

AN EPIDEMIOLOGICAL STUDY OF SMOKING AT ABBOTTABAD

Muhammad Asif Jaleel*, Rozina Noreen**, Abdul Hameed***, Altaf Hussain**, Shahid Rauf*, Liaqat Ali and Taj Tanoli****

Departments of * Bio-Chemistry. ** Physiology. *** Forensic Medicine and Anatomy. Frontier Medical College. Abbottabad

Background: Smoking is a type of environmental pollution and is injurious to health. We conducted an epidemiological study of different forms of smoking like cigarette. Hookah (Hubble- Bubble) and cigar in Abbottabad. **Methods:** 600 randomly selected subjects residing in different localities of Abbottabad were included. A specifically designed questionnaire was filled. **Results:** Out of the study population 200 (33%) were found to be smoking. **Conclusions:** A significant proportion of Abbottabad population smokes. This city is supposed to be a relatively less polluted hill station where a lot of people come for vacations.

INTRODUCTION

Environmental Tobacco Smoke (ETS) is the combination of two forms of smoke from burning tobacco product:

- Side stream smoke, or smoke that is emitted between the puffs of a burning cigarette, pipe or cigar and
- Mainstream smoke, or the smoke that is exhaled by the smoker.

When a cigarette is smoked, about one-half of the smoke generated is side stream smoke. This form of smoke contains essentially all of the same carcinogenic (cancer causing) and toxic agents that have been identified in the mainstream smoke inhaled by the smoker, but at greater levels.

More than 4,000 individual compounds have been identified in tobacco and tobacco smoke. Among these about 60 compounds are carcinogens, tumor initiators (substances that can result in irreversible changes in normal cells) and tumor promoters (substances that can lead to tumor growth once cell changes begin). Some of these compounds are tar, carbon monoxide, hydrogen cyanide, phenols, ammonia, formaldehyde, benzene, nitrosamine, and nicotine.

The exposure of nonsmokers to ETS is referred to as involuntary smoking, passive smoking and secondhand smoke. Nonsmokers who are exposed to ETS absorb nicotine and other compounds just as smokers do, and the greater the exposure to ETS, the greater the level of these harmful compounds in the body. These findings promoted recommendations that ETS be eliminated from the environment of small children. Thus smoking should not be allowed in day care centers, nurseries or other settings where infants and young children are cared for.

Ischaemic heart disease responsible for about 40% of deaths in Western countries has smoking as a major modifiable risk factor.' The steep rise in the worldwide prevalence of smoking among women is expected to

continue in the near future. At the start of the smoking epidemic, female smokers were few and different extensively from male smokers in factors such as age of starting smoking, amount smoked, and inhalation habits, and the risk associated with smoking in women may have been under estimated.² It is recently found that the relative mortality from vascular disease was higher in female smokers than in male smokers.

A possible cause of the sex difference is an interaction of some hormonal factors with components of the inhaled smoke. There is growing epidemiological evidence that women who smoke are relatively deficient in estrogen, have an earlier menopause, have decreased risk of cancer of the endometrium, have greater likelihood of osteoporosis and osteoporotic fractures, and reduced incidence of a number of "minor" disorders such as uterine fibroids.⁴ Possible biological mechanisms have been suggested.^{5,6} Estrogen deficiency, on the other hand, is associated with cardiovascular diseases. Rate of ischaemic heart disease sharply increases in women after menopause. Young women with bilateral oophorectomy have an increased risk of ischaemic heart disease. Epidemiological data show that women who use hormone replacement therapy after menopause have lower rates of ischaemic heart disease.^{7,8,9}

MATERIALS AND METHODS

A total of 600 male subjects were interviewed for their habit regarding smoking. These subjects belonged to different areas of Abbottabad and were engaged in different professions. A questionnaire regarding their personal and specific information about smoking was filled individually.

RESULTS

The study was done on 600 subjects residing in different localities of Abbottabad, out of them 200 persons were found to be smokers.

Among these 200 smoking persons, some persons used Hookah and cigar along with cigarette or without

cigarette. On the whole 33 % of the study population smoked.

Out of 200 smoking persons 33 % were smoking just for company while 63% for anxiety and remaining 4 % could not give any reason.

- 10-30 cigarettes of different brands per day was the average usage.
- Average monthly expenditure on smoking was in the range of Rs: 200-1800 per month.
- Among smoking persons 82% complained of Nocturnal cough, 6% during day and 12 % at both the times.
- 63 patients complained of sputum, out of them 30 subjects complained of occasional or frequent blood stained sputum.
- 47 smokers reported of symptoms or diagnosis of Ischaemic heart disease.
- 24 % continue smoking during Ramadan fasting.
- 66% confessed of smoking at public places.

DISCUSSION

Newspapers and electronic media are the main contributors for the advertisement of cigarette smoking. They produce charm in the ads of the cigarette smoking. Teenagers are easily trapped by these cigarette-smoking ads.

A number of studies have found that advertisement is a major promoter of teenage smoking. A recent one estimated that advertisement could be responsible for a third of teenage smoking¹¹.

Psychological factors play a major role in susceptibility to smoking. People with low self-esteem and adolescents with behavioural problems have a high risk for smoking. Depression is a well-known risk factor for smoking and increases the danger of starting at young age. According to one study, genetic factors may affect the risk of becoming nicotine dependent.

Depending on the amount taken in, nicotine can act as either a stimulant or a sedative. Most smokers have a special fondness for the first cigarette of the day because of the way brain cells respond to the day's first nicotine rush.

Rat studies show that nicotine increases the activity of dopamine, a chemical in the brain that elicits pleasurable sensations, a feeling similar to achieving a reward. The first nicotine intake of the day is particularly effective in enhancing the activity of dopamine sensitive neurons. During the day, however, the nerve cells become desensitized to nicotine: smoking becomes less pleasurable and smokers are likely to increase their intake to get their "reward". A smoker develops tolerance to these effects very quickly and requires increasingly higher levels of nicotine.

Taxes on tobacco also seem to play a role in determining as to who smokes. The countries that have low excise taxes on cigarettes have a high proportion of smokers. In 1998, the voters of California approved "Propositions 99" that increased the tax on cigarettes by 25 cents per pack and allocated 5 cents of the new tax for an anti-tobacco educational campaign. This resulted in the creation of the largest tobacco control program ever undertaken.

This program combined the effects of the tax increase with an aggressive media campaign, which attacked the tobacco industry and stressed clean indoor air, and with community based programs promoting clean indoor air and policies designed to foster a smoke-free society. This program,¹⁰¹¹ as well as similar programs in Florida, Massachusetts, and Oregon, accelerated the decline in the number of cigarettes smoked and in the prevalence of smoking.

While smoking had been on the decline in the United States for several years it has now leveled off.¹² An estimated 47 million people smoke that is nearly a quarter of the adult population. About 28% of the male population and 23 % of women smoke. The California Tobacco Control Program has led to significantly larger decrease in the prevalence of smoking and in the rate of per capita cigarette consumption in California than in the rest of the United States.

In our study about 33 % of male population indulge in smoking which is definitely higher than the society in developed and more educated countries like USA where the masses are more aware of hazards of smoking, therefore the smoking should be discouraged on the national level. In this connection electronic and print media have to play vital role.

Table-1: Physical Responses to Quitting

TIME AFTER LAST CIGARETTE	PHYSICAL RESPONSE
20 minutes	Blood pressure and pulse rate return to normal
8 hours	Levels of carbon monoxide and oxygen in the blood return to normal
24 hours	Chances of myocardial infarction decrease
48 hours	Nerve endings start to re-grow ; ability to taste and smell increases
72 hours	Bronchial tubes relax; lung capacity increases

2 week to 3 months	Improved circulation; lung function increases up to 30%
1 to 9 months	Decreased incidence of coughing, sinus infection, fatigue, and shortness of breath; regrowth of cilia in lungs, increasing the ability to handle mucus, clean the lungs, and reduce chance of infection; overall energy level increases.

CONCLUSION

As studied worldwide, smoking is known to cause different diseases e.g., Heart disease, cancer. lung diseases including pneumonia, flu, bronchitis, emphysema, stroke, dementia, osteoporosis, incontinence, impotence, cataract etc., besides this, smoking inflicts the financial losses to the person and family.

It is therefore suggested that smokers should decide to quit the smoking once for all. However, some physical responses can be expected during the process of quitting (table-1).

SOME TIPS FOR QUITTING^{11,17}

Deciding to quit

For some people, choosing a particular date to quit is helpful when no or low stress is anticipated for at least the first three days afterward.

An Exercise

- Move the muscles when craving occurs. Run, walk, jump up and down, stretch or dance.
- When cravings occur, hold your breath as long as possible or take a few deep rhythmic breaths.

Getting Family and Friends Involved

- Tell all your friends and family that you've already quit, so you'll be embarrassed if they catch you smoking.
- Pay a family member or friend if they catch you smoking. The amount should be large enough (Rs; 10 to Rs:50) to be a deterrent.

Changing Daily Habits

- Change the daily schedule as much as possible. Eat at different times or eat many small meals instead of three large ones; sit in a different chair, rearrange the furniture.
- Find other ways to close a meal. Play a tape or CD; eat a piece of fruit, get up and make a phone call.
- Go to public places and restaurants where smoking is prohibited or restricted.
- Set short term quitting goals and reward you when they are met, or every day put the money normally spent on cigarettes in a jar and buy something

pleasurable at the end of a predetermined period of time.

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