

J. Comm. Med. Iraq-1989, Vol. 2, No. (2)

EPIDEMIOLOGICAL ASPECTS OF SMOKING HABIT AMONG FIRST AND FOURTH GRADE MALE STUDENTS AT EIGHT COLLEGES, UNTV. OF BAGHDAD.

Hikmet Jamil MBChB DVD DIH AFOM MSc PhD MFOM FFOM (I),
Haboubi. G. MBChB DPH MPH MPH DrPH,
Ghaib M. Mukhlis BScM LScM MD DTM & PhD FACTM, and
Saadon K. Al-Tikriti MD MPH.

Dept. of Comm. Med. Coll. of Med. Uni. of Baghdad.

Key words: Epidemiology, Smoking, cross-sectional survey.

دراسة وبائية عن عادة التدخين بين طلبة الصف الاول والرابع في جامعة بغداد

الخلاصة:

أجريت هذه الدراسة المقطعية على الطلاب المذكورين في المرحلتين الأولى والرابعة لثمان كليات بجامعة بغداد خلال العام الدراسي ١٩٨٦ - ١٩٨٧. كان عدد الطلاب في المرحلتين ٨٨٦٤. وقد شارك في الدراسة ٤٦٠٤ (٥٢٪). بينت الدراسة أن المدخنين يشكلون ٣٩.٩٪ من مجموع المشاركين، وأن نسبة المدخنين في المرحلة الأولى كانت ٣٠.٧٪ بينما كانت في الصف الرابع ٤٩.٢٪. وقد وجد علاقة إحصائية بين ازدياد نسبة المدخنين والتقدم في سني الدراسة (القيمة المعنوية أقل من ٠.٠٥). وكانت نسبة مكثري التدخين بين طلاب الصف الرابع ٢٠.٣٪ بينما كانت ١٤.٦٪ بين طلاب الصف الأول.

SUMMARY:

A cross-sectional study was conducted on the first and fourth grade male students of eight colleges, Univ of Baghdad, during the academic year 1986-1987, to study and measure prevalence of smoking habit among them. Out of 8864 students at these grades 4604 (52%) participated in the survey. The overall prevalence of smokers is 39.9%. Percentages of smokers among first and fourth grade students are 30.7% and 49.2%, respectively. A statistically significant difference was found between percentages of smokers of the first and fourth grade students ($P < 0.001$). Percentages of heavy smokers among fourth grade students is higher than that of the first grade, 20.3% and 14.6%, respectively.

INTRODUCTION:

Tobacco smoke has been used in Western culture since 16th century, but human inhalation of cigarettes smoke is twentieth century phenomenon. Large number of men began smoking cigarettes during world war 1, while women started smoking cigarettes 25 years later^{1,2}. The relationship between tobacco use and various health problems has been documented by several reports³⁻⁶. Therefore, it is of prime importance to determine the magnitude of smoking cigarettes problem among different sectors of the community, in order to formulate an effective smoking cessation program.

Both percentage of smokers and annual cigarettes consumption per capita has been de-

creased since beginning of the sixties, while both are increasing, particularly among males, in most developing countries⁶.

This study is aiming at determining the magnitude of smoking cigarettes among male students at first and fourth grade at eight colleges, Univ. of Baghdad, as well as the effects of level of education on the prevalence of smoking cigarettes problem and number of cigarettes smoked per day.

MATERIALS AND METHODS:

This prevalence study was conducted on male students in first and fourth grade at eight colleges of Univ. of Baghdad during the academic year 1986-1987. We decided not to include female students, because during a pilot study they, particularly those at first grade, either did not respond or refuse to participate. Out of 8864 male students at first and fourth grades, 4930 students accepted to participate. Because we decided to draw equal number of students from each grade, therefore, the total number of students included in the study is 4604, with a participation rate of 52%.

A special questionnaire was constructed by the research team. It contains inquiries about smoking habit, reasons for smoking, number of cigarettes smoked per day, knowing and understanding the danger of smoking and the relationship between smoking cigarettes and various health problems. The questionnaire was administered by a trained group of students of fourth grade, College of Medicine, Univ. of Baghdad.

Chi-square test for contingency is used to test relationship between level of education and prevalence of smoking and the prevalence of smoking cigarettes is expressed as per cent.

RESULTS:

Percentage and number of smokers by college and grade are illustrated in Table 1. Percentage of smokers among students at first grade is lower than among students at fourth grade, except for students at Veterinarian College where 56% and 54% of students at first and fourth grade, respectively, are smokers.

Overall prevalence of smokers among the study population is 39.9% (1839/ 4604). Among students at first grade smokers constitute 30.7% (707/ 2302), while they constitute 49.2% (1132/ 2302) of students at fourth grade (Table 2). A statistically significant relationship was found between increase in percentage of smokers and advancing in level of education ($P < 0.001$).

Thirty-seven per cent (262/ 707) of first grade students sometimes smoke cigarettes compared to 22.4% (254/1132) of fourth grade students. The results revealed that 23.5% of first grade students smoke less than 10 cigarettes per day compared to 21.6% of fourth grade students. This trend is reversed among those who smoke 10-20 and more than 20 cigarettes per day; where 35.7% of fourth grade student smoke 10-20 cigarettes per day compared to 24.9% of those in the first grade, and percentages of those who smoke more than 20 cigarettes per day are 20.3% and 14.6% for the fourth and first grade students, respectively (Table 3).

Out of the total sample studied 54.5% (2509/ 4604%) realize the hazardous effects of smoking cigarettes compared to 2.8% (127/ 4604) who do not know that smoking cigarettes have adverse health effects, and 14.6% (761/ 4604) do not care to know about the relationship between smoking and its hazardous effects (Table 4).

Table 5 presents type of diseases that could

Table 1- Smoking status by grade and college.

College and grad	smokers		nonsmokers		total	
	No.	%	No.	%	No.	%
Science	114	21.2	422	78.8	536	100.0
	194	36.2	342	63.8	536	100.0
Administration and Economy	219	43.8	281	56.2	500	100.0
	267	53.7	233	46.3	500	100.0
Engineering	107	22.8	363	77.2	470	100.0
	250	53.2	220	46.8	470	100.0
Art	73	20.9	227	79.1	350	100.0
	169	48.3	181	51.7	350	100.0
Education	77	39.3	119	60.7	196	100.0
	159	81.1	37	18.9	196	100.0
Dentistry	20	13.3	130	86.7	150	100.0
	42	28.0	108	72.0	150	100.0
Veterinarian	28	56.0	22	44.0	50	100.0
	27	54.0	23	46.0	50	100.0
Agriculture	19	38.0	31	62.0	50	100.0
	24	48.0	26	52.0	50	100.0
Grand total	1839	39.9	2765	60.1	4604	100.0

Table 2- Smoking status by grade.

Grade	smokers		nonsmokers		total	
	No.	%	No.	%	No.	%
first	707	30.7	1595	69.3	2302	100.0
fourth	1132	49.2	1170	51.8	2302	100.0
total	1839	39.9	2765	60.1	4604	100.0

$$\chi^2 = 136.6 \quad df = 1 \quad P < 0.001$$

524

Table 3- Number of cigarettes smoked per day by grade.

number of cigarettes smoked per day	first grade		fourth grade		total	
	No.	%	No.	%	No.	%
Sometimes	262	37.0	254	22.4	516	28
less than 10	116	23.5	244	21.6	410	22.3
10 - 20	176	24.9	404	35.7	580	31
more than 20	103	14.6	230	20.3	333	
total	707	100.0	1132	100.0	1839	100.0

Table 4- Understanding danger effects of smoking cigarettes on health by grade.

level of Understanding	fir. t grade		fourth grade		total	
	No.	%	No.	%	No.	%
fully understand	1220	53.0	1289	56.0	2509	54.5
do not understand	68	3.0	59	2.6	127	2.8
do not care	336	15.9	305	13.2	671	14.6
do not answer	648	28.1	649	28.2	1297	28.2
grand total	2302	100.0	2302	100.0	4604	100.0

Table 5- Types of diseases associated with smoking cigarettes as to the opinion of 2509 students smokers who realized the adverse health effects of smoking*.

disease	No.	%	Disease	No.	%
Cancer	1108	44.1	Gastrointestinal	224	8.9
Cardiovascular	701	27.9	General malaise	89	3.5
Respiratory	440	17.5	Others	53	5.6

* = One student might give more than one answer.

Others = include psychological disorders, gingivitis, genetic malformation and pollution of environment.

Table 6- Reasons for smoking cigarettes among 1839 smokers.

Reasons	No.	%	Reasons	No.	%
Do not know	605	32.9	Nothing to do	123	6.7
Social and emotial	517	28.1	Burden of study	64	3.5
Like to smoke or mimic others	354	19.2	Personality	29	1.6
Friends	147	8.0	maturation		
			total	1839	100.0

be associated with smoking cigarettes as to the opinion of 2509 students who realize these hazardous effects. The majority of them believe that there is a relationship between smoking and cancer, cardiovascular and respiratory diseases.

Among the total number of smokers, 32.9% (605/1839) do not give reasons for smoking cigarettes, 28.1% (517/1839) smoke because of social and emotional problems, 19.3% (354/1839) like to smoke or mimic others, 8% (147/1839) have smoker friends, and 3.5% (64/1839) believe that the burden or stress of the study is responsible for getting this habit, (Table 6).

DISCUSSION:

The overall prevalence of smokers among the study population is 39.9%. Percentages of smokers among first and fourth grade students are 30.7% and 49.2%, respectively. Similar results were reported by Al-Ramadani when studied the prevalence of smoking habit among first and sixth grade students at Mosul Medical College, 27.2% and 48%, respectively⁸. The same trend of increase in prevalence of smoking cigarettes as the students preceeded through years of study was reported, also, by other studies carried on students in Baghdad and Mosul Medical Colleges⁹⁻¹¹. But, the prevalence of smokers reported by these studies was lower than that what we found.

This could be due to differences in the nature and characteristics of the sample studied i.e. medical students versus students from non-medical colleges. Students of colleges of medicine are expected to be more aware of their health and have more knowledge about the relationship between smoking cigarettes and development of various health problems. These facts together with the results illustrated by this study that the percentages of heavy smokers increased with advancing in level

of education and 54.5% of this educated population realizes the hazardous effects of smoking cigarettes, reflect a grave negligence of this serious epidemic, which keeps growing among our communities, by our most respectable and influential educational and scientific institutions. They reflect, also, the need for an effective smoking cessation program for this important sector of the community and the general population, too.

Al-Diwan et al¹², reported that 57% of secondary schools students in Saddam City, Baghdad, were smokers and 90% of the smokers start smoking after age of 12 years, this fact emphasizes the fact to start smoking cessation programs among students at secondary schools, because these students will bring this habit with them when they transfer to the universities later.

Of the 1839 smokers, 28.1% smoke cigarettes because of social and emotional problems and 38.5% do not give reasons for smoking cigarettes. Al-Fikiki¹³ carried out a survey on a sample of teachers in Baghdad. He reported that 60% of the smokers use tobacco because of social and emotional problems and 10% do not give reasons for smoking cigarettes. These differences could be attributed to the nature, composition and characteristics of the two samples studied (medical students versus teachers).

Depending on the findings illustrated by this survey we recommend a comprehensive and prompt smoking cessation program to be started at primary schools and include secondary schools and all colleges under the direction and supervision of both social and scientific leaders of the community to ensure high cooperation and effectiveness during the implementation of such program. The role of mass media in educating different sectors of the community is of prime importance in this respect.

REFERENCES:

- 1- Holbrook, J.H. Tobacco smoking. In: Harrison's principles of internal medicine. 10th ed. Pup. McGraw-Hill Int. book Co. London, pp 1302-1305 1982.
- 2- Holbrook, J.H. Smoking cigarette. In: Environmental and occupational medicine. 1st ed. Pup. Little Brown and Co. Boston, pp 785-795 1983.
- 3- W.H.O. Smoking and its effects on health. WHO tech rep ser. 568, 51. 1975. Geneva.
- 4- Jacobson, B. Smoking and health: a new generation of campaigners. Br. Med. J. 1983, 287, 483.
- 5- Willard, N. Tobacco against youth: international warnings. WHO chron, 1982, 36, 73.
- 6- W.H.O. Smoking control strategies in developing countries. WHO tech. rep. ser. 695, 1983. Geneva.
7. لجنة التخطيط والمتابعة، دائرة التسجيل - جامعة بغداد. 1987
8. الرضائي وطوب: دراسة مقارنة لانتشار عادة التدخين بين طلاب السنة الأولى والأخيرة في كلية طب الموصل للسنة الدراسية 1984 - 1985. بحث قدم في مؤتمر الاورام في الموصل.
- 9- Al-Saleem, T. Butrous, G and Murrani, W. Smoking behavior among medical students in the University of Baghdad. J. Fac. Med. Baghdad, 1978, 20, 4-8
- 10- Jawadi, S.A. Smoking habit among medical students. Jordan Med. J., 1984 18(1): 79-89.
- 11- Al-Rawi, M. Haboubi, G. and Khaznadar, M. Epidemiological characteristics of smoking habit among medical, paramedical personnel, Medical City Hospital, and medical students, Univ. of Baghdad. Personal communication.

الديوان، ج. الحديث، ط. البلاغي، س. والنثري، ع. -
تدخين السكائر بين طلاب المدارس الإعدادية الذكور في
مدينة صدام، بغداد: تحت الطبع.
الفكيكي، أ. التدخين وآثاره الاجتماعية ومضاره الصحية.
الطبعة الأولى، دار القادسية للطباعة، 1981.