University of Khartoum
Faculty of Public and Environmental Health
DEPARTMENT OF EPIDEMIOLOGY

Habit of tobacco using among the students at Alzaiem Alazhari University

A thesis submitted in partial fulfillment for master degree in Public and Environmental Health - Public Health

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Khartoum 2005
Dedication

To all my lovely family members

To my kind brother Bakri for his moral support

To my kind husband for every thing

To my friends with much love and Best wishes
Acknowledgement

I would like to express my profound thanks to my supervisor Dr. Ahmed Eltigani Elmardi, for his continuous supervision, guidance and constructive comments.

Special thanks are expressed to Ustaz, Abd Elbasit, head department of health education for his advancement. Also my special thank goes to Ustaz Dafaalhh for his valuable assistance.

I deeply appreciate the help and cooperation of ALzaiem Alazhari University staff and students.

Finally I would like to thank all who helped me in preparing, this study and special gratitude to my colleagues.
# Lists of tables

<table>
<thead>
<tr>
<th>Table title</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table (1) The relationship between tobacco using among the students and gender, at ALzaiem ALazhari University, 2002.</td>
<td>26</td>
</tr>
<tr>
<td>Table (2) The relationship between tobacco using among the students and the father's educational level, at ALzaiem ALazhari University, 2002.</td>
<td>28</td>
</tr>
<tr>
<td>Table (3) The association between tobacco using among the students and the mother's educational level, at ALzaiem ALazhari University, 2002.</td>
<td>29</td>
</tr>
<tr>
<td>Table (4) The relationship between tobacco among the students and presence of tobacco user in the family, at ALzaiem ALazhari University, 2002.</td>
<td>36</td>
</tr>
<tr>
<td>Table (5) The association between tobacco using among the students and students knowledge of health effects tobacco use, at ALzaiem ALazhari University, 2002.</td>
<td>39</td>
</tr>
</tbody>
</table>
# List of Figures

<table>
<thead>
<tr>
<th>Figure title</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure (1) The prevalence of tobacco using among the students, at ALzaiem ALazhari University, 2002.

Figure (2) The prevalence of different tobacco types using among the students, at ALzaiem ALazhari University, 2002.

Figure (3) Distribution of tobacco using among the students according to the place of residence, at ALzaiem ALazhari University, 2002.

Figure (4) Distribution of tobacco using among the students according to the reasons of tobacco use, at ALzaiem ALazhari University, 2002.

Figure (5) Distribution of tobacco using among the students according to the duration of tobacco use, at ALzaiem ALazhari University, 2002.

Figure (6) Distribution of cigarette using among the students, at ALzaiem ALazhari University, 2002.

Figure (7) Average number of cigarette smoked/day among the students using cigarettes, at ALzaiem ALazhari University, 2002.

Figure (8) Distribution of Shisha using among the students, at ALzaiem ALazhari University, 2002.
<table>
<thead>
<tr>
<th>Figure (9) Distribution of shisha using among the students according to the frequency of use, ALzaiem ALazhari University, 2002.</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
</tr>
<tr>
<td>Figure (10) Distribution of Toombak using among the students, at ALzaiem ALazhari University, 2002.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td>Figure (11) Distribution of toombak using among the students according to frequency of using dialy, at ALzaiem ALazhari University, 2002.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>Figure (12) Distribution of tobacco using among the students according to their attempt to quit it, at ALzaiem ALazhari University, 2002.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>Figure (13) Distribution of tobacco quitting trails according to the reasons of quitting, at ALzaiem ALazhari University, 2002.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>41</td>
</tr>
</tbody>
</table>
## LIST OF Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTP</td>
<td>Traditional Tobacco Products.</td>
</tr>
<tr>
<td>ST</td>
<td>Smokeless Tobacco.</td>
</tr>
<tr>
<td>SGA</td>
<td>Small For Gestational Age.</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization.</td>
</tr>
<tr>
<td>ETS</td>
<td>Environmental Tobacco Smoke</td>
</tr>
<tr>
<td>IJC</td>
<td>International Journal of Cancer.</td>
</tr>
<tr>
<td>IUATLD</td>
<td>International Union Against Tuberculosis and Lung Diseases</td>
</tr>
<tr>
<td>BMJ</td>
<td>British Medical Journal</td>
</tr>
<tr>
<td>PMJ</td>
<td>Prevention Medical journal</td>
</tr>
<tr>
<td>GYTSP</td>
<td>Global youth tobacco survey project</td>
</tr>
<tr>
<td>APR</td>
<td>African Pacific Region</td>
</tr>
<tr>
<td>AMR</td>
<td>Americas Region</td>
</tr>
<tr>
<td>SEAR</td>
<td>Southeast Asia Region</td>
</tr>
<tr>
<td>EUR</td>
<td>European Region</td>
</tr>
<tr>
<td>EMR</td>
<td>Eastern Mediterranean Region</td>
</tr>
<tr>
<td>WPR</td>
<td>Western Pacific Region</td>
</tr>
</tbody>
</table>
ملخص الدراسة

استهدفت الدراسة 4782 طالب وطالبة وهو عدد الطلاب في مجمعات الجامعة الثلاثة، وقد تم اختيار حجم العينة باستعمال العينة العشوائية البسيطة وقد كان 320 طالب وطلاب. وvaکlلـتـنية · تـبـغـيـة · اـسـتـعـمـال · اـنـتـشر · مـعـدـل · اـلـدـرـاسـة · نـتـاـئـج · هـو · 62.5%، وـتـبـغـيـة · اـسـتـعـمـال · اـنـتـشر · مـعـدـل · اـلـدـرـاسـة · أـظـهـرـت · عـوـائـل · وـتـبـغـيـة · أـلعـبـة ·، كـمـا · مـعـدـل · زـياـدة · عـلـى · سـمـلـت · اـلـدـرـاسـة · أـظـهـرـت · إـلـى · أـسـرـة · بـالإضـافـة · إـلـى · اـلـتـبـغـي · اـسـتـعـمـال · اـنتـشر · فـي · اـلـتـبـغـي · يـتـعـاـطـي · شـخـص · وـوجـود · مـبـكـر · سـن · فـي · اـلـتـبـغـي · اـسـتـعـمـال · بـدـيـء · هـي · إـلـى · أـسـرـة · بـالإضـافـة · إـلـى · اـلـتـبـغـي · يـتـعـاـطـوـن · أـصـدـقـاء · وـوجـود ·
Abstract

This across sectional descriptive study was conducted during the period from Nov- Dec 2002 to measure the prevalence of tobacco using among the students at Alzaiem Alazhari University.

From 4782 male and female students 320 students were selected using simple random sample technique to represent the whole students in the three complexes of the university.

The study revealed that the prevalence of tobacco using among the students was 62.5% and tobacco using is more prevalent among male than female students. Also it revealed that cigarettes and shisha are more prevalent types of tobacco using among the students.

The commonest factors increased this high prevalence of tobacco using among the students were, they desire to appear like adults starting tobacco using at early age, presence of tobacco user in the family in addition to presence of friends who using tobacco.

List of contents

<table>
<thead>
<tr>
<th>Title</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>I</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>II</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Abstract in Arabic</td>
<td>III</td>
</tr>
<tr>
<td>Abstract in English</td>
<td>IV</td>
</tr>
<tr>
<td>List of tables</td>
<td>V</td>
</tr>
<tr>
<td>List of figures</td>
<td>VI</td>
</tr>
<tr>
<td>List of abbreviations</td>
<td>VII</td>
</tr>
<tr>
<td>Chapter one</td>
<td></td>
</tr>
<tr>
<td>1.1 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Justification</td>
<td>4</td>
</tr>
<tr>
<td>1.3 Objectives</td>
<td>5</td>
</tr>
<tr>
<td>Literature Review</td>
<td></td>
</tr>
<tr>
<td>2.1 History background</td>
<td>6</td>
</tr>
<tr>
<td>2.2 Types of Tobacco</td>
<td>6</td>
</tr>
<tr>
<td>2.2.1 Cigarettes</td>
<td>7</td>
</tr>
<tr>
<td>2.2.2 Cigars</td>
<td>7</td>
</tr>
<tr>
<td>2.2.3 Water Pipes</td>
<td>7</td>
</tr>
<tr>
<td>2.2.4 Traditional Tobacco Products</td>
<td>7</td>
</tr>
<tr>
<td>2.2.5 Chewing Tobacco</td>
<td>8</td>
</tr>
<tr>
<td>2.3 Consumption of tobacco use among the students in the world</td>
<td>8</td>
</tr>
<tr>
<td>2.4 Why do students use tobacco</td>
<td>9</td>
</tr>
<tr>
<td>2.5 The economics of tobacco use</td>
<td>9</td>
</tr>
<tr>
<td>2.6 Passive smoking</td>
<td>10</td>
</tr>
<tr>
<td>2.7 Women and tobacco use</td>
<td>11</td>
</tr>
<tr>
<td>2.8 The health consequences of tobacco use</td>
<td>12</td>
</tr>
<tr>
<td>2.8.1 Cancer</td>
<td>12</td>
</tr>
<tr>
<td>2.8.2 Lung diseases</td>
<td>13</td>
</tr>
<tr>
<td>2.8.3 Cardiovascular diseases</td>
<td>13</td>
</tr>
<tr>
<td>2.8.4 Heart diseases</td>
<td>13</td>
</tr>
<tr>
<td>2.8.5 Other diseases</td>
<td>13</td>
</tr>
<tr>
<td>2.8.6 The health consequences of traditional</td>
<td>14</td>
</tr>
</tbody>
</table>
tobacco products

2.9 Quitting of tobacco  14
2.10 The benefits of quitting  15
2.11 Tobacco control  15
2.12 Previous studies  16

Chapter three
Methodology  20
3.1 Study design  20
3.2 Study area  20
3.3 Study population  20
3.4 Sample size  20
3.5 Methods of data collections  22
3.5.1 Structural interview  22
3.5.2 Focus group discussion  22
3.5.3 Observations  22
2.6 Data processing and analysis  23

Chapter four
Results  24

Chapter five
Discussion  47

Chapter six
6.1 Conclusion  52
6.2 Recommendation  53
-References  54
-Appendixes  58
1-1 Introduction:

Tobacco use is a human behavior, which refers to inhaling the smoke of cigarettes, cigar or pipes. It is a world wide problem that results in most five million years of potential life loss each year (WHO, 2000).

Tobacco use is a major preventable cause of premature death and illness throughout the world. Indeed, tobacco is destined to have in future a role similar (in low income countries) to the one it currently plays in industrialized countries in damaging health and causing premature death. Unless tobacco use behavior changes, three decades from now premature deaths caused by tobacco in developing world will exceed the expected deaths from AIDS, tuberculosis and complications of childbirth combined (Karen, 1998).

In recent year the prevalence of tobacco use has increased among university students. If these patterns continue, tobacco use will result in the deaths of 250 million of the people, who are student today, many of them in the developing countries (Micheal, 2000).

Snuff is a form of powdered tobacco and flavoring agents given local names in different parts of the world. In Sudan toombak is a type of oral snuff widely used from time ancient. The prevalence of toombak use in the adult male Sudanese specially students has been estimated at 3-4 fold higher than reported from the USA, South Africa, Northern Europe and Nigeria. This type of snuff is linked with increased risk for oral cancer and mucosal lesions (Idris etal, 1998).

Water pipes are other form of tobacco widely available in many shapes and sizes of smoking. In the shisha water pipe the tobacco is kept alight by pieces of glowing charcoal and the smoke is drawn through water before being inhaled. Shisha smoke has a high level of carbon monoxide and smokers have high carboxy-haemoglobin level (AlFayz etal, 1998).

Tobacco use is not only a global problem; it is a problem of
globalization. Much of the increased spread of tobacco use among students can be traced to the vectors of liberalized trade, economic integration, new technologies and increased westernization (Micheal, 2000).

Tobacco smoke contains no less than 4000 chemical compounds which are harmful, 500 of these are very harmful and 43 are complete carcinogens, i.e. cancer causing agents, in their own right. Tobacco is also harmful in the short term; the irritant substance in tobacco smoke can cause a build up of phlegm and a smoker's cough. Tobacco smoke also reduces the efficiency of lung, making people more breathless than they would normally be during situations of rest, exercise or sudden physical exertion. Furthermore, tobacco smoke reduces the ability of the lungs to fight infection, which makes smokers more likely to get different types of chest infection (WHO, 2000).

As for cancer, it is well established that tobacco use is the direct cause of the overwhelming majority of the causes of lung cancer. Other cancers caused by tobacco smoke are those to pharynx, esophagus, stomach, pancreas and bladder. Tobacco smoke is also related to other cancers in the head and neck (www.who.intlbulletin, 2000).
**1-2 Justification**

Tobacco use is one of the chief preventable causes of deaths in the world. World health organization (WHO) attributes some 4.9 million deaths a year to tobacco, a figure that is expected to rise to 10 million deaths a year by 2020. By that time, 70% of these deaths will occur in the developing countries (WHO, 2000).

Information on the prevalence rate of tobacco use among the students is not available. However, the world health organization estimates the number to be 1billion students of the total number of 2billion people use tobacco in the world, most of them in developing countries (WHO, 2000).

There is lack of information about the exact figure of the prevalence rate of tobacco use among university students in Khartoum state and Sudan as a whole (Federal Ministry of Health, 2000). So the conduction of this study is to provide information on the prevalence rate of tobacco using among the students which could be used as indicator for evaluating the magnitude of this problem in Sudan and it will provide base line data for further researches and studies.

Tobacco use has not only a short term impact, but its effect extends to the future. Tobacco use also is preventable health problem rather than curable, thus the factors which contribute to the occurrence of it can be prevented, so it could be controlled through effective and sustainable health education aiming to raise the awareness of students and young people to such an important health problem (Karen, 1998).
1-3 Objectives

1-3.1 general objective:

To study the habit of tobacco using among the students at Alzaiem Alazhari University.

1-3.2 Specific objectives:

1. To measure the prevalence of different tobacco types using among the students at Alzaiem Alazhari University.

2. To determined the socio-economic and psychological factors influencing the use of tobacco among the students at Alzaiem Alazhari University.

3. To identify knowledge and attitudes about the hazards of tobacco using among the students at Alzaiem Alazhari University.

2- Literature Review

2-1 History background:
Tobacco is a crop, which was found in the new world that was discovered by Spanish discoverer Christopher Columbus. In Sixteenth century he introduced this crop to Europe from South America, and from Europe to Africa and Asia (Giovino, 1995).

This crop grows in temperate climates and in hot ones, it reaches its maximum length which could be five meters long, that is why it's now mainly farmed in hot developing countries of Asia and Africa. After harvesting, the dry tobacco leaf can be used for smoking, snuffing and chewing (Giovino, 1995).

European acquired the habit from Indians and soon spread in the world. The habit of tobacco use has been known since 900 years ago only. It was first discovered in the American continent (which is thought to be the origin of tobacco) but yet, up to day, no one knows when the people of this continent started this habit. It had been evident that when Columbus, landed in this continent in 1492 (which he discovered) he found the ancient Indian smoking tobacco (WHO, 1999).

In Sudan, this habit was introduced during the Turkish rule. It was commonly believed at that time and till today that it relieves stress (Idris, 1998).

2-2 Types of tobacco use:

2-2-1 Cigarettes: Are available throughout the world. Filter-tipped cigarettes are usually more popular than unfiltered cigarettes. Hand rolled cigarettes is also widely smoked in many countries (Benowitz, 1988).

2-2-2 Cigars: Are smoked throughout the world. Regional variations include cheroots, stumpen and thumits used in India (Benowitz, 1988).

2-2-3 Water pipe: Also known as shisha or hubbly bubbly is commonly used in North Africa, the Mediterranean Region and parts of Africa. It has an old distinguished history which could be traced back to ancient India. During the last century its use decline to appoint where it was restricted.
only to elderly men in poorer cities, now there has been a remarkable revival (Linda, 1999).

2-2-4 Traditional Tobacco products (TTP). The term traditional tobacco products applied in present context refers to non-cigarette smoked tobacco or smoke less tobacco (ST). These products prepared by traditional means and of relatively low cost when compared to cigarettes are becoming increasingly available for consumption by million of people specially students (Ahmed, 1995).

In Sudan toombak is a type of traditional tobacco products widely used from time ancient. It is a product of powdered tobacco leaves mixed with calcium or sodium bicarbonate. It is made by mixing a powder of dried tobacco nicotine Rustic with a solution of sodium bicarbonate (atron) in water and allowed up to an hour. Toombak contains 20-100 higher level of the carcinogenic Nitrosamines compared to snuff manufactured in Europe and USA (Idris, 1998).

2-2-5 Chewing tobacco: it is also known as plug, loose leaf and twist. Pan chewing is widely practiced in south-east Asia. It consist of three main ingredients namely tobacco, areca nuts and slaked lime wrapped in a betel leaf. Dry snuff is powdered tobacco that inhaled through the nose or taken by mouth, its use now in decline. Moist snuff is taken orally. Small amount of ground tobacco is held in the mouth between the cheek and gum. Increasingly manufacturers are prepackaging moist snuff in to small paper or cloth packets, to make the product easier to use (Crofton, 1997).

2-3 Consumption of tobacco among students in the world:

Global consumption of tobacco among students has been rising steadily since manufactured cigarettes were introduced at the beginning of 20th century. Anew report of WHO reveals that 14% of students around the world currently some cigarettes. In addition, the report found that
nearly 25% of students who smoke tried their first cigarette by the age of 10. Global data on gender differences in rates of all forms of tobacco use among students are limited, (WHO, 2000).

WHO count 192 member stats distributed among six regions: African region (AFR), American region (AMR), Southeast Asia region (SEAR), European region (EUR), eastern Mediterranean region (EMR) and western pacific region (WPR). Previous studies have shown a higher prevalence rate of smoking among males students than females' students in each region as shown in the table (see appendix).
2-4 why do students use tobacco:

Experimental smoking usually begins the habit. Next comes occasional cigarette smoking at parties, on weekends or with friends. This is the most dangerous stage because it usually leads to an addictive phase, when younger become regular smokers. All of these can happen in a fairly short time (Pomerleau, 1993).

Tobacco use is both deadly and addictive; some students use tobacco to show that they are like adults, that they want independence and that they have money. The main reason as to why students continue to use tobacco is that nicotine, an ingredient tobacco is addictive. It is creates a strong craving for another cigarette, making it very difficult to quit smoking (American Journal of Public Health, 1989).

Students get hooking on cigarette remarkably quickly and they are more likely to use tobacco if:

Their parents use tobacco, they have older brothers or sisters who use tobacco or they have friends who use tobacco (Pomerleau, 1993).

2-5 The economics of tobacco use:

Tobacco is a major drain on the worlds financial resources, a World Bank economist estimated that the net loss as a result of tobacco use was about $200 billion per year, half of this loss occurring in the developing countries (Barnum, 1994).

The economic costs of smoking to smokers and their families include money spent on buying tobacco, which could other-wise be used on food, clothing or shelter. Family members of smokers lose income through time taken looking after smokers when they are sick, and time lost taking them to hospital (Rice, 1996).

Tobacco's cost to governments, to employers and to the environment includes social welfare and health care spending, loss of foreign exchange
in importing cigarettes, loss of land that could grow food. The easily measured costs are the costs of direct health care resulting from tobacco caused illnesses, this involves the special health services for tobacco users, which may not be needed expect in smokers (James, 2000).

2-6 Passive smoking:

Not only the smoking individual, but also surrounding individuals can be harmed by tobacco smoke also. Breathing in smoke from other people's cigarette is called passive smoking. It consists of smoke from the burning end of the cigarettes (called side stream smoke) and non smoke inhaled and exhaled by the smokers (called main stream smoke). Passive smoking in the home, workplace, or in public places kills people, although in lower number. However, those killed do not die from their own habit, but from some one else's (WHO, 1997).

The risk of lung cancer in non smokers exposed to passive smoking in increased by between 20 and 30 percent, and the excess risk of heart disease is 23 percent (Ehrlich, 1990).

Children are at particular risk from adults' smoking. Adverse health effects include pneumonia and bronchitis, coughing and wheezing, worsening of asthma, middle ear disease and possible neuro-behavioral impairment and cardio-vascular disease in adulthood (Ehrilch, 1996).

2-7 Women and tobacco:

The prevalence of smoking among women is much higher in the Americas and Europe. Even if the rates may be declining in some countries there are signs that owing to aggressive marketing the rates among women are rising, particularly in developing countries. Today, of the estimated 1.2 billion smokers in the world about 200 million are women and of the 4 million or so people dying of tobacco-related deaths every year, about 500,000 are women. (Sasco, 1992).
Infants of women who smoke during pregnancy have lower birth weight and a higher rate of prenatal morality than infants of non smokers. Studies have shown that smoking during pregnancy elevates the risk of delivering a low birth weight, pre-term, or small for gestational age (SGA) infant and that this risk increases with increasing maternal age (WHO, 2000).

The literature on the association between environment tobacco smoke (ETS) and pregnancy outcome has shown that exposure to environmental tobacco smoke (ETS) also elevated the risk of adverse birth outcomes. Martin and Birchen demonstrated that ETS exposure for at least 2 hour per day resulted in a mean birth weight reduction of 85g and two fold increased risk of LBW among the infants of non smokers (International journal of Epidemiology, 1999).

2-8 Health consequences of tobacco use:

Tobacco contains 4000 Chemical; many of them are dangerous and lead to serous illness and death. Tobacco can kill you by causing cancers, heart diseases, and respiratory disease. It can also affect your blood, your hearing, and your skin. In places where people smoke or exposure to tobacco smoke regularly throughout their lives, smokers who die because of their smoking die about ten years younger than people who do not smoke. Tobacco uses up your while it is silently damaging your body (Crofton, 1997).

On average, smokers who begin smoking in younger age and continue to smoke regularly have 50% chance of dying from tobacco related disease, half of these will die in middle age, before age 70, loosing a round 22 years of normal life expectancy (WHO, 1999).

The main diseases caused by tobacco use include the following:
2.8.1 Cancer:

About 40-50% of male deaths from cancer in developed countries are attributable to the use of tobacco. Tobacco use causes 85% of lung cancer, which is the major cancer fatality among men; also tobacco use is causal in the occurrence of cancers of upper respiratory sites, bladder and pancreas (Carol, 2000).

Tobacco use in presence of other factors can cause cancers of the esophagus, stomach, kidney, liver, lip, nose, nasopharynx, and blood (myeloid leukemia). An estimated 101 million people in the world died in 1995 from cancer caused by tobacco use (Carol, 2000).

2.8.2 Lung diseases:

Tobacco smoke is associated with a higher risk for nearly all major lung diseases, including pneumonia, flu, bronchitis and emphysema. Tobacco used in the presence of other factors can cause pneumonia and make asthma worsen. Globally, smoking related lung disease rates seem to be particularly affected by the age of uptake of tobacco use; childhood or adolescent smoking uptake can triple or quadruple risks (Engeland, 1996).

2.8.3 Cardiovascular disease:

Tobacco use causes or contributes to peripheral vascular diseases, ischaemic heart disease, aortic aneurysm, and stroke. Ischaemic heart disease is projected to become the major fatal disease in the world (WHO, 1997).

2.8.4 Heart diseases:

Tobacco use may be directly responsible for at least 20% of all death from heart disease, or about 120,000 deaths annually. Certain smokes are at even higher risk than others for heart problems from smoking (AlFayez, 1998).
2.8.5 Other diseases:

Smoking increased acid secretion reduces prostaglandin and bicarbonate production and decreases mucosal blood flow. Result of studies on the actual effect of smoking on ulcer, however, is mixed. Some evidence suggests that smoking delays the healing of gastric and duodenal ulcer (Crofton, 1997).

Men's sexual and reproductive health is not immune from the effects of smoking; heavy smoking is frequently cited as a contributory factor in impotence because it decreases the amount of blood flowing into the penis. Smoking also reduces sperm density and their motility, increasing the risk for infertility (Howe, 1995).

2.8.6 The health effects of Traditional Tobacco Products (TTP):

Evidence of increased morbidity and mortality from tobacco is already widespread in many developing countries. Investigations done in western laboratories on traditional tobacco products and smoke less tobacco (ST) in particular have shown that these product contain various types of carcinogens and toxins in alarming proportion linked with risk for Oropharyngeal cancer, oral pre-cancer and cardiovascular diseases (Idris, 1995).

Oropharyngeal cancer is a disease whose survival rate has not improved appreciably in decades, disease that leaves its mark or survivals in form of facial disfigurement. It remains one of the leading malignant lesions in the developing nations, particularly so in the Sudan. Toombak contains 20-100 higher levels of the carcinogenic nitrosamines which linked with increased risk for oral cancer and mucosal lesions (Ahmed, 1995).

2-9 Quitting of tobacco:

The best way to avoid the health consequences of tobacco is never to smoke or use tobacco. But even if one uses tobacco, the extra risk can be reduced by stopping. The main reasons most smokers give for wanting to
quit include effects on health, to save money and effect of passive smoking on family. (WHO, 1998).

Studies have shown that 75 -80% of smokers wants to quit while one third have make at least three serious cessation attempts. Cessation efforts cannot be ignored in favor of primary prevention, rather both efforts must be made in conjunction with one another. If only small proportions of today's 1 billion smokers were able to stop, the long term health and economic benefits would be immense (Peckacek, 1997).

2-10 The benefits of quitting tobacco use:

Quitting tobacco use is the greatest single step tobacco users can take to improve health. The reason to recommend smoking cessation is that virtually all these health risks are reversible upon quitting. We know, for example, that tobacco use is one of the leading causes of heart attacks. Upon quitting smoking, within one year the risk of heart attack is decreased by 50% within five years, it returns to that of person who's never smoked. Smoking cessation decreases health risks associated with tobacco use, thereby benefiting both public health and individual health. Intervention efforts that stop smoking can decrease the burden of disease such as heart, pulmonary and respiratory diseases and most important cancers (WHO, 1998).

Individuals can directly benefit form their decision to quiet smoking. Smokers who quit by their early thirties avoid almost all of the risk of premature death from smoking, and these are clear health benefits including longer life, even for those aged 60 and above (Lopez, 1994).

2-11 Tobacco control:

The need for action to stop tobacco production and consumption is patent. At present, about 4 million people a year die of tobacco related disease. WHO epidemiologist predict that unless there is a dramatic change in present trends tobacco will be killing 8.4 million people a year by
the late of 2020s most of them in middle age (WHO, 2002).

Health education program should be conducted on the universities to inform students about

- The harmful components of tobacco smoke
- Information about taking up tobacco
- The most prevalent diseases caused by tobacco use.
- Effects of parental smoking on children.
- Benefits of quitting smoking for smokers who are pre-illness, at risk or already ill.

In Sudan the Sudanese Anti-smoking Act of 1983 imposed a total ban on tobacco advertising and required health warnings to be printed on cigarette packets. A decree in 1984 limited the tar yield to 15 mg and in a further move aimed at limiting cigarette smuggling into the country (Anwar, 1987).

Smoking is prohibited in closed public places and in public transport vehicles but this still not implemented because is not strict rule about this, Sudan Airways ban smoking on board all its flights, in order to protect passengers health and in keeping with the international tendency to fight smoking and its harmful effects on human health.

2-12 previous studies:

Tobacco use among university students is a topic of many scientific researches and papers, it is a problem of global interest which has to be assessed and solved. In recent years the prevalence rate of tobacco use among university students has decreased in many industrialized countries. In developing countries, however, there has been a substantial rise in the prevalence rate and in the per-capita consumption of tobacco among university students (WHO, 2002).

This study conducted to evaluate tobacco habits, beliefs and attitudes of nurse and medical students at the university of Siena and Florence,
Italy. 200 medical students completed the questionnaire, they had a mean age of 19 years and 68% were female. A total of 205 nurse respondents answered to the questionnaire, they had a mean age of 21 years and 83% were female. 30% of medical students were current smokers and a total of 43% of nurse students were current smokers, too. Nurse students were more likely to smoke than medical students. Among current smokers, the number of daily cigarettes smoked is high in both groups (more than 15 cigarette/day). This means high degree of nicotine addition (American Journal of Epidemiology, 2000)

Other study conducted in USA to assess the prevalence rate and factors associated with the spread of tobacco use among under-graduate students in the Florida State University. The results revealed that the prevalence of tobacco use was 25.7% and was significantly higher among male students. 90-95% of the students admitted that tobacco smoke is dangerous to health (Moskal, 1999)

This study was carried out to determine the prevalence rate of different tobacco types among university students in Dhaka, Bangladesh. The result shows that 30% of the students were current smokers. Most students mentioned that they were influenced by the smoking behavior of friends and advertising. No significant associations were found between respondent's knowledge of the health risks of smoking and their actual smoking behavior (Prevention Medical Journal, 1998).

This study conducted in Aizawl district of Mizoram, India to assess the prevalence and pattern of tobacco use among university students. The results revealed that the prevalence rate of tobacco was 42.3% and was significantly high among male students than female students (23.9% in male, 9.4% in female) and chewing tobacco was more popular among female students indicates the existence of sex differences in tobacco use patterns. Father occupation had significant association with tobacco use
among students but influence of educational level of father and mother was very low and its association was not significant. Mean age for starting tobacco chewing and tobacco smoke for male and female varied significantly (19 years) (Chaturvedi, 1998).

Across-sectional study was conducted to assess the prevalence of tobacco use and the awareness and attitudes towards tobacco and its control among university students in Tunisia. The results appears that 30.4% of respondents were current tobacco users, of whom 24.6% smoked cigarettes and 5.8% consumed traditional tobacco i.e. snuff, chewing tobacco and water pipe tobacco. The use of tobacco was believed to be harmful to health by 98.6% of the students. Over 90% of the students were aware that tobacco use played apart in the development of heart disease; however, there were some gaps in awareness (Bulletin of the WHO, 2002).

Shisha is enjoining great popularity in Middle East. Consequently rates of smoking Shisha and cigarettes increased in all countries of this region despite health education programs. AlFayez conducted study in Saudi Arabia to determine the prevalence rate of Shisha and cigarette smoke among university students and found that 24.8% of students smoke cigarette and Shisha (AlFayez, 1998).
3- Methodology

3-1 Study design:-

It is a facility based descriptive study. It was designed to measure the prevalence of different tobacco types using among the students and determinants associated with its spread.

3-2 Study area:

Alzaiem Alazhari University is located in Khartoum North, Khartoum North Government, Khartoum state. It is established by popular effort according to decision of the republic president No. 485 on 1990 in 6-12-1995, which was accepted by most Sudanese. The university is composed of 10 faculties; the faculties were distributed in 3 complexes Khartoum North, Alabasia and Altrbia. Khartoum North complex include faculty of Medicine, faculty of Agriculture, faculty of public and Environmental Health, faculty of Medical laboratory Sciences, faculty of Shariaa and laws, faculty of economics and political Sciences and faculty of Radiography. Alabasia complex include faculty of Engineering and faculty of Urban Sciences. Altrbia complex which include faculty of Education, in addition to faculty of postgraduate.

3-3 Study population:

The students respective to gender characteristics represent the study population, the total number of students was estimated as 4732.

3-4 Sample size:

The university was already classified into 3 complexes; the sample size was determined using the formula:

\[ n = \frac{Z^2S^2}{d^2} \]

Where Z is the value of the standard normal variable corresponding to 95% level of significance.
S is an estimated standard deviation for the sample (S ≈ 23.52), and d is the marginal error (d ≈ 0.532).

According to the formula above the sample size (n) was calculated as 320. The sample size in each complex was calculated as proportional sample using the formula:-

\[ NH = \frac{nh \cdot n}{N} \]

Where:
NH Sub sample size of each complex.
nh Total number of students in each complex.
N Grand total of students of whole complexes.
n Sample size.

Distribution of population according to complexes

<table>
<thead>
<tr>
<th>Complex</th>
<th>No of students</th>
<th>%</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khartoum North</td>
<td>2658</td>
<td>56.2</td>
<td>180</td>
</tr>
<tr>
<td>Alabasia</td>
<td>771</td>
<td>16.3</td>
<td>52</td>
</tr>
<tr>
<td>Altrbia</td>
<td>1303</td>
<td>27.5</td>
<td>88</td>
</tr>
<tr>
<td>Total</td>
<td>4732</td>
<td>100.0</td>
<td>320</td>
</tr>
</tbody>
</table>

The sub sample size for each complex was distributed evenly upon the faculties and the sample size for each class was selected randomly proportional to its size.

3-5 Methods of Data collection:

The required data for fulfilling the study objectives were collected using the following methods and tools:

3-5-1 Structured interview:-
A questionnaire was formulated and pre-tested on small group in the study area to ensure full understanding of the questions by the target population.

The questionnaire included personal, social and economical situation of the students using tobacco (see appendix).

3-5-2 Focus group discussion:

The focus group was composed of (10-13) of smoker students selected randomly from each faculty. The smoker students from each faculty were involved in the focus group discussion. The facilitator used a list of question (topic guide), see appendix, while the reporter recorded the group comments, answers and concerns.

3-5-3 observations:

Data were collected through direct observation of the smokers e.g.: sharing in one cigarette, smoking inside lecture rooms, and smoking among colleagues in the university etc.
3-6 data processing and analysis:-

Data were summarized in a master sheet. Analysis was done by computer using SPSS program. Statistical interpretation was checked using \((X^2)\) test and the level of significant was taken between \((0.0 \text{ – } 0.05)\).

Results

Fig. (1)

The prevalence of tobacco using among the students at Alzaiem
Alazhari University, 2002.

n = 320

37.50% Use tobacco
62.50% Do not use tobacco
Fig.(2)

The prevalence of different tobacco types using among the students at Alzaiem Alazhari University, 2002.

(n=200)
Table (1)

The relationship between tobacco using among the students and gender at Alzaiem Alazhari University, 2002.

(n=320)

<table>
<thead>
<tr>
<th>Using of tobacco</th>
<th>Students using tobacco</th>
<th>Students don't using tobacco</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>179 (64.9%)</td>
<td>97 (35.1%)</td>
<td>276 (86.3%)</td>
</tr>
<tr>
<td>Female</td>
<td>21 (47.7%)</td>
<td>23 (52.3%)</td>
<td>44 (13.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>200 (62.5%)</td>
<td>120 (37.5%)</td>
<td>320 (100.0%)</td>
</tr>
</tbody>
</table>

\[ X^2 = 16.69994 \quad \text{df} = 1 \quad p = 0.0294 \text{ (significant)} \]
Distribution of tobacco using among the students according to place of residence at Alzaiem Alazhari University, 2002.

\[ n = 200 \]

Table (2)

The relationship between tobacco using among the students and father’s educational level at Alzaiem Alazhari University, 2002.
### Use of Tobacco

<table>
<thead>
<tr>
<th>Father educational level</th>
<th>Students use Tobacco</th>
<th>Students don't use tobacco</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>20 (71.4%)</td>
<td>8 (28.6%)</td>
<td>28 (8.6%)</td>
</tr>
<tr>
<td>Khalwa</td>
<td>34 (50%)</td>
<td>34 (50%)</td>
<td>68 (21.3%)</td>
</tr>
<tr>
<td>Basics</td>
<td>20 (57.1%)</td>
<td>15 (42.9%)</td>
<td>35 (10.9%)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>31 (60.8%)</td>
<td>20 (39.2%)</td>
<td>51 (15.9%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>45 (69.2%)</td>
<td>20 (30.8%)</td>
<td>65 (20.3%)</td>
</tr>
<tr>
<td>University</td>
<td>28 (68.3%)</td>
<td>13 (31.7%)</td>
<td>41 (12.8%)</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>22 (68.8%)</td>
<td>10 (31.2%)</td>
<td>32 (10.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>200 (62.5%)</td>
<td>120 (37.5%)</td>
<td>320 (100.0%)</td>
</tr>
</tbody>
</table>

\[X^2 = 9.343 \quad \text{df} = 6 \quad p = 0.155 \text{ (not significant)}\]

Table (3)

The association between tobacco using among the students and mother’s educational level at Alzaiem Alazhari University, 2002.

(n = 320)
<table>
<thead>
<tr>
<th>Mother educational level</th>
<th>Using tobacco</th>
<th>Students using tobacco</th>
<th>Students don’t using tobacco</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students</td>
<td>Percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>40(56.3%)</td>
<td>31(43.7%)</td>
<td>71(22.2%)</td>
<td></td>
</tr>
<tr>
<td>Khalwa</td>
<td>28(57.1%)</td>
<td>21(42.9%)</td>
<td>49(15.3%)</td>
<td></td>
</tr>
<tr>
<td>Basics</td>
<td>45(63.4%)</td>
<td>26(36.6%)</td>
<td>71(22.2%)</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>25(61%)</td>
<td>16(39%)</td>
<td>41(12.8%)</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>41(71.9%)</td>
<td>16(28.1%)</td>
<td>57(17.8%)</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>19(76%)</td>
<td>6(34%)</td>
<td>25(7.8%)</td>
<td></td>
</tr>
<tr>
<td>Post-graduate</td>
<td>2(33.3%)</td>
<td>4(66.7%)</td>
<td>6(1.9%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>200(62.5%)</td>
<td>120(37.5%)</td>
<td>320(100.0%)</td>
<td></td>
</tr>
</tbody>
</table>

\[ X^2 = 10.145 \quad df = 6 \quad p = 0.119 (\text{not significant}) \]
Fig (4)

Distribution of tobacco using among the students according to the reasons of tobacco use, at Alzaiem Alazhari University, 2002.

(n=200)

<table>
<thead>
<tr>
<th>Reasons of tobacco use</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>follow friends</td>
<td>32.10%</td>
</tr>
<tr>
<td>help memory</td>
<td>26.30%</td>
</tr>
<tr>
<td>modern</td>
<td>17.90%</td>
</tr>
<tr>
<td>other</td>
<td>23.70%</td>
</tr>
</tbody>
</table>

Fig (5)

Distribution of tobacco using among the students according to the
duration of starting tobacco use, at Alzaiem Alazhari University, 2002.

(n=200)

<table>
<thead>
<tr>
<th>Duration of starting tobacco use (years)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 12</td>
<td>7.5%</td>
</tr>
<tr>
<td>9--12</td>
<td>13.0%</td>
</tr>
<tr>
<td>5--8</td>
<td>42.0%</td>
</tr>
<tr>
<td>1--4</td>
<td>21.5%</td>
</tr>
<tr>
<td>&lt;1</td>
<td>16.0%</td>
</tr>
</tbody>
</table>
Figure (6)

Distribution of cigarette using among the students, at ALzaiem, ALazahari University, 2002.

(n =82)

- 59% Use cigarette
- 41% Do not Use cigarette
Fig. (7)

Average number of cigarettes smoked daily among the students using cigarettes, at Alzaiem Alazhari University, 2002.

(n = 82)

Fig. (8)

Distribution of Shisha using among the students, at Alzaiem Alazhari
University, 2002.

(n = 60)

use shisha
do not use shisha

57.50%
30%

42.50%
Fig.(9)

Distribution of shisha using among the students according to frequency of use, at Alzaiem Alazhari University, 2002.

n= 60
Table (4)
The relationship between tobacco using among the students and presence of tobacco user in the family at Alzaiem Alazhar University, 2002

<table>
<thead>
<tr>
<th>Presence of tobacco users in the family</th>
<th>Students using tobacco</th>
<th>Students don't using tobacco</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>142 (68.9%)</td>
<td>64 (31.1%)</td>
<td>206 (64.4%)</td>
</tr>
<tr>
<td>Not Present</td>
<td>58 (50.9%)</td>
<td>56 (49.1%)</td>
<td>114 (35.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>200 (62.5%)</td>
<td>120 (37.5%)</td>
<td>320 (100%)</td>
</tr>
</tbody>
</table>

\[ X^2 = 6.42895 \]
\[ df = 1 \]
\[ p = 0.01123 \text{ (significant)} \]
Figure (10)
distribution of toombak using among the students, at Alzaiem Alazhari University, 2002.

n= 40
Figure (11)
Distribution of toombak using among the students according to frequency of using dialy, at Alzaiem Alazhari University, 2002.

\[ n = (40) \]
Table (5)

The association between tobacco using among the students and students knowledge of health effects of tobacco using at Alzaiem Alazhhari University, 2002

\( n = (320) \)

<table>
<thead>
<tr>
<th>Knowledge of Student</th>
<th>Using of tobacco</th>
<th>Students using tobacco</th>
<th>Students don't using tobacco</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know</td>
<td>120 (60.6%)</td>
<td>78 (39.4%)</td>
<td>198 (61.9%)</td>
<td></td>
</tr>
<tr>
<td>Do not know</td>
<td>80 (65.4%)</td>
<td>42 (34.6%)</td>
<td>122 (38.1%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>200 (62.5%)</td>
<td>120 (37.5%)</td>
<td>320 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

\( X^2 = 5.74593 \)
\( df = 1 \)
\( p = 0.01653 \) (significant)
Fig. (12)

Distribution of tobacco using among the students according to their attempt to quit tobacco use, at Alzaiem Alazhari University, 2002.

n = (200)
Figure (13)

Distribution of tobacco quitting trails according to the reason of quitting, Alzaiem Alazhari University, 2002.

n = 200

<table>
<thead>
<tr>
<th>Reason of quitting</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health problem</td>
<td>41.30%</td>
</tr>
<tr>
<td>Economic matters</td>
<td>12.10%</td>
</tr>
<tr>
<td>Personal matters</td>
<td>25.30%</td>
</tr>
<tr>
<td>Other</td>
<td>21.30%</td>
</tr>
</tbody>
</table>
Results

The prevalence of tobacco using among the students is 62.5% as appears in figure (1).

Figure (2) shows the prevalence of different tobacco types using among the students, 41% used cigarette, 30% used shisha, 20% used tobacco and 9% used other types.

Table (1) shows the relationship between tobacco using among the students and gender $X^2 = 16.6999$ and $p = 0.029$ (significant).

Figure (3) shows the distribution of students using tobacco according to place of residence. The percentage was 18.5% with family, 15% with relatives, 30% with friends and 36.5% in boarding house.

Table (2) reveals that there is no association between tobacco using among the students and father's educational level. The percentage was 8.6% were illiterate, 21.3% khalwa, 10.9% basics, 15.9% intermediate, 20.3% secondary, 12.8% university and 10.2% post-graduate.

Table (3) illustrates that there is no relation between tobacco using among the students and mother's educational level. The percentage was 22.2% illiterate, 15.3% khalwa, 22.2% basic, 12.8% intermediate, 17.8% secondary, 7.8% university while only 1.9% were post-graduate.

The distribution of tobacco using among the students according to the reasons of tobacco using was presented in Figure (4). The percentage was 32.1% follow friends, 20.3% help the memory, 17.9% modern and 23.7% mentioned other reasons.

Figure (5) shows the distribution of tobacco using among the students according to the duration of starting using it. The percentage was 12% less than one year, 16.3% from 1-4 years, 19.6% from 5-8 years and 52.1% more than 8 years.

Figure (6) shows the distribution of tobacco using among the students according to the use of cigarettes, 41% use cigarette and 59% donot use cigarette.
Figure (7) shows the average number of cigarettes smoked daily. 20% smoked < 5 cigarette/day, 23.1% smoked 6-10 cigarette/day, 32.1% smoked 11-15 cigarette/day and 24.8% smoked more than 15 cigarettes/day.

As present in Figure (8) 30% of students using shisha and 70% do not using shisha.

Figure (9) shows the distribution of shisha using among the students according to frequency of use, 55% of the students use shisha always and 45% use shisha some times.

Table (4) Presents the association between tobacco using among the students and presence of tobacco user in the family $X^2 = 6.42895$ and $p=0.01123$ (significant).

Figure (10) Shows the distribution of toombak using among the students, 20% using toombak and 80% do not using toombak.

Figure (11) Appears the distribution of toombak using among the students according to average number of use dialy, 10.1% used it from 5-10times/day, 18.5% from 11-16times/day, 62.2% from 17-21times/day and 11.2% used it more than 21times/day.

The relationship between tobacco using among the students and students knowledge of health effects of tobacco using was presented in table (5). $X^2 = 5.74593$ and $p =0.01653$ (significant).

Figure (12) shows the distribution of tobacco using among the students according to their attempt to quit it, 37.5% of the students attempt to quit tobacco using and 62.5% do not attempt to quit tobacco using.

Figure (13) shows the distribution of tobacco quitting trails according to the reasons of quitting, 41.3% mentioned health problem, 21.1% for economic maters, 25.3% personal matters while 21.3% mentioned other reasons.
4-2 Results of the focus group discussion:

The discussion with the focus groups of tobacco user among student revealed that the majority of students think that tobacco use help them to understand well specially during examination period so most students increased the amount of use during this period. Also some students mentioned that they use tobacco for first time because they have nothing to do and they wanted to waste their time.

The discussion also revealed that half of the students said that in spite of they know that tobacco use is very bad custom, and dangerous to their own health and other health but they can't quit it because they became addict. Also most students explained that they quit tobacco use during Ramadan month but they turn back to its use after the end of month.

The group's discussion also indicated that most of the student who used cigarettes send their small brother to buy cigarettes for then from the store, and this is very bad and dangerous custom because it may led to learn this boys to try to use cigarette and so after three or four trailers they became addict to its use.

All students who use tobacco mentioned that cigarette, toombak and shisha are more prevalent types of tobacco among them.

4-3 Results of Observation:

The observations made during the study showed the following results:
- The majority of the students use tobacco specially cigarettes in crowded places in the university such as cafeteria and inside lectures room.

- The availability of different tobacco types inside the university.

- Most students sharing other in one cigarette i.e more than three students can smoke one cigarette.

**Discussion**

This descriptive study was conducted at Alzaiem Alazhari University. The objectives of the study were to measure the prevalence of different tobacco types using among the students and to identify the determinants associated with its spread. The data for this study were collected through techniques of interviews, focus group discussion and observations.
The results of the study revealed that the prevalence rate of tobacco using among the students was 62.5%. Out of these tobacco users; 41% were used cigarettes, 20% used toomback, 30% used shisha and 9% were used other types. Inspite of the lack of information about exact percentage of the prevalence rate of tobacco use among students in Khartoum state and Sudan as a whole, but this rate is considered to be high when compared to the rates in the most developing countries such as India and Bangladesh as chatureddi 1998 and Ahsan 1998 reported on their studies that the prevalence rates are 42.3% and 30% respectively.

This high rate of tobacco using among the students in Sudan compared to the rates indicated by studies conducted in other countries could be attributed to many factors such as exposure of the students to social and educational pressures, changes in the habits and behaviors of the students due to urbanization specially majority of them came from different states in the Sudan, changes in the biological and emotional needs of the students in addition to inadequate social care and support for tobacco users particularly when they were at primary and secondary education levels.

The study also illustrates that the prevalence rate of tobacco use is more prevalent among males student than females student (89.5 in males, 10.5% in females), the relation was statistically significant. This low percentage of females student tobacco users may be attributed to the reasons that in Sudan these practices are religiously prohibited and socially un acceptable in addition to reason that most females tend to deny that they were tobacco users because this may cause problem for them with their families. Tobacco use among female affected her health and her children health in the future as reported by WHO, 2000 which explained that exposure to tobacco smoke during pregnancy elevates the risk of delivering a low birth weight, preterm or small for gestational age infant.
and that this increases with increasing maternal age.

This finding goes with previous studies which indicated that the highest prevalence of tobacco has been found in males student as stated by (WHO, 2000).

The study also demonstrates that there is no relationship between father’s and mother’s educational level of the students and tobacco use, this means that the higher or lower educational level of father’s or mother’s of students can not affect their use to tobacco.

The reasons for tobacco use as explained by tobacco user students were, majority of the students mentioned that they use tobacco because their friends encourage them to its use, this may be attributed to the reason that most of the students have lived with friends in the boarding house during their study periods and this had led them to be affected by friends. This finding is supported by the study that was conducted in Bangladesh, which stated that most students mentioned that they were influenced by the smoking behavior of friends (prevention medical journal, 1998). Other reasons for tobacco smoke as mentioned by students include they think that tobacco use can help them to understand well; so they increased the amount of tobacco use during examination period, other students mentioned that they use tobacco to escape from their family problems and others mentioned that they use tobacco because they have nothing to do and they wants to waste time.

The presence of tobacco users in the family has a direct effect in tobacco use among students, the relationship was statistically significant. This finding means that parents, brothers or sisters can encourage their teenagers to use tobacco because this had led them to think that this habit is not dangerous and there is no restriction on its use. This finding agrees with the literature presented by pomerleau 1993 who stated that most students are more likely to use tobacco if their parents smoke or they have
older brothers or sisters who used tobacco. This practice on the other side affect the income of the families by wasting money that is spent on tobacco use, which could other-wise be used in food, clothing or shelter as mentioned by Rice, 1996.

Majority of the students explained that they start tobacco using 7 years ago when they aged about 15-25 years of age, this means that they starting tobacco use at younger age before they attended the university and this is very dangerous because when a person begin tobacco use in younger age and continue to use it regularly will have 50% change of dying from tobacco related diseases, half of these will die in middle age before age 70year loosing around 22 years of normal life expectancy as presented by WHO, 1999.

Among students who smoke cigarette, 56.9% of them mentioned that they smoke more than 11 cigarettes per day. This is the most dangerous stage because it usually leads to an addiction phase which makes it very difficult to quit smoking habit. This finding coincides with the study that conducted at the university of Siena and Florence in Italy by American journal of epidemiology, 2000, which stated that 15% of the students smoke more than 15 cigarettes per day. Those smokers are negatively affecting non smokers who sit or live near to them (passive smoking). Passive smoking kills people, although in lower number, however those killed do not die from their own habit but from some one else’s as explained in the literature by WHO, 1997.

The study also shows that 30% of tobacco users students use shisha and out of these there are 55% who use shisha always and 33.9% use shisha occasionally . This means that most of them were exposed to shisha smoke for long time which may led to serious illness especially respiratory lung diseases as mentioned in by England 1996 who stated that tobacco smoke is associated with a higher risk for nearly all major lung diseases
including pneumonia, flue bronchitis and emphysema. This prevalence rate of shisha use considered to be high when compared to prevalence that found in Saudi Arabia (24.8%) in the study conducted by Alfayez, 1998.

20% of tobacco user among students used toomback and majority of them use it more than 15 times per day and this is considered to be very dangerous to their health because toomback contains 20-100 higher levels of the carcinogenic nitrosamines which linked with increased risk for oral cancer and mucosal lesions as explained by Ahmed, 1995.

Most of students included in this study agreed that they know that tobacco use is very dangerous to their health and others health indirectly and cause respiratory lungs disease and may cause cancers, in spite of this, they continue using it. The association between tobacco use and knowledge of student about negative effects was statistically significant. This finding complies with the study conducted in USA by Moskal (1999), which stated that 90-95% of the students admitted that tobacco smoke is dangerous to their health and other health, however, there are some gabs in awareness.

On the other hand, the study showed that 37.5% of students using tobacco mentioned that they attempted to quit tobacco. So they explained some reasons which led them to make this attempt such as they may face health problems in lungs, some said that they want to save their money that spend on tobacco and others said that they attempt to quit tobacco because it affected negatively on their health and their family members. This finding was inline with the literature conducted by WHO 1998. Those students who attempted to quit tobacco use can directly benefit from their decision, because they avoid almost all of the risk of premature death from smoking, and there are clear health benefits including longer life and decrease health risks associated with tobacco used, as presented by WHO, 1998.
6.1 Conclusion:

The prevalence of tobacco using among the students was 62.3 and it was high among males than females student.

Depression and stress are the common reasons for tobacco using among the students.

Presence of tobacco user in the family and presence of friends who using tobacco are the commonest factors increased the prevalence of tobacco using among the students.

Majority of the students know that using of tobacco is dangerous to their health and others health.

6-2 Recommendation:

- Government should impose taxes on tobacco to increase cost of
production and consequently increases prices of tobacco and discourage its use.

- Ministry of health co-operated with other ministries and youth organizations should establish committee to be concerned with tobacco as public health problem.
- Parents should be aware to their sons and son’s friends.
- Further studies should be conducted to achieve more reliable and realistic results.

References


Appendix (i)

١٠. أسك العربي، أختي الطالبة

نرحب الإجابة الموضوعية، سيما وأن هذا الاستبيان سري وليس مفتوحاً بمسنوب، أينما وردت كلمة التبغ فإنها تشمل السجائر والشيشا والتمباك.

رقم الاستمارة:...........................................

الكلية:...........................................

(1) الجنس: طالب طالبة

(2) عمر الطالب:

أ. أقل من 20 عام
ب. 20-24 عام
ج. 24-28 عام

(3) موطن الطالب:

أ. وسط السودان
ب. شمال السودان
ج. جنوب السودان

(4) المصدر الأساسي لدخل الأسرة:

د. الاغتراب
ج. الوظيفة
ب. التجارة

(5) هل تعيش مع:

أ. أسرتك
ب. أحد الأصدقاء
ج. أحد الأقارب
(6) مصرف الطالب الشهري:

أ. أقل من 10 ألف دينار
ب. 10 - 15 ألف دينار
ج. 15-20 ألف دينار
(7) المستوى التعليمي للطالب:

أ. أمي
ب. خلوة
ج. أولي
(8) المستوى التعليمي للأم:

أ. أمي
ب. خلوة
ج. أولي
(9) هل تتعاطى التبغ؟

أ. نعم
ب. لا
(10) إذا كانت الإجابة بنعم أي الأنواع التالية تتعاطى:

ه. أخرى (حدد)
(11) لماذا بدأت تعاطي التبغ؟

أ. تقليداً للأصدقاء
ب. لأنه يساعد على التركيز
ج. لأنه شكل حضاري
(12) (حدد).
(12) هل في الأسرة شخص يتعاطى التبغ؟
أ. نعم
ب. لا
(13) منذ متى بدأت تعاطي التبغ؟
أ. أقل من عام
ب. 1-4 سنوات
ج. 4-8 سنوات
د. أكثر من 8 سنوات
(14) إذا كنت تدخن كم سيجارة تدخن اليوم؟
أ. أقل من 5 ب. 5-10 ج. 10-15 د. أكثر من 15 سيجارة
(15) هل تتعاطى التبغ؟
أ. نعم
ب. لا
(16) إذا كانت الإجابة بنعم هل بصورة دائمة أم أحياناً؟
(17) هل تتعاطى التبغ؟
أ. نعم
ب. لا
(18) إذا كانت الإجابة بنعم كم مرة في اليوم؟
(19) هل تعرف مضار التبغ الصحية؟
أ. نعم
ب. لا
(20) هل تعرف مضار التبغ الصحية على غير المدخنين؟
أ. نعم
ب. لا
(21) هل حاولت الإخلع عن تعاطي التبغ؟
أ. نعم
ب. لا
(22) إذا كانت الإجابة بنعم ما هي الأسباب التي دفعتك لذلك؟
أ. لقناعتي بتأثيره السالب على الصحة
ب. لأسباب شخصية
ج. لأسباب مالية
Appendix (ii)

Universtiy of Khartoum

Faculty of public and environmental health

The magnitude and determinants associated with the spread of tobacco use among university students.

Alzaiem Alazhari University

2002-2003

Focus Group Discussion (topic guide)

1- The reasons and behavior for tobacco use among students.

2- The most prevalent type of tobacco among students.

3- The use of tobacco during Ramadan month.

4- Behavior of sending small brothers.

5- The knowledge of students about the health hazards of tobacco use.