Effects of Smoking Cigarette on the Health among Residents in Mogadishu, Somalia

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Abstract

Cigarette smoking, hereafter referred to as "smoking," is the main reason behind premature death in developed countries. Smoking is currently considered one of the greatest health problems worldwide, and it is one of themost preventable causes of death. There were no studies according to the knowledge of author conducted in Somalia to determine the health effects of cigarette smoking in the study area. The study aims to find out the impact of cigarette smoking on the health among men in Mogadishu city.

A cross sectional study was used. A structured questionnaire was used to collect data from the respondents at a cluster sampling. Quantitative data analysis was used. This study took into consideration 295 respondents as sample size to determine feasible findings about topic under the study.

In general, 37.5% of the participants were cigarette smokers. The prevalence of khat chewing is high among participants aged 20 – 29 years in study. The health effects on cardiovascular as reported by the participants include chest pain, rapid heartbeat, asthma, heart attack and hypertension. There is another effect to the oral cavity, as described by the respondents which may affect the appearance of the teeth and tissues, such as tooth decay, tooth stains, bad breath, and stomatitis and tooth discoloration.

Greater efforts in practicing primary and secondary prevention among current and future physicians to solve the health problems associated with tobacco use in the country is needed as well as increasing public awareness of the potential health hazards of cigarette smoking;

Keywords: Health, Impact, Cardiovascular disease, Cigarette Smoking, Mogadishu.

1.1 Introduction

Cigarette smoking, hereafter referred to as "smoking," is the main reason behind premature death in developed countries. Smoking is currently considered one of the greatest health problemsworldwide, and it is one of themost preventable causes of death. Globally, the use andsale of substances such as alcohol and tobacco is causing substantial levels of problems related to health (Weiss, Cohen and Eisenberg, 2001).The World Health Organization (WHO) estimates more than 4 million deaths a year to tobacco and this number is likely to increase to 10 million deaths a year by 2020. Moreover, it is now a growing public health challenge in the developing world. Citing the death of 5 million individuals worldwide every year due to smoking-related diseases, the WHO states that smoking should be considered a pandemic (Reda, Moges, Yazew and Biadgilign, 2012).About 1.3 billion smokers worldwide and half of them die due to smoking-related diseases (WHO, 2017). Tobacco smoking is causing over 3 million deaths every year worldwide, and if current smoking trends continue the annual mortality will exceed 10 million by 2030 (Gupta, 2006).

Tobacco consumption has fallen substantially over thepast 30 years in many industrialized countries as a result of increasing awareness of the hazards of tobacco use and the implementation of aggressive and effective tobacco controlpolicies. In contrast, over the same time period, tobacco consumption has been increasing in the developing world; developing nations now consume the greatest share ofthe world's cigarette production (WHO, 2009).Just as global tobacco consumption is shifting between industrialized and developing countries, the tobacco pandemic is spreading to women in a variety of settings. Historically, smoking by women in industrialized countries increased during the last century, lagging behind the rise in men by about 20 to 30 years. This rise among women can be attributed to weakening social, cultural, and

political constraints, coupled with women's earning power and targeted marketing by tobacco companies. Today, the prevalence of smoking among women in some countries remains high, while surveillance data from other countries provide warning of increasing use among youth, particularly girls (Reda et al., 2012).In 2006, more than 1 billion smokers in the world consumed about 5.7 trillion cigarettes (WHO, 2009). An additional700 billion bidis are consumed annually in India alone (Asma and Gupta, 2008). There is wide variation in smoking prevalence among both males and females from one region to another. According to WHO (2009), the prevalence of smoking globally is higher for men (40% in2006) than for women (nearly 9% in 2006), and males account for 80% of all smokers (nearly 1 billion).

Despite widespread knowledge of the health consequences---, tobacco use, especially smoking is common globally. During the last decades efforts have been made in many countries to reduce smoking in the general public, as well asto prevent young people from starting to smoke. Studies have reported that young people start experimenting with tobacco as early as 10 years of age, and become regular smokers at approximately 15 (Lindberg, Jonsson and Ronmark, 2005).Smoking prevention programs most often address thegeneral population. However, identifying subjects at highrisk could make more targeted and extensive efforts possible. Prevention programs in which young people were enrolled and committed in the program, and programs that lasted throughout adolescence, have been successful (Winkleby, Feighery and Dunn (2004). Common risk factors for starting to smoke are having family members,or friends that smoke (Rosendahl, Galanti and Gilljam, 2003). Other risk factors are personal factors, such as risk-taking behaviour, stress, depression, and susceptibility to peer influence. Good school performance, being a member of a two-parentfamily, participation in sports and physical exercise, goodself-esteem, personal health concerns

and good refusal skills have all been negatively associated with smoking (Holmen, Barrett-Connor and Clausen, 2002).

Cigarette smoking has been described as a "gate way" substance towards illicit drug use among adolescents (Gilliland, Islam, Berhane, Guaderman, McConnoll, Avol and Peters, 2006).The onset of tobacco use occurs primarily in early adolescence,a developmental stage that is far removed byseveral decades from the death and disability that areassociated with smoking in adulthood. Therefore, thefact that many adult smokers initiated their smoking habit as adolescents makes adolescence smoking a significant public health problem (Warren, Jones, Peruga, Chauvin, Baptiste, de Silva, el Awa, Tsouros, Rahman and Fishburn, 2008). It is also importantas it is associated with respiratory health effects such asthe incidence and exacerbation of asthma (Rudatsikira, Muula and Siziya, 2009). Studies showed that national smoking prevalence among men insub-Sahara Africa varies from 20% to 60% and the annual cigarette consumption rates are on the rise for bothmen and women (Warren*et al*., 2008).

Tobacco use is determined and influenced by several kinds of factors: (1) individual factors (perceptions, self-image, and peers); (2) social factors (societal norms); (3) environmental factors, such as advertising and economics; and (4) cultural factors, such as traditional uses of tobacco, acculturation, and the historical context of the tobacco industry in various communities. Behavior and patterns of tobacco use result from each of these factors and from their complex interplay, which is difficult to study and measure. Although available evidence has demonstrated that these factors contribute to behavior, research has been unable to quantify the distinct effect of each one and the effects of their interaction. The lack of definitive literature points to the need for further research to better quantify the ways in which a person's exposure to various social, environmental, and cultural influences affects tobacco use behavior.

Most likely, it is not a single factor but rather the convergence or interaction of some or all of these factors that significantly influences both a person's decision to use tobacco and patterns of tobacco use (Lynch and Bonnie, 1994).

According to The Tobacco Atlas 2013 report, every year more than 3200 of its people are killed by tobacco-caused disease, while more than 32000 children and more than 602000 adults continue to use tobacco each day. Complacency in the face of the tobacco epidemic will ensure the tobacco industry continues to run roughshod over the lives of Somalia's citizens and ensure that tobacco's death toll will grow with each passing year. Tobacco control advocates must reach out to other communities to strengthen their efforts in this mortal fight. Even though fewer men and women, on average, die from tobacco use in Somalia compared with otherlow-income countries, still 41 men (3.8%) of men and 21 (2.5%) women are being killed by tobacco every week, necessitating action from policy makers. It is a public belief that abuse of drugs is not high in Somalia, but use of psycho-stimulants suchas tobacco and khatis growing; tobacco harms the health, the treasury, and the spirit of Somalia as it is the sign of an ongoing and dire public health threat. The health hazards, determinants of cigarette smoking andits prevalence have not been well studied.Therefore, the aim of this study is to describe the health effects of cigarette smoking among men in Mogadishu, Somalia.

1.2 Statement of the problem

Tobacco contains many chemicals which are known to cause cancers (Report on Carcinogens, 2011). It kills more than the combination of AIDS, legal drugs, illegal drugs, road accidents, murder and suicide (Mackay & Eriksen, 2002). It is a major health problem face by the community throughout the world. It is the single leading cause of

preventable mortality and morbidity; more than five million lost their lives every year as a result of cigarette smoking (WHO, 2008).

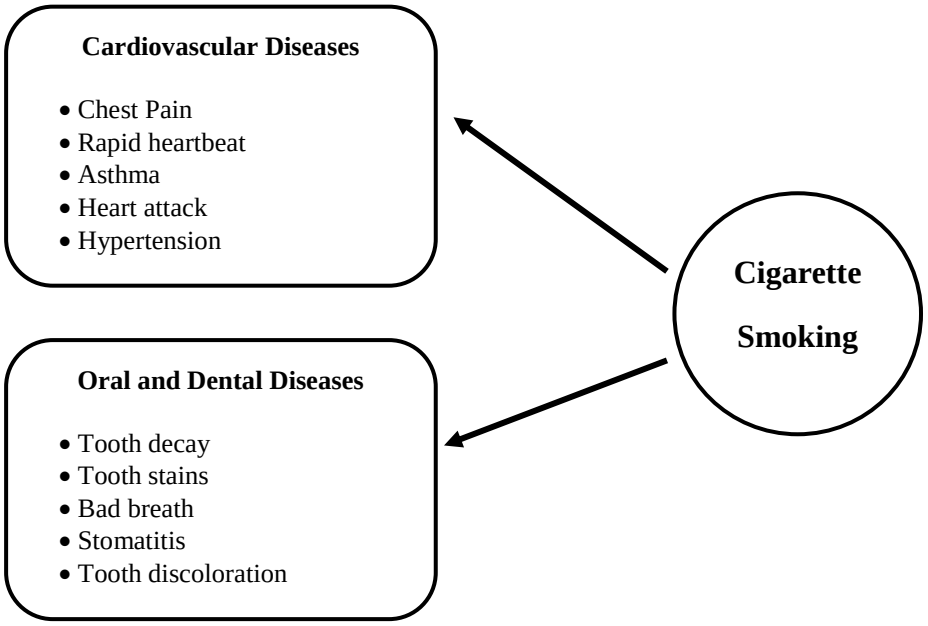
It is a public belief that abuse of drugs is not high in Somalia but use of psycho-stimulants such as tobacco and khat is growing; tobacco harms the health, the treasury, and the spirit of Somalia as it is the sign of an ongoing and dire public health threat. Everyone knows cigarette smoking is bad for you. The health hazards, determinants of cigarette smoking and its prevalence have not been well studied. Therefore, the aim of this study is to describe the effects of cigarette smoking on health among residents in Mogadishu, Somalia. Because of the prevalence of smoking among the residents of Mogadishu nowadays, it is important to know their effects on the health help minimize the number of smokers.

1.3 Research objective

The specific objectives were: To describe the effects of cigarette smoking on the cardiovascular health; also to identify the effects of cigarette smoking on the oral and dental health among residents in Mogadishu, Somalia.

1.4 Conceptual Framework

The following conceptual framework was adopted by the researcher.



2.0 Methodology

2.1 Study Design and Population.

The research design used for this study was descriptive and cross-sectional using the quantitative approach in Mogadishu, Somalia, from April 2017 to September 2017. The design was descriptive cross-sectional because this design was used when to provide an accurate account of the characteristics of a particular individual, event, or group in real-life situations for the purpose of discovering new meaning, describing what exists, determining the frequency with which something occurs and categorizing information as well as it is used to examine groups of subjects in various stages of development simultaneously with

the intent of inferring trends over time (Burns & Grove 2005). Quantitative research refers to a formal, objective and systematic process to describe and test relationships and to examine cause-and-effect interactions between variables (ibid).

Burns and Grove (2005) define a population as all elements such as individuals, objects, events or substances that meet the sample criteria for inclusion in a study. A population is the entire aggregate of cases in which a researcher is interested and the elements which show the sample criteria for inclusion in the study. It is sometimes referred to as a target population. A portion of a target population to which the researcher has reasonable access to is referred to as an accessible population. In this study, the population consisted of all persons in the seventeen districts of Mogadishu city as well as their eligible dependents.Targeted population were those who aged above 20 years to ensure that all subjects were responsible for their decision. People aged <20 years were excluded from this study.

2.2 Sampling Procedure/Method Sample and Size Determination.

The sampling units were all the seventeen districts of Banadir region, namely Bondhere, Daynile, Dharkenley, Hamar-Jajab, Hamar-Weyne, Heliwaa, Hodan, Howl-Wadag, Karan, Shangani, Shibis, Waberi, Abdiaziz, Wadajir, Warta-Nabada, Kaxda and Yaqshid. Cluster sampling will be used which isusually exclusive sub-populations, which together comprise a population as each cluster consists of heterogeneous elements and typical elements of the population. Secondly, one district was randomly selected (Abdiaziz) and has approximately 12.628 persons (District Authority, 2016). Four sub-districts made up of Abdiaziz district, namely Looya-adde, Neero, Gaarisa and Dhagahbuur. Then one of these sub-districts (Gaarisa) which has approximately 1,128 pesrons was selected for the study using simple random sampling as its adults were included.

The researcher has employed the **Slovin's** formula to determine the final sample size from which data will be collected. The sample size is calculated from the target population as follows;

$$n = \frac{N}{1 + N\,(e^2)}$$

- n = the desired sample size/required.
- N= the estimate of the target population size.
- e = the level of statistical significance/margin error at 5%; standard value of 0.05.

$1{,}128 / (1 + 1{,}128 * 0.05^2) =$ **295**

Therefore, two hundred and ninety-five respondents participated in this study.

2.3 Data Collection Technique.

Data were collected by using structured questionnaires which was prepared first in English and then translate into Somali and back to English. Two data collectors who were under graduate nursing students were involved, and training was given; mainly on the purpose of the study, handling ethical issues and method of data collection.

2.4 Data Analysis.

The collected data were cleared and checked for completeness and were entered, compiled and analyzed using SPSS 19 (Statistical Package for the Social Sciences) program was used appropriately; percentage were used as a statistical test. Data cleaning was performed to check for accuracy, consistencies, missed values and variables. Any error identified was corrected.The regression model was applied to determine relationships between the variables.

2.5 Ethical Considerations.

Participation in this research study was completely voluntary and they were not being induced to participate through offer of material items or money. Good explanation for the participants was done before filling the questionnaire Participants were assured of their privacy and non-participation if they so wished.The benefit of the study was explained to all of the participants. Confidentiality and privacy of all respondents was maintained through use of unique identifiers, personal identifying information, such as name, telephone or address was not being recorded.All the study participants were informed about the objective of the study and their verbal consent was obtained.

2.6 Study Limitations.

Some of the female participants refused to fill the questionnaire, due to gender issues. Certain aspects of the questionnaire were considered too technical and therefore difficult for the respondents as evidenced by the high proportion of respondents ticking a wrong place for many questions.Further, translation of the questionnaire from English to Somali and back to English might have affected the meaning of certain statements and experts' comments.

3. Results

Out of the two hundred and ninety-five questionnaires were distributed, two hundred and sixty-one were returned making the response rate 88.5%. In Table 1, the majority of the respondents (143) were aged between 20 and 29 years representing 54.8%. The majority were males (77.4), singles (50.2%), had informal education (37%), and (70.3%) were unemployed. Most of the respondents (77.8%) had a total family income of USD ≤100 per month. The data obtained from the questionnaire, reveals that 98 (37.5%) of the participants were cigarette smokers.

Table 1: Results

No	Response items	Scale of response	Frequency	Percentage (%)
1	Age Group	20 – 29 years	143	54.8
		30 – 39 years	77	29.5
		40 – 49 years	29	11.1
		>49 years	12	4.6
		Total	261	100
2	Gender	Male	202	77.4
		Female	59	22.6
		Total	261	100
3	Marital Status	Single	131	50.2
		Married	114	43.7
		Divorced	12	4.6
		Widowed	4	1.5
		Total	261	100
4	Educational Level	Primary	81	31
		Secondary	45	17.2
		Informal	64	24.5
		Illiterate	50	19.2
		University	21	8.1
		Total	261	100
5	Employment status	Employed	101	38.7
		Unemployed	160	61.3
		Total	261	100
6	Smoking cigarette	Yes	98	37.5
		No	163	62.5
		Total	261	100

No	Response items	Scale of response	Frequency	Percentage (%)
7	Number of Cigarettes/Day	≤5 cigarettes	42	42.9
		>5 cigarettes	56	57.1
		Total	98	100
8	Total years of Smoking	≤5 years	63	64.3
		>5 years	35	35.7
		Total	98	100
Effects of cigarette smoking				
٩	Chest pain	Yes	53	54
		No	45	46
		Total	98	100
١٠	Rapid heartbeat	Yes	61	62.2
		No	37	37.8
		Total	98	100
١١	Asthma	Yes	52	53
		No	46	47
		Total	98	100
١٢	Heat attack	Yes	55	56.1
		No	43	43.9
		Total	98	100
١٣	Hypertension (High blood pressure)	Yes	52	53
		No	46	47
		Total	98	100
١٤	Took decay	Yes	73	74.5
		No	25	25.5
		Total	98	100
١٥	Took stains	Yes	51	52
		No	47	48
		Total	98	100
١٦	Bad breath	Yes	59	60.2
		No	39	39.8
		Total	98	100

No	Response items	Scale of response	Frequency	Percentage (%)
17	Stomatitis (Smoker's Palate)	Yes	63	64.2
		No	35	35.8
		Total	98	100
18	Tooth discoloration	Yes	67	68.4
		No	31	31.6
		Total	98	100

3.1 Discussion

This study provides an insight on smoking cigarette among residents in Mogadishu with a specific focus on its effects on the cardiovascular system and oral cavity. In this study, there was significant correlation between chest pain, rapid heartbeat, asthma, heart attack, tooth decay, tooth stains, bad breath and stomatitis and cigarette smoking (Table 2). This has highlighted a detailed figure on the health effects of cigarette smoking among residents in Mogadishu, Somalia. Without question, effects on the cardiovascular systemare the main effects that should lead the tendency to focus on.This is due to smoking produces transient vascular effects on the heart and blood vessels as well as toxic components of the tobacco smoke are being distributed throughout the whole organism by means of circulation. Effects on the oral cavity have also got a vast importance.

These results agreed with the study conducted by Nikodemowicz (2007), who showed that the effects of cigarette smoking on the cardiovascular system included fatty buildups in arteries, several types of cancer and chronic obstructive pulmonary disease (lung problems). Atherosclerosis (buildup of fatty substances in the arteries) is a chief contributor to the high number of deaths from smoking. Cigarette smoking is a major cause of coronary heart disease, which leads to heart attack and it is the most important single risk factor in coronary artery

disease, sudden cardiac death, ischemic stroke, aortic aneurysm formation, and peripheral vascular disease and Buerger disease. It must be also said this factor might be possibly removed.

These results are also in agreement with the results of Johnson and Bain (2000) who cited that smoking often results in discolorations of teeth and dental restorations. Bad breath and diminished taste as a result of stomatitis are common side effects of smoking. Periodontal disease is increased both in prevalence and severity in smokers.

Table 2: Analytical Presentation

***Independent Variable (Smoking Cigarette)**

Dependent Variables	T value	P value
Chest pain	2.611	0.002
Rapid heartbeat	2.500	0.017
Asthma	2.921	0.001
Heart attack	3.538	0.003
Hypertension	2.531	0.011
Tooth decay	2.588	0.012
Tooth stains	3.071	0.004
Bad breath	3.350	0.001
Stomatitis	2.933	0.005
Tooth discoloration	3.612	0.001

4. Conclusion and Recommendations

When we think about tobacco use, we have the tendency to limit our concern to the increased risksfor cardiovascular system and/or oral cavity. This article reviews some of the cardiovascular and oral changes associated with tobacco use. Some of these changes directly affectthe wellness of the heart and its vessels and include chest pain, rapid

heartbeat, asthma, heart attackand hypertension. Others affect dental health, as evidenced by the relationship between cardiovascular and oral cavity diseases and smoking. Other changes may affect the appearance of the teeth andtissues, such as tooth decay, tooth stains, bad breath, and stomatitis and tooth discoloration, thus affecting the person's desire for a pleasing presentation to others. Relating the use of tobacco to specific findings in the oral cavity will visually document for the patient the adverse effects of their tobacco use. Smoking is the most important modifiable risk factor for cardiovascular disease, a major risk factor for cardiovascular morbidity and mortality, and is considered to be the leading preventable cause of death in the world.This "piece of the puzzle" may set inmotion their desire to stop using tobacco products.

Therefore, the researcher recommends:

- Greater efforts in practicing primary and secondary prevention among current and future physicians to solve the health problems associated with tobacco use in the country is needed as well as increasing public awareness of the potential health hazards of cigarette smoking;
- A community awareness by the community healthcare workersis needed, which seeks to change the social climate and promote a supportive environment;
- A health systems approach that focuses on promoting and integrating clinical best practices (behavioral and pharmacological) which help tobacco-dependent consumers increase their chance of quitting successfully.

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