations, has witnessed a rise in smoking rates, particularly among its youth. In 1995, 36% of males and 9% of females aged 15 years or older in Pakistan were smokers [Alam SE (1998)], and it is estimated that 1,200 children begin smoking every day [US Department of Health and Human Services (1994)].

The high prevalence of smoking among young male students in Pakistan is a concerning public health issue, as this demographic is particularly susceptible to the adverse health consequences of tobacco consumption. Factors such as male gender, advanced age, lower educational status, and exposure to household smokers have been recognized as principal risk factors for tobacco use in the Pakistani context. Furthermore, the sociocultural acceptance of smoking and the influential role of peer groups have been demonstrated to significantly shape smoking behaviors among the nation's youth population.(Prevalence and Associated Factors of Smoking Among Final Year Medical Students: A Multicentric Survey From Pakistan(2016).

University students, as future professionals and leaders, are key influencers in their societies. Their behaviors and actions have a significant impact on both their peers and younger generations. Unfortunately, smoking is prevalent among university students in Pakistan, which not only negatively affects their health but also hinders their academic and personal performance, crucial for national development. The tobacco industry's expansion, with cigarettes containing dangerously high levels of tar and nicotine, exacerbates this issue [Asghar et al. (1989)]. If not addressed, this situation could lead to severe public health consequences, including premature deaths and increased healthcare costs. For instance, in 2000, it was estimated that nearly half of the 4.83 million premature deaths attributable to smoking occurred in developing countries, mainly among men aged 30–69 years [EzzatiM (2003)].

(Zulfiqar et al.2023) research explores the demographic and socioeconomic factors influencing tobacco consumption patterns in Punjab, Pakistan. Their findings indicate that individuals with higher educational attainment and greater financial resources are less likely to engage in smoking, while those from lower socioeconomic backgrounds demonstrate elevated smoking rates. This observed trend underscores the crucial role of education and economic stability in deterring tobacco use.

Despite widespread knowledge of the harmful effects of smoking, students in low and middle-income countries, including Pakistan, continue to contribute to the increasing smoking trend. Globally, approximately 1.3 billion people smoke regularly, and between 8,200 and 9,900 young people begin smoking every day, putting them at risk of rapid nicotine addiction [http://www.globalhealth.gov/].

The health of populations worldwide is severely threatened by cigarette smoking. The absence of effective anti-tobacco organizations, coupled with the aggressive efforts of the tobacco industry to increase market share, has contributed to the ongoing epidemic in many developing countries. Understanding the factors that influence smoking habits, particularly among students, is therefore crucial.

This study aims to assess the socio-economic drivers of smoking among male students in Pakistan, exploring the influences of factors such as family smoking behavior, residency (home vs. hostel), social relations, and stress levels. It seeks to answer key questions: What role do socio-economic variables play in shaping smoking behavior? How does family smoking influence students' habits? Do income and stress levels affect smoking patterns? How do educational levels and living arrangements (hostels vs. homes) impact smoking? Despite numerous global studies on smoking patterns among students [WHO 1992, 1997; World Bank 1999], few have provided a comprehensive analysis of the socio-economic determinants of smoking in male students. This study aims to fill that gap, offering clear insights into the socio-economic variables that influence smoking behavior in Pakistani students and providing evidence for potential interventions to curb this growing public health issue.

## I. Literature Review

Cigarette smoking has been a significant public health concern globally, and Pakistan is no exception. A number of studies have explored the prevalence, patterns, and socio-economic factors influencing smoking behaviors among different demographics in Pakistan, particularly among students. This literature review synthesizes findings from various studies to understand the socio-economic determinants of smoking in the country.

(Samad et al.2024) investigate the concerning increase in vaping among Pakistani adolescents, attributing it to factors such as social pressure, easy access, and socio-economic conditions. The study emphasizes how the marketing and widespread availability of vaping products have led

to their extensive use, particularly among young people. The findings underline the necessity for robust regulations and public education campaigns to address this escalating problem.

Razzaq et al. (2022) (Garrett et al., 2019) focus on tobacco consumption in an urban slum, revealing that unemployment, low education levels, and limited media exposure correlate with increased tobacco use. These findings suggest that socio-economic vulnerabilities play a crucial role in shaping smoking behaviors, which can also be extended to younger populations exposed to similar conditions.

Zahra et al.(2022) analysis of secondary data from the 2017–2018 Pakistan Demographic and Health Survey provides insights into the socioeconomic and geographic factors influencing secondhand smoke exposure. Their findings reveal disparities in secondhand smoking based on socioeconomic status, educational attainment, and the urban-rural divide. These insights underscore the need for targeted public health interventions to safeguard non-smokers from the harms of passive smoking.

Zubair et al. (2022) (Greaves, 2014) provide a gender-specific perspective on tobacco use risk factors, noting that education, wealth, and social influences significantly determine smoking behaviors. Their research indicates that men and women experience different social pressures and economic motivations regarding tobacco use, necessitating gender-sensitive policy measures.

Alam S. E. (1998) analyzed the prevalence and patterns of smoking in Pakistan, focusing on variables such as age, marital status, and community. Using a stratified systematic sample, his study found a higher prevalence of smoking among males, with the smoking rate increasing until the age of 64. Additionally, smoking was found to be more prevalent among illiterate individuals, indicating that education level plays a critical role in smoking habits.

Shah et al. (2001) examined the prevalence and correlates of smoking among a sample of 4,203 individuals in 16 villages in Pakistan. Their study revealed that smoking behavior was more common among men and that smoking prevalence increased with higher education levels. Interestingly, the study found no significant relationship between cigarette consumption and income, suggesting that other factors, such as education and social influences, might play a larger role in smoking behavior.

Sheikh (2004) conducted a study on stress and coping strategies among medical students in Pakistan, which also indirectly highlighted the relationship between stress and smoking. The study, which included 264 students, found that over 94% of male students reported experiencing stress during their student life. The most common stressors were academic pressures, and coping mechanisms included sports, music, and socializing. Though not directly focused on smoking, the study suggests that stress management techniques may be an important factor in addressing smoking behavior among students.

Ahmad et al. (1995) conducted a nationwide population-based, cross-sectional survey to study the prevalence and predictors of smoking in Pakistan. Their study, which sampled 9,442 individuals above the age of 15, found an overall smoking prevalence of 15.2%, with significantly higher rates among men (28.6%) compared to women (3.4%). The study also highlighted that urban areas had a higher prevalence of smoking than rural areas. Key predictors of smoking included age, gender, ethnicity, and illiteracy.

Khan et al. (2005) focused on smoking prevalence, knowledge, and attitudes among medical students in Karachi, Pakistan. They surveyed 271 students aged 17-28 years and found a higher prevalence of smoking among male students (22.0%) compared to females (3.8%). The mean age at which students began smoking was 17.9 years. The study emphasized the importance of integrating smoking cessation programs and counseling into the medical curriculum to reduce smoking prevalence among medical students.

Rozi et al. (2005) conducted a study on high school adolescents in Karachi, using cluster sampling to analyze the prevalence and factors associated with smoking. They found that paternal smoking, uncle smoking, and spending leisure time outside the home were significantly associated with adolescent smoking. This suggests that familial influences and environmental factors play a key role in shaping smoking behaviors among young people.

Nawaz et al. (2007) analyzed smoking habits and beliefs among future physicians in Pakistan through a cross-sectional survey conducted in three medical colleges. The study found a

prevalence of 11.2%, with smoking being more prevalent among male students, hostel residents, and first-year students. This study reinforces the idea that residency and peer influences are important factors in student smoking behavior.

Rozi et al. (2007) examined the correlates of cigarette smoking among male college students in Karachi, finding that 24% of students were current smokers. The study revealed that smoking prevalence was higher among students in public schools compared to private schools. Additionally, students whose friends smoked were five times more likely to smoke themselves. The study also identified family educational background as a key factor, with students whose fathers had no formal schooling being more likely to smoke.

Ahmed et al. (2008) conducted a study on the prevalence of cigarette smoking among young adults in Pakistan, focusing on university students. The study, which included 629 students, found that 23% of students smoked, with a higher prevalence among males (31%) compared to females (6%). The study identified parental and sibling influence, as well as the presence of smokers in the home, as significant predictors of smoking among students.

These studies collectively highlight the socio-economic factors that contribute to smoking behavior among students in Pakistan, including gender, education, family background, peer influence, and stress levels. The findings indicate that male students are more likely to smoke, and factors such as higher education, family smoking behavior, and the living environment (hostel vs. home) significantly influence smoking patterns. Moreover, the role of stress and coping mechanisms in smoking behavior suggests that interventions aimed at reducing smoking should also address mental health and stress management among students.

## II.     Material, Methods and Results

This chapter outlines the data collection process and the results obtained from a survey conducted in 2024. A questionnaire-based survey was administered to male smoker students from the two universities of Pakistan that are "Pakistan Institute of Development Economics (PIDE) and Quaid-e-Azam University (QAU) in Islamabad". Due to time constraints, data were collected from 75 male students who were smokers. The sampling method used was convenient sampling,

and the survey ensured full participation, with all 75 students completing the questionnaire. Prior to distributing the questionnaires, the research idea and the questionnaire were presented in class for feedback, allowing for improvements. Informed verbal consent was obtained from all participants, ensuring that the students were aware of the study's purpose and that their responses would remain confidential. Data entry for this study was conducted using the Statistical Package for Social Sciences (SPSS) version 10. The frequencies and percentages of responses provided by the respondents were analyzed using SPSS to summarize the data and identify patterns in socio-demographic and behavioral characteristics.

The questionnaire gathered socio-demographic information including age, marital status, educational level, and economic details such as monthly pocket money and expenditures. Additionally, it inquired about smoking behavior, family smoking patterns, social relationships, and other factors that could potentially influence smoking. Respondents were specifically asked about the number of cigarettes smoked daily, the time spent with smoker friends, family smoking habits, and the level of their income at the time they started smoking. The data were analyzed to identify the socio-economic determinants of smoking among male students.

Regarding smoking behavior, respondents were asked how many cigarettes they smoked daily, with the options being <=2, 5, 8, 11, or 14 cigarettes. The responses were categorized, with 32% of respondents smoking 2 or fewer cigarettes, 25.3% smoking 5 cigarettes, 17.3% smoking 8 cigarettes, 6.7% smoking 11 cigarettes, and 16% smoking 14 or more cigarettes daily. This data served as the dependent variable in the analysis, with other socio-economic factors being examined for their potential influence on smoking behavior.

The residency variable was examined by asking respondents where they lived when they started smoking, with possible answers being 'Hostel' or 'Home.' The majority of respondents (62.7%) indicated that they started smoking while living in a hostel, while 33.3% began smoking at home. This finding suggests that the majority of students started smoking during their time in the hostel, which may reflect greater social exposure to smoking behaviors among peers or increased independence in hostel life.

To assess the impact of family smoking behavior, respondents were asked whether any family members were smokers when they started smoking. Results showed that 49.3% of respondents reported having a smoker in their family, while 50.7% did not. This near-even distribution suggests that family smoking behavior may not be the most significant factor for all students, although it may still influence some individuals.

Social relations were another key factor explored in the survey. Respondents were asked how much time they spent with smoker friends when they started smoking, with possible responses ranging from 1 to 9 hours per day. The majority of respondents (26.7%) spent 5 hours per day with smoker friends, followed by 22.7% who spent 3 hours and 17.3% who spent 9 or more hours with smoker friends. The results indicate that the more time a student spends with smoker peers, the more likely they are to begin smoking, highlighting the strong influence of social networks on smoking behavior.

The survey also explored the role of income, asking students how much pocket money they received when they started smoking. The responses indicated that 42.7% of respondents had a monthly income of 10,000 rupees or less, 22.7% had 13,000 rupees, 18.7% had 17,000 rupees, and 14.7% had 20,000 rupees or more. This suggests that students with lower incomes may be more likely to begin smoking, potentially as a way to cope with stress associated with financial difficulties.

Community background was assessed by asking respondents whether they lived in an urban or rural area. The majority of respondents (60%) lived in urban areas, while 38.7% were from rural areas. This finding was contrary to expectations, as more respondents from urban areas reported starting smoking compared to those from rural areas, indicating that urban environments may have greater exposure to smoking behaviors or access to cigarettes.

The education level at which students began smoking was another focus of the study. When asked about the education level at which they started smoking, 45.3% of respondents indicated they started smoking before their bachelor's degree, 20.7% started during their bachelor's, and 20% started during their master's degree. A smaller percentage started smoking during their M.Phil. studies. This suggests that smoking initiation is common in the early stages of higher education, particularly before completing a bachelor's degree.

Finally, respondents were asked about their age when they started smoking. The majority (32%) reported starting at age 18, followed by 26.7% who started at age 21 and 16% who started at age 15. These findings suggest that many students begin smoking during their late teens or early twenties, which are critical years when individuals may be more susceptible to peer pressure and lifestyle changes.

In summary, the data collected indicates that a variety of socio-economic factors influence smoking behavior among male students. Hostel living, peer influence, and family smoking behavior were all found to play significant roles in the initiation of smoking. Additionally, factors such as income levels, community background, education level, and age also impacted smoking patterns. These findings provide valuable insights into the socio-economic determinants of smoking among university students and highlight areas for potential intervention. Further analysis using regression models will explore these relationships in more depth to better understand the factors contributing to smoking behavior among male students in Pakistan.

III. **Conclusion**

This study highlights the crucial role of socio-economic factors in influencing smoking behavior among male students at the university level in Pakistan. The findings suggest that factors such as residency, family smoking behavior, social relations with smoker friends, and income (pocket money) are significant determinants of smoking among students. These socio-economic elements create environments and conditions that foster smoking behavior and, therefore, should be carefully considered in strategies aimed at reducing tobacco use among students.

The study found that residency, particularly living in hostels, has a notable impact on smoking behavior. Students in hostel environments are more likely to start smoking, which can be attributed to several factors. The relative freedom experienced in hostels, coupled with the lack of parental supervision and the increased opportunity for socialization with peers, creates an environment conducive to smoking initiation.

The financial freedom and absence of parental guidance often lead to higher levels of stress, which can prompt students to adopt unhealthy coping mechanisms such as smoking.

Family smoking behavior was another significant determinant identified in this study. The presence of smoking behaviors within the family strongly influences a student's decision to smoke. If a student has family members who smoke, the likelihood of the student engaging in smoking increases. This is because students tend to imitate the behaviors of family members, and when smoking is normalized within the household, it becomes challenging to discourage such behavior. The study underscores the importance of family dynamics in shaping attitudes toward smoking.

Social relations, specifically the time spent with smoker friends, also emerged as a key factor in the initiation of smoking. The study shows that the more time students spend with friends who smoke, the more likely they are to start smoking themselves. This finding highlights the influence of peer groups and social circles on individual behavior. Students tend to model their actions based on the behaviors of those around them, making peer influence a powerful factor in smoking initiation.

While income was found to have an insignificant direct impact on smoking in this study, the responses indicated that students with lower incomes (pocket money) are more likely to experience financial stress, which may contribute to smoking initiation. Financial pressure among students, particularly those from low-income backgrounds, can lead to increased stress, which in turn may prompt them to seek relief through smoking. This finding suggests that while income itself may not be a direct predictor, the stress associated with low income could be an indirect factor influencing smoking behavior.

## IV. Policy Recommendations

Based on the findings of this study, several policy recommendations can be made to help reduce smoking among university students in Pakistan:

- **Parental Involvement and Guidance**: Parents should be more actively involved in monitoring and guiding their children's behavior, especially in the absence of constant supervision in hostel life. Although it may be challenging, parents

can play a critical role in discouraging smoking by setting a positive example and having open discussions about the health risks of tobacco use. Moreover, parental engagement can help mitigate the stressors that students face, thereby reducing the likelihood of smoking as a coping mechanism.

- **Encouraging Healthy Activities**: Universities should promote extracurricular activities and healthy hobbies that can keep students engaged and help reduce stress. Encouraging students to participate in activities such as sports, gardening, arts, or volunteering can provide an outlet for stress and serve as an alternative to smoking. Implementing wellness programs and offering students opportunities for physical and mental relaxation could be effective in combating smoking initiation.

- **Financial Support and Scholarships**: Since financial stress was identified as an indirect factor contributing to smoking behavior, it is essential for the government and educational institutions to offer more scholarships and financial assistance to students, particularly those from low-income backgrounds. By alleviating the financial pressures faced by students, they are less likely to resort to smoking as a means of stress relief.

- **Peer Education and Awareness Programs**: Given the strong influence of peer groups, universities should consider implementing peer education programs that aim to educate students about the dangers of smoking and promote healthy, smoke-free behaviors. Peer-led initiatives can be highly effective in influencing students, as they often trust and relate more to their fellow students than to authority figures.

- **Stronger Regulations on Tobacco Advertising and Accessibility**: The government should strengthen regulations around the marketing and availability of tobacco products, particularly in areas frequented by young adults, such as university campuses. Limiting access to tobacco and reducing its visibility on

campus can help decrease its appeal to students.

In conclusion, this study emphasizes the need for a multi-faceted approach to tackling smoking among university students in Pakistan. By addressing the socio-economic determinants identified in this research—such as residency, family smoking behavior, social relations, and income—targeted interventions can be developed to help reduce smoking initiation and promote healthier lifestyles for students. Through collaborative efforts between families, educational institutions, and government bodies, it is possible to mitigate the growing prevalence of smoking and its associated risks among the youth population.

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