

Knowledge and Protective Health Behaviors Concerning Risk Factors for Coronary Heart Disease among Baghdad University Students

Aqeel H. Jasim¹, Haider M. Majeed², Tahseen R. Mohammed¹

¹Instructor, Ph.D., ²Assistant Instructor, Fundamentals of Nursing Department,
College of Nursing-University of Baghdad, Iraq

Abstract

Background: Coronary heart disease, a gradual buildup of fatty deposits in the coronary arteries, occurs as a result of several risk factors with 75% attributable to lifestyle choices.

Objectives: To evaluate knowledge and behaviour of Baghdad University students concerning coronary heart disease and to identify the relationship between demographic characteristic data with student's knowledge and health behavior.

Methodology: A cross-sectional design study utilizing a stratified random sampling method. Students of all colleges of Baghdad University (BU) in Baghdad City were included. The respondents were randomly selected from each college. The sample size was 200. Knowledge, health behaviour questionnaire was developed and distributed to the respondents involved. The data collected was analyzed using SPSS version 20.0.

Results: The majority of the study were female who accounted for (54%) of the total participants while male constituted (46%). Most of the study participants (35%) were ages between 20 and 21 years old. Study participants' distribution in equal forms on colleges twenty-five percent for each college. (28.5%) of the students were first class. The majority of students (76.5%) were single and the remainder was married. Majority (79%) lived in urban areas while the rest (21%) lived in rural areas.

Conclusions: findings of study shows that, undergraduate students have poor knowledge regarding risk factors for coronary heart diseases, as well as results demonstrate overall students have good behaviour toward preventive measurement about risk factors of CHD.

Keywords: Knowledge, Health behavior, Students, Risk Factors, Coronary Heart Disease.

Introduction

Coronary heart disease (CHD) is a major public

health problem worldwide. The coronary atherosclerosis is the major cause of coronary artery disease. However non atherosclerotic types of coronary heart disease are also reported. The clinical presentation of coronary artery disease includes angina pectoris, myocardial infarction, and chronic coronary heart disease⁽¹⁾. According to the World Health Organization (WHO), there were 7.4 million deaths due to ischemic heart disease in 2012, with high-income countries and upper-middle-income countries accounting for 158 and 107 deaths per million, respectively^(2,3). Multiple risk factors are involved in

Corresponding Author:

Aqeel H. Jasim

Instructor, Ph.D., Fundamentals of Nursing
Department, College of Nursing-University of
Baghdad, Iraq
e-mail: jasmaqeel@yahoo.com

the development and progression of CAD. In general, risk factors of CVD and CAD can be divided into two groups. The first group is non-adjusted risk factors such as age, sex, race, and family history. The second group is adjustable risk factors such as hypertension, diabetes mellitus (DM), dyslipidaemia, overweight, and smoking^(4,5).

Methodology and Materials

A cross-sectional descriptive and analytical study to assess the knowledge and health behaviour regarding coronary heart disease among students of Baghdad University. This study was conducted at Bagdad University between December 15th 2016 up to the end of 10th march 2018. A tool of knowledge, health behaviour questionnaire was developed and distributed to the participants in this study. The questionnaire was validated by conducting the pre-testing among 20 students in a pilot study. The content validity of the questionnaire was verified by expert of faculty of nursing. The questionnaires were distributed to the

selected undergraduate students of all the four colleges in Baghdad University. The stratified random sampling method was utilized in selecting the participants. The inclusion criteria for the participants were age of 18 years old and above of both genders, male and female, which include Year 1 to Year 4 from each faculty. The sample size calculated was 200, inclusive of the 10% non-response rate. Proportional allocation from all grade levels (1 to 5 in all colleges).

Results

The majority of the study were female who accounted for (54%) of the total participants while male constituted (46%). Most of the study participants (35%) were ages between 20 and 21 years old. Study participants' distribution in equal forms on colleges twenty-five percent for each college. (28.5%) of the students were first class. High percentage of the students was single and the remainder was married. Majority (79%) lived in urban areas while the rest (21%) lived in rural areas.

Table (1): The Mean of Score of Students Knowledge Concerning Risk Factors for Coronary Heart Disease.

No	Items	True		False		MS	SD	A.D
		No	(%)	No	(%)			
1	Smoking	198	99.0	2	1.0	.99	.100	Pass
2	Alcohol	113	56.5	87	43.5	.56	.497	Good
3	High blood pressure is a risk factor	146	73.0	54	27.0	.73	.445	Good
4	High cholesterol	133	66.5	67	33.5	.66	.473	Good
5	Individuals who suffer DM are at more risk for CHD	114	57.0	86	43.0	.57	.496	Good
6	Being overweight increases a person's risk for CHD	91	45.5	109	54.5	.46	.499	Poor
7	BMI of more than 30 is considered as obese	107	53.5	93	46.5	.54	.500	Good
8	Diabetes is a risk factor for developing CHD	87	43.5	113	56.5	.44	.497	Poor
9	High blood sugar puts a strain on the heart disease	86	43.0	114	57.0	.43	.496	Poor
10	People with diabetes have high cholesterol	74	37.0	126	63.0	.37	.484	Poor
11	People with DM tend to have low HDL (good) cholesterol	87	43.5	113	56.5	.44	.497	Poor
12	Unhealthy diets	100	50.0	100	50.0	.50	.501	Good
13	High level of density lipoprotein	93	46.5	107	53.5	.46	.500	Poor
14	Physical inactivity	48	24.0	152	76.0	.24	.428	Poor
15	Stress	71	35.5	129	64.5	.36	.480	Poor
16	Men and women experience many of same symptoms of a heart attack	80	40.0	120	60.0	.40	.491	Poor
17	Walking is type of exercise to be a preventive of CHD	86	43.0	114	57.0	.43	.496	Poor
18	Daily exercise can prevent CHD	108	54.0	92	46.0	.54	.500	Good
19	Eating fruits or vegetable	104	52.0	96	48.0	.52	.501	Good

No	Items	True		False		MS	SD	A.D
		No	(%)	No	(%)			
20	Avoid drinking alcohol	137	68.5	63	31.5	.68	.466	Good
21	Tobacco cessation	103	51.5	97	48.5	.52	.501	Good
22	Prayer	91	45.5	109	54.5	.46	.499	Poor
23	Prime wherefores of heart attacks is stress s	99	49.5	101	50.5	.50	.501	Good
24	Most cholesterol in eggs found in yellow part	53	26.5	147	73.5	.26	.442	Poor
25	Polyunsaturated fats are healthier for the heart than the saturated fats	59	29.5	141	70.5	.30	.457	Poor
26	Eating a lot of red meat increases heart disease risk	62	31.0	138	69.0	.31	.464	Poor
27	Taking an aspirin each day decreases the risk of getting heart disease	52	26.0	148	74.0	.26	.440	Poor
28	Dietary fiber lowers blood cholesterol	62	31.0	138	69.0	.31	.464	Poor
29	Most cholesterol in eggs found in yellow part	15	7.5	185	92.5	.08	.264	Poor
30	HDL refers to „good“ cholesterol, and LDL refers to „bad“ cholesterol	36	18.0	164	82.0	.18	.385	Poor
	Total	2695		3305		0.45		

(A.D.): Assessment Degree, M.s=mean of score [(0 - .49) = fail (F); (0.5 –1) = Pass(P)]

Table (2): The Mean of Score of Health Behaviour Prevention Concerning Risk Factors for Coronary Heart Disease.

No	Items	Strong agree		Agree		Disagree		MS	A.D
		No	(%)	No	(%)	No	(%)		
1.	Doing exercise to maintain a healthy lifestyle	139	69.5	59	29.5	2	1.0	2.68	G
2.	Smoking is bad for health.	127	63.5	65	32.5	8	4.0	2.60	G
3	Maintain my weight according to my body mass index	136	68.0	60	30.0	4	2.0	2.66	G
4	Take less oily food	128	64.0	65	32.5	7	3.5	2.60	G
5	Taking a healthy diet	97	48.5	91	45.5	12	6.0	2.42	G
6	Exercising for 30 minutes most days	110	55.0	72	36.0	18	9.0	2.46	G
7	Control on blood pressure	110	55.0	72	36.0	18	9.0	2.49	G
8	Avoid eating fast food	93	46.5	97	48.5	10	5.0	2.42	G
9	Avoid stress	35	17.5	107	53.5	58	29.0	1.88	A
10	Avoid drinking carbonated drinks	53	26.5	98	49.0	49	24.5	2.02	A
11	Take fruit or vegetable in diet	88	44.0	93	46.5	19	9.5	2.34	G
12	Heart disease is severe	66	33.0	88	44.0	46	23.0	2.10	A
13	Choose a diet low in fat	106	53.0	65	32.5	29	14.5	2.38	G
14	Limits use of sugars	86	43.0	94	47.0	20	10.0	2.33	A
15	Get enough sleep	128	64.0	67	33.5	5	2.5	2.62	G
16	Take relaxation each day	120	60.0	67	33.5	13	6.5	2.54	G
17	Specific method to control stress.	123	61.5	59	29.5	18	9.0	2.52	G
18	Perform physical activity	133	66.5	62	31.0	5	2.5	2.64	G
19	prevent heart attacks my exercising	122	61.0	63	31.5	15	7.5	2.54	G
20	Exercise decreases stress.	113	56.5	72	36.0	15	7.5	2.49	G
	Total	2113		1516		371		2.44	G

(A.D.): Assessment Degree, M.s=mean of score [(1 – 1.66) = poor (p); (1.67 – 2.33)= Acceptance(F); [(2.34 – 3) = Good (G)]

Table (3): Association Between Students Knowledge & Demographic Characteristic

Demographic Variables		Sum of Squares	df*	Mean Square	F	Sig.
Age Groups	Between Groups	.152	1	.152	.179	.673
	Within Groups	168.003	198	.849		
	Total	168.155	199			
Gender	Between Groups	.074	1	.074	.295	.588
	Within Groups	49.606	198	.251		
	Total	49.680	199			
Academic Year	Between Groups	1.704	1	1.704	1.183	.278
	Within Groups	285.171	198	1.440		
	Total	286.875	199			
Marital Status	Between Groups	.000	1	.000	.000	.993
	Within Groups	35.955	198	.182		
	Total	35.955	199			
	Within Groups					
Total						

Sum of squares, Degree of freedom, Mean squares, Significant *: $P \leq 0.05$

Table (4): Association Between Health Behaviour Prevention Score & Demographic Characteristic).

Demographic Variables		Sum of Squares	df*	Mean Square	F	Sig.
Age groups	Between Groups	1.546	2	.773	.914	.403
	Within Groups	166.609	197	.846		
	Total	168.155	199			
Gender	Between Groups	.445	2	.222	.890	.412
	Within Groups	49.235	197	.250		
	Total	49.680	199			
Academic year	Between Groups	3.852	2	1.926	1.341	.264
	Within Groups	283.023	197	1.437		
	Total	286.875	199			
Marital status	Between Groups	.047	2	.023	.128	.880
	Within Groups	35.908	197	.182		
	Total	35.955	199			

Sum of squares, Degree of freedom, Mean squares, Significant *: $P \leq 0.05$

Discussion

Throughout the course of the data analysis of the current study indicated that students' knowledge concerning risk factors for coronary heart diseases. Thirteen questions to evaluate general knowledge related to risk factors of CHD. Only (45%) of the study sample answered correctly and (55%) responded incorrect "do not know". Knowledge questions were split to dietary pattern, medical and risk factors. Knowledge related to risk factors for CHD was answer correctly (Know) by (99%) majority of participation answer smoking main causes for CHD, most of them stated 56.5% alcohol

main risk factors for CHD, most of them reported (73%) hypertension risk factors for CHD, (66.5%) answer hypercholesterolemia one of causes CHD, and most of them told (57%) diabetes mellitus all of them answer these main risk factors for cardio vascular disease, most of students(45.5%) told being overweight increase person risk for CHD,(43%) of them stated that high blood sugar puts strain on the heart disease, only (37%) of students answer correctly that individual with DM have high cholesterol.

The finding of the study agree with result obtained from other study who reported respondents' knowledge

regarding the CHD risk factors who reported twenty five percent students graded smoking as the top most risk factor for CAD followed by hypertension high cholesterol, age, Family history, and high cholesterol diet. Correct identification of risk factors in the form of positive responses was highest for cholesterol levels (91%)⁽⁶⁾.

Students' knowledge regarding risk factors for CHD. The most of the participants answered the danger factors questions items know like ambulation is type of exercise to be a preventive of CHD (43%), taken up fruits or vegetable is able to prevent from CHD (52%), avoid drinking alcohol reduced the risk of getting heart disease (68.5%), tobacco cessation prevent the risk of getting heart disease (51.5%) and body mass index of more than (30) is considered as obese (53.5). From all the risk factor questions, knowledge concerning physical inactivity (24%), stress (35.5%), both gender experience same symptoms of heart attacks world (40).

This findings is same line with result obtain from other study the researcher reported that the majority also demonstrated adequate knowledge regarding several CHD prevention measures, such as regular physical activity blood pressure control and smoking cessation .However, fewer participants demonstrated correct knowledge of other CHD risk factors, including diabetes, stress .Fewer subjects were aware of (HDL) and (LDL) as risk factors ^(7,8).

Health behaviour prevention about risk factors coronary heart disease. Twenty questions exploring students health behaviour concerning of CHD.

This result of study are good agreements with other studies done by other researchers whose reported that the item with the highest proportion of positive health behavior was "smoking is bad for health" (93.7%,) (149), "exercise to maintain a healthy lifestyle" (87.4%,) (139), I maintain my weight according to my body mass index (BMI(74.8%,)(119),take less oily food for healthy lifestyle (74.8),(119),I believe walking a lot can give benefits to my health (72.3), (115) and I should take fruit or vegetable in my diet for maintaining my health (77.4),(123) ^(9,10) .

Association between student's knowledge score and the demographic characteristics (age, gender, academic year and marital status. The association between sociodemographic and students' knowledge score was explored. There are no significant relationship between gender

and students knowledge (Chi-square = .526a), age (Chi-square = 2.118a) academic year (Chi-square = 3.507a) and marital status (Chi-square = .900a).

This result agrees with that of the other researcher who reported,The responses provided by the third year student nurses straight from school education and those mature students were found to be non-significant in relation to the two age categories ($p>0.05$). The HB however, was shown to differ significantly between males and females ($p=0.04$), demonstrates the mean scores attained for both CHD knowledge and health behavior byboth gender^(11,12).

The association between sociodemographic and Students attitudes Score was explored. There are no significant relationship between (age, gender, academic, marital status) and students' behaviour scores.

This finding Agree with results obtained from the study done by other researcher who reported. The present study identifies that there was no significant relationship between total CHD knowledge and HB of the third year student nurses ⁽¹³⁾.

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Conflict of Interest: None declared.

Ethical approval: The study was approved by the Institutional Ethics Committee.

Conclusions

This study demonstrate that, despite poor students knowledge regarding risk factors for CHD, as well as study indicated overall students have fair health behavior toward preventive measurement about risk factors of CHD. We recommend to health education programs about risk factors of coronary heart disease; seek to improve understand the trouble of heart disease and work cooperatively to reduce them. Should be transmitted through the mediums of radio and television, posters, pamphlets, social media like Facebook and Twitter to be beneficial to accessing to younger people.

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