

Cigarette Smoking Habits among University Students: Prevalence and Associated Factors

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ABSTRACT

Smoking is the main cause of morbidity and mortality in the world and is estimated to kill 5 million people each year worldwide. If current patterns of tobacco consumption continue, smoking will kill more than 8 million people each year globally by the year 2030, with 80% of these deaths in the developing countries. This study aimed to determine the prevalence and associated factors of cigarette smoking among male university students in Muzaffarabad, Pakistan. A descriptive cross-sectional study was conducted among 542 male students at University of Azad Jammu & Kashmir in Muzaffarabad from July to December 2015. The socio-demographic characteristics and cigarette smoking behavior of the students were measured by using a standardized pre-tested self-administrated validated questionnaire in English. The overall prevalence of cigarette smoking among students was found to be 49.4%. The mean age of starting cigarette smoking was 19.2 ± 2.73 years. Age, marital status and education were found significantly associated with cigarette smoking behavior (p -value<0.05). The most common reason for cigarette smoking was stress alleviation (35.0%) followed by peer pressure (24.5%). As cigarette smoking is considerably higher among students. There is a need to develop effective tobacco control measures among university students in Muzaffarabad.

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1. INTRODUCTION

The morbidity and mortality due to tobacco smoking now constitutes a global pandemic. Smoking is the main cause of preventable deaths and is estimated to kill up to 5 million people each year in the world. If current patterns of tobacco consumption continue, smoking is expected to kill up to 8 million people each year globally by the year 2030, with 80% of these premature deaths in the developing regions [1].

Cigarette smoking causes several diseases such as heart diseases, stroke, chronic obstructive pulmonary disease, periodontitis, peripheral vascular disease, tooth loss, carries, cataract, hip fracture, osteoporosis, dermatitis, diabetes, impotence, tuberculosis, dementia, cognitive decline, peptic ulcer disease and it also causes cancer of bladder, cervical, kidney, oral, oesophageal, lung, laryngeal, pancreatic, leukaemia and stomach [2]. Trends of cigarette smoking are now changing in developing and developed regions. Although cigarette smoking is declining or static in most of the developed regions due to some stringent measures of public health, while it is continuously increasing in the developing regions due to massive advertisement and promotion of cigarettes and other tobacco products [3]. There are about 1.1

thousand million people (47% of males and 12% of females) are currently smoking in the world of which nearly 80% of the world's total smokers live in the developing regions. One such developing country, which has the highest prevalence of cigarette smoking in the South East Asian Region, is Pakistan [4].

The prevalence of cigarette smoking in Pakistan among young male adults especially university students is 15% [5]. According to a Pakistani Global Youth Tobacco Survey, males were more likely to smoke than females, with prevalence of smoking among males at 32.4% as compared to 5.7% among females. About 60,000 people die annually due to tobacco related diseases in Pakistan [6]. Lung cancer is the main cause of the death among men followed by mouth cancer. A study in 2012 on perceptions of cigarette smoking among university students found that about 59.2% of the male students and 22% of the female students were current smokers. Influence of family smoking and curiosity were found to be the main reasons of smoking [7]. The National Health Survey of Pakistan on smoking reported a prevalence of 54% among adult males and 9% among adult females [8]. There is scarcity of data regarding prevalence and factors influencing on cigarette smoking in this particular region from Pakistan. This study was conducted to determine the prevalence and associated factors of cigarette smoking among male students in University of Azad Jammu and Kashmir, Muzaffarabad, Pakistan.

2. RESEARCH METHOD

A university-based cross-sectional study was conducted for the period of July to December, 2015 among male students at University of Azad Jammu and Kashmir in Muzaffarabad, Pakistan. The University of Azad Jammu and Kashmir is the leading university of the State of Azad Jammu & Kashmir, which was established more than 30 years ago in the capital Muzaffarabad and it is consisted of three faculties: sciences & engineering, arts & design and health & medical sciences. A list of all the students (n=3002) was procured from the office of academic affairs at University of Azad Jammu and Kashmir to be used as sampling frame for this study.

Stratified random sampling method was used to select the sample size wherein the students were stratified according to their faculties and education level. A proportional number of the students from each faculty were then selected systematically with a sampling interval of 6 to make up the estimated sample size. A sample of 555 students was therefore collected and appropriate representation from each faculty was ensured. Other adjustments such as non-response, design effect and expected percentage of the eligible students were also taken into consideration while calculating the sample size.

As the cigarette smoking among female students in University of Azad Jammu and Kashmir is very rare, hence this study just focused on male students. Students who were present at the time of data collection were included in this study. Students who refused to participate in this study and those students who were absent from university at the time of data collection were replaced by the next student in the sample frame. Data was collected through a standardized pre-tested self-administrated validated questionnaire in English that was developed after reviewing previous studies on cigarette smoking. The questionnaire included information about socio-demographic characteristics, cigarette smoking behavior, age for starting cigarette smoking, reasons for cigarette smoking and finally intension to quit cigarette smoking.

The study was approved by the ethical and research committee of the University of Azad Jammu and Kashmir. The students were informed about the aims and objectives of the study and both written and verbal consent was taken from the students before administering the questionnaire. Confidentiality of the information was guaranteed. The data were analysed using Statistical Package for Social Sciences (SPSS), version 21. Frequencies and percentages were calculated for all the categorical variables. Chi-square test was used to determine the relationship between socio-demographic characteristics and cigarette smoking behavior of the students. P-value of < 0.05 was accepted as level of statistical significance.

3. RESULTS AND ANALYSIS

A total number of 542 students from all the three faculties of University of Azad Jammu and Kashmir were included in this study.

3.1. Socio-demographic characteristics of the students

The age of students ranged from 17 to 45 years. Mean age of the students was 22 years, median was 21 years and standard deviation was 5.06. The majority of the students (53.9%) were distributed among group of 21-25 years. About 91.3% of the students were unmarried. Most of the students (58.1%) were from urban regions and around 41.7% had family income of 31,000-60,000 Rupees per month. The majority of the students were from faculty of sciences & engineering (59.2%) and were graduates (67.5%) as shown in Table 2.

3.2. Prevalence of cigarette smoking

The overall prevalence of current cigarette smoking among students at University of Azad Jammu and Kashmir in Muzaffarabad was 49.4%. Of the students, 11.6% percent were former smokers and 39.0% percent were never smokers. The prevalence of cigarette smoking was reported highest (52.4%) among students from faculty of arts and design. However, there was found no significant difference (p -value=0.589) between prevalence of cigarette smoking among students in different faculties of University of Azad Jammu and Kashmir as shown in Table 1.

Table 1. Prevalence of Cigarette Smoking among Students (n=542)

Faculty	Current smokers		Former smokers		Never smokers		X^2	df	p -value
	N	%	N	%	N	%			
Sciences & engineering	158	49.2	39	12.2	124	38.6	2.872	2	0.589
Arts & design	86	52.4	18	11.0	60	36.6			
Health & medical sciences	24	42.1	6	10.5	27	47.4			
Total	268	49.4	63	11.6	211	39.0			

3.3. Factors associated with cigarette smoking

Table 2 shows the association between socio-demographic characteristics and cigarette smoking behaviour of the students. It was found that age, marital status and education level were significantly associated with cigarette smoking behavior (p -value<0.05), while family income, locality and faculty type were found not to be significantly associated with cigarette smoking behavior (p -value>0.05). The prevalence of cigarette smoking decreases as the age of students is increased. Students who were in the age groups of 16-20 years (48.7%) and 21-25 years (54.8%) had higher prevalence of cigarette smoking in comparison to students who were in age groups of 31-35 years (26.7%) and more than 35 years (20%). Unmarried students (51.9%) had higher prevalence of cigarette smoking compared to married students (23.4%). The prevalence of cigarette smoking was also significantly higher among students who were in lower education level (53.0%) than students who were in higher education level (12.5%).

Table 2. Socio-Demographic Characteristics and Associated Factors of Cigarette Smoking (n=542)

Variables			Smokers		Non-smokers		X^2	df	p -value
	N	%	N	%	N	%			
Age							16.022	4	0.003
16-20 years	185	34.1	90	48.7	95	51.3			
21-25 years	292	53.9	160	54.8	132	45.2			
26-30 years	40	7.4	12	30.0	28	70.0			
31-35 years	15	2.8	4	26.7	11	73.3			
More than 35 years	10	1.8	2	20.0	8	80.0			
Marital status							13.962	1	< 0.001
Married	47	8.7	11	23.4	36	76.6			
Unmarried	495	91.3	257	51.9	238	48.1			
Family income							0.380	3	0.944
Less than 30,000 Rupees	190	35.1	92	48.4	98	51.6			
30,000-60,000 Rupees	226	41.7	115	50.9	111	49.1			
61,000-90,000 Rupees	86	15.9	41	47.7	45	52.3			
More than 90,000 Rupees	40	7.4	20	50.0	20	50.0			
Locality							1.384	1	0.239
Rural	227	41.9	119	52.4	108	47.6			
Urban	315	58.1	149	47.3	166	52.7			
Education level							20.202	3	< 0.001
Graduation	366	67.5	194	53.0	172	47.0			
Masters	98	18.1	53	54.1	45	45.9			
Master of Philosophy	62	11.4	19	30.7	43	69.3			
Doctor of Philosophy	16	3.0	2	12.5	14	87.5			
Type of faculty							1.451	2	0.484
Sciences & engineering	321	59.2	158	49.2	163	50.8			
Arts & design	165	30.5	86	52.1	79	47.9			
Health & medical sciences	56	10.3	24	42.9	32	57.1			

3.4. Reasons for cigarette smoking

Regarding the reasons for cigarette smoking, the most common reason for cigarettes smoking was stress alleviation (35.05%) followed by peer pressure (24.47%). About 19.03% had smoked cigarettes due to

family influencing, 9.97% smoked for style & fun and 4.23% smoked due to curiosity. Around 7.25% of the students answered because of other reasons as shown in Figure 1.

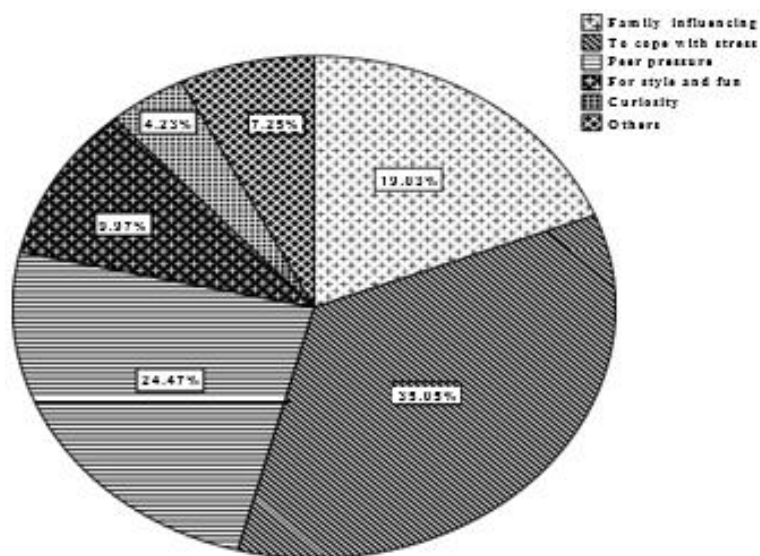


Figure 1. Reasons for Starting Cigarette Smoking

3.4. Age for starting cigarette smoking

The mean age for starting cigarette smoking in this study was 19.2 ± 2.73 years. The majority of the students (67.47%) started smoking at the age of 16-20 years, 25% started at the age of 10-15 years and only 7.53% started at the age of 21-25 years as shown in Figure 2.

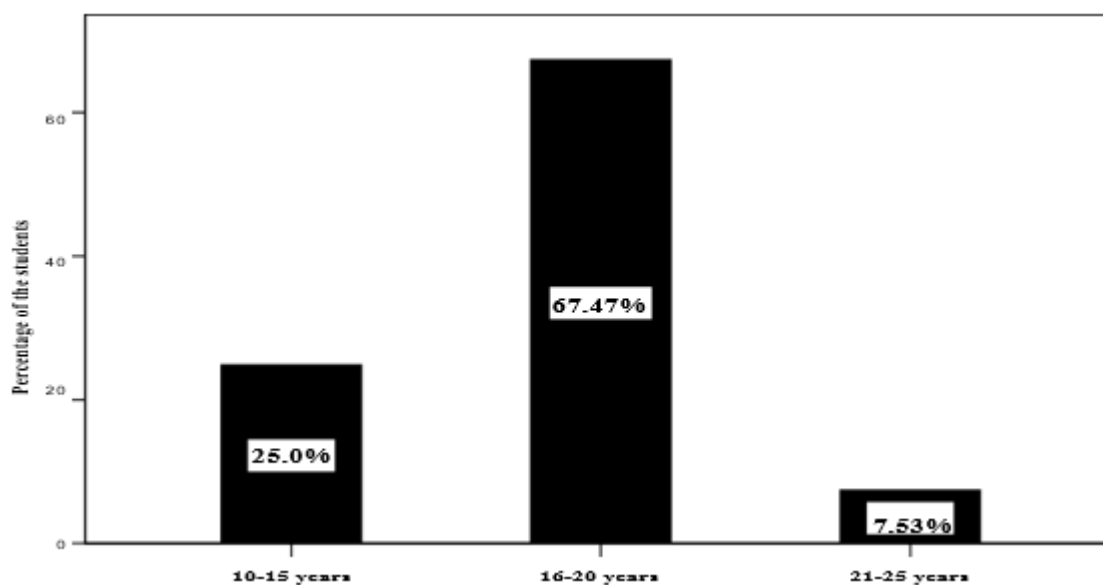


Figure 2. Age for Starting Cigarette Smoking

4. DISCUSSION

This was the first study to determine the prevalence and associated factors of cigarette smoking among university students in Muzaffarabad, Pakistan. Therefore, the findings from this study can extrapolate

to the general student population throughout the State of Azad Jammu and Kashmir, Pakistan. The overall prevalence of cigarette smoking among students in this study was 49.4%. A quite similar prevalence of cigarette smoking was reported in a study from Turkey [9], which reported a prevalence rate of cigarette smoking among students of 40.0%. The higher prevalence of smoking was reported by a study in Bangladesh [10] in which the prevalence of current smoking was 60.2%. The prevalence of cigarette smoking in this study (49.4%), however, was much higher than that reported among university students in Saudi Arabia (30.1%) [11]. The variations in prevalence of cigarette smoking in this study and other studies may be due to different age groups studied, different research methodologies adopted and the use of different guidelines for defining cigarette smoking.

Age, marital status and education level were the important predictors of cigarette smoking in this study (p -value <0.05). As for age, there was a significant association (p -value=0.03) between age and cigarette smoking behavior. The highest prevalence of cigarette smoking was found in young age students, with cigarette smoking percentage decreasing with advancing age. However, this finding was not comparable with studies conducted in Cameroon [12] and Pakistan [13] reporting that the prevalence of cigarette smoking also increased as the age of the students is increased. But it was in an agreement with a study conducted in Turkey [14]. This could be better explained by the fact that old age students are more receptive to medical advice and public health messages and they are more likely to quit cigarette smoking compared to young age students. Marital status was significantly associated (p -value=0.001) with cigarette smoking behavior in this study. The finding was consistent with several other studies conducted in Malaysia [15] and Jordan [16]. It was also reported that unmarried students were more likely to become cigarette smokers than married students. Unmarried students live with their friends and they could spend their money as they want. Married students live with their wives and other family members who do not like their smoking habits.

In terms of education level, there was also a significant association (p -value=0.001) between education level and cigarette smoking behavior. This finding was in an agreement with studies conducted in Ethiopia [17] and Iran [18] which reported that education level was associated with smoking practices of the students. These studies also indicated that students in lower education level were more likely to be smokers than students in higher education level. The majority of the students (51.9%) who were studying in graduation were current smokers in this study. Transition from college to university is marked as a crucial period for the students because at this level they adopt many lifestyles and behavior including smoking. Therefore, effective tobacco control programmes and policies are required at this stage.

The mean age for starting cigarette smoking in this study was 19.2 2.73 years. The majority of the students (67.47%) started cigarette smoking before the age of 20 years. This finding was consistent with a study conducted in Iran [19] reporting that the average age for initiating cigarette was 19 years. This implies early identification of the smokers so that tobacco control measures could be implemented in this age group. The main reasons for starting cigarette smoking in this study were stress alleviation (35.0%) followed by peer pressure (24.5%) and family influencing (19.28%). A study from Sudan [20] reported that the most common reasons for initiating cigarette smoking were health concerns (29%), waste of money (19%), religious (17%), social (17%) and others (18%). Similarly, another study from Pakistan [21] found that factors such as curiosity (27.27%), family influencing (16.66%), peer pressure (18.18%), stress (10.6%) and style (13.6%) were associated with increased prevalence of cigarette smoking. Thus, this study examined the prevalence and associated factors of cigarette smoking among university students in Muzaffarabad. The information obtained in this study might be helpful to establish effective tobacco control and prevention measures among students at University of Azad Jammu and Kashmir in Muzaffarabad, Pakistan.

5. CONCLUSION

The prevalence of current cigarette smoking among students was considerably high (49.4%). It may increase further unless some urgent tobacco prevention and control measures are not taken. Age, marital status and education level were the important predictors of cigarette smoking. Considering these parameters of cigarette smoking, there is a need to develop effective tobacco control programmes and policies to reduce the growing patterns of youth cigarette smoking in Azad Jammu and Kashmir especially among students at University of Azad Jammu and Kashmir in Muzaffarabad, Pakistan.

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