

Knowledge About Health Effect of Cigarette Smoking and Quitting Among University Students in Basrah, Iraq

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Abstract:

Background: globally, tobacco use has become a public health problem among university students, smoking habits show variation across different countries, the prevalence rates also varies between countries. Health knowledge about the risk effects of smoking is a very important factor to motivate smokers to quit smoking. Smoking cessation reduces health risks and improves quality of life. Morbidity and mortality of cancer, cardiovascular and lung diseases can be reduced if smokers quit. This study aims to determining are the students of university have knowledge about health effects of cigarette smoking and quitting? **Subjects and methods:** this study is a cross-sectional study which was conducted in Basra city on university students for the period from 15th of August 2023 to 30th of April 2024. About 1869 students with mean age (22.44+ 5.58 years), from different colleges in Basra University students participated in the study. The students filled in properly selected questionnaire detailing their socio- demographic characteristics and smoking behavior. **Results:** the prevalence of smokers in the studied population was 15.1 %, only 94.7% had correct knowledge about smoking, 27.2% had mentioned three risk or more of smoking, 36.1 % of the studied sample knew his information about smoking during academic study, Sadness and long leisure times was the cause of smoking for more than half of the smokers, 48.9% of the smokers Sometimes thought in risks of their smoking during the last month, 33.7% of smokers intended to quit during next six months mostly because of smoking is unhealthy causing diseases. **Conclusions and Recommendations:** cigarette smoking is a common problem among university students despite their awareness about the health hazards of tobacco. The study revealed that most participants had adequate knowledge and good attitudes towards cigarette smoking. Specific training and counseling should be part of the curriculum at university and smoking need to be further addressed through appropriate educational tools and government legislation.

Introduction:

Cigarette smoking is one of the leading causes of preventable morbidity and premature mortality globally. [1-4] According to World Health Organization (WHO) definition a smoker is someone who smokes any tobacco product, either daily or occasionally. [5] Cigarette smoking is described as the act of inhalation and exhalation of the fumes produced by burning tobacco [6], usually rolled in thin paper. Since the origin of cigarettes in the 20th century, their worldwide manufacture and utilization have been on a constant rise [7], making cigarette smoking a global epidemic [8]. It is primarily concentrated in developing countries [9]. Out of the 40,000 active agents in cigarette smoke, over 40 are cancerous [10], including tar and heavy metals, while others like nicotine and carbon monoxide are detrimental to several organ systems of the body. Smoking is associated with several diseases [9- 14], including chronic obstructive pulmonary disease, cerebrovascular diseases like stroke and cataracts, cardiovascular diseases like coronary artery disease, and carcinomas of the oral cavity, lung, pancreas, bladder, and kidneys [8, 11 ,13]. It is also injurious to the health of pregnant women and their babies, even if taken passively, causing stillbirth, low birth weight, miscarriage, and congenital anomalies [11 ,15]. The financial implications due to the premature disease and death of the working force lead to a decline

in the growth of low- and middle-income countries, where the economy is already facing a downward spiral [16]. The adverse effects of smoking are not only limited to smokers but also extend to non-smokers due to the inhalation of secondhand smoke, which has even greater numbers of carcinogenic constituents than first-hand cigarette smoke and, hence, is even more hazardous. Acute respiratory diseases are 50-100% more likely to develop in children exposed to passive smoking than non- exposed children. Studies indicate that around one-third of adults worldwide have frequent exposure to secondhand smoke [13]. Tobacco kills at least half of long-term smokers and is related to more pooled death each year than Human Immune Virus/Acquired Immune Deficiency Syndrome, Tuberculosis, and Malaria.[17] Much of the morbidity and mortality associated with tobacco use relate to cancers, chronic lower respiratory obstructive conditions and cardiovascular disease.[18] The ninth WHO report on the global tobacco epidemic demonstrates the remarkable progress of many countries in adopting health-promoting policies and reducing tobacco use – a risk factor that kills an astounding 8.7 million people every year. And even more shocking is that 1.3 million of these deaths are among people who do not use tobacco, including infants and children. Women and children in particular are vulnerable to second-hand smoke exposure. [19]

Among university students, smoking habits exhibit considerable variation across different countries and between male and female students within the same regions, with prevalence rates showing diverse patterns in different countries.[20-26] The WHO developed the WHO Framework Convention on Tobacco Control (WHO-FCTC) which articulates a range of strategies to control the tobacco epidemic through reduce demand through effective legislation which are protective (such as reducing exposure to smoke), regulator (such as content and risk disclosures), and educative (such as awareness and advertising restrictions).[27,28] Despite these efforts, tobacco epidemic reduction efforts remained inefficient globally.[28] Smoking cessation reduces health risks and improves quality of life. In particular, the cumulative risk of dying of cancer, cardiovascular and lung diseases can be drastically reduced if smokers quit, even at an advanced age. [29-31] The cigarette smoking epidemic spreads in a fast manner among university students. Extra-efforts are required to protect young adults from smoking-related hazards, so a smoking prevention and cessation supporting strategies are urgently needed. [32]

The continuously alarming concept is that the majority of smokers are still underestimating the smoking-related health hazards. [33] and even the acknowledgment of the cigarette smoking-adverse effects is not commonly translated into avoidance or stoppage of the smoking habit. There is still a shortage in the health message regarding the smoking hazards on the youth health and physical performance and there is still a shortage in the utilization of the smoking-related health hazards as a motive for smoking cessation. [34] Despite the incorporation of the many practical strategies to fight cigarette smoking among young adults; only modest achievements were obtained,[35] more efforts are still needed to alleviate the smoking impact in students' health and more health warnings are required to encourage the process of cigarette smoking control and cessation among youth.[36] Increasing awareness about smoking impacts on health through implementing effective interventions that provides information about the hazards of smoking can augment the intention to stop smoking among the university smoker students.[37]

Subjects and methods:

This study is a cross-sectional study which was conducted in Basra city on university students for the period from 15th of August 2023 to 30th of April 2024 with the aim of determining whether the students of university have knowledge about health effects of cigarette smoking and quitting?

The study population: The participants were university students from different colleges in Basra University. The colleges were (Economic and Administration College, College of Fine Arts, College of Engineering, College of Sciences, College of Law, College of Nursing, College of Literature, Al-Zahraa College of Medicine, Basra College of Medicine, College of Dentistry, College of pharmacy, College of Veterinary Medicine, College of Agriculture, College of Physical Education, College of Education for pure

Sciences, College of Education for human Sciences, College of information technology and computer. Sampling and sample size: The sample size was calculated according to the following equation: [38] $n = Z^2 p (1 - p) / d^2$

Where n = sample size

Z = statistic for a level of confidence. For the level of confidence of 95%, which is conventional, Z value is 1.96.

P = expected prevalence or prevalence from previous studies. It was 23.2 % according to Salma A Ali [39]d = precision, Margin of error allowed is (0.02).

Based on the above calculation, the estimated sample size required was (1711) individuals. Taking into consideration non-response (10%) of the sample and incomplete questionnaire, the final sample size was extended to (1882) students. 15 students didn't respond to questionnaire; therefore, the total number of included subjects was (1867) which represents (3.7%) of the total number of the students (49835) in the aforementioned colleges. A simple random sampling method was applied, classrooms were chosen randomly to reach the target number of students that was determined previously.

Data collection: A special questionnaire was used in the study were chosen from other previous related published studies. It was tested in a pilot study on 70 students. Some items that were used in the pilot study which revealed uncertain answers were modified or deleted until the final form was set and used in the final analysis. The 70 students were re-included in the final analysis by using the final form of the questionnaire.

After obtaining an official approval, we take a sample of (1867). The questionnaire was distributed by the researchers and the students were asked to answer freely and honestly to each question. A guarantee of anonymity was provided. The students were told that the information was for scientific research only. The questionnaire included multiple choice questions, aimed to collecting data on the students' socio-demographic characteristics and their smoking behavior. The information that collected includes: Socio-demographic characteristics: age, sex, place of residence, economic level of family. Smoking behavior and Knowledge about harmful health effects of smoking and ability to quit smoking.

Data analysis: Data were checked and fed on computer system. The statistical analysis was made by the use of the Statistical Package for Social Sciences (SPSS) version 28. The data were tabulated and frequencies were calculated and pie chart was used to describe some results.

Ethical consideration: the official permissions of the general health directorate of Basra and Basra University Presidency was done; informed consent was obtained from all participants. An assurance of anonymity was provided. The students were told that the information is for scientific research only.

Results:

1. Socio demographic characteristics of the studied sample

Most of the studied sample 75.8% was at (21-24 year) age group with mean age (22.44+ 5.58 years), half of them 50.5% were female, 63.0% of the studied sample were less than 500.000 ID and 53.2 % of them were from Basra center as shown in Table 1.

Table 1 Socio demographic characteristics of the studied sample

Character		Frequency	Percent
Age	17 - 20	294	15.7 %
	21-24 year	1415	75.8 %
	25-28 year	158	8.5 %
Sex	Male	925	49.5 %
	Female	942	50.5 %
Income	More than 1000.000 ID	253	13.5 %
	500.000-1000.000 ID	438	23.5 %

	less than 500.000 ID	1176	63.0 %
Address	Basra center	993	53.2 %
	Basra periphery	733	39.2 %
	Other governments	141	7.6 %
Total		1867	100.0

2. Smoking habit:

Table 2 showed The prevalence of smokers in the studied population was 15.1 % , while 3.5% were past smokers.

Table 2 Smoking habit of studied sample

Smoking state		Frequency	Percent
Smoking	Past smokers	65	3.5
	Current smokers	282	15.1
	Non-smokers	1520	81.4
	Total	1867	100.0

3. Knowledge about smoking

Only 94.7% had correct knowledge about smoking and 91.3 % of the sample had bad opinion about smoking as revealed in Table

Table 3 Knowledge about smoking of the sample

Knowledge		Frequency	Percent
Good for health	Yes	99	5.3
	No	1768	94.7
Opinion about smoking	Good	80	4.3
	Don't know	83	4.4
	Bad	1704	91.3
Total		1867	100.0

4. Smoking health risks as mentioned by the sample

Table 4 showed that the majority of the studied population (69.2%) had mentioned that the lung cancer of smokers is the main smoking health risks and only 27.2% had mentioned 3 risk or more.

Table 4 Smoking health risks as mentioned by the sample

Smoking health risks		Frequency	Percent
Smoking risks	Ca Lung of Smokers	1292	69.2
	Impotence	5	0.3
	Teeth Caries and Discoloration	11	0.6
	Premature Aging	4	0.2
	Ca Lung of Non-Smokers	9	0.4
	Coronary Heart Disease	39	2.1
	3 risk or more	507	27.2
	Total	1867	100.0

5. Source of information of the studied sample

Figure 1 showed about 36.1 % of the studied sample knew his information about smoking during academic study then 26.94% of the sample took his information from internet, and only 20.03% from doctors and health system.

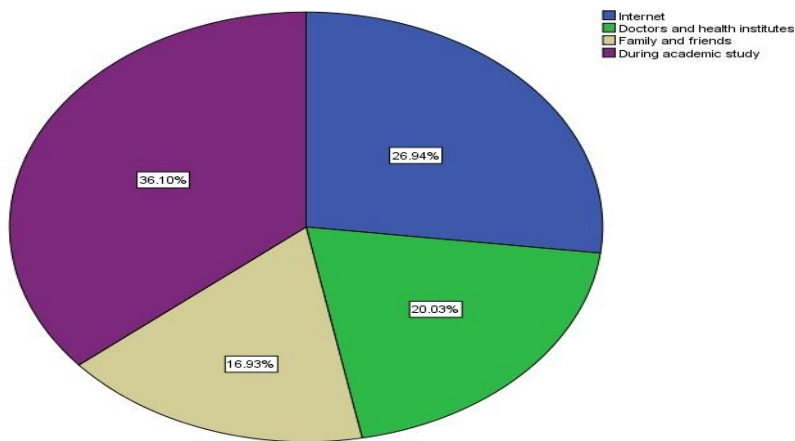


Figure 1 Pie chart for Source of information of the studied sample

6. Causes of smoking

Sadness and long leisure times was the cause of smoking for more than half of the smokers (56.74%) followed by bad friends and eager to first experiment for about 32.27% of the smokers as revealed by Figure 2.

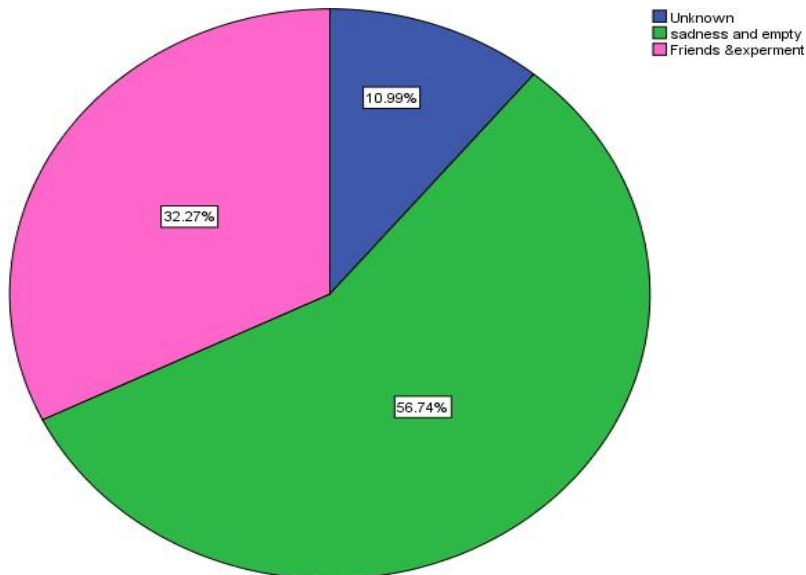


Figure 2 Pie chart of the causes of smoking

7. Number of cigarettes smoked per day

About 61.7% of the smokers smoked 20 cigarettes and less, while 5.3% was shisha smokers shown by Table 5.

Table 5 Number of cigarettes smoked per day

Number of cigarettes smoked per day	Frequency	Percent
1-10	59	20.9
11-20	115	40.8
21-30	43	15.2
31-40	36	12.8
41 and more	14	5.0
shisha	15	5.3
Total	282	100.0

8. Attitude of smokers

Table 6 described about 48.9% of the smokers Sometimes thought in risks of their smoking during the last month, 62.4% of smokers thought smoking effect health and only 43.3% was thinking about quitting smoking

during last month.

Table 6 Attitude of smokers

Attitude		Never	Some	A lot
During the last month how, many do you think in risks of your smoking?	No.	43	138	101
	%	15.2	48.9	35.8
How much smoking effect health?	No.	34	72	176
	%	12.1	25.5	62.4
In the past month, have you thought about quitting smoking?	No.	66	94	122
	%	23.4	33.3	43.3

9. Intention to quit smoking

Regarding intention to quit smoking Table 7 showed that 33.7% of smokers intended to quit during next 6 months, 36.5% of smokers intended quitting someday after 6 months while 29.8% had no intention to quit.

Table 7 Intention to quit smoking

Intention to quit	Frequency	Percent
During next month	60	21.3
During 1- 6 months	35	12.4
Someday after 6 months	103	36.5
No intention to quit	84	29.8
Total	282	100.0

10. Causes of quitting intention

Figure 3 showed More than half of the smokers (58.9%) intended quitting smoking because of smoking is unhealthy causing diseases, 8.2% of because of bad smell of smoking.

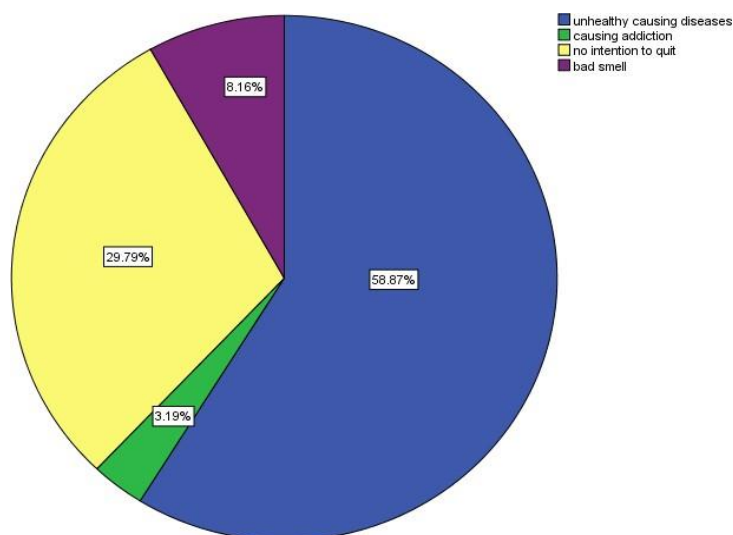


Figure 3 Pie chart of Causes of quitting intention

Discussion:

This study assessed the Knowledge about health effect of cigarette smoking and quitting among university students in Basra, Iraq. A sample of 1867 students were university students from different colleges in Basra University was participated in special questionnaire was used in the study, there was limited researches on this subject in Iraq. The results were compiled and compared with researches carried out in Iraq, Saudi Arabia, Syria, Egypt, Pakistan, Argentina and USA [39 - 49].

The prevalence of current smoking in this study was (15.1 %) and it less than the prevalence of current smoking in previous study conducted on Basra university students in 2010 which was (23.2 %), as Ali S A study. [39] This reduction may attribute to awareness about health effect of smoking. An important positive observation in our study was that rate of non - smoker was (81.4 %). The prevalence of current smoking in this study similar to a study conducted in Saudi Arabia which (19.4%) [41] another study conducted in Egypt where the prevalence of current smokers was (12%). [46]

About knowledge, as the study was conducted on university students, adequate knowledge regarding the hazards of smoking was expected to be present due to their higher level of education, which was in accordance with the result obtained, according to which (94.7%) of all respondents were familiar with the harmful effects of smoking. This was similar to a study conducted in Jeddah, Saudi Arabia, where (94%) of participants had this knowledge [44]. This conclusion was further reinforced when queried regarding smoking-associated morbidities, as the majority, (i.e., 69.2 %), knew it increased susceptibility to certain cancers such as lung. The result obtained in research in Pakistan where (98%) of participants believed it increased the risk for lung cancer [40]

About attitude in our study shows about (48.9%) of the smokers sometimes thought in risks of their smoking during the last month, (62.4%) of smokers thought about smoking effect health. This was similar to a study conducted in Saudi Arabia, where the average score for thought about “knowledge of health risks” was (53 %) actually [41].

In this study for current smokers, the number of smoked cigarettes per day was (20) cigarettes and less which about (61.7%) of the smokers while (5.3%) was shisha smokers. This result was similar to that consumed by medical students in Iraq (57.7) smoke (1–10 cigarettes per day) [47]. However, in USA, the number of cigarettes smoked per day was less than 1 in (20%) and less than 10 cigarettes per day in (80%) of smoking university students [48]. Various factors contribute and motivate students to smoke, such as stress, depression, part of entrainment, and so on. This study showed that the most reported causes of smoking were Sadness, long leisure times was the cause of smoking for more than half of the smokers (56.74%) followed by bad friends and eager to first experiment for about (32.27%) of the smokers. In a study conducted in Egypt they found the most causes of smoking were stress relief, followed by entertainment, sadness and depression (42, 23 and 18%, respectively) [46]. However, both Iraqi and Saudi Arabia medical students reported entertainment as the main cause of smoking for their smoking habit [47,49]. Regarding intention to quit smoking this study showed that (33.7%) of smokers intended to quit during next six months, (36.5%) of smokers intended quitting some day after 6 months while (29.8%) had no intention to quit. Quitting rate in the study conducted in Egypt was (43.7 %) [46]. About smoking quitting in study conducted in Saudi Arabia was (43.3%) was thinking about quitting smoking during last month [41]. Therefore, special training is required for students to assist them in giving up quitting smoking. About source of information of the studied sample (36.1 %) of the studied sample knew his information about smoking during academic study then (26.94%) of the sample took his information from internet, and only 20.03% from doctors and health system. According to World Health Organization smoking-related knowledge was more likely to be noticed on TV than on other media [43].

Conclusions:

Cigarette smoking is a common problem among university students despite their awareness about the health hazards of tobacco. The study revealed that most participants had adequate knowledge and good attitudes

towards cigarette smoking.

Recommendations

Several governmental legislations should be implemented to prevent smoking among college students.

1. Activate WHO Tobacco Control in Iraq.
2. Smoking should be prohibited within the college.
3. Specific educational programs focus on smoking cessation include training and counseling should be part of the curriculum at university.
4. Providing a range of extracurricular activities, including sports.
5. smoking cessation unit should become a part of clinical care within the healthcare system.

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