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Impact of Smoking in a Tobacco-Growing Developing Country: A Review

Ignatio Madanhire and Charles Mbohwa

Abstract

The chapter reviews the impact of smoking on a developing country whose economy heavily depends on growing tobacco. Other than the pollution of the air caused by tobacco smoke, large areas of forestry land is destroyed, and huge losses are incurred due to perennial veldt fires. These would damage properties, flora, and fauna, and in some cases human life is lost. Public health bill is increasing annually to cater for smoking-related cancer which has become the major killer disease ahead of HIV/AIDS in the country. The levying of excise duty on cigarette sales to control tobacco smoking is not deterrent enough. There has been a marked increase in smoking by the youth of school-going age, and this risk behavior has been attributed to excessive exposure to intense advertising by the tobacco industry. Weak legal framework has not done enough to enforce tobacco smoking control, prohibition of public smoking, and sale of tobacco to the under-aged individuals. It was established that the common view that the thriving tobacco industry is responsible for key economic exports does not promote initiatives to reduce cigarette smoking.

Keywords: smoking, cigarettes, control, pollution, health, environment

1. Introduction

Cigarette smoking habit is normally started at an early age, and it continues into one's adult life [1]. According to prior studies, if one starts smoking, it will be difficult for one to stop the practice. Among those who continue to smoke throughout their lives, it is estimated that about half are expected to die from some smoking-related causes [2, 3]. It is for this reason that adolescents and school-aged children should be a primary focus for all intervention strategies [1, 2]. There is a need to put in place initiatives and strategic alliances to effectively address the negative impact of tobacco and to encourage and support children to lead healthy and active lives free from tobacco smoking [1].

It is estimated that, of the 6.6 billion people in the world, 1.3 billion are smokers and 1 billion of these are males [2]. By the year 2030, tobacco will be the single biggest cause of death worldwide causing more deaths than HIV, malaria, tuberculosis, maternal mortality, automobile crashes, homicides, and suicides combined [1, 3]. It is also estimated that tobacco-related diseases will account for 11% of all deaths that will occur in developing countries by 2025. So far, no other consumer products have come close to inflicting this degree of harm on the world community [2].

2. Background

Zimbabwe has a long history of growing tobacco. In 2012, the country was the top tobacco-producing nation in Africa, while in 2013 it was the sixth largest tobacco producer in the world [3, 4]. According to Zimbabwe's tobacco industry and marketing board, 98% of Zimbabwe's tobacco is exported. Thus tobacco is the country's largest foreign currency earner accounting for 10–43% of the country's gross domestic product [5].

Tobacco industry is a major source of employment for the population. There are currently over 90,000 tobacco farmers. Tobacco growing is given top priority despite widespread food insecurity and environmental degradation resulting thereof. As a result farmers are highly incentivized to grow tobacco than grain food crops [4, 5].

The country recently joined other countries in the Framework Convention on Tobacco Control (FCTC), which obligates nations to implement a variety of tobacco control measures [3]. These entail the requirement for member countries to adopt and implement measures that address tobacco control in three domains—tobacco demand reduction, tobacco supply reduction, and protecting the environment [5, 6]. It was observed that Zimbabwe has implemented several measures aimed at reducing tobacco demand, but very few aimed at reducing tobacco supply or protecting the environment.

3. Tobacco smoking trends

The smoking prevalence among females in Zimbabwe is about 5%, and for men it is much higher at 33%. This observation reflects the growing popularity of smoking among males in the country. This demonstrates the need for tobacco control in the country [1, 2]. The country has a few tobacco control measures and one national tobacco control law, Statutory Instrument 264 of 2002 [3]. The smoking of cigarettes is associated with negative social, health, and economic consequences, which can affect both smokers and non-smokers alike.

It has been observed that smoking-related diseases in African countries are lower than international standards. The increase in smoking prevalence suggests a looming epidemic of smoking-related diseases. Information on tobacco use among young people is not readily available for most developing countries like Zimbabwe, where the last survey was conducted 10 years ago [1, 3]. Thus if the effort on tobacco control is to succeed globally, the progress has to be equally made in Zimbabwe, and the impact of intervention has to be closely monitored and evaluated.

Current interventions entail making it a mandatory requirement to put health warnings on cigarette packages, designating smoke-free zones in public settings, and all cigarette sales are levied at 60%. While there are laws to prevent tobacco sales to minors, the youths from both urban and rural settings have reported that they have easy access to cigarettes [3, 4, 6]. Efforts being made to send anti-smoking messages to the youths are being diluted by massive advertising by tobacco industry portraying “positive” images of cigarette smoking. Urban residents are always exposed to contradicting messages as they have ready access to media channels such as televisions, newspapers, and magazines [3, 5]. Billboards are erected, and sporting events such as soccer matches are used to promote cigarette smoking. Brazil, which is the world's top tobacco producer, managed to reduce tobacco use by 50%, without affecting its revenue coming from exports. Tobacco control measures that target internal tobacco use cause little conflict with export profits. This example suggests that Zimbabwe may also be able to implement tobacco control at home with insignificant impact on exports [4].

The FCTC has been slow to agree on a coherent and effective policy to support economically viable alternatives to tobacco growing and protecting the environment.

4. Economic impact

Zimbabwe is the largest grower of tobacco in Africa and the sixth largest grower in the world. Tobacco plays a big role in the Zimbabwean economy. According to statistics by the UN's food and agriculture organization, tobacco is the Zimbabwe's largest export commodity— and it accounts for nearly 10% of GDP as shown by activity in **Figure 1** [7, 8].

Tobacco production in the country reached its peak of 217 million kilograms in 2014 as shown in **Table 1**. In 2015, 54% of Zimbabwe's tobacco exports was sold to China [8, 9].

Cigarette consumption per capita is the total annual number of cigarette sticks consumed divided by the total adult population aged 15 years and above in the country. **Figure 2** shows that the major declines in cigarette consumption occurred in 1982, 1984, 1992, and 2005–2008 [8, 9]. During 1982 and 1992, the consumption declined due to the occurrence of drought in the country, and consumers diverted their attention from purchasing more cigarettes to buying food stuff for themselves and their families. In 2004 up to 2008, there was an economic decline, and the Zimbabwean dollar was depreciating in the hyperinflationary environment in the country [8]. A decline in the economy affected agricultural output which in turn affected the manufacturing industries adversely in terms of reduced output and resultant company closures. The closing down of companies led to an increase in the number of unemployed individuals with little disposable income, which led to a decrease in consumption. In 2009–2011, the country introduced a multicurrency system, and there was an increase in consumption. From 2011 to 2015, **Figure 2** shows a decline in consumption that was influenced by an increase in excise tax on retail prices for all cigarette tobacco sales which led to reduced demand [10, 11].

In previous studies, it was observed that a positive price elasticity of cigarettes implied that increasing tax on the tobacco cigarettes would only raise tax revenue and not necessarily reduce the demand for the consumption of the product [3, 4].

Considering the addictive behavior associated with the product, the demand for cigarettes does not follow the essential laws of economics and the theory of demand [9]. Thus the cigarettes being an addictive product, there is no demand influence on the change in price of the commodity. Instead peer networks have a positive and significant influence on smoking intensity and participation, compared to excise tax and tobacco control policies that may be introduced by the government of the day [10].



Figure 1.
Tobacco field (ZTB 2018).

Year	Tobacco production (million kg)
2004	69
2005	73
2008	48
2010	59
2011	124
2012	144
2013	167
2014	217
2015	189
2016	195

Table 1.
Tobacco production trend (ZIMSTAT, 2017).

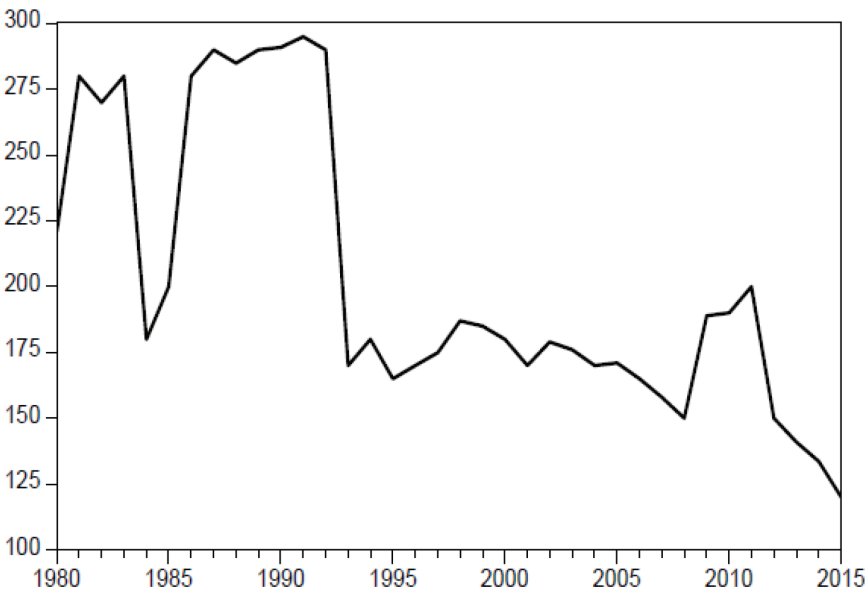


Figure 2.
Cigarette consumption per capita [14].

5. Social impact

According to WHO report in 2018, smoking is considered as a preventable cause of premature death in developed countries, whereas smoking epidemic in developing countries is now becoming even more popular and accepted as a societal norm [4, 6]. These countries mostly concentrate on malnutrition and infectious diseases, and they give low priority to tobacco cigarette smoking-related issues.

In the country, the government fears that a levy increase on cigarette sales and other proven cost-effective tobacco control measures would harm its economy in terms of revenue, job, and income losses. Despite that the demand for cigarettes is inelastic, Zimbabwe is one of the countries that have the lowest excise tax on cigarettes in Africa at 40% (**Figure 3**), and this is way below the recommended WHO excise tax rate of 75–80%, which could effectively reduce demand [5, 7]. Thus hiking excise tax rate is an effective measure to reduce cigarette smoking as well as reduce tobacco-related social costs [10].

It was observed that the majority of smokers become addicted when they are still teenagers [12]. Among other reasons, the youths smoke for them to look mature, to

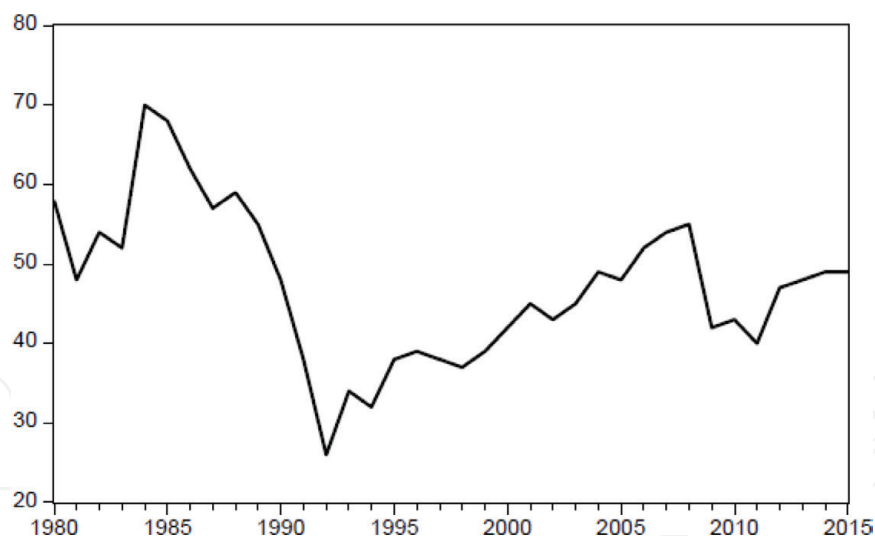


Figure 3.
 Excise tax in Zimbabwe (%) (ZIMSTAT, 2017).

experiment, and to be like their friends. This brings out the fact that smoking also provides a social reward by making the consumer feel like they are part of a group, which provides a sense of comfort and acceptance [13].

The consumption of cigarettes is increasing in the country. Adults smoke when they experience mounting stress and pressures due to personal and economic challenges. They would smoke in order to feel relaxed and get energy to get over their problems. Others smoke because smoking makes them feel good about themselves and it gives them a sense of pleasure [9].

Provision of educational programs in the school curriculum may be necessary to educate the youth on the short- and long-term effects of cigarette smoking. It may also be necessary to introduce effective warning labels on all tobacco cigarette products. The government can introduce a system that sends text messages to every individual using cellular networks stating the bad effects of smoking and encouraging people to stop smoking [1]. It could also provide cessation programs and medication to smokers to help them quit and provide medical education advising smokers that quitting is cheaper than treating smoking-related illnesses.

6. Environmental impact

The tobacco industry damages the environment in ways that go far beyond the effects of the smoke that cigarettes put into the air. Tobacco growing, manufacturing of cigarettes, and process of delivering products to retailers all have environmental impacts that may include deforestation, the use of fossil fuels, and dumping or leaking of cigarette waste products into the natural environment [14]. The whole life cycle from growing tobacco plants to the disposal of cigarette butts negatively impacts the environment. The ecological impacts of tobacco are serious cause for concern, especially in a tobacco-growing country like Zimbabwe [3].

6.1 Cigarette butts and the environment

6.1.1 Veldt fires

Cigarette smoking in rural and commercial farming areas is considered to be the common cause of most veldt fires when smoldering butts are thrown on dry

grass (**Figure 4**). The farming land destroyed by veldt fires in Zimbabwe amounted to 950,905 hectares in 2009, 1,152,413 hectares in 2010, 713,770 hectares in 2011, and 1,320,325 hectares in 2012. In this regard, veldt fires pose a serious challenge to environmental sustainability [11, 15].

Figure 5 shows that most veldt fires are caused by careless human activities such as improper disposal of cigarette stubs and burning of vegetation during land preparation (these two being the major causes). The least causes according to Forsyth et al. [12] are smoking bees and motorist who prepare fire for warming themselves in case of a vehicle breakdown at night.

The veldt fires have adverse impact on the environment especially in communal areas, where they have destroyed any damageable material. Trees, species of wildlife, farming land, livestock, human lives, and livelihoods suffer under the severe threat posed by veldt fires [2, 3]. The natural environment has suffered the destruction of fauna and flora, while the loss of property, pollution, and at times injury have been the order of the day in the human environment [11, 12]. Veldt fires also result in the decline of veldt conditions and an increase in air pollution, thereby reducing the quality of air that people would use to breathe. These fires emit millions of tons of gases and particulate matter into the air, which will have serious consequences on human health and carbon balances that contribute to global climate change [2, 4].



Figure 4.
Veldt fire in Karoi area, Zimbabwe.

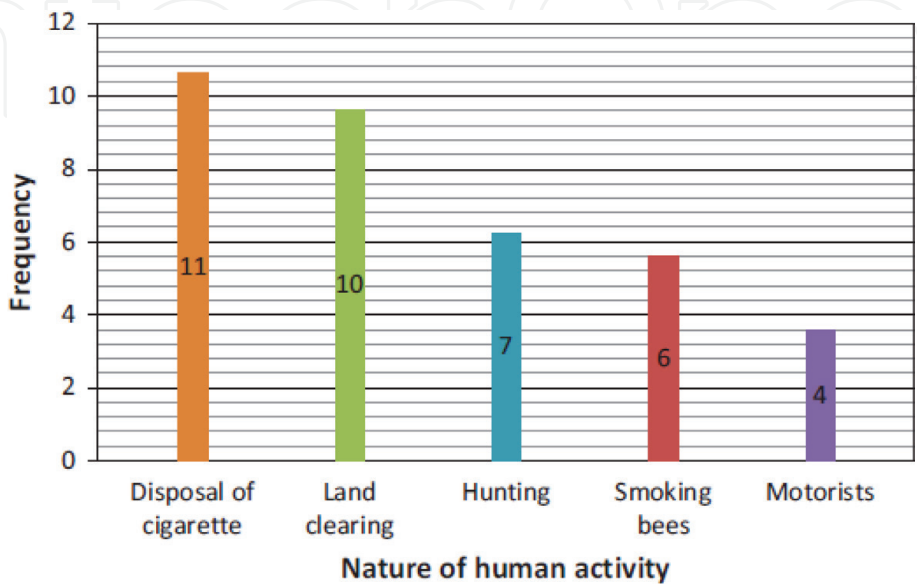


Figure 5.
Smoking topping causes of veldt fires.

If not controlled, veldt fires would give rise to unclean environment, severe environmental degradation, and diminished livelihoods [11, 12]. This would result in severe destruction of the veldt, thereby adversely affecting flora and fauna. Therefore veldt fires also pose some danger to human life since communities depend on the very degraded environment [11]. Air and water can be polluted by such veldt fires, thereby creating health hazards due to the resulting non sustainability of natural environment.

It is in this regard that there is a need to come up with sound interventions to protect, preserve, and sustain the environment. Enforcing of tobacco smoking control legislation may go a long way in reducing veldt fire incidence.

6.1.2 Water pollution

Tobacco waste is the end point in the life cycle of cigarettes, and the resulting cigarette butts are the largest single type of litter by count. Tobacco waste ends up everywhere, and it is a well-known public nuisance for many communities, especially those with few resources to remove it [12]. Cleanup and disposal are costs of tobacco consumption that are not currently borne by manufacturers, distributors, or users of tobacco products [15]. The cleanup costs of tobacco waste in the form of discarded cigarette butts are generally borne by municipalities. Cigarette butts on disposal in landfill produce further liquid wastes such as heavy metals and poisons such as arsenic that leach from butts [16].

Long after a cigarette has been extinguished, it continues to cause environmental damage in the form of non-biodegradable butts—millions of kilograms of which are discarded every year [17]. Butts are the most common item accumulating in local waste stream. Tossing a cigarette butt on the ground has become one of the most accepted forms of littering globally, and this has become a social norm for many smokers [14, 16]. The increase of butt disposal directly into the environment has been attributed to imposed restrictions on smoking in workplaces, bars, restaurants, etc. (**Figure 6**).

Toxic chemicals in cigarette butts contribute to nonpoint source pollution, when butts are carried through storm drains by rainfall and urban runoff to dams, rivers, wetlands, and even underground sources of drinking water [15, 16]. Nonpoint source pollution has harmful effects on drinking water supplies.

Studies have also shown that harmful chemicals such as nicotine, arsenic, polycyclic aromatic hydrocarbons (PAHs), and heavy metals leach from discarded tobacco butt waste and can be acutely toxic to aquatic organisms such as fish [16]. A butt may look like the end of the damage brought by a cigarette, but there is still a way to go in addressing postconsumer waste cleanup and responsible disposal [11].

6.2 Environmental tobacco smoke (ETS) pollution

Environmental tobacco smoke (ETS) could be described as the material in indoor air that originates from tobacco smoke (**Figure 7**). Breathing in ETS is known as passive smoking, secondhand smoke, or involuntary smoking [10].

Tobacco smoke consists of solid particles and gases. The solid components of tobacco smoke such as tar and nicotine make up 10%, while the gases constitutes about 90%. The major gas present in tobacco smoke is carbon monoxide. Other gases include formaldehyde, acrolein, ammonia, nitrogen oxides, pyridine, hydrogen cyanide, vinyl chloride, N-nitrosodimethylamine, and acrylonitrile. Of these, formaldehyde, N-nitrosodimethylamine, and vinyl chloride are suspected or known carcinogens in humans. Acrylonitrile has been known to cause cancer in animals [14, 16].



Figure 6.
Discarded cigarette stubs (Picture by: I Madanhire).



Figure 7.
Indoor smoke producing.

Environmental tobacco smoke is composed of both mainstream and sidestream smoke. ETS is diluted by the air in the room before it is inhaled and is therefore less concentrated than mainstream or sidestream smoke. Every person—both smokers and non-smokers—in a room with ETS will have similar exposure because nearly 85% of ETS in a room comes from sidestream smoke (**Figure 9**). The smoker is also exposed to mainstream smoke, but this exposure is limited to the time it takes to smoke a cigarette [6, 10]. However, exposure to ETS remains constant for the entire time spent in that room.

Exposure to ETS has been estimated in terms of “cigarette equivalents.” Cigarette equivalents can be measured by determining carboxyhemoglobin levels in blood. Carboxyhemoglobin is formed in the blood when someone inhales carbon monoxide. The hemoglobin in the blood that has oxygen bound to it is called oxyhemoglobin. It is the oxyhemoglobin that carries oxygen to the tissues. However, carbon monoxide has a much stronger attraction to hemoglobin than oxygen. Thus, inhaled carbon monoxide quickly replaces the oxygen in the oxyhemoglobin and binds to the hemoglobin to form carboxyhemoglobin which can be measured [6, 7]. Various studies suggest that passive exposure to ETS over an 8-hour day is comparable to directly smoking one to three cigarettes.

While no single study can say that there is a 100% chance of health problems as a result of exposure to ETS, an association between ETS and various health conditions is considered very likely because there is:

- The proven link between heart diseases and lung cancer to active smoking
- The presence of several known carcinogens in environmental tobacco smoke



Figure 8.
Deforestation-related tobacco curing barns.

- The general acceptance that the risks of certain diseases are directly related to the amount of tobacco smoke inhaled

When evidence from various studies is combined, they indicate that exposure to ETS increases the number of lung cancers detected in non-smokers. Non-smoking co-workers of smokers have a relative risk of being affected. Non-smokers with heart disease (angina pectoris) exposed to ETS in ventilated and unventilated rooms had increased heart rates, elevated blood pressures, and increased carbon monoxide in the blood. ETS aggravates allergy symptoms. It is generally more irritating to the respiratory tract of asthmatics, and it can aggravate some asthmatic symptoms such as wheezing [3].

Many of the substances in cigarette smoke are very irritating to the eyes, throat, and respiratory mucous membranes. A high proportion of non-smokers report eye irritation, headache, nasal discomfort, cough, sore throat, or sneezing when exposed to cigarette smoke. Eye irritation seems the main symptom during passive exposure to cigarette smoke.

6.3 Deforestation

Tobacco farming is the main cause of deforestation in countries such as Zimbabwe (**Figure 8**). There is evidence of substantial, and largely irreversible, losses of trees and other plant species caused by tobacco farming that make it a particular threat to biodiversity [5].

Tobacco control efforts aimed at the protection of the environment and health of persons represent another hurdle. Deforestation is a particularly significant problem in Zimbabwe, since flue-cured tobacco requires heat to process the leaves and wood is used as a fuel supply [6].

After harvesting, tobacco is dried and cured to preserve it for storage, transport, and processing. Indigenous trees are cut down to provide fuel for the curing process and construction of curing barns as given in **Figure 8**; as a crop it is responsible for damage to ancient forests [13].

7. Smoking impact on public health

No matter how one smokes it, tobacco is dangerous to one's health. There are no safe substances in any tobacco products, from acetone and tar to nicotine and

carbon monoxide. The substances one inhales do not just affect the lungs. They can affect the entire body. Tobacco smoke is incredibly harmful to human health. There is no safe way to smoke.

Cigarette smoking harms nearly every organ of the body, causes many diseases, and reduces the health of smokers in general (**Figure 9**). Quitting smoking lowers one's risk for smoking-related diseases and can add years to one's life [3]. Smoking harms nearly every organ of the body and affects a person's overall health [7]. Smoking causes diminished overall health, increased absenteeism from work, and increased healthcare utilization and cost [11].

Regardless of the widespread knowledge of the harm caused by smoking, only little success has been achieved in tobacco control initiatives. It is estimated that there are currently 3.5 million deaths a year from tobacco, and this figure is expected to rise about 10 million by 2030 [7, 10]. By that date, 70% of the deaths will be experienced in developing countries [8].

Tobacco use is distinguished from many other health problems by the presence of an aggressive, transnational tobacco industry whose goals are fundamentally incompatible with public health [2, 3]. Like other industries, the tobacco industry does not only seek to promote the use of its products and expand into new markets but also seeks to weaken strong tobacco control policies and undermine public health advocacy efforts [4].

There is a strong relationship between smoking prevalence and lung cancer patterns. Because smoking is the major cause of lung cancer and lung cancer commonly takes 20 or more years to develop, smoking prevalence is an important predictor of future lung cancer patterns [7]. Likewise, today's lung cancer patterns are a good indicator of the smoking prevalence of previous decades. When one takes up smoking, there is a greater chance of contracting cancer later in life. It can

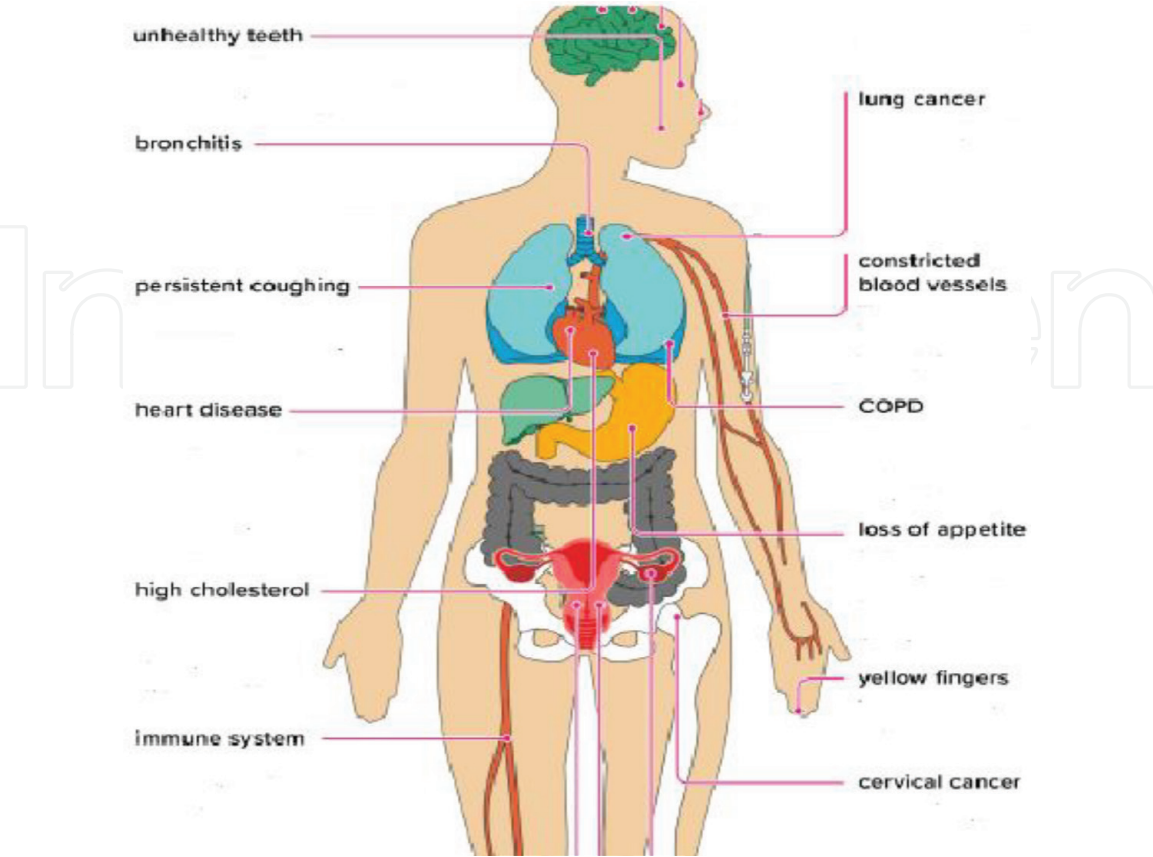


Figure 9.
Smoking effects on human body.

be assumed with accuracy that a majority of the youths that are current smokers would develop lung cancer before they reach the age of 35 years [10]. Smoking can cause lung disease by damaging the airways and the small air sacs (alveoli) found in the lungs. Lung diseases caused by smoking include chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. If you have asthma, tobacco smoke can trigger an attack or make an attack worse [7].

There are also other diseases that are caused by smoking, such as heart diseases, strokes, and a range of respiratory diseases. Smoking causes about 80% of all deaths from COPD. Smoking damages blood vessels and can make them thicken and grow narrower. This makes the heart beat faster and one's blood pressure to go up. Clots can also form. A stroke occurs when a clot blocks the blood flow to parts of your brain, and a blood vessel in or around your brain bursts [7, 10]. Blockages caused by smoking can also reduce blood flow to your legs and skin.

Smoking can affect bone health. Women past childbearing years who smoke have weaker bones than women who never smoked. They are also at greater risk for broken bones. Smoking affects the health of your teeth and gums and can cause tooth loss [7]. Smoking causes general adverse effects on the body, including inflammation and decreased immune function.

Some effort is being made to ban smoking in public places but not at an individual level. Very few are aware of the dangers of smoke from other people's cigarettes with yet fewer in favor of banning smoking in public places. This is unmistakably a lack of knowledge on the dangers of environmental tobacco smoke to one's health [8]. During the past two or so decades, research has been undertaken worldwide to reveal the evidence on the health effects of passive smoking. These studies have concluded that passive smoking increases the chances of contracting or aggravating a range of illnesses including cardiovascular disease, lung cancer as mentioned above, asthma (particularly in children), acute irritation of the respiratory tract, bronchitis, pneumonia, and other chest illnesses in children [10].

One huge problem that cannot be overshadowed by the economic use of tobacco is its increased use by young people and the long-term effects to their health [1].

8. Highlights on smoking in Zimbabwe

The current smokers could have been enticed into smoking by associating with smokers or frequenting places where smoking is a common practice like beer halls and clubs. Surprisingly though, not many smokers are in favor of banning smoking in public places, with less than half saying they are in favor [1]. There are difficulties as some of the current smokers try to quit smoking in recent past, with no success.

However smokers often do not take into serious consideration the long-term consequences of smoking behaviors. For youths, the risks of tobacco use are perceived to be remote and are outweighed by what they see as the immediate benefits [5]. They tend to underestimate the addictiveness of nicotine and the difficulties associated with quitting; they believe it is easier for young people to quit than adults.

Due to the proven association between high-risk behaviors like tobacco and drug abuse and HIV transmission, most of the school-based programs are now touching on the dangers of tobacco. Clear messages on the health hazards of smoking are not being adequately given within the school environment [18].

A government regulation, Chapter 5: 06 of the Statute Law of Zimbabwe, prohibits the sale of alcoholic beverages or tobacco products to persons below the age of 18. Most of the shopkeepers are well aware of the age restriction, but due to the need for increased sales, they do not adhere to the requirements [19]. Because of lack of



Figure 10.
Public smoking in the park [1].

enforcement of this law, the practice is further worsened because the shopkeepers know that nobody will prosecute them. Public smoking is a criminal offense under the Section 81 of Forestry Act, but no smoker has been prosecuted under the Act.

The Ministry of Health and Child Care has been using legislations such as the Public Health Act Chapter 15: 09 of 1996 and the Statutory Instrument 264 of 2002 on smoking regulations, which stipulate that smoking in public places such as halls, public offices, buses, airlines, schools, and commuter omnibuses is prohibited, to fight the scourge of public smoking. Besides drafting such policies, their enforcement and public awareness need to be considered.

9. Putting into perspective the smoking impacts

The review showed that there is substantial burden of experimental smoking among adolescents. It was established that experimentation with danger is crucial to the adolescent experience, and they start this as an act of rebellion or as a sign of maturity, but it ends up being an addictive behavior later in life. Consistent with other studies, the prevalence of smoking was higher among males, and the gap between males and females seemed not to be narrowing as previous studies intimated. This difference in prevalence between genders might be due to social and cultural acceptance of smoking among males rather than females in the country.

The low prevalence rate among the African origin group could be explained by the economic situation in Zimbabwe which has left people without any disposable income, especially those from high-density areas. The issue of increase in the prevalence of smoking across age groups might be explained by the addictive nature of the habit, and therefore students fail to stop and experience withdrawal symptoms during times of abstinence; therefore they continue smoking up to adulthood. It therefore follows that a program that successfully reduces youth smoking is likely to yield a good long-term public health benefit as most of these people who become smokers in adulthood start while they are still in their youth.

Issues related to planting alternative crops and reducing environmental and health damage from tobacco growing are contentious and complex, and any proposed solutions are likely to pose challenges for the country. The country is officially deliberating on what needs to be undertaken on coming up with alternative crops to tobacco. In country the use of taxation has been embarked on as a form of tobacco control by the Ministry of Finance and Ministry of Health. Similar efforts could be made by environmental and health authorities, who already collaborate on shared concerns such as air pollution by introducing relevant penalties.

10. Way forward in tobacco smoking control

Establishing extended producer responsibility and product stewardship programs would contribute to public health outcomes such as reducing tobacco use and increasing the cost of tobacco products, enacting new tobacco product regulations and labeling to make the product less marketable, and strengthening existing anti-litter and outdoor smoking bans. This could also include huge campaigns to raise public awareness on the environmental effects of tobacco waste, building momentum for advocacy against their irresponsible disposal. Thus numerous criteria can be used to determine how tobacco product waste should adhere to extended producer responsibility and product stewardship principles and standards [14].

Although assisting young people to avoid smoking is a widely endorsed goal of public health already, no adequate action has been taken to develop interventions that stop or reduce this habit and to make informed decisions in the country. Since the findings are almost similar to those found in Western countries, high cigarette prices and laws against youth access or adolescent tobacco education can be recommended as interventional strategies which work.

Furthermore, if health policy makers need to reduce the impact of tobacco-related diseases like tuberculosis, strategies for controlling tobacco use should be implemented now. Future studies should be implemented to monitor and evaluate the impact of the interventions.

Zimbabwe's current economic hardship, its robust tobacco growing and distribution infrastructure, and continued world demand for tobacco suggest that the government will continue to prioritize tobacco production in the absence of incentives to do otherwise. There is need to have programs that highlight the dangers of smoking. Introduction of new tobacco control and prevention programs in the country will save lives, reduce illnesses, and help reduce the economic burden associated with tobacco-related illness and lost productivity. According to available literature, non-smokers incur direct costs through passive smoking, where it has an impact on the non-smoker's health and has greater risk on property damage by fires. The financial costs are incurred by individuals who are not exposed to smoke, which include public or private healthcare costs that are tobacco related. Smoking also inflicts caring externalities that include emotional suffering experienced by non-smokers caused by the illness inflicted or death of the smoker. An increase in excise tax and the enforcement of tobacco control events would jointly reduce the cigarette demand effectively. The world is turning into a smoking epidemic, and this can be averted with the aid of these initiatives at both global and national scales.

11. Conclusion

The review exposed a plethora of adverse impacts of smoking on the country. These range from environmental degradation through deforestation and unintended veldt fires, as well as air pollution through environmental tobacco smoke. Various diseases in humans are attributed to nicotine from cigarette smoking with cancer having been identified as the most killer disease in this developing country. Leaching of chemicals from cigarette butts has also been indicated to cause extensive water pollution. Tobacco smoking tendency could not be deterred by imposition of an excise tax of 40% on cigarette sales for this tobacco-growing nation, where tobacco is in some circles viewed a major export that heavily contributes toward the economy. It is this contradictory situation that the authorities find themselves in, which compromises the legislative enforcement of various laws which are meant to reduce smoking prevalence. There is still an opportunity to mitigate the

impact of smoking in the country by introducing anti-smoking health campaign programs in schools and other tertiary institutions to stop smoking tendencies in children at an early age. Excise duty could also be increased up to 75% to have a positive deterrent effect and reduce the unnecessary burden of smoking-related disease treatment on the economic budget.

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