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# TOBACCO USE

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# TABLE OF CONTENT:

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## **1. Types of Tobacco Use:**

- a. Active.
- b. Passive.
- c. Tobacco forms.

## **2. Magnitude of the Problem:**

- a. Prevalence.

## **3. Components of tobacco.**

## **4. Sishah.**

## **5. Consequences:**

- a. Health.
- b. Social.
- c. Economic.
- d. community development.
- e. Religious.

## **6. Prevention and control:**

- a. Globally.
- b. Nationally.
- c. Conceptually.

## **7. Tobacco Control Programs in KSA.**

## **Introduction**

Tobacco use may be defined as any habitual use of the tobacco plant leaf and its products. The predominant use of tobacco is by smoke inhalation of cigarettes, pipes, and cigars. Smokeless tobacco refers to a variety of tobacco products that are sniffed, sucked, or chewed. In this paper we address different aspects of tobacco use in terms of prevalence of tobacco use, types and components of tobacco, and prevention and control measures, with a focus on Saudi Arabia. (1)

## **Tobacco Use Worldwide**

In 2015, over 1.1 billion people smoked tobacco. Far more males than females smoke tobacco. Although tobacco use is declining in many countries, the prevalence of tobacco smoking appears to be increasing in the Eastern Mediterranean Region. Men tend to smoke much more than women in most of the countries of the region. For example, current smoking is 38.1 % among men and 0.6 % among women in Egypt, compared to 23.4 and 1.4 % in Iran. However, Turkey and Lebanon have different patterns with higher rates of smoking among women (15.2 % in Turkey and 29.8 % in Lebanon). (2)

## **Prevalence of Tobacco Use in Saudi Arabia**

A national survey assessing the status of tobacco consumption in the Saudi Arabia was conducted on 10,735 individuals aged 15 or older (5253 men and 5482 women), in which the overall prevalence of current smoking was 12.2 % and males were more likely to smoke than females (21.5 % vs. 1.1 %). Daily shisha smoking was reported by 4.3 % of the population (7.3 % of men and 1.3 % of women). Around 1.4 % of population (2.6 % of men and 0.1 % of women) were daily smokers of cigarette/cigar and shisha. As for second-hand smoking, 23.3% of the entire population (32.3 % of men and 13.5 % of women) were exposed to secondhand smoke for at least one day during the past 7 days at home, work, or school. Every year, more than 4,700 of people in Saudi Arabia die from tobacco use related diseases, while more than 116,000 children and more than 288,9000 adults continue to use tobacco each day. (3)

## **Types of Tobacco Use**

Tobacco is used by one or more of the following forms: cigarettes, water pipes, cigars, kreteks, roll-your-own cigarettes, bidis, pipes, sticks, dry snuff, chewing tobacco, electronic cigarettes, and passive smoking. There are two types of tobacco use: active tobacco use (active smoking) and passive tobacco use (passive smoking). Active smoking is the direct use of cigarettes, water-pipes (shisha), pipes, cigars, e-cigarettes, e-water-pipes, or smokeless tobacco use. Passive smoking is divided into second-hand smoke and third-hand smoke. Second-hand smoke, is a mixture of gases and fine particles that include smoke from a burning cigarette, cigar, or pipe tip and smoke that has been exhaled or breathed out by the person who is smoking. Third-hand smoke exposure refers to exposure to smoke components and their metabolic by-products from contact with surfaces that have adsorbed smoke. The smoke leaves a residue of nicotine and other toxic substances in household dust and on surfaces. Although not yet well studied, there is concern that contact with third hand smoke will result in absorption of toxins through the skin or ingestion from contamination of the hands.

There are two main forms of smoke that come from burning tobacco: side-stream smoke which is exhaled by a smoker, and mainstream smoke which comes from the lit end of a cigarette, pipe, or cigar. Side-stream smoke has higher concentrations of carcinogens and is more toxic than mainstream smoke. It has smaller particles than mainstream smoke. These smaller particles make their way into the lungs and the body's cells more easily. (4) (5) (6) (7) (8) (9)

## **Components of Tobacco**

Tobacco is composed of more than 4,000 substances including: tar (a black sticky substance used to pave roads), nicotine which is used in insecticides, carbon monoxide (also produced by car exhaust), 210 polonium which is a dangerous radioactive substance, cadmium (one of the metals commonly used in batteries), some amount of alcohol (especially ethanol), acetone, ammonia (also used in toilet cleaners), butane, and arsenic (extremely poisonous). (10) (11) (12)

## **Sisha**

Many people believe shisha smoking is safer than smoking cigarettes, because of the misconception that the tobacco smoke gets filtered through water, which makes it cleaner. This is not true. On contrary, inhaled shisha smoke contains the same toxins as cigarettes. Infections such as tuberculosis, hepatitis, herpes may be transferred from one smoker to another by sharing Hookah, while cigarettes are less likely to be shared.

Cigarettes and shisha deliver about the same amount of nicotine, leading to tobacco dependence. One cigarette session lasts for approximately 5 minute and involves 20 puffs producing 500-600 ml of smoke. Also, it produces less carbon monoxide and tar compared to shisha. On the other hand, one shisha session lasts for 45 minutes and involves 200 puffs producing 90,000 ml of smoke. Moreover, shisha produces more carbon monoxide tar that produced by cigarette. (12) (13)

# **Consequences of Tobacco Use**

## **1- Health Consequences**

Smoking by far is the worst risk factor for more than 25 different diseases. It affects different body-systems, especially the respiratory tract, causing shortness of breath, bronchial asthma, emphysema, and multiple cancers. The cardiovascular system is also affected by smoking and can cause atherosclerosis, peripheral vascular disease, heart attacks and stroke. Oral complications of tobacco use include gum staining, tooth decay, tooth loss, oral cancer. The urinary system can also be affected leading to bladder cancer. Smoking while pregnant is a risk factor for premature delivery, low birth weight and Sudden Infant Death Syndrome. Furthermore, smokers have shorter life expectancy compared to non-smokers. (14)

## **2- Impacts of Secondhand Smoke**

Both smokers and non-smokers experience eye irritation, sore throat, headache, nausea, and dizziness when exposed to cigarette smoke. Exposure to secondhand smoke can also cause non-smokers to experience the same devastating health effects as smokers, including cardiovascular disease, lung cancer, and chronic obstructive lung disease (COPD). Second-hand smoke contains twice as much tar and nicotine as that inhaled by the smoker, and is responsible for over 63,000 deaths among non-smokers every year in the United States. One of the most significant actions we can take to reduce the consequences from second-hand smoke exposure is to set up rules ban smoking in our homes or in our cars.

## **3- Social Consequences**

Tobacco use -for a long time- was more than welcomed by society. It was attractive to others, and was a symbol of manhood and power in the western countries. This was due to the large marketing campaigns of tobacco industry companies, which was also marketed by movie stars and other celebrities. However, nowadays it is more of rejected by the societies, after knowing its hazards and its health consequences. Tobacco users, who develop illnesses or die prematurely, will deprive their families of income, increase the cost of healthcare and delay financial development.

## **4- Economic Consequences**

Tobacco industry companies spend billions of dollars to market their products, and earn much more than they spend. On the other hand, the government spends billions for the treatment of smokers. A recent study from the United States showed that more than \$133 billion is spent on direct medical care for tobacco smokers, more than \$156 billion is lost productivity and around \$6 billion is lost for treatment of second-hand smokers.

## **5- Impacts on Community Development**

Tobacco use strongly affects community development. In fact, the higher the number of tobacco users the slower the community develops. Tobacco use increases morbidity and mortality of the population, which in turn, slows down the community development.

## **6- Religious Perspective**

Tobacco smoking was invented after the birth of Islam, so there is no verse in the Qur'an or hadith for Prophet Mohammed (peace be upon him) stating that tobacco use is forbidden. However, many Islamic scholars believe that tobacco use is forbidden based on Ijtihad.

## **Prevention and Control:**

### **1. Globally:**

#### **WHO Framework Convention on Tobacco Control (FCTC):**

FCTC is the first treaty negotiated under the auspices of the World Health Organization. It was developed in response to the globalization of the tobacco epidemic. The objective of this convention and its protocols is to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke by providing a framework for tobacco control measures to be implemented by the Parties at the national, regional and international levels in order to reduce continually and substantially the prevalence of tobacco use and exposure to tobacco smoke. (15)

#### **FCTC Guidelines for Implementation:**

Implementation of FCTC guidelines are done by reducing demand and supply. Demand reduction is achieved by price/tax measures or non-price measures. Examples for non-price measures are protection from exposure to tobacco smoke, regulation of the contents of tobacco products, regulation of tobacco product disclosures, packaging and labelling of tobacco products, education and public awareness, tobacco advertising, promotion and sponsorship and tobacco dependence and cessation. Supply is reduced by preventing illicit trade in tobacco products, banning sales to and by minors and support alternative activities. (16)

### **2. Nationally:**

To help make the FCTC a reality, the WHO introduced MPOWER measures to assist in reducing the demand for tobacco products at a country-level.

- **M: Monitor** tobacco use and prevention policies.
- **P: Protect** people from tobacco smoke.
- **Q: Offer** help to quit tobacco use.
- **W: Warn** about dangers of tobacco.
- **E: Enforce** bans on tobacco advertising, promotion and sponsorship. (17)

### **3. Conceptually:**

Smoking Bans lead to decreased morbidity and mortality by reducing environmental (secondhand) tobacco smoke and by changing of attitude that reduce initiation or consumption, hence, less tobacco users. (18)

## **Tobacco Control Programs in KSA**

The tobacco control program in Saudi Arabia are operated by the Ministry of Health, which was established in 2002 after agreement number (8116) of the Minister of Health. It is directed toward all types of tobacco in Saudi Arabia. It has launched several tobacco control clinics all over the country. The role of tobacco control program in Saudi Arabia is to prevent tobacco use among Saudi population, reduce the effects of tobacco use on non-smokers, and protect the future generations of their harms. (19)

## **Purity Anti-smoking Charitable Association**

This is a charity operating under the supervision of the Ministry of Social Affairs, and was established in 1406 AH. Its Mission is working to reduce the number of smokers to reach a non-smoking society by focusing on positive rapprochement with smokers and introducing them to the positive aspects of pure life and the use of modern scientific methods to achieve the highest rates of success. (20)

## **Tobacco Control at King Saud University (KSU)**

Anti-Smoking Clinic is one of the community services provided by Deanship of Student Affairs in KSU, and was established in 2005. It aids in helping students, faculty and staff who smoke to quit smoking. The clinic is located in Deanship of Student Affairs building (Building 17) in the fifth floor. The smoker passes through six steps in this clinic:

- 1- Islamic views on smoking and health and psychological harms are explained to the smoker.
- 2- Getting the smoker's information, such as: the duration of smoking, type of tobacco smoked, age... etc.
- 3- Taking measurements: weight and height, carbon monoxide in the lungs and the efficiency of the lungs.
- 4- The doctor explains how many sessions needed for the smoker according to the measurements taken.
- 5- Silver Spike Point Therapy is used 25 minutes a day, which stimulates endorphin secretion, which in turn helps in reducing the nicotine withdrawal effects.
- 6- Gifts are provided for those who had quit smoking after the therapy. (21)

## **Conclusion**

Tobacco use is any habitual use of the tobacco plant leaf and its products. Although tobacco use is declining in many countries, the prevalence of tobacco smoking appears to be increasing in the Middle East. In KSA, the overall prevalence of current smoking was 12.2%, and 23.3% of the entire population were exposed to secondhand smoke. Tobacco is used by one or more forms including cigarettes, water pipes, cigars... etc. Tobacco is composed of dangerous substances including Tar, Nicotine, Carbon Monoxide, Polonium... etc. The consequences of tobacco use include health, social, and economical factors. Global prevention and control was established by the WHO with the Framework Convention on Tobacco Control (FCTC). The FCTC developed the MPOWER measures to reduce tobacco demand on a country-level. Tobacco control programs in KSA are operated by the ministry of health.

## References

1. Al-Ibrahim MS, Gross JY. Tobacco Use. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The History, Physical, and Laboratory Examinations. Boston: Butterworths; 2011.
2. Moradi-Lakeh M, El Beheraoui C, Tuffaha M, Daoud F, Al Saeedi M, Basulaiman M, et al. Tobacco consumption in the Kingdom of Saudi Arabia, 2013: findings from a national survey. BMC Public Health. 2015 Jul 5;15:611.
3. WHO | Prevalence of tobacco smoking. 2016 Oct 10 [cited 2017 Dec 21]; Available from: <http://www.who.int/gho/tobacco/use/en/>
4. Types of Smoking [Internet]. [cited 2017 Dec 21]. Available from: <https://www.hamad.qa/EN/your%20health/Stop%20Smoking/About-Smoking/Pages/Types-of-Smoking.aspx>
5. WHO | Types of Tobacco Use [Internet]. [cited 2017 Dec 21]. Available from: <http://www.who.int/tobacco/en/atas4.pdf>
6. The Health Consequences of Involuntary Exposure to Tobacco Smoke. [Internet]. [cited 2017 Dec 21]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK44321/>
7. Health Risks of Secondhand Smoke [Internet]. [cited 2017 Dec 21]. Available from: <https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/secondhand-smoke.html>
8. Burton A. Does the Smoke Ever Really Clear? Thirdhand Smoke Exposure Raises New Concerns. Environ Health Perspect. 2011 Feb;119(2):A70.
9. Bahl V, Jacob P, III, Havel C, Schick SF, Talbot P. Thirdhand Cigarette Smoke: Factors Affecting Exposure and Remediation. PLoS One [Internet]. 2014 [cited 2017 Dec 21];9(10). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4186756/>
10. The Health Consequences of Involuntary Exposure to Tobacco Smoke. [Internet]. [cited 2017 Dec 21]. Available from: <https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf>
11. Evaluation of the Carcinogenic Risks of Chemicals to Humans - Tobacco Smoking [Internet]. [cited 2017 Dec 21]. Available from: <https://monographs.iarc.fr/ENG/Monographs/vol1-42/mono38.pdf>
12. WHO | Arsenic [Internet]. [cited 2017 Dec 21]. Available from: <http://www.who.int/mediacentre/factsheets/fs372/en/>
13. Smoking CO on, Health. Smoking and Tobacco Use; Fact Sheet; Hookahs. 2017 Oct 5 [cited 2017 Dec 21]; Available from: [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/tobacco\\_industry/hookahs/](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/tobacco_industry/hookahs/)
14. Health effects of tobacco - Wikipedia [Internet]. [cited 2017 Dec 21]. Available from: [https://en.wikipedia.org/wiki/Health\\_effects\\_of\\_tobacco](https://en.wikipedia.org/wiki/Health_effects_of_tobacco)
15. WHO FCTC Booklet [Internet]. [cited 2017 Dec 21]. Available from: <http://apps.who.int/iris/bitstream/10665/42811/1/9241591013.pdf>
16. WHO | FCTC [Internet]. [cited 2017 Dec 21]. Available from: [http://3pk43x313ggr4cy0lh3tctjh.wpengine.netdna-cdn.com/wp-content/uploads/2015/02/CH20\\_Treaties.pdf](http://3pk43x313ggr4cy0lh3tctjh.wpengine.netdna-cdn.com/wp-content/uploads/2015/02/CH20_Treaties.pdf)
17. WHO | MPOWER brochures and other resources. 2016 Jul 28 [cited 2017 Dec 21]; Available from: <http://www.who.int/tobacco/mpower/publications/en/>
18. Impact of Smoking Bans on Smoking [Internet]. [cited 2017 Dec 21]. Available from: [https://www.york.ac.uk/media/economics/documents/herc/wp/11\\_05.pdf](https://www.york.ac.uk/media/economics/documents/herc/wp/11_05.pdf)
19. MOH Portal Team. Tobacco Control Program - About us [Internet]. [cited 2017 Dec 21]. Available from: <https://www.moh.gov.sa/endepts/TCP/Pages/About.aspx>
20. الجمعية الخيرية لمكافحة التدخين .. نقاء [Internet]. [cited 2017 Dec 21]. Available from: <http://naqa.org.sa/intro/index.php>
21. Smoking [Internet]. [cited 2017 Dec 21]. Available from: <http://faculty.ksu.edu.sa/alshuaibi/Pages/smoking.aspx>