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CIGARETTE SMOKING BEHAVIOR AMONGSECONDARY SCHOOL STUDENTS IN BAGHDAD / RISAFA.

Dr. Lamyaa Ali Hasan[1]*, Dr. Abdul Hussain M. Al-Hadi[2], Ibaa Abid Ali Essa[3]

[1]MBChB, FICMS-FM Family Physician Specialist In Al Mustanseria PHC Training Center of Family Medicine/ Baghdad.
[2]MBChB, DPH, MSc, PhD, Professor of Community Medicine.
[3]FICMS-RAD Al Kindy Teaching Hospital.

***Corresponding Author: Dr. Lamyaa Ali Hasan**
MBChB, FICMS-FM Family Physician Specialist In Al Mustanseria PHC Training Center of Family Medicine/ Baghdad.

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ABSTRACT

Background: Tobacco smoking is considered a major public health problem in both developed and developing countries since approximately 4 million people die prematurely from tobacco – related illnesses each year, with deaths expected to rise to 10 million each year by 2030. **Objective:** To examine factors influencing cigarette smoking among secondary school students and to assess their knowledge and attitude towards cigarette smoking. **Subjects and methods:** A Cross sectional study was carried out during the period of three months started from the 5th of January to the 5th of April/2007 to study smoking behavior among secondary school students. The study done on 36 governmental secondary schools selected in a systematic random sampling from calm areas in Baghdad/ Risafa, the study include male and female students, academic (general) and nonacademic (Technical, Commercial, Art and Teacher's Institute) schools. Self administrated questionnaires were distributed to 1492 Student (response rate was 99.5%). **Results:** Prevalence of smoking among secondary school students was 9.8%, significantly higher prevalence found among male (13.5%) than female students (2.6%) and higher prevalence found among nonacademic (13.5%) than academic schools (9.6%). Prevalence of smoking increases with age (higher in more than eighteen years old), and 58.9% of smokers of secondary school students started smoking in age more than fifteen years old, but still 15.8% started smoking in age less than twelve years old. Family history of smoking was higher in smoker than nonsmoker student. Most common cause for initiating smoking was influence by friends followed by reducing tension and anxiety, while most common cause for quitting was that they don't believe in smoking, and so results shows that 74% try quit smoking. Three quarter of students were knowledgeable about the bad effect of smoking on their health and on others and most smoking related diseases mentioned by the students were CA lung, Bronchitis, Atherosclerosis and Heart diseases while other diseases were less known. **Conclusion:** The study concluded that health education strategies are important since smoking started in younger age group, school smoking control efforts should target parents, teachers and students and should start as early as primary school, government commitment and social support are important if these programs are to be implemented and sustained.

KEYWORDS: Cigarette smoking, Secondary school students, knowledge, attitude.

INTRODUCTION

Tobacco smoking is considered a major public health problem in both developed and developing countries since approximately 4 million people die prematurely from tobacco – related illnesses each year, with deaths expected to rise to 10 million each year by 2030.[1]

WHO estimates that cancer-related deaths will increase by 20 percent over the next 10 years, killing over 9 million people in 2015. Seventy percent of those deaths will be in low and middle income countries, many of which are concurrently experiencing sudden and dramatic rises in risk factors such as increased tobacco use, alongside unhealthy diets and decreased physical activity. There is not a single country, not a community, and hardly a family, untouched by cancer. In short, we are facing a major, and growing, global health crisis.[2]

Children, who represent the building blocks of the future, are a large and significant segment of the population. Many of tobacco's future victims are today's children, and 250 million children alive today will be killed by tobacco in the future if current consumption trends continue. Recent trends indicate an early age of initiation

of smoking and rising smoking prevalence rates among children and adolescents.[3]

Close to 50 percent of children are exposed to passive smoke at home. The highest smoking rates among youth are found in Central and Eastern Europe, sections of India and the west Pacific Islands. Health and medical experts agree that we must discourage children from starting to smoke and becoming addicted if we are to control the tobacco disease pandemic.[4]

Global Youth Tobacco Survey (GYTS) was conducted in thirteen countries in Asia and Europe, It was found that students started Smoking at an early age and the majority of current smokers wanted to quit smoking. The smoking prevalence rates of students ranged from very high of 33% to a low of 10%. More than 90% of first-time use of tobacco occurs before high school graduation and approximately 40% of teenagers who smoke eventually become addicted to nicotine. Because the average age at first use is 14.5 years, smoking prevention must start early.[3]

To sustain the decline in smoking prevalence, efforts must be intensified to discourage smoking initiation and to promote smoking cessation. Tactics for promoting cessation and reducing the prevalence of smoking include tobacco excise taxes, enforcing minor access laws, prohibiting smoking in public places and reducing tobacco advertising and promotion.[5]

SUBJECTS AND METHODS

Study design and setting: A cross sectional study was conducted on secondary school students in Baghdad/ Risafa, consent was obtained from administration of education in Baghdad / Risafa (first, second, third) and school administrators. Data collection started on fifth of January to the fifth of April /2007.

Study sample: Out of three hundred sixty four (364) governmental secondary schools, thirty six schools (10% of total) were selected randomly (systematic random sampling) in Baghdad/Risafa, different types of secondary school educations represented, Academic (general) and Nonacademic (Technical, Commercial, Art and Teacher's institute). Male and female schools were included in the study, out of thirty six secondary schools, twenty two (60%) are male schools, eighteen of them are general secondary schools and four are of nonacademic school, and fourteen(40%) are female schools, twelve of them are general secondary schools and two are of nonacademic schools, from each school, (10%) of students who were present at time of the study were selected to participate in the study, in a systematic random sampling every tenth students chosen from each class.

Method: Data obtained through self administrated questionnaire, aim of the study was explained to students and announced that all personal identifications not taken or included in the questionnaire to assure confidentiality.. The questionnaire was distributed to the students with aid of one of the authers of the school. Data collected by the questionnaire was based on world health organization (WHO) guidelines for conduct of tobacco smoking surveys for young people,[6] with additional questions taken from a study in Saudi Arbia.[7] it contains questions on personal background, history of smoking status an knowledge and attitudes towards cigarette smoking. One thousand four hundred ninety two (1492) students responded to the questionnaire, only seven of them excluded before data computed due to incomplete data (response rate was 99.5%).

Statistical analysis: Data were analyzed using Statistical Package of Social Science (SPSS) version 14, statistical associations between smoking status and study variables were tested with Chi squared distribution, level of significance was set at $P \leq 0.05$.

RESULTS

Out of 1485 of secondary school students in Baghdad / Risafa, 146 were smokers (9.8%).

The relationship between smoking habit and some demographic characteristics shown in table (1): one hundered forty four students were less than 16 years old, 5 of them were smokers (3.5%), one thousand one hundered one students were in age group (16—18), 82 of them were smokers (7.4%)., two hundered forty were more than 18 years old, 59 of them were smokers (24.6%), the differences was statistically significant ($P<0.0001$).

Nine hundered eighty six were male students, 133 of them were smokers (13.5%). And 499(33.6) female students, 13 of them were smokers (2.6%). The difference was statistically significant ($P<0.0001$).

Out of 1485student, 1389 were from general secondary schools, 133 of them were smokers (9.6%). And 96 students were from technical, commercial, art and teacher's institute, 13 of them were smokers (13.5%). The difference was not significant statistically ($P= 0.207$).

Social status: 1428 were single, 133 of them were smoker (9.3%), and 57(3.8%) students were married, 13 of them were smokers (22.8%). The difference was statistically significant ($P=0.001$).

Table 1: The association between smoking habit and some demographic characteristic of the studied group of secondary school students.

Demographic Characteristics		Smokers	Nonsmokers	Total	x^2	P value
Age(years)	<16	5(3.5)	139(96.5)	144(100	72.54	< 0.0001
	16 - 18	82(7.4)	1019(92.6)	1101(100)		
	>18	59(24.6)	181(75.4)	240(100)		
Gender	Male	133(13.5)	853(86.5)	986(100)	44.27	<0.0001
	Female	13(2.6)	486(97.4)	499(100)		
Education	General	133(9.6)	1256(90.4)	1389(100)	1.59	0.207
(technical, commercial, Art, teacher's institute)		13(13.5)	83(86.5)	96(100)		
Social status	Single	133(9.3)	1295(90.7)	1428(100)	11.25	0.001
	Married	13(22.8)	44(77.2)	57(100)		
Total		146(9.8%)	1339(90%)	1485(100%)		

Family history of smoking found in 108 of smokers (74%). Among smokers, 28(19.2%) had smoking fathers and 20(13.7%) smoking brothers, while 4(2.7%) of smokers had smoking mothers, only 5 of smokers (3.4%) had other family members who smoked. 51 of smokers (34.9%) had more than one member in their family who smoked. The association of student's smoking status and family history of smoking found to be statistically significant (P<0.00001) (Table 2).

Table 2: Relationship between history of smoking among family members and student's smoking status.

Family history of smoking	Smoking habit	
	Smoker N=146 n(%)	non- smokers N=1339 n(%)
Yes	108(74)	648(48.4)
No	38(26)	691(51.6)
Father	28(19.2)	344(25.7)
Mother	4(2.7)	
Brother	20(13.7)	135(10.1)
Others	5(3.4)	84(6.3)
More than one member	51(34.9)	85(6.3)
None	38(26.0)	691(51.6)

History of smoking, cigarettes smoked and trial of quitting among secondary school students shown in table (3). Out of 146 smokers, 23 of them (15.8%) started smoking at age of less than 12years, and 37 started at age of 12—15 years (25.3%), while 86(58.9%) started at age of more than 15 years old. 79 of smokers (54.1%) smokes less than 10 cig./day while 35(24.0%) smoke more than 20 cig./day. 80 of smokers were daily smokers(54.8%), and 67 of smokers (45.9%) their families know about their smoking, and 108 of the smokers try quitting (74.0%).

Table (3): History of smoking, cigarettes smoked and trial of quitting among secondary school students.

Smoking history		Smokers N=146 n (%)
Age at which smoking commenced	< 12 years	23 (15.8)
	12—15	37 (25.3)
	> 15	86 (58.9)
Number of Cigarettes / day	<10	79 (54.1)
	10—20	32 (21.9)
	>20	35 (24.0)
Do you smoke Daily	Yes	80 (54.8)
	No	66 (45.2)
Family knowledge about your smoking	Yes	67 (45.9)
	No	79 (54.1)
Have you ever tried quitting	Yes	108 (74.0)
	No	38 (26.0)

Of the responses, the reason given for smoking shown in table (4), 50(34.2%) reported influence by friends as the main reason for smoking, 30(20.5%) said that they use it to reduce tension and anxiety, other less common reasons was influence by their family members (5.5%), feeling of self-confidence **(**0.7**%)** and pleasurable feeling **(**4.8**%)** and (28.8%) give more than one reason.

Table (4): Reasons for developing cigarette smoking behaviors among secondary school students.

Reasons for developing smoking behavior	Smokers N=14 n (%)
Influenced by friends	50 (34.2)
Influenced by family members	8 (5.5)
Self – confidence feeling	1 (0.7)
Pleasurable feeling	7 (4.8)
Reducing tension and anxiety	30 (20.5)
Other reasons*	8 (5.5)
More than one reason	42 (28.8)

*Others include: Just wanted to try it, an act of rebellion or defiance against their parents or people of authority. their favourite film star smokes.

Common reason for quitting was that they didn't believe in smoking 30(27.8%)**,** other reasons were financial reason 13(12%), family and friends pressure 12(11.1%), negative effect on health 14(12.9%), and 29 (26.9%) give more than one reason (Table 5).

Table (5): Reasons for quitting smoking in smokers group in secondary school students.

Reasons for quitting	Smokers tried quitting (N=108) n (%)
Financial	13(12
Family and friends pressure	12(11.1)
-ve effect on health	14(12.9)
Not believe in smoking	30(27.8)
Other reasons*	10(9.3)
More than one reason	29(26.9)

*Others include: cigarettes are the leading cause of death from residential fires. Smoking gets me in trouble at school, I don't want my parents to find out.

Table (6) shows that (18.5%) of smokers said that smoking is harmful to smoker's health only compared with (11.4%) of nonsmokers the difference was statistically significant (P = 0.04), (67.8%) of smokers agree that smoking is harmful to others health also compared with (78.2%) of nonsmokers, the difference was statistically significant (P=0.008) and (64.4%) of smokers said that it lead to addiction compared with(75.1%) of nonsmokers, the difference was statistically significant (P<0.0001) and (89%) of smokers said that smoking lead to serious diseases compared with (97%) of nonsmokers, the differences were statistically significant (P<0.0001).

Table (6): Knowledge of the studied group (smokers and nonsmokers) of secondary school students regarding the effects of smoking.

Effect of smoking	Smokers N=146			Non-smokers N=1339			x^2	Pvalue
	Yes n (%)	no n(%)	don't know n(%)	Yes n (%)	no n(%)	don't know n(%)		
Harmful to smoker's health only	27(18.5)	104(71.2)	15(10.3)	153(11.4)	1056(78.9)	130(9.7)	6.44	0.04
Harmful to smoker's surroundings health also	99(67.8)	8(5.5)	39(26.7)	1047(78.2)	33(2.5)	259(19.3)	9.74	0.008
Smoking leads to addiction	94(64.4)	14(9.6)	38(26.0)	1006(75.1)	17(1.3)	316(23.6)	46.2	<0.0001
Smoking leads to serious diseases	130(89.0)	8(5.5)	8(5.5)	1299(97.0)	1(0.1)	39(2.9)	67.06	<0.0001

DISCUSSION

Although every effort was made to provide an atmosphere of privacy and confidentiality among the surveyed, underreporting, especially by female students, could not completely be ruled out.

In this study the prevalence rate of smoking among secondary school students was (9.8%) and since we couldn't find any previous studies on smoking behavior in secondary school students in Iraq, we 'll mention here the prevalence among youth in Iraq, were it was found that prevalence of smoking among age group (15–18) year was (41.4%) and among age group (19 – 24) was (61.4%).[8] the prevalence of smoking above 15 years age in Iraq was (23.2%).

The results found in our study was lower than those done in Palestine (12%),[9] Aden (19.6%).[10]

It's evident from results of the study that smoking increases with age and is more prevalent in age group (>18 year), same result found in study done in Saudi Arabia.[11] Aden.[10] youth in Iraq (more in age group 19–24year)(8),and in study done in Bahrain on male secondary school students it was more in age group (18-20year)(37.8%)(12) While lower prevalence of smoking was in age group (<16 year) (3.5%) which is less than that done in Turkey (10%) (13). This is different from the pattern found in developed countries, were almost all regular smoking begins before age of 20 years and smoking prevalence tends to decreases with age.[14]

There was significant association between cigarette smoking behavior and gender in our study. Female had lesser prevalence than male (2.6%, 13.5%). Same results regarding male prevalence found in other studies one in Syria, South West Saudi Arabia.[15,7] while it was less than other studies.[9,12,10,16] While prevalence of female in our study is much lesser than other studies, Aden (15.5%)[10] Syria (6.6%).[15] The difference may be due to social and cultural conditions in different communities.

There was no significant association between cigarette smoking behavior and student's education, where general secondary school students prevalence was (9.6%) and non academic prevalence was (13.5%), same result found in other studies.[7,16,17]

There was significant association between smoking behavior and social status of the students, the prevalence was higher among married students, same result found in study done in Central Saudi Arabia.[11]

The influence of family members on smoking status of students was apparent from this study, where the proportion of smokers with positive family history of smoking was high (74%) , Moreover, father's and brother's smoking habit was significant statistically with student's current smoking status (P<0.0001) these results consistent with earlier studies conducted in both developed and developing countrie.[11,18] More than half of students started smoking at age (>15 year) and others (41.4%) below age of 15 year, same result found in other studies.[11,19] This parameter should be of immense importance in formulating health education strategies, thus anti-smoking campaigns can focus on younger age groups.

More than half of smokers smoke less than 10 cigarette/day and more than half are daily smokers, same found in a study done in Syria, where half of male smokers are daily smokers(47.4%) and they smoke an average of (8.9±5.6 cig./day).[15]
The results showed that influence by friends was the main reason for developing cigarette smoking behavior in studied sample, similar findings observed in other studies.[11,16,18,20] Second reason reported in the study was reducing tension and anxiety, same result found in one study.[11] while effect of teachers reported in other study to be (20%).[18]

The data of the present study reveal that most school students are reasonably knowledgeable of the harmful effect of smoking and about three quarter of the students know that smoking is not only harmful to their own health but to other's health and that cigarette smoking leads to addiction and yet still about quarter of them continue smoking. Same results found in other studies were still about (2/3) of youth in a study in Turkey and (44.9%) in other study continue smoking.[11,13]

The knowledge of students to smoking related diseases was variable. Only (0.6%) say it doesn't cause any disease and (8.2%) say it cause disease but they don't know what disease it cause and most of the students mention more than one smoking related disease. Same result found in other study.[11] And so students need to be educated on smoking and its effects before lighting their first cigarette.

CONCLUSION

Onset of smoking in secondary school students is alarming, so health education strategies are important since smoking started in younger age group. School educational smoking programs is important, and school smoking control efforts should target parents, teachers and students and should start as early as primary school, government commitment and social support are important if these programs are to be implemented and sustained. Wider studies need to be done to study effect of school educational smoking programs on smoking behavior of the students.

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