

(RESEARCH ARTICLE)



Distribution and effects of smoking in the local population of district swat

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Abstract

Smoking is one of the major health problems all over the world; it's the inhalation of tobacco stuff. The present study was conducted in various localities of district Swat, Khyber Pakhtunkhwa. A questionnaire-based survey was conducted for the collection of data; it's composed of various questions. A total of 91 respondents were interviewed along different parameters associated with smoking. The ratio of the smoker was high among the age group 21-30 years with a 45.1% rate of smoking followed by 31-40 years (18.7%). The rate of smoking depends upon different occupations, among all the Occupations, Shopkeepers have a very high rate of smoking (28.6%) followed by students (19.8%), and Labours (15.4%). It is indicated that jobless peoples have no money that is why the rate of smoking is very low 6.6%. Concerning smoking-associated disease, 62.6% of respondents were normal and have no lung diseases. Fast breathing was high (16.48%) among the local community followed by Bronchitis (7.7%). Education is one of the key factors related to smoking, the highest rate of smoking was recorded from Illiterate (23.07%), followed Matriculates (teenagers) (17.58%). Smoking duration is one of the key factors, 1 to 10 years duration of smoking is very high (62.63%) followed by age group 11-20 years (19.78%). Smoking affects normal activities of life and also resulted in deaths in different countries. Similarly, fast breathing was recorded as the major health problem while there is no evidence of cancer reported.

Keywords: Smoking distribution; Effects; Local Population; Swat

1 Introduction

Smoking is an act of inhalation and exhalation of fumes burning tobacco in the form of cigarettes, cigars, and pipes. Most people smoke by burning tobacco leaves, either in the form of pipes or rolled up with papers. The big size is called cigars, while the small size is cigarette but the smaller size is cigarillos, among which the most common is the cigarette. (Zaridze *et al.*, 1998). Epidemiological studies investigated that cigarette smoking is associated with lung cancer in humans. The most common type of cancer is malignant neoplasm in the developed countries, smoking tobacco is the main cause of such fatal diseases, which is also responsible for 90 to 95% of causing cancer in males while 80 to 85% in females (Zaridze *et al.*, 1998). Increased cigarette smoking enhanced lung cancer (bronchogenic carcinoma) than another type of cancer. A large amount of tobacco smoking is the factor that is responsible for lung cancer. In England, it was investigated that 33% of the patient smoked more than 20 cigarettes per day (Watson and Conte, 1954). Cigarette smoker's exposure to certain industrial inhalants, like uranium miners to particulate radioactive material, and X-rays, have all been found to be cancer-causing for human lungs (Ishimaru, *et al.*, 1975). Cancer-causing compounds of cigarette smoke like polycyclic aromatic hydrocarbons (PAH) undergo metabolic changes in vivo by aryl hydrocarbon hydroxylase (AHH). Hydrocarbon hydroxylase is microsomal mixed-function oxygen and works to metabolize PAH to epoxides. Epoxides may join to DNA and other large-size molecules or they may be changed to another compound such as phenols and dihydrodiols, or they may be conjugated to glutathione. " The epoxide joining to DNA is responsible for

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mutation and malignant transformation in cells. (Jett *et al.*, 1978). In the 1920s “radium emanation” or radon was reported as the causative agent of lung cancer in the Schoenberg mine.

Lung cancer is strongly associated with smoking and there are reports of a synergistic effect between smoking and occupational exposure (Edling, 1982). The chances of lung cancer were quite more in cigarette smokers than nonsmokers, and that there was a definite dose-response relationship between the number of cigarettes smoked and the appearance of lung cancer. It is now mostly accepted that cigarette smoking is the main causative agent in pulmonary carcinogenesis in people, and a definite dose-response correlation has been established. On the other side, it was reported that lung cancer is now improving throughout the globe, and although it is a general assumption that an increase in cigarette smoking may be responsible for this growth (Jett *et al.*, 1978). Smoking of cigarettes is expressed to certain industrial inhalants and exposure of miner uranium which particulate to the radioactive substances and X-rays exposure also have to precede carcinogenesis (Edling, 1982). Most of the study mentions that the risk of lung cancer increase due to the daily number of cigarette smoking, the risk of lung cancer is relatively high to have more than 20 cigarettes in per day. Smoker has a 7-time risk of cancer than those of non-smoker. Epidermal carcinomas and anaplastic carcinoma are scientifically related to smoking. Some researchers also say that adenocarcinoma is also associated with smoking and according to this study Japanese smokers have more lung cancer. This is very, small cell anaplastic and epidermis (Ishimaru *et al.*, 1996). Mostly bending side of DNA is considered to cause mutation and cancer chances in the cells. Certain other substance is also involved such as a steroid (Jett *et al.*; 1978). Smoking of cigarettes in adolescents' age was increased in the 1990s, peaked in the mid-1990s while then gradually decline started. Approximately 5 million persons died in the year 1995 prematurely from smoking-related illness ((Ishimaru *et al.*, 1996). The habits of smoking are established in young people during adolescence (Douglas and jenny, 2014).

The college students examined that the roles of psychosocial, theoretical, behavioral protective factors as well risk factors are present, especially in smoking cases. It's investigated either protective or risk factors are related to the initiation of smoking cigarettes in the first two years of college. But a recent report says that there are 11% to 14% of college students had smoked rapidly smoking after the first cigarette of high school. Among these 28% to 37% began smoking regularly after high school. Because the college years proceed the better chances of smoking whether its protective or risk factors of the student (Costa and Frances, 2006).

Approximately 400,000 persons die in the United States each year due to past or current smoking (CS), all over the world prevalence of tobacco and its use is approximately more than one billion people. CS is a more complex mixture of thousands of chemicals which is generated by the combustion or burning of tobacco leaves, these chemicals have mutagenic, carcinogenic, cytotoxic properties, (Costa and Frances, 2006). Effect of smoking is long term affection for the global community, by the reference of CDC, the effect of smoking account estimated 443,000 death in each year in the united states one in every five. Almost the population Is more affected by smoking especially in teenagers, lower education group which is most important for the research such as the LGBT population (Marchant, 1995). the association is noted between cigarette smoking and lung cancer with dose-response relationship differ is by histologic, strongest for carcinoma of the small cell and this is followed by sequence cell carcinoma and also weak for adenocarcinoma (Zahm *et al.*, 1989).

The experiment was done on two groups one is exposed and the other one is non-exposed, Non exposed group is expected to experience lung cancer the chance is 6.177 times more than on unexposed smokers, the reason is just exposure to smoking. The acid-exposed cohort has 7.12 times greater than an exposed smoker, again the reason is smoking. The difference between exposed and non-exposed habits of smoking which lead us approximately 15% of lung cancer effects is more than those non-exposed. Cigar and pipe are involved in the effect of lung cancer while this effect is less than another cigarette, these have a less confounding effect (Steenlan and Beumont, 1989).

2 Material and methods

2.1 Study area

The present study was conducted in District Swat, Khyber Pakhtunkhwa, Pakistan; located north of Islamabad. According to 1998 census information Swat has 48.5% females and 51.5% males whereas 99.7% of people are Muslims. The population of Swatian tribes is composed of Pathans, Kohistanis, Yousafzai, Gears, Mians, and piranhas (Qasim *et al.*, 2013). District Swat is one of the most important tourist spots of Khyber Pakhtunkhwa, most of its beauty depends upon “River Swat” as it cut the district into two partitions, which further enters into Kabul River at Charsada point (Yuosufzai *et al.*, 2013).

2.2 Data Collection

Data were collected from the different union councils of tehsil Babuzai to find the age and gender-wise distribution of smoking. The questionnaire was filled by each individual through the interview-based survey. The data was collected by different techniques like questionnaire-based surveys and a practical visit to different areas where smokers were dominant and interviewed them orally. The structured questionnaire was designed to gather data about age, gender, education, occupation; disease like Tuberculosis, Asthma, Pannonia, fast breathing and the most dangerous is cancer (lung cancer). Questionnaires were filled from smokers visiting their homes. Data were collected in the form of an interview from Tehsil Babuzai District Swat. The number of questions was asked by an interviewer considered from a single house. The sample size of the study comprises 91 questionnaires filled from different locations of Tehsil Babuzai including Norway Kalay, Rung Mahla, Rahimabad, Suhrab Khan Chwak, and Faiz Abad.

The statistical formula was used for the calculation of data by simple random sampling which is $(\text{sample interval} = N/n)$ where the N is the total sample population within the area and n is the total number of samples were taken.

3 Results

3.1 Age

Data was collected from individuals of different age-focused groups, which were divided into six age-wise categories. The ratio of the smoker was high among the age group 21- 30 years with a 45.1% rate of smoking followed by 31-40 years (18.7%), 13.2% (41-50), 11-20 years (12.1%), 51-60 years (6.5%) and 61-70 years (4.4%) (Figure 1).

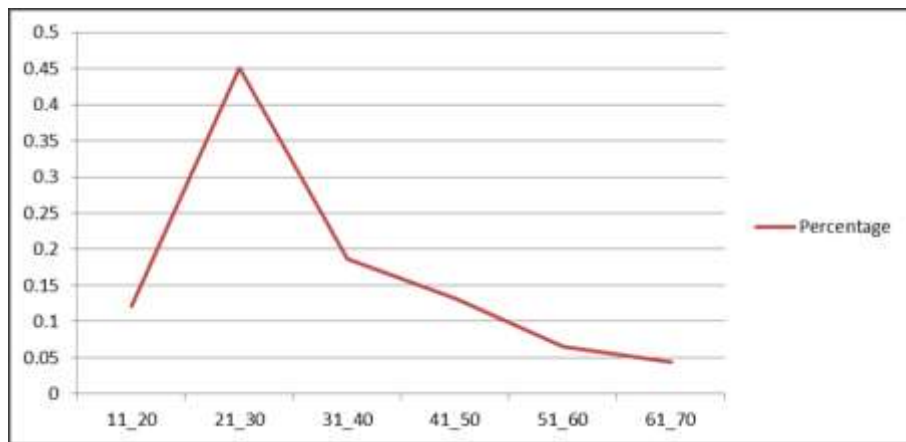


Figure 1 Percentage of different age groups concerning smoking

3.2 Occupation

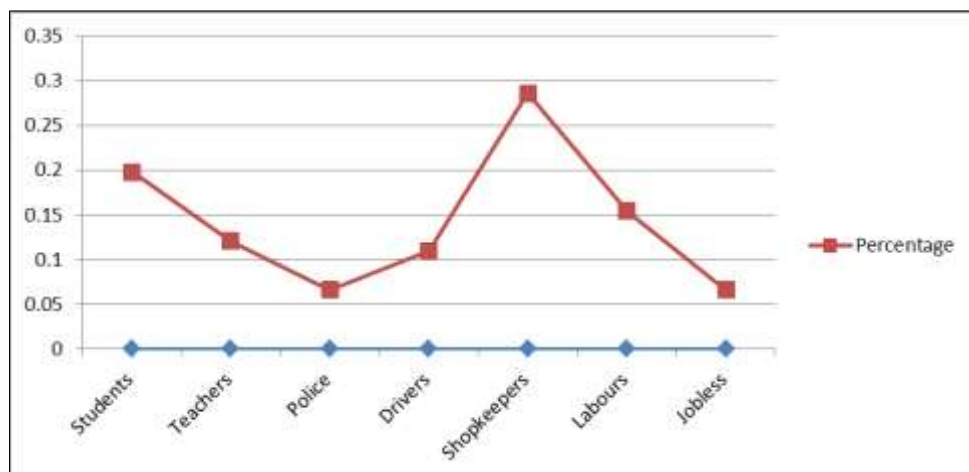


Figure 2 Occupation wise response from the local population

The respondents were having different occupations which were categorized as jobless, students, police, teachers, drivers, shopkeepers, and laborers. Among all the categories Shopkeepers have a very high rate of smoking (28.6%) followed by students (19.8%), Labours (15.4%). It is indicated that jobless peoples have no money that is why the rate of smoking is very low 6.6% (Figure 2).

3.3 Lung associated diseases

The respondents were having different lung diseases. Data were collected from different categories of community, among which 62.6% of respondents were normal and have no lung diseases. Among lung associated diseases, fast breathing was high (16.48%) among the local community followed by Bronchitis (7.7%). The current study has no evidence (0%) effect of smoking on any type of cancer (Figure 3).

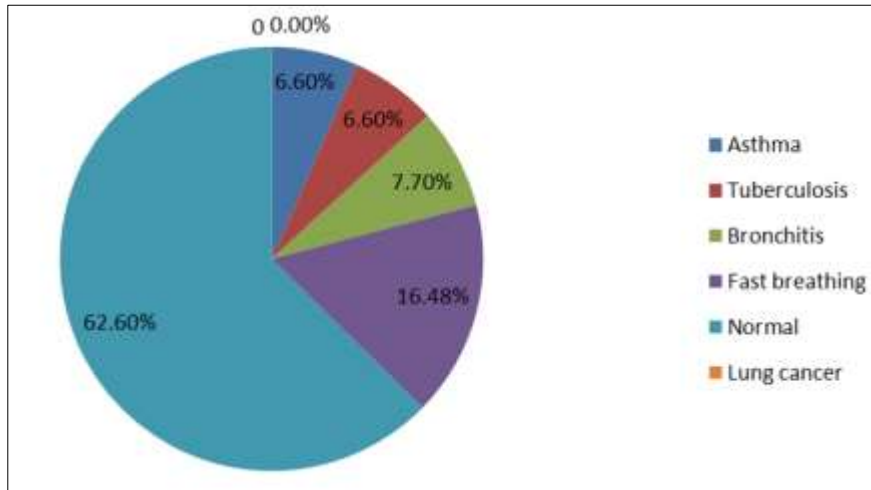


Figure 3 Disease caused due to smoking in the study area

3.4 Education

Education is one of the key factors related to smoking, based on educational background, all the respondents were divided into five different categories. Among these, the highest rate of smoking was recorded from Illiterate (23.07%), followed by Matriculates (teenagers) (17.58%). As a result of this parameter, a very less rate of smoking was recorded among graduates/qualified communities (10.98%). This indicated that education is a key factor that provides proper awareness which is why the high rate of smoking was recorded as illiterate due to lack of education (Figure 4).

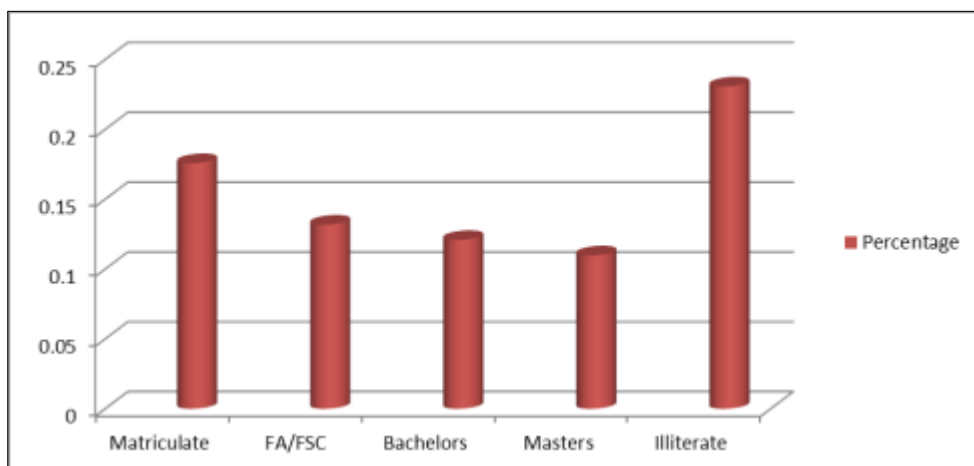


Figure 4 Comparison of various educational groups to smoking

3.5 Regular duration of smoking

Smokers were divided into different categories based on smoking duration. Percentage of regular smokers among age group from 1 to 10 years are very high (62.63%) followed by age group 11-20 years (19.78%), age group 21-30 years (8.8%), and 31-40 years (8.8%). According to this research, the highest percentage of the regular smoker was found among the age group 1 to 10 years (Figure 5).

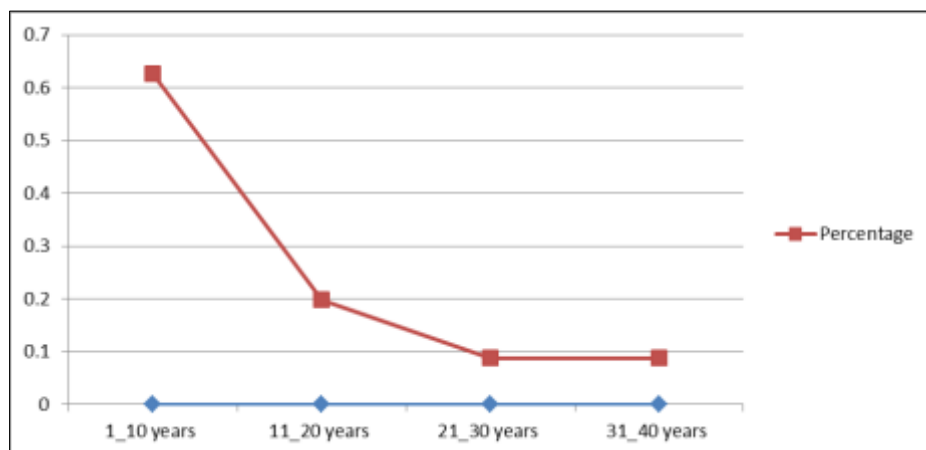


Figure 5 The regular duration of smoking

4 Discussion

Smoking among women is also very common in Europe to start at the earlier age of 9 or 10 years old; women start regular smoking at secondary school level around 14 or 15 years old (Douglas, 2014). But the result of this study investigated that smoking is common at the age of 20 to 30 years. Smoking is most common in lower social classes, according to a 2006 study about 35% of people from primary school level, 29% from high school, and 13% with university-level smokers, show that fewer age smokers are more vulnerable than older aged people (Medbo, 2012). Similarly, the findings of our study also investigated that teenagers especially school (18%) and college students (13%) are more vulnerable to smoking which badly affect their health. The case-control study was carried out in Asia, Europe, North & South America, and South Africa, in all these areas smoking was a danger for laryngeal cancer due to the intensity and long duration of smoking. Laryngeal cancer is more than 10 times that of the smoker who smoked up to 40 years, and more than 20 cigarettes are smoked in a day. Increasing the use of tobacco and effect the decreasing of age. (IARC, 1986). The high percentage of the smoker was found among shopkeepers 28.6% and this might be because they mostly have free time in the shop and also due is lack of education.

Excessive use of tobacco smoking causes severe diseases like chronic disease, respiratory disease, pneumonia, and influenza. Smoking of cigarette show a lower level of lung functions as compared to non-smokers and also reduces lung growth. Among the young people smoking shows worsen respiratory disease, and also lead to appear irregular menstrual cycle and lung cancers in the female (Appau, 2011). However, the finding of this study indicated that fast breathing (15%) is one of the common smoking-related diseases followed by bronchitis (7%). This study also indicated that there is no evidence of any types of cancer caused by smoking.

5 Conclusion

Our results show that smoking is very high as compare to females, and most of their effects are because of the different lung-associated diseases. our study indicates that the smoking habits are dominant in males whose age is from 21 to 30 years in Tehsil Babuzai, such group of age are young and working in a different sector, Shopkeepers are highly vulnerable to smoking because they have too much free time and availability of the cigarettes anytime. Effect of the smoking cause different disease in district Swat, among them fast breathing was one of the command diseases. Similarly, students of matric and FSC are more affected by smoking because they are mostly living in hostels and away from parental control. During this study, it's also pointed out that a very high number of the respondent has habit of smoking for the last ten years. A high percentage of smoking was found among uneducated respondents (23%) as compared to educated people.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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