

## Prevalence of Cigarette Smoking among Hawler Medical University Students

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### ABSTRACT

**Background and Objectives:** Tobacco smoking is a growing public health problem in the developing countries. This study estimates the prevalence of smoking and assesses the socio-demographic correlates of smoking among Hawler Medical University students in Erbil city.

**Methods:** A cross sectional study was conducted during March - April 2007 on 600 students in Hawler Medical University. A systematic stratified sampling method was used. A special questionnaire was used. Data on age and sex of the students, name of college, number of cigarette smoked per day, and age of starting smoking were obtained.

**Results:** out of the 587 respondents, 72 students were smokers giving a prevalence rate of 12.3%. The prevalence of smokers were much higher in males than females (23.9% and 1.9%, respectively). The highest rate of smokers was among the age group 24-26 year in both sexes. 50% of students started smoking at the age of 18-22 years.

**Conclusions:** The prevalence of smoking is comparatively higher taking into consideration that the study was conducted on students of medical and allied health sciences and that more than half of students started smoking during study years. The study recommends integrating health awareness programmes about smoking hazards in the medical education curriculum.

**Key words:** Smoking, Medical students, Erbil, Kurdistan region, Iraq.

### INTRODUCTION:

Smoking is a leading cause of morbidity and mortality from non-communicable diseases in the world<sup>1</sup>. Adolescent cigarette smoking is significant to public health for many reasons. Firstly; many adult smokers had initiated the habit during the adolescence period. Secondly, smoking among adolescents has short to medium term health effects in the smokers as well as peers who may be exposed to environmental smoke<sup>2,3</sup>. Lastly, smoking in adolescents may also be a marker of other harmful lifestyles such as engagement in illicit drug use, alcohol use, and psychiatric illnesses<sup>4</sup>. A study of over thirty thousand British physicians showed that nonsmokers lived about ten years more than smokers. For those born

the standardized mortality rate between the ages of 35 and 69 for nonsmokers was 15% and for smokers was 45%<sup>5</sup>. The recent declaration in 2002 by the World Health Organization's International Agency for Research on Cancer indicated that exposure to environmental tobacco smoke (ETS) is carcinogenic to humans. The increasing awareness that ETS is harmful to health places an onus on governments to safeguard public health by providing legislation to protect the general public from passive (involuntary) smoking. The focus of occupational legislation is to provide safe work environments. Recent court cases have demonstrated that the protection of workers from ETS at their place of work is becoming an important occupational health issue<sup>6</sup>. Although the number of adults who smoke has dropped

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past ten years, this has not happened amongst young people. In fact in some parts of the world the number of young smokers has actually increased especially among young women. Statistics have shown that one quarter of Britain's 15 years old (both boys and girls) are regular smokers. It is estimated that 450 children per day start smoking .Half of all teenagers who are currently smoking will die from diseases caused by tobacco if they continue to smoke throughout their lives and one half of this number will have their lives shortened by an average of 23 years<sup>1</sup>. This study was carried out to find the prevalence rate of smoking and its relation to different socio- demographic factors among Hawler Medical University student.

#### **SUBJECTS AND METHODS:**

Hawler Medical University comprises four colleges (Medicine, Dentistry, Pharmacy and Nursing). The total number of students of the University at the academic year 2006 – 2007 was 1745 students. The smoker defined as a person smoking one or more cigarette daily<sup>8</sup>, and all students with these criteria regarded as smoker in the study. This cross-sectional study was conducted on a sample of students of University during March - April, 2007. Sample size was calculated using a significance level of 95% with 25% degree of precision of the expected proportion and an estimated prevalence of 9.3%<sup>7</sup> accordingly; the sample size was 600 students. The systematic stratified sampling method was used to select the study subjects. Regarding statistical analysis, (SPSS version 15) used for data entry and analysis of the result. Chi-square test has been used in the present study for determining the significance of the result, p - value less or equal to 0.05 regarded statistically significant. A questionnaire designed by the researcher was used for data collection, containing information about age and sex of the students, name of college, number of cigarette smoked per

questionnaire has been developed through literature review, and used the in previous studies about smoking by other researchers and checked by two experts in this field to increase the reliability and validity of the questionnaire. Also a pilot study done by choosing twenty persons, who are not included in the study, have been asked to fill the questionnaire to identify and correcting the weakness of the questionnaire before using it with real respondents. Also, during the present study, the questionnaire has been distributed and explained to all students in same manner by two trained persons in all colleges to make it more reliable and valid.

#### **RESULTS:**

Out of 600 students, 587 responded to the questionnaire (response rate =97.8%).The age range of students was 18-26 years (mean  $\pm$  SD: 22  $\pm$  2.73) with a Male: Female ratio of 0.94:1. This study showed that out of the total sample of 587, 72 students were smokers giving a prevalence rate of 12.3%.The prevalence of smoking habit were much higher in males than females (23.9% and 1.9%, respectively). The difference is statistically significant (p < 0.0001). The highest rate of smokers was among the age group 24-26 year in both sexes. Statistically significant variation in the age prevalence of smoking was demonstrated (p < 0.0001). These findings are shown in (Table 1).

**Table (1):** Frequency distribution of the study population according to age and sex characteristics.

Age Sex group (years)	Male			Female			Total			P value
	Number of participants	Smokers		Number of participants	Smokers		Number of participants	Smokers		
		N o.	(%)		N o.	(%)		No.	(%)	
18-20	81	8	9.9	128	1	0.8	209	9	4.3	0.008
21-23	120	30	25.0	150	3	2.0	270	33	12.2	0.000
24-26	75	28	37.3	33	2	6.0	108	30	27.7	0.007
Total	276	66	23.9	311	6	1.9	587	72	12.3	0.000

The prevalence rate of smoking among college of dentistry students was (19.0%) which is higher than that of other college's students (Medicine 11.8%, Pharmacy 9.4% and statistically significant ( $P = 0.016$ ). The Nursing 8.4%). These differences are

prevalence of smoking habit was higher among the age group 24-26 in all Colleges (Medicine, Dentistry, Pharmacy, and Nursing) of Hawler Medical University. ( $P < 0.001$ ,  $p = 0.177$ ,  $p = 0.013$  and  $p = 0.045$ , respectively), (Table 2).

**Table(2):** Prevalence of cigarette smoking according age group and college.

Age College group (year)	Medicine			Dentistry			Pharmacy			Nursing		
	Number of Participants	Smoker		Number of Participants	Smoker		Number of participant	Smoker		Number of participants	Smoker	
		N o.	(%)		N o.	(%)		N o.	(%)		N o.	(%)
18-20	85	3	3.8	50	6	12.0	50	0	0.0	30	1	3.3
21-23	116	9	7.7	40	1	2.5	57	9	15.7	30	2	6.6
24-26	78	21	26.9	20	3	15.0	20	3	15.0	11	3	27.2
Total	279	33	11.8	110	21	19.0	127	12	9.4	71	6	8.4

This study showed that prevalence of smoking was higher among male than female students in all colleges of the University. (Table.3).

**Table 3:** Prevalence of smoking habit by gender and college

Sex College	Medicine			Dentistry			Pharmacy			Nursing		
	Num ber of partic ipant s	Smoking		Number of Participa nts	Smoking		Num ber of partic ipant s	Smoking		Numbe r of particip ants	Smoking	
		N o.	(%)		N o	(%)		No.	(%)		No	(%)
Male	178	30	16.8	70	19	27.1	77	11	14.2	31	6	19.3
Female	101	3	2.9	40	2	5.0	50	1	2.0	40	0	0.0
Total	279	33	11.8	110	21	19.0	127	12	9.4	71	6	8.4

Regarding age of starting smoking the present study revealed that more than one tenth (12.3%) of smokers students started

smoking during adolescence period (12-17) years old and the rest during university years (87.5%). (Table 4).

**Table4:** Age of starting smoking.

Age (years)	Number of smoker	%
Less than 18	9	12.3
18-22	36	50
23-26	27	37.5

## SUBJECTS AND METHODS:

The high response rate (97.9%) in this study could be attributed to the simplicity of the questionnaire and the cooperation of students with the researcher, which is higher than the response rate in previous study in Erbil, among the students of College of Medicine (85.5%)<sup>7</sup>. The prevalence rate of smokers (12.3%) revealed by this study is slightly higher than the prevalence rate which is previously reported among university students in Erbil, Iraq 9.3%<sup>7</sup> and less than prevalence rate among university students in Pakistan 14.1%<sup>9</sup>, Baghdad (25.5%)<sup>10</sup>, Mosul, Iraq

lands 18%<sup>12</sup>, China 40.7%<sup>13</sup> and Ireland 20%<sup>14</sup>. These variations in prevalence rate may be due to the differences in time, cultural factors and sample size. The higher prevalence rate revealed by this study among males agrees with the findings of other studies in Erbil<sup>7</sup>, Baghdad<sup>10</sup> and Mosu<sup>11</sup>, China<sup>13</sup>, Syria<sup>15, 16</sup>, Turkey<sup>17</sup>, Greece<sup>18</sup>, Uganda<sup>19</sup>. However few studies have explained why the gender disparity occurs. Maziak<sup>20</sup> and Maziak et al<sup>21</sup> have explored the reasons why most women in Syria were non-smokers. They mentioned three main reasons: religious convictions; family values & traditions and limited economic resources. Barzani<sup>22</sup> has

also reported that cultural and religious taboos towards smoking among women could be an important factor in Kurdistan-Iraq for male predominance. The prevalence rate was highest among students of the College of Dentistry (19.0%), while it was close to each other among students of the Colleges of Medicine (11.8%), and Pharmacy (9.4%) and the low among students of the College of Nursing (8.4%). This probably suggests that anti-tobacco messages among students of Colleges of Medicine, Pharmacy, and Nursing are more effective in discouraging tobacco use than College of Dentistry. The lowest prevalence rate among students of College of Nursing could be attributed to the larger number of female students in the sample. The male to female ratio in the College of Nursing is 1:1.15. The rising in the prevalence rate in older age students in the present study is similar to that revealed by other studies in Iraq<sup>7, 10, 11</sup>, and Albania<sup>23</sup>. This rising in the prevalence might be due to the increase stress across study years in these colleges. Regarding starting age for smoking, this study showed that 50% of participants started the habit of smoking between 18-22 years of age and 37.5% between 23-26 years which indicating that most students start smoking at the early youth. These results are consistent with those of other studies in Iraq<sup>7, 11</sup>.

**Methodological issues:** the present study faced with some problems especially with female students because they tried to hide some information regarding their smoking habit. The non-respondent rate in the study was low this could be attributed to the simplicity of the questionnaire and high level of education among students.

**Conclusions:** The prevalence of smoking is comparatively higher taking into consideration that the study was conducted on students of medical and allied health sciences and that more than half of students started smoking during study years.

**Recommendation:** the study recommends

medical curriculum in the University, and also increasing health education programme about this subject in the University.

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