

# Smoking Prevalence and Parameters among University Students, Saudi Arabia

Yasser Altowyan<sup>1\*</sup>, Mohammed Altwayan<sup>2</sup>, Yosef Altowayan<sup>2</sup>, Fahad Alfahied<sup>3</sup> and Khalid Altwayan<sup>4</sup>

<sup>1</sup>Medical Intern, College of Medicine, Majmaah University, KSA.

<sup>2</sup>Medical student, College of Medicine, Qassim University, KSA.

<sup>3</sup>Assistant Professor, Family Medicine, College of Medicine, Majmaah University, KSA.

<sup>4</sup>MBBS, Ministry of Health, King Fahad Specialist Hospital, Buraidah, KSA.

## \*Corresponding author

Yasser ALTowyan, Medical Intern, College of Medicine, Majmaah University, KSA, Tel: 00966591981111; E-mail: yasser.mu@hotmail.com.

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## Abstract

**Background:** According to WHO, tobacco epidemic is one of the biggest public health threats the world has ever faced with 21% of the global population aged 15 and above smoked tobacco. Which killing around 6 million people a year. More than 5 million of those deaths are the result of direct tobacco use while more than 600 000 are the result of non-smokers being exposed to second-hand smoke.

**Objectives:** The study aimed to find the Onset, Prevalence, Type, and Frequency of smoking.

**Methods:** A cross sectional study was conducted from December 2013 - May 2014. The target population was students of male gender studying in Majmaah University. A total of 325 students aged between 19-25 years were randomly chosen from different Colleges of ALMajmaah University.

**Results:** Seventy two students (22.2%) were smokers, 74 (22.8%) were second hand smokers. Remaining 253 (55%) were non smokers. 41 of smokers (56.9%) were smoking cigarettes. 25 (34.7%) were smoking water pipe, and 6 (8.3%) were smoking both types. Most cigarette smokers were smoking one pack per day (25) students and (15) students were smoking water pipe once daily. Majority of smokers were smokers since 2-4 years (45.8%) and (40.3%) were smoking from five years or more.

**Conclusion:** High smoking rate in Majmaah university students indicate that more researches need to find out causes of smoking. Intervention and awareness programme should be conducted to reduce prevalence of Smoking.

**Keywords:** Smoking, University Students, World Health Organization.

## Introduction and Literature Review

According to WHO, The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing around 6 million people a year. More than 5 million of those deaths are the result of direct tobacco use while more than 600 000 are the result of non-smokers being exposed to second-hand smoke.

Nearly 80% of the more than 1 billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest. Tobacco users who die prematurely deprive their families of income, raise the cost of health care and hinder economic development.

In some countries, children from poor households are frequently employed in tobacco farming to provide family income. These

children are especially vulnerable to “green tobacco sickness”, which is caused by the nicotine that is absorbed through the skin from the handling of wet tobacco leaves.

Second-hand smoke is the smoke that fills restaurants, offices or other enclosed spaces when people burn tobacco products such as cigarettes, bidis and water-pipes. There are more than 4000 chemicals in tobacco smoke, of which at least 250 are known to be harmful and more than 50 are known to cause cancer.

There is no safe level of exposure to second-hand tobacco smoke. In adults, second-hand smoke causes serious cardiovascular and respiratory diseases, including coronary heart disease and lung cancer. In infants, it causes sudden death. In pregnant women, it causes low birth weight.

Almost half of children regularly breathe air polluted by tobacco smoke in public places. Second-hand smoke causes more than 600

000 premature deaths per year. In 2004, children accounted for 28% of the deaths attributable to second-hand smoke. Every person should be able to breathe tobacco-smoke-free air. Smoke-free laws protect the health of non-smokers, are popular, do not harm business and encourage smokers to quit. Over 1.3 billion people, or 18% of the world's population, are protected by comprehensive national smoke-free laws [1].

Cigarette smoke contains polycyclic aromatic hydrocarbons and nitrosamines, which are potent carcinogens and mutagens in animals. It causes release of enzymes from neutrophil granulocytes and macrophages that are capable of destroying elastin and leading to lung damage. Pulmonary epithelial permeability increases even in symptomless cigarette smokers, and correlates with the concentration of carboxyhaemoglobin in blood. This altered permeability may allow easier access for carcinogens [2].

American Center of Disease Control and Prevention write these facts:

- Cigarette smoking harms nearly every organ of the body, causes many diseases, and reduces the health of smokers in general. Cigarette smoking is the leading preventable cause of death in the United States. Cigarette smoking causes more than 480,000 deaths each year in the United States. This is nearly one in five deaths.

Smoking causes more deaths each year than the following causes combined:

- Human immunodeficiency virus (HIV)
- Illegal drug use
- Alcohol use
- Motor vehicle injuries
- Firearm-related incidents

More than 10 times as many U.S. citizens have died prematurely from cigarette smoking than have died in all the wars fought by the United States during its history.

Smoking causes about 90% (or 9 out of 10) of all lung cancer deaths in men and women. More women die from lung cancer each year than from breast cancer. About 80% (or 8 out of 10) of all deaths from chronic obstructive pulmonary disease (COPD) are caused by smoking.

Cigarette smoking increases risk for death from all causes in men and women. The risk of dying from cigarette smoking has increased over the last 50 years in men and women in the United States [3].

Many previous studies conducting that there is a correlation between being a university student and increase Smoking as being a university student is always associated with changes in living situation and becoming more responsible of daily choices and life style.

One study in United Kingdom reported that Current prevalence of

hookah use increased from 9.0% before college to 13.1% during the first month of college [4]. Another Study in Spain targeting Smoking among undergraduate university students also indicated that: Prevalence of active smoking among respondents was 36% [5].

There where studies conducted about relatively same subject "Smoking Prevalence and Parameters among university students".

### **In Saudi Arabia we chose those studies**

**First study:** "Tobacco consumption in the Kingdom of Saudi Arabia, 2013: findings from a national survey" and the result was: Overall prevalence of current smoking was 12.2 % and males were more likely to smoke than females (21.5 % vs. 1.1 %), around 23.3 % of the entire population, 32.3 % of men and 13.5 % of women, were exposed to secondhand smoke [6].

**Second study:** "Pattern and prevalence of smoking among students at King Faisal University, Al Hassa, Saudi Arabia" The prevalence of current smoking was 28.1% (21.6% for cigarettes, 14.6% for waterpipe) [7]. In Asia and worldwide we will compare our results with those studies as well: In Malaysia there was a study of "Prevalence and of smoking and associated factors among Malaysian University students". A total of 199 students participate and results was about one third of students were smokers (29%) [8].

While in Jordan a study of "Prevalence, social acceptance, and awareness of waterpipe smoking among dental university students: a cross sectional survey conducted in Jordan" shows: Students (n=547) reported current tobacco use of 54.3% for males versus 11.1% for females (P<0.005). Among current smokers, 3.5% used only cigarettes (22.0% males, 2.3% females), 12.6% used only waterpipe (36.6% males, 88.6% females), and 6.9% used both (41.5% males, 9.1% females) [9].

Finally, there was a study done in Georgia "Prevalence of and factors influencing smoking among medical and non-medical students in Tbilisi, Georgia s" which found of the sample as a whole, 48.75% were identified as smokers and 51.25% were identified as nonsmokers [10].

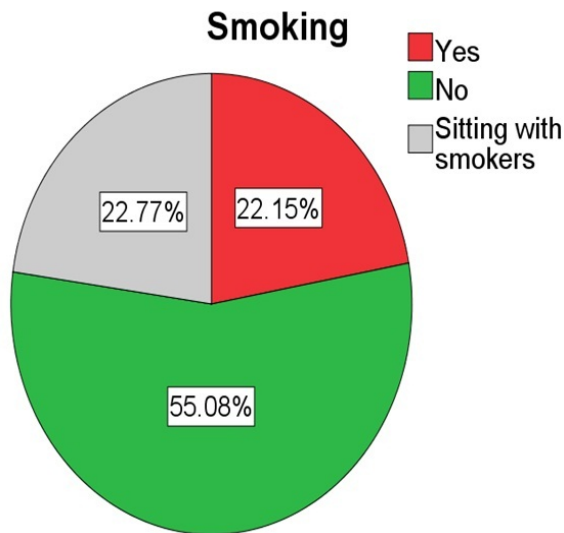
### **Material and Methods**

It was an observational cross-sectional study conducted in Majmaah University; the main campus is located in Majmmah City and has branches in other cities like, Alzulfi, Alghat, Hotat sudair, Ushirat Sudair, Rumah, and others. The study was conducted from December 2013 - May 2014. The target population was students of male gender studying in Majmaah University. A total of (325) male students aged between 19-25 years were randomly chosen from Colleges of ALMajmaah University. The data was collected by Simple random sampling, using computer generated list, Using direct investigation method. The questionnaire was self generated and was validated by pilot study. Prior to filling out the questionnaire, the students were informed about the study and were given instructions about how to fill out the questionnaire

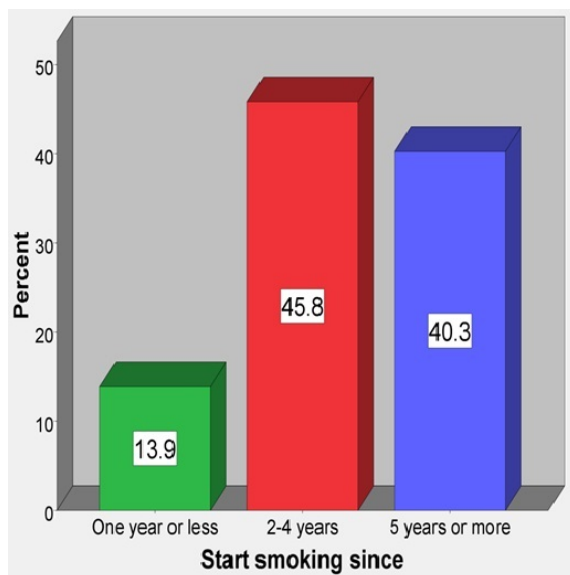
completely and truthfully. Ethical approval was also sought from Department of Essential and Health Sciences Research Center at AlMajmaah University. The data entered and analyzed by using SPSS 22.0. Mean + S.D is reported for quantitative variables like age etc. Frequencies and percentages are reported for qualitative variables. Pearson Chi-square and Fisher Exact test were applied to observe associations between qualitative variables. A p-value of <0.05 was considered as statistically significant.

## Results

72 students (22.2%) were smokers, 74 (22.8%) were second hand smokers. Remaining 253 (55%) were nonsmokers (Figure 1).



Cigarettes smoking was the most type with 41 students (56.9%), water-pipe 25 students (34.7%) and 6 students (8.3%) were smoking both types. Most cigarettes smokers were smoking one pack per day (25) students and (15) students were smoking water-pipe once daily. Majority of smokers were smokers since 2-4 years (45.8%) and (40.3%) were smoking from five years or more (Figure 2).



## Discussion

The prevalence of Smoking among Majmaah University Students was 22.3% and is comparable to international prevalence percentage. The study reported that 22.8% were passive smokers. It is higher than study done in King Saud university (Smoking among Saudi university students: consumption patterns and risk factors, Mandil A) [11]. Which found smoking rate 14.5%, and less than study (Smoking habits of students in College Of Applied Medical Science, Saudi Arabia, Talal J. Hashim) which reach 29% of smokers [12].

## Recommendation

We recommend doing more researches about smoking habits to find reasons behind increased smoking prevalence; awareness programme among the university as well as community should be developed related to diseases that smoking can cause, strict rule regarding smoking in public area should be applied.

## Conclusion

High smoking rate in Majmaah university students indicate that more researches are needed to find out causes of smoking. Intervention and awareness programme should be conducted to reduce prevalence of Smoking.

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