The Economic, Health, Social and Psychological Effects of Smoking

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Abstract

Background: Cigarette smoking is the single biggest preventable cause of death,Tobacco has many economic, health, social and psychological effects. However, many people have been using tobacco for a long time and on a daily basis. It is shocking that nearly one billion people in the world use tobacco.

Objective: This article reviews the economic, health, social and psychological effects of smoking.

Methods: In our research, we used various reliable international articles and research.

Results: _Smoking harms the environment through toxic fumes and causes heavy air pollution.

_ The economic impact of smoking is double: the costs of smoking itself, and the costs of reducing its prevalence among smokers. Over and above the nominal value of cigarette purchases, tobacco costs have greater health and economic impacts on individuals, families, employers and taxpayers.

_ Smoking causes so many diseases that lead to death it is harmful to human beings and has effects like cancer, diabetes, stroke, heart disease, lung diseases, and so on. Moreover, it increases the risk for certain eye diseases, tuberculosis, and problems with the immune system.

_Smoking exposes you to a greater risk of depression.

_Smoking affects your relationships with family and friends.

Conclusions: smoking cessation is associated with numerous short- and long-term health and economic benefits. The greatest benefit accrues from smoking cessation when young, but even quitting in middle age avoids much of the healthcare risk and the associated cost of treatment. As such, great efforts should be made to reduce the prevalence of smoking worldwide, particularly in developing countries where smoking is on the increase.

KEY WORDS: Cigarette ,smoking , Tobacco, economic impact, smoking cessation.

Introduction

Smoking has spread widely among people around the world, especially in Arab countries, and this is due to the lack of awareness of the harmful effects of this bad practice on human health and his role in society , it is harmful to human beings and has effects like cancer, diabetes, stroke, heart disease, lung diseases, and so on. Moreover, it increases the risk for certain eye diseases, tuberculosis, and problems with the immune system (1, 2).

smoking is the act of two opposite processes; which are inhaling and exhaling fumes of some burning material made of a plant. the act of smoking is commonly associated with tobacco that is smoked by a cigarette, or pipe (3).

Tobacco that people smoke in cigarettes contains nicotine. Nicotine is an alkaloid that is addictive and has both tranquilizing and stimulating psychoactive effects on the human body (4). Adverse effects of tobacco smoke are mediated through the action of many chemical compounds that are usually concentrated and condensed into tobacco mixtures (5).

This definition is too generic and also far to clarify the negative impact of tobacco to individual health since there are a lot of harmful factors that must be emphasized when cigarette smoking is analysed. Clinical, biological, metabolic, epidemiologic, statistic and socio-economic factors interact to lead to only one result which is an irreversible damage of individuals' health primarily for some organs like lungs, cardiovascular system and epithelial structures which may be identified as a target of smoking toxics. Passive smoking also plays a strong role to cause health damage (3) .

It has also an addictive effect, and that it affects the economic status of individuals, and so on (6).

It poses enormous health- and non-health-related costs to the affected individuals, employers, and the society at large. The World Health Organization (WHO) estimates that, globally, smoking causes over US$500 billion in economic damage each year (7).

The smoking that was practiced by American Indians, was transferred to Europe by Columbus and other explorers. Then, Smoking spread to other areas rapidly and nowadys is widely practiced around the world (8, 9).

more than 3 Million people currently die each year from smoking, half of them before the age of 70 and more than one third of current smokers meet partial or permanent disability. Therefore, there is an enormous human and social cost to pay to smoking. Yet, smoking habit seems to be scarcely influenced by anti-smoking campaigns since there is evidence that 1 billion of smokers in the world exist and an increased/decreased/ and again increased rate characterises cigarette consumption (10).

We must spread awareness of the damages of smoking among people, and advise them to avoid it as it can decrease the risk of disease and help us to stay healthy and wealthy.

Fig.1 Cigarettes (11).

1.Historical perspective

Tobacco was introduced into Europe from America at the end of the fifteenth century. At first used primarily for medicinal purposes it came to be burnt in pipes for pleasure on a large scale nearly 100 years later, at first in England and subsequently in Europe and throughout the world. Pipe smoking gave way to the use of tobacco as snuff and, in turn, to cigars and cigarettes at different times in different countries until cigarette smoking became the dominant form in most of the developed world between the two world wars. Societies were formed to discourage smoking at the beginning of the century in several countries, but they had little success except in Germany where they were officially supported by the government after the Nazis seized power (12).

2.Cigarettes

A cigarette is a small paper-wrapped cylinder of cured and shredded or cut tobacco leaves, rolled into a paper tube. Ingredients in the final cigarette generally include not only tobacco, but many other products such as, residual pesticides, herbicides, fertilizer, heavy metals, arsenic, cyanide and other toxins, Tobacco smoke contains more than 4000 chemicals, many of which are toxic and carcinogenic (13).

Cigarettes can be found worldwide and are among the most deadly and addictive products ever produced by mankind. When used as intended by their manufacturers, they kill approximately one half of their users (13).

Fig.2 Cigarettes (14).

3.Chemical compounds of Tobacco smoke

Cigarette smoke contains some 4000 compounds, including carbon monoxide, ammonia and known carcinogens such as nitrosamines and polycyclic aromatic hydrocarbons(15) .

Both active and passive smoke has similar chemical composition although some differences may be observed,(Alkanes and Alkynes , Aromatic Hydrocarbons, Sterols , Alcohols and Esters, Aldehydes, Ketones, and Quinones, Nitriles, Cyclic Ethers, and Sulfur Compounds, Acids, Phenols and Phenolic Ethers, Alkaloids and Other Bases, Brown Pigments, Carbohydrates , Amino Acids, Proteins, and Related Compounds, Miscellaneous Components) (16).
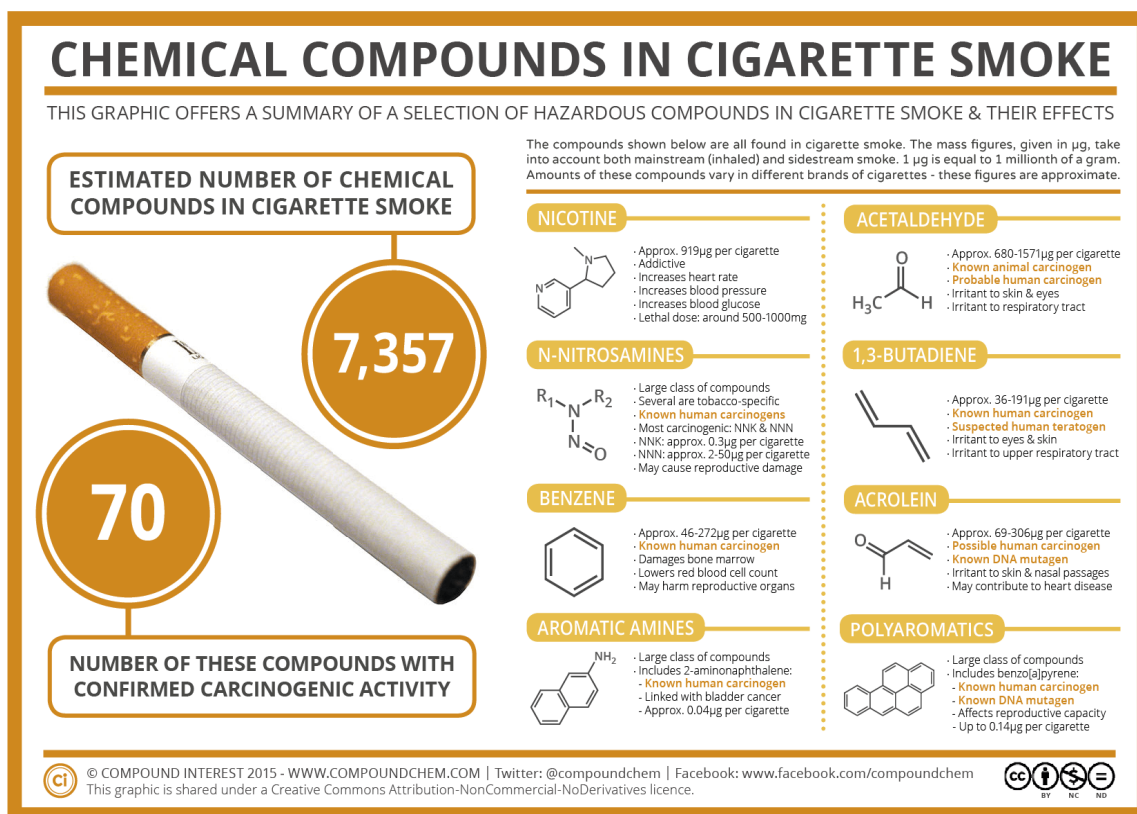

Fig.3 Chemical compounds in cigarette smoke .

Source :https://www.compoundchem.com/2014/05/01/the-chemicals-in-cigarette-smoke-their-effects/

4.The impact of smoking on the environment

Findings consistently show that concentrations of toxics exhaled by a lighted cigarette pollute individuals and environmental air heavily, whereas clean air may be dosed when tobacco smoke does not play its action (7).

Fig.4 The impact of smoking on the environment .

Source :https://tunza.ecogeneration.org/m/view.jsp?board=ourActions&viewID=12747&searchType=&searchName=&pageNumber=1085

5.The economic effects of smoking

Despite the tremendous human and financial impact of tobaccorelated diseases, it is unfortunately still true that tobacco control activities require, at present, as similar economic costs as those related to hospitalization and treatment of people affected by the harmful effects of smoking (7).

The economic impact of smoking is twofold: the costs of tobacco use itself, and the costs of reducing its prevalence among smokers. Beyond the face value of cigarette purchases, the costs of tobacco use have more far-reaching health and economic implications on private individuals, families, employers, and taxpayers (7).

The costs of smoking have thus been classified as direct, indirect, and intangible. The direct costs of smoking include the cost of illness due to smoking on affected patients, and the health care expenditure involved in the treatment of smoking-related illnesses (eg, cost of drugs and administrative services) (7).

The impact of cigarette smoking on morbidity and mortality in the United States is well known. Economic consequences of these health effects-expenditures for medical care and the value of productive output lost-have been estimated in many ways (17).

The study indicated that smoking not only causes morbidity and mortality but also it places a considerable economic burden on both health system and society as a whole. the total cost of smoking accounted for 1.5 to 6 % of national health systems' expenditure and 0.22 to 0.88 % of GDP of countries. Also, outpatient care and cost of premature mortality have been found to be the most important cost drivers of direct and indirect costs, respectively(18) .

The costs of smoking can be classified into direct, indirect, and intangible costs. About 15% of the aggregate health care expenditure in high-income countries can be attributed to smoking. In the US, the proportion of health care expenditure attributable to smoking ranges between 6% and 18% across different states. In the UK, the direct costs of smoking to the NHS have been estimated at between £2.7 billion and £5.2 billion, which is equivalent to around 5% of the total NHS budget each year. The economic burden of smoking estimated in terms of GDP reveals that smoking accounts for approximately 0.7% of China's GDP and approximately 1% of US GDP. As part of the indirect (non-health-related) costs of smoking, the total productivity losses caused by smoking each year in the US have been estimated at US$151 billion (7).

The costs of smoking notwithstanding, it produces some potential economic benefits. The economic activities generated from the production and consumption of tobacco provides economic stimulus. It also produces huge tax revenues for most governments, especially in high-income countries, as well as employment in the tobacco industry. Income from the tobacco industry accounts for up to 7.4% of centrally collected government revenue in China. Smoking also yields cost savings in pension payments from the premature death of smokers (7).

The cost per life year saved from the use of pharmacological treatment interventions ranged between US$128 and US$1,450 and up to US$4,400 per quality-adjusted life years (QALYs) saved (7).

School-based smoking prevalence programs tend to reduce short-term smoking prevalence by between 30% and 70%. Total intervention costs could range from US$16,400 to US$580,000 depending on the scale and scope of intervention. The cost effectiveness of school-based programs show that one could expect a saving of approximately between US$2,000 and US$20,000 per QALY saved due to averted smoking after 2–4 years of follow-up (7).

-Smoking cessation

Smoking cessation measures could range from pharmacological treatment interventions to policy-based measures, community-based interventions, telecoms, media, and technology (TMT)-based interventions, school-based interventions, and workplace interventions (7).

Price-based policy measures such as increase in tobacco taxes are unarguably the most effective means of reducing the consumption of tobacco. A 10% tax-induced cigarette price increase anywhere in the world reduces smoking prevalence by between 4% and 8%. Net public benefits from tobacco tax, however, remain positive only when tax rates are between 42.9% and 91.1%. The cost effectiveness ratio of implementing non-price-based smoking cessation legislations (such as smoking restrictions in work places, public places, bans on tobacco advertisement, and raising the legal age of smokers) range from US$2 to US$112 per life year gained (LYG) while reducing smoking prevalence by up to 30%–82% in the long term (over a 50-year period) (7).

Smoking cessation classes are known to be most effective among community-based measures, as they could lead to a quit rate of up to 35%, but they usually incur higher costs than other measures such as self-help quit-smoking kits. On average, community pharmacist-based smoking

cessation programs yield cost savings to the health system of between US\$500 and US\$614 per LYG (7).

Advertising media, telecommunications, and other technology-based interventions (such as TV, radio, print, telephone, the Internet, PC, and other electronic media) usually have positive synergistic effects in reducing smoking prevalence especially when combined to deliver smoking cessation messages and counseling support. However, the outcomes on the cost effectiveness of TMT-based measures have been inconsistent, and this made it difficult to attribute results to specific media. The differences in reported cost effectiveness may be partly attributed to varying methodological approaches including varying parametric inputs, differences in national contexts, differences in advertising campaigns tested on different media, and disparate levels of resourcing between campaigns. Due to its universal reach and low implementation costs, online campaign appears to be substantially more cost effective than other media, though it may not be as effective in reducing smoking prevalence (7).

Many of the adverse health effects of smoking are reversible, and smoking cessation treatments represent some of the most cost effective of all healthcare interventions. Although the greatest benefit accrues from ceasing smoking when young, even quitting in middle age avoids much of the excess healthcare risk associated with smoking. In order to improve smoking cessation rates, effective behavioural and pharmacological treatments, coupled with professional counselling and advice, are required. Since smoking duration is the principal risk factor for smoking-related morbidity, the treatment goal should be early cessation and prevention of relapse(19) .

6.Health Consequences of Smoking

Tobacco-related disease is the leading cause of preventable death in much of the developed world, accounting for an estimated one in every five deaths (20) .

Half of all long-term regular smokers who begin smoking during adolescence can expect to die from tobacco use, and 50% of these die prematurely during middle age, losing some 20 to 25 years of life expectancy compared with non-smokers(21) .

Smoking predisposes the smoker to a large number of diseases, including many types of cancer (lung, oesophagus, bladder, kidney, stomach, pancreas), chronic obstructive pulmonary disease (COPD), coronary heart disease, stroke, peripheral vascular disease, and peptic ulcer disease. Smoking during pregnancy can cause spontaneous abortion, stillbirth, prematurity, low birthweight, and sudden infant death syndrome (SIDS) (19, 22).

In addition, smoking during pregnancy can also have an adverse effect on the toddler's behaviour (23).

6.1 Respiratory System

Smoking directly irritates and damages the respiratory tract and confers a higher risk of developing major lung diseases, including COPD (i.e. chronic bronchitis and emphysema), pneumonia, and influenza(24) .

The deterioration in pulmonary function associated with COPD is directly related to the duration of smoking and the number of packyears (the number of packs smoked per day multiplied by the duration of smoking in years)(25).

Cigarette smoking is the major cause of all histological types of lung cancer(24) .

Among men, the risk of lung cancer is elevated 20-fold in smokers compared with non-smokers (26).

6.2 Cardiovascular System

Smoking acts both independently of, and synergistically with, other major risk factors for coronary heart disease. Fatal myocardial infarction is 4-times more common in young male smokers than in non-smokers of the same age (19).

Smoking is also a risk factor for transient ischaemic attacks (27).

6.3 Gastrointestinal System

Smoking is a risk factor for oral, oesophageal, pancreatic and colorectal cancers (28).

For example, pancreatic cancer is twice as common among smokers as in non-smokers (27).

The risk of developing gastric and duodenal ulcers (29).

There is increasing evidence that smoking can induce pathogenic and carcinogenic processes in the gastrointestinal tract. These processes can lead to severe chronic inflammation and subsequently to the development of cancers at the sites of inflammation. Clinical and experimental data have also shown that smoking is a major risk factor for the induction of inflammatory diseases, such as ulcers and Crohn's disease. Cigarette smoke and its active compounds alter the fundamental structure of the gastrointestinal tract by inducing cell apoptosis and inhibiting mucosal cell turnover. Cigarette smoke also interferes with the protective mechanisms of the gastrointestinal tract by decreasing blood flow to the mucosa and modulating the mucosal immune system. Detailed mechanistic studies could contribute to the development of more effective therapies for various disorders of the digestive tract (30).

6.4 Reproduction and Growth

Smoking during pregnancy adversely affects the fetus and, in later years, ETS can affect the neonatal infant and the growing child (19).

6.5 Other health effects

Smoking appears to exert a negative effect on bone mass at the major sites of osteoporotic fracture, namely the hip, lumbar spine and forearm.(31)

Smoking is strongly associated with numerous dermatologic conditions including poor wound healing, wrinkling and premature skin aging, squamous cell carcinoma, psoriasis, hidradenitis suppurativa, hair loss, oral cancers, and other oral conditions. In addition, it has an impact on the skin lesions observed in diabetes, lupus, and AIDS. The evidence linking smoking and melanoma, eczema, and acne is inconclusive. Anecdotal data exist on the possible protective

effects of smoking in oral/genital aphthosis of Behc¸ets disease, herpes labialis, pyoderma gangrenosum, acral melanoma, and Kaposis sarcoma in AIDS patients (32).

The possible biological mechanisms responsible for the observed association of smoking with various diseases and global mortality are numerous and, in spite of a many attempts to find causative relationships, are still unclear. It is a great scientific task to unravel exact pathways through which smoking affects human health. Although the effects of smoking on inflammatory markers may persist for many years, a majority of the adverse health effects of smoking are reversible. Therefore, quitting smoking avoids much of the excess health-care risk associated with smoking and allows increasing life expectancy (33).

7.Psychosocial Correlates of Smoking Behaviour

7.1 Social Correlates

In the developed world, particularly in those with well developed anti-smoking campaigns/policies, smoking is strongly related to socioeconomic status, being more prevalent among the poor, semi-skilled manual occupation groups, the unemployed, poor educational achievers, and single mothers, Smoking is linked to the social dimension of the smoker and his social surroundings. The smoker usually does not smoke except in the presence of others, from friends and co-workers, and even family from children, wife and parents, and in public places, where smoking becomes a social burden and an authoritarian practice of compelling others, and harmful to them, without Their ability to prevent this, as the smoker stems from his free self-representations, and the fact that most countries do not prohibit smoking compulsorily, especially in the family environment, which is the area in which the smoker exercises his authority. (22).

7.2 Psychiatric Correlates

Depression is an important risk factor for nicotine addiction. Smokers are more likely to have a history of major depression – and such smokers are much less likely to quit than those with no history of depression (34).

It has been suggested that this as sociation between depression and cigarette smoking may be due to a common genetic predisposition to the two disorders (35).

Other risk factors for nicotine addiction include schizophrenia (70 to 90% of schizophrenic patients are smokers) and polydrug abuse, in particular alcohol, cocaine and heroin (34).

Conclusions

smoking is a very bad habit. many people smoke everyday and they are not aware of how bad smoking is. people may die younger because of smoking. they also waste their money on buying cigarette.

Smoking negatively affects individuals and the environment, as the toxic fumes emitted from it contribute to polluting the environment.

Smoking affects the global economy due to its high costs, the costs of reducing it and awareness of its risks.

The great attack on smoking is due to the great harm that affects people's health, as it causes a large number of heart and lung diseases as well as cancers. Although this is the main reason, there are other reasons such as that it has an addictive effect, and that it affects the economic status of individuals, and so on.

There is a strong medical evidence that smoking is related to many diseases. it has negative effects on nearly all the human body and overall health. smoking can cause many diseases and health issues that can be prevented by not smoking. smoking has negative impacts on people of all ages and for both genders.

Smoking might affect our relationship with family and friends, because of the greater risk of depression or anxiety.

Whoever wants to preserve his body in order to remain strong and free of diseases should take more care of it, by staying away from bad habits that harm him, such as smoking of all kinds, and spreading awareness of this on a large scale so that others are not harmed .

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