

Eureka Journal of Health Sciences & Medical Innovation (EJHSMI)

ISSN 2760-4942 (Online) Volume 2, Issue 7, July 2026



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KNOWLEDGE, ATTITUDES AND PRACTICES OF AL-RAFIDAIN UNIVERSITY COLLEGE'S STUDENTS TOWARDS SMOKING

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Abstract:

Background: Cigarette smoking remains a major public health concern worldwide, particularly among young adults and university students, and one of the leading preventable causes of morbidity and mortality worldwide.

Objectives: To estimate the Knowledge, attitudes and practice towards smoking, and finding the source of information about smoking in Al-Rafidain University College's students.

Method & Subjects: This is a cross-section study through online survey, a questionnaire designed through Google form, and by distributed the electronic link to students' telegrams channels of the Al-Rafidain university college. The study conducted from 25/9/2024 -25/1/2025.

Results: Five hundred and thirty-four students enrolled in this study, through online survey about smoking. The highest percent 336(62.9%) in the age group 20 and below, females 342(64.0%), in the second stage 271(50.7%), never married 504(94.4%), most participants think they had moderate monthly income 339(63.5%), living in urban 517(96.8%). The majority of students 516(96.6%)

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living with their parents, who still living together 461(86.3%). About the educational lever of the parents; the highest percent of the students' fathers 201(37.6%) complete college / institution, followed by complete primary 144(27.0%). Opposite to their mothers 201(37.6%) complete primary, followed by 156(29.2%) of them complete secondary.

Conclusion: A significant portion of the Students at Al-Rafidain University College, primarily male, engages in the habit, heavily influenced by peer pressure and used as a coping mechanism for stress. There is high attempt to quit smoking but is not adequately supported. It needs active integration cessation support into primary healthcare services targeting this demographic.

Keywords: smoking, college-students, knowledge, attitude, Cigarette, Electronic cigarette, nargileh, Baghdad, Iraq.

Introduction:

Tobacco use through cigarette smoking is still a serious problem all over the world. It is one of the preventable health issues that affects especially young adults, college and university students being among them. According to WHO, smoking contributes to about 8 million deaths per year including over a million because of second-hand smoke exposure. However, the health organization underlines the serious burden of diseases related to tobacco and cigarette smoking even after decades of public health measures implemented.

While in many developed countries smoking prevalence is decreasing because of these measures, the prevalence is growing or remaining high in some developing countries, thus perpetuating health disparities.

Even though students are aware of the negative health effects of cigarette smoking, some of them keep smoking because of various reasons like stress, social approval, lack of appropriate treatment. Cigarette smoking remains to be an important public health issue for the country like Iraq with lots of university

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students. Recent studies show that there is a gap between students' knowledge and attitudes to smoking and smoking behavior.

Negative effects of cigarette smoking involve not only health-related outcomes but also social, economic and even environmental consequences. Cigarette smoking is maintained and kept by nicotine addiction caused by pharmacological effects of tobacco products. There are lots of treatments available for cessation but nicotine dependence makes it difficult. At the same time, the emergence of new types of tobacco products and their marketing creates a challenge for existing measures in the sphere of tobacco control, especially among young people.

College students are prone to adopt smoking behavior due to peer pressure, stress, personal freedom, socialization. Knowing KAP (Knowledge, Attitudes, Practices) of students to smoking is necessary for developing interventions for prevention of tobacco use and smoking-related health effects. As a well-known private educational institution located in Baghdad, Al-Rafidain University College includes lots of students whose health behavior and beliefs have impact on public health. Studying KAP of the college students gives valuable information about the factors sustaining the use of tobacco and helps to create health education and intervention programs for this population group. Thus, knowing KAP of the students in this situation is useful to detect the gaps in knowledge and misconceptions about smoking, as well.

This paper aims to consider the current state of cigarette smoking, health effects, consequences, the efficacy of prevention and cessation strategies, and to assess the KAP of students of Al-Rafidain University College towards smoking. The findings are expected to support evidence-based strategies for health promotion and tobacco control in Iraqi academic institutions.

Objectives:

1- Estimate the Knowledge, attitudes and practice of Al-Rafidain University College's students towards smoking

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- 2-Find the source of information about smoking in Al-Rafidain University College's students.
- 3-Find the smoker profile of Al-Rafidain University College's students.
- 4-Find the association between the smoking status of the students and some demographic variables.

Method & subjects:

Study Design: cross section study through online survey, a questionnaire designed through google form, and by distributed the electronic link to students' telegrams channels of the Al-Rafidain university college. The study conducted from 25/9/2024 -25/1/2025.

Ethical approval: The Al-Rafidain University College research committee has approved the study protocol. Every participant was informed of the study's objectives, and the permission notice at the beginning of the computerized questionnaire makes it apparent that the information will be kept confidential. The computerized questionnaire and the researcher's goal of facilitating orders were shared with all departments of Al-Rafidain University College.

Study population:

Included criteria: its enrollment All the students studying at Al-Rafidain University College from all departments (Dental, Pharmacy, Anesthesia Techniques, Bioscience, Medical Laboratories, Radiology, Medical-Device-Technology, Civil Engineering, Computer Engineering Technologies, Engineering of Power Mechanics Technologies, Law, Business Administration & Accounting), of all ages & both sexes.

Excluded criteria: Any student who does not complete the online survey will be excluded.

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The questionnaire

An Arabic online questionnaire that was pre-made and self-administered was used to gather data. It was adapted from the questionnaire of the WHO Global Youth Tobacco Survey. ⁽⁹⁾

The questionnaire consists of five parts: **the first demographic** features consist of 11 questions (age, sex, stage, marital status, monthly income perception, residency, student is living in parents, parents' situation, father educational level, mother educational level, father smoking any type, mother smoking any type, siblings smoker any type, friend smoker any type.)

The Second part consists of 13 questions for knowledge about smoking, first nine questions were "Did the smoking causes these diseases (stroke, MI, worse Asthma, DM, Sexual dysfunctional, Pregnancy complications, Lung cancers, Uterus, breast & prostate cancers, organic addiction & psychological addiction)" and the four question were "did the Tobacco smoke contains (Tar poisoning material, carcinogenic & poisoning material, Passive smoking harm to me, small amounts of lead 210 & polonium 210)". Additionally; the last question about source of information.

The third part is about the attitude had 6 questions, three negative questions ("Nargileh less harm than cigarrete", "my future partner accepts to be smoking", "In the future, my children accept to be smokers"), and three positive questions ("Financial effect of smoking", "smoking of others near me harmful to me", "Prevention of smoking by law"), the last question about smoker students feeling about their smoking,

The fourth part is about the practice had eight questions ("Smoking start", "still smoking", "if you smoking now or previously what is smoking type (Can smoke more than one types)", "If you smoking now or previously what is smoking type (Can smoke more than one types)", "Who was encourage you to smoke", "smoking usual places", "Goes to restaurants specially for smoking", & "One Yr Attempt Stopping Smoking").

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Also, one question about reasons why students smoke, another about their response about PHC & hospital doctor advice to stop smoking.

The questionnaire tested by pilot study by 20 students not included in the study sample, and reliability test done for 13 knowledge questions, the Cronbach's Alpha = 0.656, while the 6 attitude questions, the Cronbach's Alpha = 0.525.

& also expired opinion taken (two community physicians and three family physicians).

The scoring of the Overall Knowledge

13 questions (Yes = 3, I don't know =2, No = 1)	Poor knowledge (13-21)
	Accepted knowledge (22 -30)
	Good knowledge (31-39)

The scoring of the Overall attitude

6 questions 3 Negative questions: (strongly disagreed= 5, disagreed= 4, neutral= 3, agreed= 2, strongly agreed= 1) 3 positive questions: (strongly disagreed= 1, disagreed=2, neutral= 3, agreed= 4, strongly agreed= 5)	negative attitude (6-13)
	neutral attitude (14- 21)
	positive attitude (22- 30)

Sampling technique:

by distributed the online survey to students' telegrams channels of the Al-Rafidain university college, which they were all students linked in, of all ages & both sexes, they were free to enrolled in the survey or not, no name or e-mails collected with one response only.

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Statistical analysis Outcomes and procedures:

The answers were downloaded from the electronic form of the Questionnaire (Google-form) to the computer as an excel file and imported to SPSS ver. 26 to be analyzed. Also, overall knowledge and overall attitude were calculated.

An analysis of the data; frequencies, percentages, a chi-square test, (and Yate correction), the data were examined. P-value is regarded as significant if it's less than 0.05.

The Results

Five hundred and thirty-four students enrolled in this study, through online survey about smoking, with mean 20.8 and standard deviation 3.551, and the highest percent 336(62.9%) in the age group 20 and below, females 342(64.0%), in the second stage 271(50.7%), never married 504(94.4%), most participants think they had moderate monthly income 339(63.5%), living in urban 517(96.8%).

The majority of students 516(96.6%) living with their parents, who still living together 461(86.3%).

About the educational lever of the parents; the highest percent of the students' fathers 201(37.6%) complete college / institution, followed by complete primary 144(27.0%). Opposite to their mothers 201(37.6%) complete primary, followed by 156(29.2%) of them complete secondary.

When the students about smoking of the surrounding persons, 275(51.5%) of fathers were smokers, 186(34.8%) of siblings were smoker, and 238(44.57%) of their Friend were smokers, while only 9(1.7%) of mothers were smoker. As appeared in table (1)

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Table (1): Distribution of students according to their demographic variables & their parents' variables:

		Frequency N=534	Percent %
Age Mean =20.80 Std. Deviation=3.551	≤ 20 yrs.	336	62.9
	21 -24 yrs.	159	29.8
	≥ 25 yrs.	39	7.3
Sex	female	342	64.0
	male	192	36.0
Stage	first class	116	21.7
	second class	271	50.7
	third class	102	19.1
	fourth class	45	8.4
Marita status	never married	504	94.4
	currently married	30	5.6
Monthly income perception	low income	172	32.2
	moderate income	339	63.5
	high income	23	4.3
Residency	urban	517	96.8
	rural	17	3.2
Student is living in	my parents' house	516	96.6
	my relative house	11	2.1
	Student accommodation	7	1.3
parents	live together	461	86.3
	died mother	10	1.9
	died father	58	10.9
	both died	5	0.9
Father educational level	not read not write	21	3.9
	complete primary	144	27.0
	complete secondary	131	24.5
	college / institution	201	37.6
	postgraduated	37	6.9
Mother educational level	not read not write	25	4.7
	complete primary	201	37.6
	complete secondary	156	29.2
	college / institution	124	23.2
	postgraduated	28	5.2
Father smoking any type	Not smoking	259	48.5
	smoker	275	51.5
Mother smoking any type	Not smoking	525	98.3
	smoker	9	1.7
Siblings smoker any type	Not smoking	348	65.2
	smoker	186	34.8
Friend Smoker any type	Not smoking	296	55.4
	smoker	238	44.57

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The study revealed that the students had good knowledge 351(65.7%), and most of the answers of the participants were correct about smoking except for question “smoking can be cause worsen DM, and “Tobacco smoke contains small amounts of lead²¹⁰ & polonium²¹⁰”.

Current study also show that the main source of students’ information was internet 382(71.5%) followed by during study- years 348(65.2%), as shown in table (2) and figures (1, 2).

Table (2): Distribution of students according to their **knowledge** about smoking:

		No	%	don't know	%	Yes	%
Smoking can be causes	Stroke	108	20.2	194	36.3	232	43.4
	MI	46	8.6	107	20.0	381	71.3
	worse Asthma	53	9.9	68	12.7	413	77.3
	Worse DM	245	45.9	176	33.0	113	21.2
	Sexual dysfunctional	103	19.3	156	29.2	275	51.5
	Pregnancy complications	27	5.1	96	18.0	411	77.0
	Lung cancers	5	0.9	23	4.3	506	94.8
	Uterus, breast & prostate cancers	114	21.3	187	35.0	233	43.6
	organic & psychological addiction	12	2.2	79	14.8	443	83.0
Tobacco smoke contains	Tar poisoning material	5	1.0	217	40.6	312	58.4
	carcinogenic & poisoning material	7	1.3	59	11.0	468	87.6
	Passive smoking harm to me	7	1.3	62	11.6	465	87.1
	small amounts of lead ²¹⁰ & polonium ²¹⁰	14	2.6	405	75.8	115	21.5

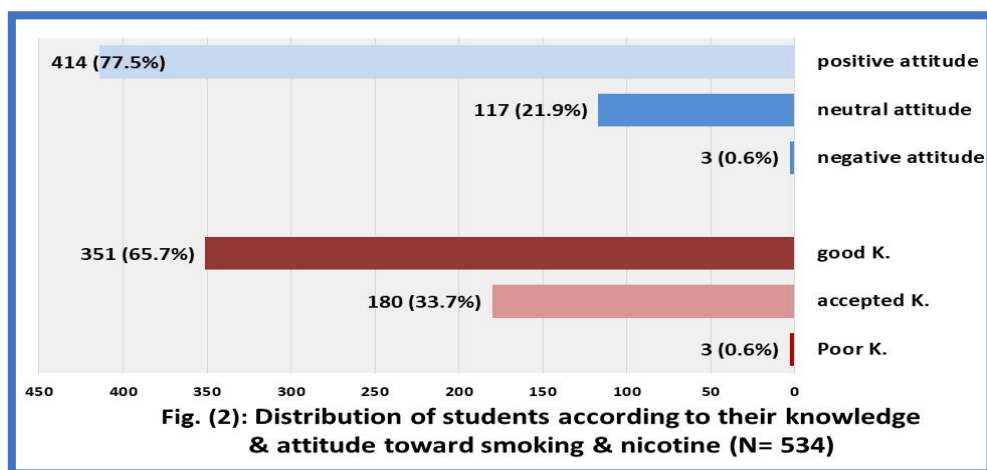
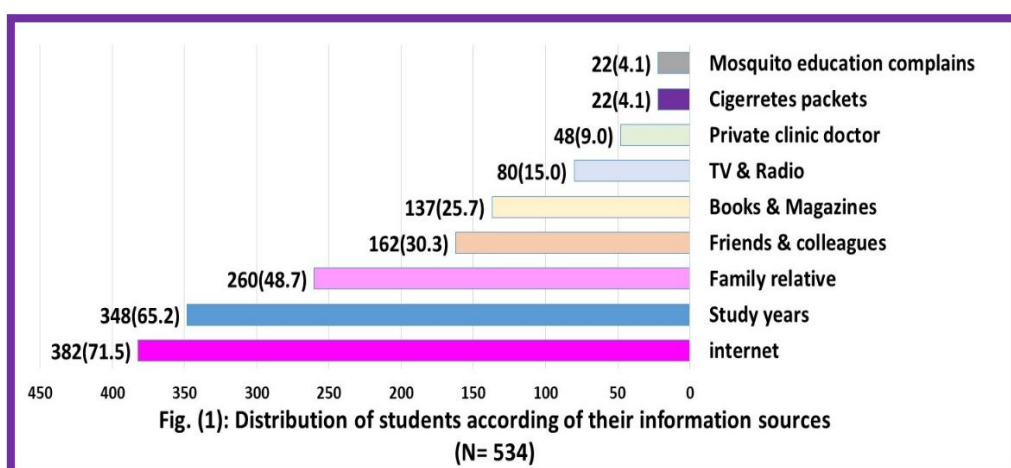
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ISSN 2760-4942 (Online) Volume 2, Issue 7, July 2026



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Students' attitude toward smoking & nicotine showed in table (3) & figure (2), overall attitude was mostly good 414(77.5%), and must of the questions answered correctly.

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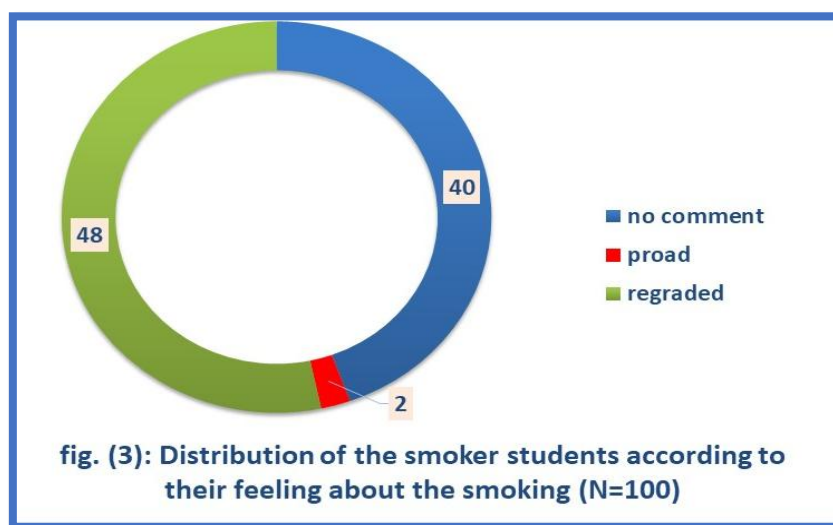
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Table (3): Distribution of students according to their attitude toward smoking & nicotine

		strongly agreed	agreed	neutral	disagreed	strongly disagreed
Negative attitude	Nargileh less harm than cigarette	18 (3.4%)	79(14.8)	108(20.2)	170(31.8)	159(29.8)
	My future partner accepts to be smoking	8(1.5)	33(6.2)	106(19.9)	140(26.2)	247(46.3)
	In the future, my children accept to be smokers	2(0.4)	6(1.1)	29(5.4)	102(19.1)	395(74.0)
Positive attitude	Financial effect of smoking	166(31.1)	185(34.6)	134(25.1)	36(6.7)	13(2.4)
	Smoking of others near me harmful to me	320(59.9)	159(29.8)	32(6.0)	18(3.4)	5(0.9)
	Prevention of smoking by law	360(67.4)	108(20.2)	33(6.2)	21(3.9)	12(2.2)

Hundred students were smoker, 100(18.73%), and when they asked if they feeling proud or regret about their smoking, 48(48%) were regret, while 40(40%) with no answer and only two of them were proud. As shown in figure (3).



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For the 100 students who currently or previously smoker, the highest percent started smoking four years and more, 75 % still smoking till now, Cigarette is the dominant type 71%, followed by Nargileh 42%. Friends and peers 52 % were the main who was encourage them to smoke, followed by Self-psychological causes 27%, and to less extend the Family, relatives, & neighbors 21%. Smoking in the public places 76 %, only 19% in the secret places, and four of them give no answers.

When the smoker students asked about “did you goes to restaurants specially for smoking”, 56 % of them answered, 30 % answered “maybe”, and only 14% they do go to restaurants specially for smoking.

Within one year 68 % of smoker students attempt to stop smoking and 25 % of them succeed in this, and 25% never tried to stop smoking and seven of them were “on & off” in the stopping smoking. All that enlisted in the table (4).

Table (4): Distribution of students according to their smoking details:

		Frequency N= 100	Percent %
Smoking start	less than 1 yr	8	8
	1yrs. -less 2 yrs.	12	12
	2 yrs. - less than 4years	14	14
	4 yrs. and more	46	46
	I don't remember	20	20
Still smoking	No. I was stopped	25	25
	Still smoker	75	75
If you smoking now or previously what is smoking type (Can smoke more than one types)	Cigarette	71	71
	Electronic cigarette	40	40
	Nargileh	42	42
	Cigar	7	7
	C-pipe	4	4

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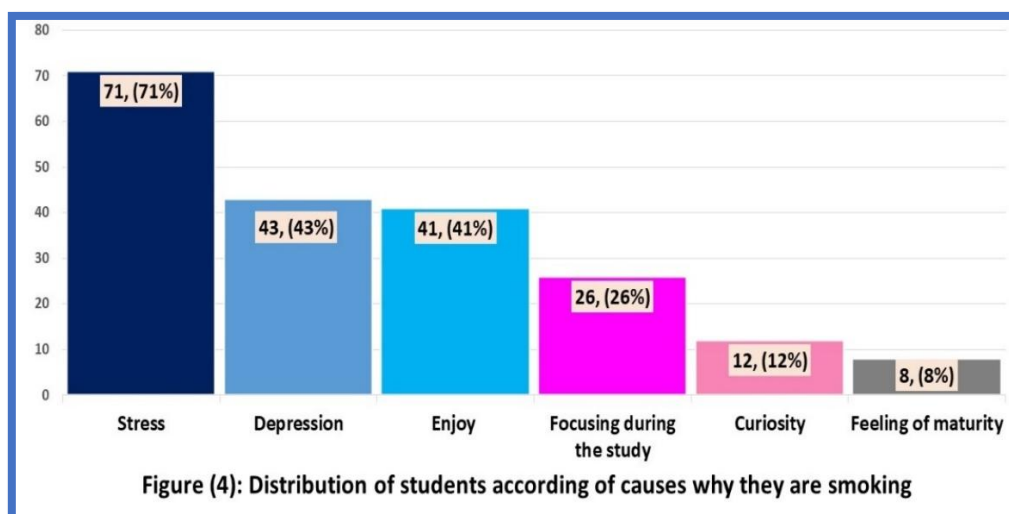


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Who was encourage you to smoke	Friends and peers	52	52
	Self-psychological causes	27	27
	Family, relatives, & neighbors	21	21
Smoking usual places	Secret places	19	19
	Publics places	76	76
	No answer	4	4
Goes to restaurants specially for smoking	No	56	56
	Maybe	30	30
	Yes	14	14
One year Attempt Stopping Smoking	No	25	25
	Yes	68	68
	On & off	7	7

Stress is the main cause to start smoking in 71% of the smoker students, followed by depression 43% them, while 41% they found the smoking enjoying them, other 26 % of them belived that the smoking make them more focousing during their study, 12 % feeling curiosity to smoke, and only 8 % of these students feeling that smoking make them lookes more mature. As appeared in figure (4).



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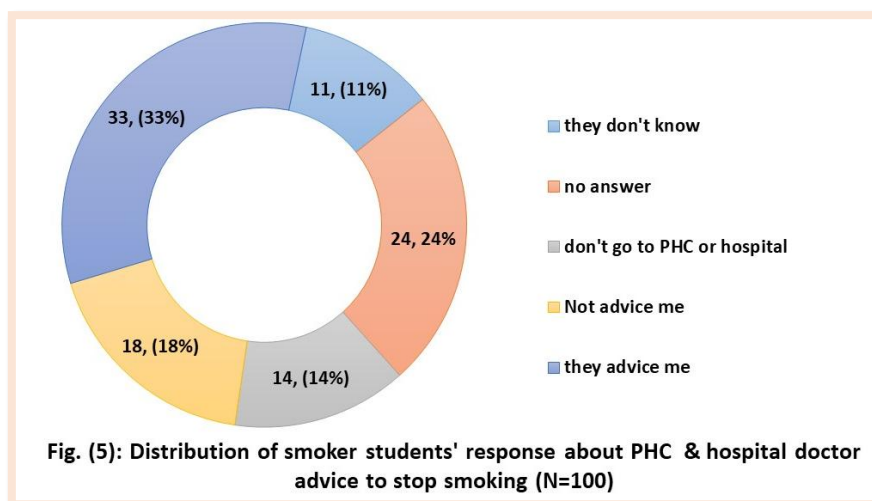
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Regarding the Health education about smoking by PHC or/ & hospital doctors, 24% gave no answer, while 14% of them did not went to the PHC or hospitals, the remaining 62 students went to the PHC or hospital, 11% of then were did not tell the doctors about their smoking, 18 % did not receive and advice to stop smoking, and 33% received advice. As drawing in figure (5).



Current study found signifacnt association between smoking status of students and their age, sex, stage, father smoking any type, mother smoking any type, siblings' smoker any type, smoker friends, overall knowledge, overall attitude as p value (0.001, 0.000, 0.004, 0.019, 0.027, 0.012, 0.000, 0.013, & 0.000 correspondingly). But there is no significant association with Residency, Marita status, Father educational level, Mother educational level, Monthly income perception as the p value above 0.05 (0.318, 0.917, 0.289, 0.482 & 0.094 correspondingly). As shown in table (5).

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Table (5): association between smoking status of students and their demographic variable:

		Smoking status			Total	P-value
		Never smoker	X- smoker	still smoker		
		434	25	75	534	
Age	≤ 20 yrs.	288	14	34	336	0.001
	21 -24 yrs.	122	7	30	159	
	≥ 25 yrs.	24	4	11	39	
sex	female	328	8	6	328	0.000
	male	106	17	69	106	
stage	first class	109	1	6	116	0.004
	second class	215	16	40	271	
	third class	78	6	18	102	
	fourth class	32	2	11	45	
Residency	urban	422	23	72	517	0.318
	rural	12	2	3	17	
Marita status	never married	411	23	70	504	0.917
	currently married	23	2	5	30	
Father educational level	not read not write	16	0	5	21	0.289
	complete primary	124	4	16	144	
	complete secondary	107	9	15	131	
	college / institution	159	12	30	201	
	postgraduated	31	0	6	37	
Mother educational level	not read not write	18	1	6	25	0.482
	complete primary	170	8	23	201	
	complete secondary	130	10	16	156	
	college / institution	94	6	24	124	
	postgraduated	22	0	6	28	
Monthly income perception	low income	130	13	29	172	0.094
	moderate income	283	12	44	339	
	high income	21	0	2	23	
Father smoking any type	Not smoking	223	10	26	259	0.019
	smoker	211	15	49	275	
	Not smoking	429	25	71	525	0.027

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Mother smoking any type	smoker	5	0	4	9	
Siblings' smoker any type	Not smoking	295	15	38	348	0.012
	smoker	139	10	37	186	
Smoker friends	non-smoking	291	1	4	296	0.000
	Having smoker friend (s)	143	24	71	238	
Overall knowledge	Poor K.	1	0	2	3	0.013
	accepted K.	145	9	26	180	
	good K.	288	16	47	351	
Overall attitude	negative attitude	0	0	3	3	0.000
	neutral attitude	76	7	34	117	
	positive attitude	358	18	38	414	

When the students asked about their suggestions; 21(3.9%) of the students suggested prevent smoking in college, 27(5.1%) suggested prevent smoking Law to prevent in public places, and 16(3%) suggested health education companions. And majority 470(88.1%) had no suggestion as shown in table (6).

Table (6): Distribution of students according to their suggestions:

suggestion	Frequency	Percent
No suggestions	470	88.1
prevent smoking in college	21	3.9
prevent smoking Law to prevent in public places	27	5.1
health education companions	16	3.0
Total	534	100.0

Discussion

This cross-sectional study on the Knowledge, Attitudes, and Practices (KAP) of students at Al-Rafidain University College provides critical insights into the tobacco epidemic within an Iraqi academic setting. The results suggest that there is a complicated relationship between high level of knowledge, generally positive

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attitude, and smoking prevalence which has been highly influenced by social and demographic factors. The selected participants of the research were mostly young people under the age of twenty years, females, single, city dwellers, and living with parents. This demographic profile is typical of the undergraduate student population in many Iraqi institutions ^(4,9). A key finding is the high prevalence of smoking in the students' immediate environment: more than half of fathers, one third of siblings, and near half of friends were reported as smokers. This creates a social environment where smoking is normalized, which is a well-established risk factor for smoking initiation among youth and young adults as highlighted in the U.S. Surgeon General's report (2020) ⁽⁷⁾. The high prevalence of smoking among family members and friends is consistent with studies in Iraq ⁽⁹⁾, Saudi Arabia ⁽¹⁰⁾, and Sudan ⁽¹¹⁾. The very low smoking rate among mothers less than two percent is consistent with cultural norms observed in other studies from Iraq ⁽¹²⁻¹³⁾.

The study revealed generally a good knowledge, two-third of students. Majority of students' awareness was particularly high for the links between smoking and lung cancer, addiction followed by pregnancy complications. This aligns with other studies from Egypt ⁽¹⁴⁾, Saudi Arabia ⁽¹⁵⁾, Pakistan ⁽¹⁶⁾, and Malaysia ⁽¹⁷⁾. However, significant knowledge gaps were identified, mirroring findings from other studies from Yemen ⁽¹⁸⁾, Pakistan ⁽¹⁹⁾, and Sudan ⁽¹¹⁾. Only one-fifth knew smoking worsens diabetes mellitus, and three-quarter of them were unaware that tobacco smoke contains radioactive elements like polonium-210. The conclusion drawn from this is that, even though the existence of general health hazards is known, lack of information on pathological and toxicological issues still exists. The internet formed the main source of information for almost three quarters of the students, while study year became the most important factor for over two thirds of the respondents.

Positive attitudes prevailed in 77% of respondents, which shows that the students have negative perception about smoking. In almost all of the cases, the students

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disagree with the idea that Nargileh is relatively harmless compared to cigarettes, will not allow a smoking partner and even their kids to smoke, understand the cost of smoking, and endorse policies against smoking. The strong anti-smoking attitude can be considered an encouraging sign and an enabling atmosphere for strict tobacco control policies. However, the persistence of smoking among these attitudes suggests that there is still a gap between knowledge, attitude, and behavior – an issue which repeatedly emerges in studies about tobacco in the Eastern Mediterranean region. ^(4,8,20,21). This gap is often bridged by addiction, social pressure, and stress ⁽⁷⁾.

The smoking prevalence was near one-quarter of the participants, which is lower than the rates found in other studies from Saudia Arabia (68%) ⁽²¹⁾, Pakistan (49.5%) ⁽¹⁶⁾, and Sudan (32%) ⁽¹¹⁾. The dramatic gender disparity with males being significantly more likely to smoke is a stark finding that reflects deep-seated socio-cultural norms in Iraq ⁽¹²⁻¹³⁾. This aligns with studies in Saudia Arabia ^(10,15,22) and Nepal ⁽²³⁾

Initiation and Type: Most smokers started four years ago and more; this means a large proportion of student smokers began the habit in their mid-to-late teens. This is a vulnerable developmental period where individuals are highly susceptible to peer pressure, stress, and the desire for social acceptance. Cigarettes seventy- one percent were the dominant type, may be due to their low cost, high availability, and potent addictive nature contribute to this dominance. Secondly, the next common group was Nargileh, which was forty-two percent of participants (9.24–25).

The use of this item by many participants is a matter of concern, considering the commonly misunderstood fact that it causes no more harm compared to cigarettes—an idea that even some of the students in this study have. This finding is supported by other studies conducted in Iraq.

Eureka Journal of Health Sciences & Medical Innovation (EJHSMI)

ISSN 2760-4942 (Online) Volume 2, Issue 7, July 2026



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Moreover, the majority of the participants noted that their peers were the main influencers, which is the power of peer influence, a concept also found in other countries such as Iran (26) and Indonesia. ⁽²⁷⁾. Tobacco smoking was mostly caused by stress (71%) and depression, which affected about half of the smokers, suggesting that smoking is a way to deal with mental disorders. This observation is consistent with studies done in Saudi Arabia. ⁽²⁸⁾, The above-stated results clearly show that most of the students tend to smoke in times of stress and under pressure, indicating that smoking cessation support programs need to include psychological counseling. One of the good things about this study is the high proportion of smokers trying to quit during the last year. Moreover, the proportion of those who managed to do it is nearly a quarter. Clearly, there is a huge motivation to stop smoking, and this is one of the important factors to consider when developing cessation support programs. Approximately one-quarter never tried to stop smoking at all.

Role of Healthcare Providers: According to the results, there is a lack of involvement of healthcare providers into the matter. Almost one-third of people who consulted doctors were recommended to quit, and it is a huge lost opportunity for a brief intervention. ⁽⁷⁾.

Statistical analyses revealed several well-established correlations. Smoking was significantly correlated with male sex and advanced age, in agreement with findings of several studies carried out in Iraq ⁽⁴⁻⁵⁾. Furthermore, having a smoking father, brother, or friend represents a very strong modeling effect, which is one of the most stable findings in world literature on tobacco use ⁽²⁷⁾.

As seen from KAP results, increased knowledge on smoking was linked to smoking, which can mean higher exposure to information about dangers of smoking for those who smoke or more engagement of smokers with this information as a result of their smoking practice. Positive attitude was highly correlated with being a non-smoker.

Eureka Journal of Health Sciences & Medical Innovation (EJHSMI)

ISSN 2760-4942 (Online) Volume 2, Issue 7, July 2026



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It turned out that there is no correlation between the socioeconomic status (in terms of parental education and income) and smoking, which means that in the case of this group of students the influence of such factors as social and knowledge-related is more direct.

The absence of any suggestions can be explained by the low awareness of possible measures or the understanding that smoking is a private matter not to be regulated. The few recommendations were related to creating smoke-free colleges and public places as well as implementing tobacco education programs, which are also recommended by WHO. ⁽¹⁻²⁾.

Conclusion

Knowledge levels among students of Al-Rafidain University College are fairly good concerning the risks of smoking, while the attitudes of the same group of students toward smoking are predominantly positive. However, a considerable number of the students smoke and become influenced by peer pressure and need to cope with stress. While efforts made to quit smoking are good, they do not receive sufficient support through systematic quit smoking programs and regular advice of healthcare specialists.

This study reveals an important KAP gap among the students. Raising awareness alone is insufficient. What is needed is a holistic approach that will (a) fill certain gaps in knowledge, (b) address misunderstandings about alternative nicotine products, (c) develop resistance to peer pressure, (d) provide mental health and stress management options, and (e) implement quit smoking programs into primary healthcare delivery.

Recommendation

1. Develop and implement university-specific health education initiatives that focus on dispelling existing myths and providing scientifically based facts about the negative effects of smoking and its constituents.

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ISSN 2760-4942 (Online) Volume 2, Issue 7, July 2026



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2. Implement peer support group programs in order to make use of the positive impact of social interaction in preventing smoking and encouraging cessation.
3. Incorporate mental health services, counseling, and stress management seminars into the university's health services in order to provide alternative ways of handling stress than smoking.
4. Improve training programs for doctors and other health care professionals at the primary level about the significance of providing effective smoking-cessation advice.
5. Implement smoke-free policies in university settings and public places in accordance with the positive attitude of students towards such policies.
6. Perform qualitative research to understand the root causes of the knowledge-practice gap and the situations when smoking behavior is initiated.

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