

The Smoking Prevalence Among University Students in Erbil City/ Iraq

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Abstract: Background and objectives: To assess the prevalence of smoking among university in Erbil city in relation to gender, also the difference in brushing between the two groups (smoker and non-smoker students). **Methods:** a cross sectional survey were planned to consist of 600 students from 3 different universities (Hawler Medical University, Tishk International University and Salahaddin University) with an age range 17-25 years old. **Results:** The prevalence of smoking was 33.1% and those smoking students smoked Hookah in about 47.2%, while 39.2% smoked cigarettes and 13.6% of them smoked Vipe. Prevalence of brushing among smokers and non-smokers were approximately the same (98.5%- 98.3%) respectively.

Conclusions: the prevalence of smokers was nearly one third of students. Male smokers were more than female. Hookah used mainly by the students than the other types. Prevalence of brushing teeth was approximately the same among both groups. Nearly three-fourth of the students among smokers and non-smokers did not have bad breath.

Key words: Smoking, University Students, Hookah, And Cigarettes

Introduction

The use of tobacco can be concenter as one of the most public health problems and about 8 million individuals may die every year across the world, greater than 7 million individual dies because of direct use of tobacco, whereas about 1.2 million individual dies as a result of non-smokers being exposed to second-hand smoke (Global Burden of Disease, 2021). Cigarette smoking kills 480,000 individuals in the USA every year. Each year, approximately 201,773 ladies across the world die from secondhand smoke (Courtney R, 2015).

According to the outcomes, 2000 adolescents beneath the age of 18 begins daily smoking for the first time within the world, and almost 300 individuals begin daily smoking (Abuse S, 2017). According to the report of the WHO, there are almost 1.1 billion current cigarette smokers within the world (WHO, 2020). In China the meta-analysis results observed that the level of smoking among women was 5.34% (Liu Y, et al., 2016), while in Iran meta-analysis results observed that the level of smoking among girls within the age of 12 -17 years old was 6% (Ehsani-Chimeh E, et al., 2020). The smoking prevalence was 64.7% in women in Central and Eastern Europe (Brožek GM, et al., 2019).

The term unpremeditated smoking means that a person irregularly smokes to relieve stress in a public setting. The habitual smoking (tobacco addiction) is defined as a physical fixation with all manufacturing of tobacco.

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Many health experts consider smoking habit to be a mental preoccupation as well, with major health consequence (Clancy N, et al., 2013). Tobacco, a filter chemical that is addictive, and paper wrapping are the two main components of most cigarettes. Cigarettes are to blame for the most majority of tobacco-related disease in the United States. When smokers inhale dangerous compounds in cigarette smoke, they are exposed to a hazardous mixture of nearly 7,000 substances. The smoking may harm most of body organ, the non-smokers also were exposed to the toxins in cigarette by secondhand smoke (USDHHS, 2010).

Contrary to popular belief, smoking cigars or pipes is no less harmful to one's health than smoking cigarettes. In truth, a single cigar has more tar and nicotine than a packet of cigarettes, and a single huge cigar contains 40 times the nicotine and tar found in a single pack of cigarettes. Regular cigar smoking is dangerous, even in small amounts, because toxic chemicals and carcinogens are present. The death rate of people because of the mouth, throat, esophagus, cancer because of smoking cigars is about ten times higher than those who don't smoke (Fiore M, et al., 2008).

2. Material and Methods

This study was carried out from the beginning of March 2022 till the end of July 2022. During this period, sample collection, data analysis and article writing was done. Before starting the study, approval from the Ministry of Higher Education and Scientific Research was obtained for taking permission to go and start collecting data from the universities. In this epidemiological study, a sample size of 600 students (310 were males and 290 were females) was selected from 3 universities. All the students were from different area in Erbil City-Governorate/ Iraq. The selections were done among different ages and in different grades.

During the interview, the researchers used English and Kurdish languages. The answers were written in English on the questionnaires paper. All the questions were recorded without mentioning the participant's name.

The questionnaire that has been used in this research, contains the following: General information such as age, gender, year of study, smoker or not and types of smoking (cigarettes, Vipe and Hookah), frequency of smoking, and the frequency of brushing.

Students from different universities in different grades between the ages of 17 to 25 were included to participate in the survey, while nearly 25 students refuse to participate in the answering of the questions.

Data were analyzed using the statistical package for social science (SPSS, version 21) on personal computer, the collected data was grouped and placed in tables and the following statistical analysis was done: Descriptive analysis of the sample, prevalence and chi-square test were used to investigate the main relationships, for the statistical significance, it was set at $p < 0.05$.

3. Results

The sample consisted of 600 university students aged range from 17 – 25. Students were from three universities, 200 (33.3%) students were from each University. The questionnaires were answered by 310 (51.7%) males and 290 (48.3%) females. Students who answered the questionnaires 104 (17.3%) were 1st graders, 108 (18.0%) were 2nd graders, 200 (33.3%) were 3rd graders and 188 (31.3%) were others as shown in table 1.

Table 1: Distribution of sample according to gender and grades.

University students	Gender		Gender			
	Male	Female	1 st grade	2 nd grade	3 rd grade	Others
	310 (51.7%)	290 (48.3%)	104 (17.3%)	108 (18.0%)	200 (33.3%)	188 (31.3%)

The prevalence of smoking was observed to be 33%, male smokers were higher in Salahaddin University than the other universities with no significant differences ($p= 0.469$) and female smoker in Tishk International University was more than the other universities with no significant differences ($p= 0.463$), while a significant difference was obtained between smoker male and female students ($p= 0.013$) as shown in Table 2.

Table 2: Prevalence of smoking in different universities in relation to gender

University	Male			Female			Total	
	Non-Smoker	Smoker	p	Non-Smoker	Smoker	p	Non-Smoker	Smoker
HMU	53 (17.1%)	45 (14.5%)	0.469	86 (29.7%)	16 (5.5%)	0.463	139 (69.5%)	61 (30.5%)
TIU	55 (17.7%)	45 (15.5%)		79 (27.2%)	21 (7.2%)		134 (67.0%)	66 (33.0%)
Salahaddin university	53 (17.1%)	59 (19.0%)		75 (25.9%)	13 (4.5%)		128 (64.0%)	72 (36.0%)
Total	161 (51.94%)	149 (48.1%)	0.013	240 (82.76%)	50 (17.24%)		401 (66.83%)	199 (33.17%)

For the students type of smoking the result showed that hookah 163 (47.2 %) was more used by the student than the other types of smoking followed by cigarettes 135 (39.2 %) and least type used was pipe 47 (13.6 %) with no significant differences as shown in table 3.

Table 3: Type of smoking used by the student

Type of smoking	Smoked by the student
Cigarettes	135 (39.2 %)
Vipe	47 (13.6 %)
Hookah	163 (47.2 %)

The smoking frequency for the students, the result observed that most of the student smoked less than 10 cigarettes a day 71 (52.6 %), while for both Vipe 20 (40.8%) and hookah 97 (59.1%) most of the students smoked once a week, also least of students had daily use of vipe 15 (30.6%) and hookah 16 (9.8%) as shown in table 4.

Table 4: Frequency of each type of smoking

Cigarettes frequency	Less than 10 cigarettes a day	71 (52.6 %)
	More than 10 cigarettes a day	64 (47.4 %)
Vipe frequency	Daily	15 (30.6%)
	Once a week	20 (40.8%)
	Once a month	14 (14%)
Hookah frequency	Daily	16 (9.8%)
	Once a week	97 (59.1%)
	Once a month	51 (31.1 %)

From the result, it was showed that 196 (98.5%) of the student who smoked were brushing their teeth and only 3 (1.5%) didn't brush their teeth, also for the non-smokers 395 (98.3%) brushed their teeth and only 7 (1.7%) didn't brush with no significant differences (p: 0.564) as shown in Table 5.

Table 5: Prevalence of brushing tooth among smokers and non-smokers

		Smoking		p
		Yes	No	
Brushing tooth	Yes	196 (98.5%)	395 (98.3%)	0.564
	No	3 (1.5%)	7 (1.7%)	

3.1 Frequency of Brushing Among Smokers and Non-Smokers

Students who smoke and brushes their teeth once a week were about 56.3% of student, while 32.7% of students brushes twice a day and 11.1% of students brushes once a week. For the non-smokers 47.3% students brushes once a day, 46.3% brushes twice a day and only 6.3% brushes once a week, with significant differences ($p= 0.002$) as shown in table 6.

Table 6: Frequency of brushing among smokers and non-smokers

		Smoking		p
		Yes	No	
Brushing frequency	Once a day	111 (56.3%)	189 (47.3%)	0.002
	Twice a day	64 (32.7%)	185 (46.3%)	
	Once a week	21 (11.1%)	24 (6.3%)	

4. Discussion

The prevalence of smoking among students were conceder to be high (33.17%) which was higher than that founded by Ahmed L, et al., 2021 which was 15%, Yasso, et al., 2015 which was 21%, Al-Kubaisy, et al., 2012 which was 20.75%, and Almerie M, et al., 2008 which was 27%, but this result was in agreement with results of Khader, et al., 2008. While higher prevalence of smoking was founded by Sahadat Hossain, 2017 which was (60.2%).

This result may be due to that most of the students were smoking either due to stress or for enjoyment.

The prevalence of smoking among males was (48.1%) which was significantly higher than females (17.24%), and this result was in agreement with the result of other studies (Ahmed L, et al., 2021; Nasser, et al., 2020; Sahadat Hossain, 2017; Al-Kubaisy, et al., 2012; Almerie M, et al., 2008; Khader, et al., 2008).

This result may be due to un-acceptance of the community that prevents females from smoking.

The prevalence of using Hookah among students was more than the other types; this result was in agreement with Almerie M, 2008. While in other study higher prevalence of cigarette smoking was found by Ahmed, L.A, et al., 2021 which was 54,7% and Hookah was 4%, also Khader et al, 2008, were they found that cigarette smoking was (80%), pipe was (0.4%) and Hookah was (19.3%).

In this study high percentage of students smoked less than 10 cigarettes a day, this result was in agreement with Khader et al, 2008. While the higher frequency of smoking Hookah was once a week (59.1%), this result was in disagreement with Nazeer Khan et al, 2008 in which the prevalence of smoking weekly was the lowest (14.7%), daily smoking was (20.5%), monthly smoking was (28.3%).

In this study, the prevalence of brushing among smokers and non-smokers were approximately the same (98.5%-98.3%) respectively; this result was in agreement with Dar-Odeh et al., 2010.

This result may be due to highly educated students among universities.

The result showed that higher percentage of smoker and non-smoker students tend to brush once a day, this result was in agreement with other study (Dar-Odeh et al., 2010; Khami et al, 2009).

From this study it was concluded that high percent of student were smokers, male students significantly higher than female students regarding smoking. The using of Hookah among students was more than types, those students mainly use Hookah once a week. For all of that special consideration should be prepared for students regarding the serious problems occur from smoking in order to limit the use of all types of smoking.

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