

RESEARCH ARTICLE**Assessment of Major Behavioral Risk Factors for Coronary Heart Disease among Patients Admitted to coronary care unit in Rania General Hospital****Shakhawan Azad Ahmed***Department of Community Health Nursing, College of Nursing, University of Raparin, Iraq***Corresponding author: Shakhawan Azad Ahmed**Email: shaxawanazad641@gamil.comShakhawanazad@uor.edu.krd

ORCID

ABSTRACT

Coronary Heart Disease (CHD) occurs when decreases or stops blood flow to the heart muscles. This is resulting from the gradual narrowing of coronary arteries and atherosclerosis. Tobacco use, abnormal lipid profile, obesity, high blood pressure, diabetes, physical inactivity, emotional distress, high alcohol consumption and reduction in the consumption of fruit and vegetables are the predominant risks of cardiovascular diseases such as CHD.

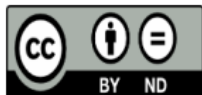
The study aims to assess the behavioral risk factors for coronary heart disease among patients admitted to the coronary care unit.

This is to identify the major behavioral risk factors for coronary heart disease in patients who admitted to the coronary care unit and to determine whether there are any relations between modifiable risk factors and socio-demographic characteristics of the data.

This descriptive study of quantitative method was carried out, with a non-probability (convenience) sample of (50) Adults diagnosed with coronary heart disease and admitted to the coronary care unit in Rania general hospital.

In the study, physical inactivity and smoking are the most common behaviors that worsen CHD among participants. Moreover, smoking behavior is increasingly detected in males. This study therefore, recommends that further studies on this topic need to be conducted. Public awareness should be raised toward unhealthy behaviors, in particular physical inactivity and smoking.

Keywords: Coronary Heart Disease, Behavioral Risk Factors



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Received: 03 August 2022 , Accepted: 11 October 2022, Available online: 28 January 2023

INTRODUCTION

Coronary heart disease (CHD), also known as coronary artery disease (CAD). Refers to any narrowing or obstruction of arterial Lumina that interferes with cardiac perfusion. As a result of the limitation of sufficient blood to the cardiac muscles, the myocardium can develop various ischemic diseases, including angina pectoris, MI, heart failure, sudden death, and cardiac arrhythmias. (Robinson, Hallowell, and Pottage 2012). Coronary heart disease also is a major cause of morbidity and disability worldwide (Gaziano et al, 2010). It has been expected to be the most typical factor of disability by the 2020s. Moreover, there is an estimation of 2.7million people living with CHD in the UK (Bitton and Gaziano, 2010).

Coronary heart disease is the widest factor of death, estimated as three-quarters of global death (Gaziano et al. 2010). Recently, the World Health Organization (WHO) fact sheet introduced the top ten leading causes of death from 2000-2012 in the world, with ischemic heart disease (IHD) placed at the top. This life-threatening disease kills 7.4 million people over the period (WHO 2014). Moreover, CHD is the main cause of death in the United States of America among adults, representing approximately one-third of all dead people, who are over the age of 35 years (Arabi, 2007). In the UK for instance, 82000 Britons die due to CHD annually (NFC.NHS .UK,2014, NHS. UK 2014), in which about one in five men and one in eight women die from the disease (patient.co.uk, 2014).

Tobacco use, abnormal lipid profile, obesity, high blood pressure, diabetes,

Methodology

A descriptive study has been performed to explore the major behavioral risk factors for coronary heart disease in patients admitted Coronary Care Unit in Rani General Hospital. In the study, a quantitative method has been applied. Under the affiliation of the University of Raparin, College of Nursing.

In this study convenience sample is a non-probability sample. In which units are selected

physical inactivity, emotional stress, high alcohol consumption, and under consumption of fruit and vegetables are the predominant risk factors for the disease (NICE, 2010, Yusuf et al., 2004, Nissinen, Berrios and Puska, 2001). in addition to the socio-economic factors in which for example, Kakinami et al. (2013) have demonstrated that low socio-economic status can prominently increase the risk factors of cardiovascular disease such as CHD. According to the previous statements, CHD is A descriptive study has been performed to explore the major behavioral risk factors for coronary heart disease in patients admitted Coronary Care Unit in Rani General Hospital. In the study, a quantitative method has been applied. Under the affiliation of the University of Raparin, College of Nursing.

In this study convenience sample is a non-probability sample. In which units are selected utilizing the data availability. Moreover, the sample may comprise primarily those with a particular social class or event (Parahoo 2006). This means that only those who have met the inclusion criteria participated in a standard questionnaire different kinds of questionnaire about behavioral risks for CHD is organized. It consists of closed questions including two-way questions, checklists, and multiple choice questions. These sets of questions are asked to all participants in the same order. Many textbooks and articles explained that a questionnaire is the commonest way of data collection (Cormarck 2000, Gerrish, Parahoo 2006 & Lacey 2006).

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The study has been proved by the ethics committee at the University of Raprin. Regarding participants, informed consent has been obtained from all participants. In the informed consent, the participant's rights and some of the study processes were explained.

In this descriptive study, the quantitative methodology has been accomplished, in which 50 cardiac patients were involved. The process of data collection was carried out in the Coronary Care Unit in the hospital as the study setting.

Data analysis took place using the SPSS program after the processes of coding and tabulating. Consequently, among the behavioral risk factors in the study, physical

RESULTS

Table (1) indicates that the higher percentage is good (>39years) representing 90.0% of the sample, 6.0% of them are aged between (31-39years), (4.0%) of them are aged (\leq 39years), and (Mean and Standard deviation 3.82 ± 4.00). 64.0% of the study sample were Male and 36.0% of the study sample were Female, Regarding marital status, the higher percentage (72.0%) of the study sample was married, and (Mean and Standard Deviation 2.20 ± 2.00), the highest percentage of the sample represents (45.7%), while very few of them was single which represent (4.0%) of the study sample. This table reveals that the education level of mothers ranged from illiterate to graduate, the majority of them are illiterate which represent (44.0%), and the lowest percentage of the study sample are Secondary Schools representing (6.0%) of all the study, at the same time in this table indicates that the highest percentage (32.0%) were housewife. The highest percentage (46.0%) of the study sample was sufficient, 18.0%, and 36.0% of the study sample were barely sufficient and insufficient, the same table indicates that the highest percentage (32.0%) were housewife

inactivity and cigarette smoking were the most frequent variables, and consuming too much alcohol was the less frequent variable in which the results are found to be statistically significant. Physical inactivity, consuming too much alcohol, and cigarette smoking are among the major behavioral risk factors for CHD worldwide.

However, drinking too much alcohol in the current study is ranked down. This may be because of religious considerations in Kurdish society. Following this, cigarette smoking is still one of the leading causes of health disasters among the population including CHD. In the study, the ratio of smoking among male participants is dramatically higher among than females. This can confirm that in regard to behavioral risks, there are gender influences for CHD in Rania City.

while table 2 indicates the highest percentage (48.0%) of the study sample used Oil in Diet, 58.0% of the study sample always used Salt in Diet. The same table shows the majority (88.0%) of the study sample consumed Fruit Diet. The rate of sample who consumed vegetable, nuts, beans and eggs, sweet were (78.0%), (62.0%) (54.0%) (42.0%) and (36.0%) respectively. The highest percentage (86.0%) of the study sample consumed chicken meat per week. Also, the rate of the study sample who consumed red meat, fish, and organ meat liver, and kidney, was (68.0%), (56.0%), (34.0%) respectively. The same table shows that the highest percentage (86.0%) of the study sample didn't take exercise regularly, the highest percentage (82.0%) of the study sample were nonsmokers, and (18.0%) of the study sample were smokers, other while (86.0%) of the study sample were smoker for the duration (>20years). The same table represented that the lowest percentage (4.0%) uses alcohol, (2.0%) uses alcohol for (<10years) and (2.0%) uses alcohol for 10-20 years.

Table 3 indicated the relationship between the age group of the study sample with their behavioral risk factor related to coronary heart disease as followings. There was no

statistical significant relationship between age and all behavioral risk factors related to Coronary Heart Disease (modification dietary, dietary consumption per day and week, regular exercise and alcohol use, and smoking but there

Was a statistically significant relationship between sweet and age group

Result Table 1: Demographic characteristics of the study sample

Variable	NO	%	Mean	SD
Age				
≤30	2	4.0		
31-39	3	6.0	3.82	4.00
>39	45	90.0		
Gender				
Male	32	64.0	1.36	1.00
Female	18	36.0		
Marital Status				
Single	2	4.0		
Married	36	72.0	2.20	2.00
Widows	12	24.0		
Divorce	0	0		
No. of Children				
<3	10	20.0		
3-6	17	34.0	2.26	2.00
>6	23	46.0		
Education levels				
Illiterate	22	44.0		
Able to read and write	9	18.0		
Primary	10	20.0	2.24	2.00
Secondary	3	6.0		
Graduate	6	12.0		
Occupation				
Employ	11	22.0		
Private	11	22.0		
Student	0	0	3.14	4.00
Housewife	16	32.0		
Retired	12	24.0		
Economic status				
Sufficient	23	46.0		
Barely sufficient	9	18.0	1.90	2.00
Insufficient	18	36.0		

Table 2: Behavioural risk factors related to the Coronary Heart Disease

Variable	NO	%
A-Dietary Modification-types of oil used in Diet		
Fat	3	6.0
Oil	24	48.0
Both Fat and Oil	23	46.0
Unknown	0	0
Slat uses in Diet		
Never	4	8.0
Occasionally	17	34.0
Always	29	58.0
Unknown	0	0
B-Dietary consumption per day		
Vegetables	39	78.0
Fresh fruits	44	88.0

Nuts		21	42.0
Eggs		27	54.0
Sweet		27	36.0
Beans		31	62.0
-Dietary consumption per week			
Red meat		34	68.0
Chicken meat		43	86
Fish		28	56.0
Organ meat liver & kidney		17	34.0
-Physical Activity			
Regular exercise	Yes	7	14.0
	No	43	86.0
Smoking pattern	Yes	9	18.0
	No	41	82.0
Duration of smoking			
<10		2	4.0
10-20		5	10.0
>20		43	86.0
-No of cigarette per day			
<10		3	6.0
10-20		4	8.0
>20		43	86.0
-Alcohol			
Alcohol use	Yes	2	4.0
	No	48	96.0
-Duration of alcohol			
<10		1	20.0
10-20		1	20.0

Table 3: Relationship between age group and Behavioral risk factors related to Coronary Heart Disease

Variable	Age Group						Total (No=50)		p-value	
	≤30		30-39		≥39		No	%		
	No	%	No	%	No	%	No	%		
A-Dietary modification										
-Types of oil used in diet										
Fat	0	0	1	33.3	2	66.7	3	50	*0.259	
Oil	1	4.2	2	8.3	21	87.5	24	50	NS	
Both Oil and Fat	1	4.3	0	0	22	95.7	23	50		
-Salt uses in Diet										
Never	1	25.0	0	0	3	75.0	4	50	*0.403	
Occasionally	0	0	1	5.9	16	94.1	17	50	NS	
Always	1	3.4	2	6.9	26	89.7	29	50		
B-Dietary consumption per week										
Red meat	Yes	2	5.9	2	5.9	30	88.2	34	50	*0.453
	No	0	0	1	6.3	15	93.8	15	50	NS
Chicken meat	Yes	2	4.7	3	7.0	38	88.4	43	50	*0.450
	no	0	0	0	0	7	10.0	7	50	NS
Fish	Yes	1	3.6	2	7.1	25	89.3	28	50	*0.916
	No	1	4.5	1	4.5	20	90.9	22	50	NS
Organ meat liver & kidney	Yes	2	11.8	1	5.9	14	82.4	17	50	*0.1000
	No	0	0	0	0	33	98.2	33	50	NS

	No	0	0	2	6.1	31	93.9	13		
-Physical activity										
Regular exercise	Yes	1	14.3	1	14.3	5	71.4	7	50	*0.285
	No	1	2.3	2	4.7	40	93.0	43		NS
-Smoking pattern										
Smoking	Yes	1	11.1	1	11.1	7	77.8	9	50	*0.439
	No	1	2.4	2	4.9	38	92.7	42		NS
-Alcohol										
Alcohol use	Yes	1	50.0	1	50.0	0	0	2	50	*0.006
	No	1	2.1	2	4.2	4.5	93.8	48		NS

Table 4 Relationship between gender and behavioural risk factors related to the coronary heart disease

Variables	N =50				p-value	
	Male		Female			
	No	%	No	%		
A-Dietary modification						
Types of Oil used in Diet						
Fat	3	100.0	0	0	*0.221	
Oil	14	58.3	10.0	41.7	NS	
Both Fat and Oil	15	65.2	8.0	34.8		
-Salt uses in Diet						
Never	2	50.0	2	50.0	*0.120	
Occasionally	8	47.1	9	52.9	NS	
Always	22	75.9	7	24.1		
B- Dietary consumption per a day						
-Vegetable	Yes	25	64.1	15	35.9	*0.618
	No	6	60.0	4	40.0	NS
-Fruit	Yes	29	65.9	15	34.1	*0.758
	No	3	50.0	3	50.0	NS
-Egg	Yes	18	67.6	9	60.9	*0.771
	No	14	33.3	9	44.8	NS
-Sweet	Yes	14	77.8	4	22.2	*0.144
	No	18	56.3	14	43.8	NS
-Beans	Yes	22	71.0	9	29.0	*0.233
	No	10	52.6	9	47.4	NS
-Nut	Yes	16	76.2	5	23.8	*0.149
	No	16	55.2	13	44.8	NS
C-Dietary consumption per week						
-Red meat	Yes	25	73.5	9	26.5	*0.060
	No	7	43.8	9	56.2	NS
-Chicken meat	Yes	27	62.8	16	37.2	*0.659
	No	5	71.4	2	28.6	NS
-Fish	Yes	18	64.3	10	35.7	*0.1000
	No	14	63.6	8	36.4	NS
-Organ meat liver kidney	Yes	13	76.5	4	23.5	*0.227
	No	19	57.6	14	42.4	NS
D-Physical Activity						
-Exercise	Yes	6	85.7	1	14.3	*0.197
	No	26	60.5	17	39.5	NS
4-smoking pattern						
-Smoking	yes	9	100.0	0	0	*0.018
	No	23	56.1	18	43.9	NS

<i>F-Alcohol use</i>	<i>Yes</i>	2	100.0	0	0	*0.530 NS
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DISCUSSION

When observing behavioral risk factors of coronary heart disease, there will be an assumption that there are several negative behavioral modes, which they frequently occur in societies. To illustrate the negative behavioral modes, smoking, dietary imbalance, sedentary lifestyle, and consuming too much alcohol. However, these risk factors are responsible for Cardiovascular Diseases (CVD) including, CHD, Stroke, and peripheral vascular diseases. They mainly affect coronary and heart health in all ages (Leon 2009).

In this study, physical inactivity and smoking are the most frequent risk factors among the participants. Physical inactivity has been detected among 43 patients out of the total including 50 patients. They comprised 86% of the total population in the study, by which this risk factor ranked the top.

Sedentary lifestyle and physical inactivity is been highlighted in a substantial amount of literature, which has a crucial effect on increasing morbidity and mortality among CHD patients. Moreover, physical inactivity is one of the major leading causes of obesity and atherosclerosis (Yusuf et al. 2001).

Smoking is another modifiable risk factor that has a significant impact on this study. Among participants in this study, 82% are smokers, in which 41 patients confirm that they had a history of smoking for about 10 years or more. Literature has explored that cigarette smoking is one of the most dangerous causes of CHD and atherosclerosis (Jajich 2004). Following this, a study by Shaten (1991) confirms that rates per thousand person-years of CHD mortality were higher for smokers than for nonsmokers at every level of baseline risk factors when examined.

On the other hand, there are some relations between the Bio-demographic distributions of the participants and risk factors. The study found a positive correlation between gender identity and cigarette smoking. This relation has been proved by statistical analysis, in which P-value shows <0.05 . It could be suggested that this result has been obtained in from a considerable amount of literature, particularly when observing gender identity and cigarette smoking (Jarvis et al 1995, Suzuki et al 2006).

CONCLUSIONS

Coronary heart disease is a major global health impact recently. It causes disability and death more than any other disease. Several factors exacerbate the consequences of the disease among societies, particular modifiable risk factors. Tobacco use, abnormal lipid profile, obesity, high blood pressure, diabetes, physical inactivity, emotional distress, and high alcohol consumption are outstanding among them. In the current study, 50 cardiac patients were investigated to find the major behavioral risk factors among them. Consequently, physical inactivity and smoking were the commonest among patients admitted Coronary Care Unit in Hospital. It can be suggested that, modifiable risk factors vary greatly among different societies. This paper, therefore, calls for further studies on the current topic and public health education should be enhanced on toward the risk factors.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

The protocol of the study was accepted by the council of the College of Nursing / University of Raparin.

FUNDING

This research did not receive any grant from

funding agencies in the public, commercial, or non-profit sectors.

AUTHOR'S CONTRIBUTIONS

Study concept; Writing the original draft; Data collection; Data analysis and Reviewing the final edition

DISCLOSURE STATEMENT:

The authors report no conflict of interest

ACKNOWLEDGEMENTS

We thank the anonymous referees for their useful suggestions.

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