Prevalence and Contributing Factors to Cigarette Smoking Initiation and Use Among Undergraduates Students: A Cross Sectional Study

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Abstract

The goal of this research was to learn more about the prevalence of smoking among undergraduate students, as well as the variables that encourage them and may influence their cigarette smoking habits. A crosssectional investigation was carried out. A self-administered questionnaire was created to capture sociodemographic information, smoking behaviors and smoking motivating factors, related illness, hazardous, and smoking grade. Of the 304 undergraduates that partici- pated in the study, 82 were smokers. The average age was 21.3 ± 0.210 years (95 % CI [21.103, 21.909]). Smoking was prevalent in 26.7 % of the selected population [95 % confidence interval (CI) 98.1–105.7]. The prevalence of smoking varies greatly depending on the year of the investigation. A higher percentage of smokers (34.14 %) have smoked cigarette at friend's place. About 6% of smokers develop asthma and 23% have cough. In comparison to smokers, a majority of non smokers were aware of the harmful effects of smoking (63 % vs. 36.5 %, p = 0.001). For nicotine dependency, the Fagerstrom score was low for 12.95%, moderate for 31.70 %, and high for 46.34 %. The primary motivations for starting to smoking were pleasure and convenience (50.70%). Although the frequency of cigarette smokers in under-graduates' students was lower than in the overall population, the percentage is alarming and suggesting that cigarette smoking is on the rise.

Keywords:

Cigarette smoking, Factors, Prevalence, Students, Tobacco.

1. INRODUCTION

Smoking is extremely harmful to one's health. It contributes to the morbidity and mortality of numerous heart and lung disorders. Tobacco burning is a severe threat to global health, killing almost 8 million people every year and resulting in high healthcare expenses and vanished productivity (Organization, 2015). Around 80% of smokers live in low-income regions, and cigarette-related death and morbidity is higher in

At the same time tobacco outflow remains stable or declines in industrialized nations, it rises at a pace of 3.4% per year in underdeveloped countries (Boutayeb & Boutayeb, 2005). Recent research on the spread of tobacco use projected a waning of tobacco use in continent Africa and the East-Mediterranean region, where the system of health is fragile (Bilano *et al*., 2015). In countries' tobacco companies target youth and women since they are more likely to take up the habit (Lee *et al*., 2012). Tobacco use is a major risk factor for illnesses such chronic obstructive pulmonary disease, diabetes, cancer and cardiovascular disease (Organization, 2015). Infectious and non-infectious diseases will be burdened twice as much as non-communicable diseases when smoking prevalence rises over time (Boutayeb & Boutayeb, 2005). The Centers for Disease-Control and Prevention (CDC) and the World-Health Organization (WHO) performed the Global Youth Tobacco Survey (GYTS) to estimate the global burden of tobacco usage among youth (Warren *et al*., 2006). The findings of this survey included participants from 131 countries, revealed an 8.9% global prevalence of current smokers were students. This frequency was highest in the WHO Americas region (17.5%) and the WHO European Region (17.9%), with less than 10% in four other WHO statistics (Warren *et al*., 2006).

Tobacco smoking is prevalent in Pakistan, with 36% of males and 9% of females smoking. Adult smokers account for 15% of university students, with predominantly male smokers (Shaikh & Kamal, 2004). Every day, over 1,200 children begin smoking (General, 1990). This is a severe problem that affects financial expen- ditures as well as progressively robbing the country of healthy hands and high disease burden in an already overburdened health system. Adults' motivations for starting to smoke are inexplicable.

Biological, psychological, genetic, economic, and societal elements may all be considered. The majority of this is due to social and environmental factors, such as smoking by friends, blood-relations, siblings, and members of the general public. Smoking habits of parents play an essential effect in the onset and growth of youth smoking addictions (General, 1990). Adults who have at least one smoking parent are more expected to flinch smoking them- selves, according to a number of studies (Tyas & Pederson, 1998). Others have proposed that children with one smoking parent are more prone than children with non-smoking parents to develop higher levels of smoking (Murray *et al*., 1983).

Tobacco use among undergraduates is a major public health issue in both industrialized and developing states. The GYTS was steered in three distinct areas of Pakistan, with a focus on school kids aged 13-15 years old who smoked (Arrazola *et al*., 2017; Rozi *et al*., 2007). As a result, public health urgency should be given to educating this group about the dangers of smoking so that their behavior can be changed. It is also required for the government for initiatives that look into the causes that lead to people starting to smoke cigarettes (Aslam *et al*., 2014).

This study aims to regulate the relationship between cigarette smoker and various social factors such as smoking in the home, family smoking involvement, and smoke-free public places, as well as to investigate the prevalence

of smoking in undergraduates' students and evaluate the factors related to smoking in students.

2. MATERIALS AND METHODS

The research was conducted in a cross-sectional manner. The information was gathered from the Institutions of Pakistan between January and April 2022. There is a two-part questionnaire that was prepared. The first section contained demographic data about the participant, such as their institution, gender, age, address, and educational level. The second section contained data on smoking status, prevalence, motivating factors for smoking, smoking location, smoking status of family members and friends, knowledge of the detrimental effects of smoking, any recent sickness linked to smoking, and social history.. In smokers, the Fagerström score of nicotine dependence was assessed. Low nicotine addiction is indicated by a score of less than 3, moderate nicotine addiction is indicated by a score of 3 to 6, and high nicotine addiction is indicated by a score of 7 to 10. The smoking status was the dependent variable. All participants gave verbal agreement and agreed to keep their identities private. The purpose of the study was described to the selected participants, who were assured that their responses would not be revealed to any academic authority and that their privacy would be respected. A representative sample of students from professional 1st, 2nd, 3rd, 4th, and 5th years of the university was drawn using statified clusterstratified cluster sampling. A cluster was def

ined as a collection of classrooms. Simple ranrandom selection was used and 28 students were included from each section (year) for a total sample size of 304.

STATISTICALANALYSIS:

SPSS Statistics 20 Version was used to statistically evaluate the data. Statistical significance was defined as a p-value of less than 0.05.

3. RESULTS AND DISCUSSION

Characteristics of the Sociodemographic environment 82 (26.19%) of the 304 participants smoked cigarettes. The individuals' average age was 21 ± 0.211, with a 95 % confidence interval of [21.093, 21.907]. Around 56% of respondents lived with family members, while 24% lived with friends and 19% lived alone. The prevalence of smoking varies dramatically depending on the year of study: 6% in the first year, 23% in the second year, 29% in the third year, 29% in the fourth year, 17% in the fifth year, and 6% in the sixth year shown in Table 1.

3.2. Cigrette Smoking

Smoking was prevalent in 40.19 %t of the population (95% CI- 98.2-105.8). According to the survey, the majority of smokers (34.14%) had smoked cigarettes at a friend's house, followed by social gatherings (18.29), public areas (8.5 %), and at home (6.81%) (4.8%). About 6% of smokers suffered from Asthma, and 23% from cough. According to statistics, a higher number of nonsmokers than smokers were aware of the detrimental effects of smoking (63% vs. 36.58%) shown in Table 2.

3.3. Participants' Smoking Habits

There were 43.9 % regular smokers and 56.09 % occasional smokers among the 82 smokers. The average age at which people began smoking was 19.6 ± 1.08 years (Table 1). For cigarette dependency, the Fagerström score was low for 21.95 %, moderate for 31.70 %, and high for 46.34 % (Table 2).

3.4. Why did you start smoking?

This included Fun (50.70 %), stress (40.24 %), test failure (9.7%), friends' company (36.5%), and personal concerns (13 %) were the most common reasons for starting to smoke (Table 2).

Table 1. Shows the general Characteristics of the 82 Smokers who participated in Study.

Variables	Number%
Gender	
Male	82 (26.19%)
Age (in years)	
18-20	36 (43%)
21-23	18 (42.85%)
24-27	15 (18.29%)
Year of education	
1st	06 (7.2%)
2nd	23 (28.1%)
3rd	29 (35.0%)
4th	17 (20.0%)
5th	08 (9.7%)
Have you ever smoked?	
No	222 (73.02%)
Yes	82 (29.19%)
Have repeat class?	
No	59 (71.00%)
Yes	23 (28.05%)
Smoking's negative effects are known?	
No	30 (36.00%)
Yes	52 (63.00%)
Smoking Position	
Non smokers	222 (73.01%)
Consistent smokers	36 (43.90%)
Infrequent smokers	46 (56.09%)

Table 2: Attitudes about Smoking (n=82)

Fagerstrom score	
Low (0-3)	37 (12.34%)
Moderate (3-6)	28 (32.41%)
High (7-10)	45 (46.08%)
Smoking Place	
Home	6 (7.2%)
Hostel	4 (4.9%)
University	4(4.9%)
With smokers	42 (51.22%)
In reactive parties	28 (34.13%)
Motivation for starting smoking	
In Stress	33 (40.24%)
Examination fear	08 (9.7%)
Fun and Pleasure	41 (50%)
Personal life difficulties	13 (13%)
Friends	30 (36%)

Despite the fact that the hazardous effects of cigarette smoking are now well known, a large proportion of university students involved in this practice in this study. This figure is since young people who try cigarettes are more likely to become smokers in the future. We discovered that out of the 304 students in the research, 82 were smokers. Smoking was found to be prevalent in 40.19% of the population. For nicotine dependency, the Fagerström score was high for 21.95 % moderate for 31.70 %t, and low for 46.34 %. Our findings revealed that the proportion of smokers (26.9%) was lower than that reported in earlier research and was equivalent to that of Italy (29.0%), which was lower than that of American society (23.5%) but higher than that of Sweden (18.0%) (Helakorpi *et al.*, 2008; Jamal et al., 2012). Friends who smoke, test failure, stress, enjoyment, and fun parental smoking were the most important factors in cigarette smoking. The prevalence of smoking in adults rises with age (Rudatsikira *et al.*, 2008). In this study, the main determinant for cigarette smoking was a high proportion of smoking during pleasure and reactionary gatherings. Another key element that is linked to cigarette smoking is the presence of smoking-related friends. This element is also supported by research from other parts of the world (Bricker, Peterson Jr, Andersen, *et al.*, 2006). According to the findings of two longitudinal studies conducted in the United States, smokers' friends are more responsible for adults starting to smoke than those who do not have smoker friends (Bricker, Peterson Jr, Leroux, *et al.*, 2006). Furthermore, parental smoking was strongly linked to participant smoking. Bricker *et al.* demonstrated the significant impact of parental smoking on children's smoking behavior in a cohort study including 5,000 households (Samet *et al.*, 2010). This pattern is consistent with the findings of other research undertaken in both developing and developed nations (Scragg *et al.*, 2003). In actua-

lity youngsters mimicked their parents' actions since they are their role models. Second, according to Scragg *et al*., parents who smoke are more likely to allow smoking in the home (Shadid & Hossain, 2015). Participants who lived with other smokers in their household were twice as likely to be smokers as those who lived with nonsmokers. The findings of this study will important for public policies and practices. To begin with, it indicate that the factors that influence Pakistani students' decision to smoke are likely to be similar to those studied in other nations. It helps to legitimize the necessity for the government to create smoke-free zones, population education, and tobacco-cessation management. It helps to justify the necessity for larger, more complex trials on tobacco use among Pakistani adolescent adults.

Table 3. Factors Associated with Smokers using Logistic Regression Statistics

Variables	Crude OR	95%CI	Significant level
Friends Smoker	3.95	2.01to7.76	0.0001
Parental smoking	2.31	2.13 to 6.77	0.0001
Knowledge of harm	4.45	2.60 to 7.61	0.0001
Year of education			
1st	0.06	0.017 to 0.22	0.0001
2nd	2.14	2.12to6.23	0.0001
3rd	3.12	2.12 to 7.17	0.0001
4th	2.25	2.33 to 7.81	0.0001
5th	0.05	0.017 to 0.22	0.0001
Staying Habits			
With family members	1.82	1.06 to 5.12	0.0001
With friends	2.84	2.16 to 8.17	0.0001
Alone living	1.78	1.98 to 7.16	0.0001

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