



University of Babylon College of  
Medicine  
Department of Community  
Medicine

# **SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH ISCHEMIC HEART DISEASE**

Done by

Forth stage

Supervised by

حسنين علاء كاظم  
محمد حمزة سلمان  
علي كاظم عبود  
ابو الحسن حسام محسن  
منار بسام بدر  
براق عبد الامير حسين  
غدير احمد طالب  
ايات عقيل ابراهيم  
تبارك طلعت كاظم

د. امير كاظم حسين



## Socio-demographic Characteristics of Patients with Ischemic Heart Disease Admitted to Merjan and Alimam Alsadiq Teaching Hospitals, Babylon, Iraq

Hasanin Alaa, Mohamed Hamza, Abulhasan Husam, Ali Kadum, Ayat Aqeel, Tabarq Talat, Manar Bassam, Buraq Abdulameer, Ghadeer Ahmed, and supervised by Dr. Ameer Kadum Hussein

Community medicine department , University of Babylon College of Medicine, Babylon , Iraq

### Abstract

**Background and Objective :** Socio-demographic characteristics of Patients with Ischemic Heart Disease

**Methods :** A cross-sectional study conducted in Merjan and Alimam Alsadiq Teaching Hospital, Babylon , Iraq. Study included all patients with ischemic heart disease excluding those with unstable medical illness. Socio-demographic variables, history of comorbid illnesses were compiled from 4th of April to 1st of May 2022 . A questionnaire was structured with 19 questions to collect data .

**Results :** A total of 80 patients were included in this study A total of 80 ischemic heart disease patients were included. About (57.5%) of the sample was male; (82.5%) were married; (17.5%) were still working; and about (25%) had poor education. About (52.5%) were live in rural areas. (41.25%) were aged between 41 and 60 years old. And the family income was below 500,000 IQD in (47%) of patients.

**Conclusion :** The results conclude that there is a prevalence of cardiovascular disease in Babylon , and the risk factors were strongly influenced by clinical and sociodemographic (such as age, sex, , residence , occupation and income) characteristics of the population. Physical inactivity was common in 76.25% of patients and tobacco was used by 47.5%

### Introduction

Cardiovascular diseases cause approximately one-third of deaths worldwide among cardiovascular illnesses, ischemic heart disease (IHD) ranks as the most prevalent. Cardiovascular disease ranks first as a cause of disease related death in Iraq.

The World health organization(WHO) has considered Ischemic heart disease at the top causes of mortality globally, however countries differ in their rates and there have been changes over the time.

It is estimated that 17.5 million individuals die from cardiovascular diseases (CVDs) each year, accounting for 31% of all deaths worldwide and more than 75% of these deaths occur in low- to middle-income population.

The manifestations of IHD are dependent on the duration, severity, and acuity of the ischemic episodes. Chronic IHD restricts the ability of the heart to increase blood supply in response to increases in myocardial oxygen demand, resulting in development of angina pectoris. Myocardial ischemia causes irreversible myocardial cell death, which leads to mass loss of heart function, formation of fibrous scars, and adverse cardiac remodelling.

Nowadays in the developing countries including Iraq there are alarming features of increasing rates of CAD in young age. The most important risk factors of heart diseases are behavioural risk factors including diet, age and sex, obesity, smoking, personality, hypercholesterolaemia, and physical inactivity.

The increasing incidence of IHD is expected to continue, due not only to the increased prevalence of obesity, diabetes, and metabolic syndrome but also to population aging.

More than (70%) of at-risk individuals have multiple risk factors for IHD, and only (2-7%) of the general population have no risk factors.

Cardiovascular disease is strongly influenced by socioeconomic status in all societies, whether one considers accepted risk factors, heart disease, hypertension or stroke.

Further more several studies have shown that male urban have a higher incidence of hypertension compared to males living in rural area.

Previous individual and case-control studies from Kurdistan Iraq have reported that Cardiovascular diseases tend to occur earlier in our population with the older men showing more aggressive lesions. So this study has been aimed to define socio-demographic status of patients with Ischemic heart disease in Iraq.

## **Patients and methods**

### **Study population and sampling technique**

A cross-sectional study included patients attending the cardiology centers at Merjan and Al-Imam Al-sadiq teaching hospitals during the data collection time ( from 4th of April to 1st of May 2022 ). A systematic random sampling technique was applied.

### **Inclusion criteria**

All patients with ischemic heart disease of any age and sex who welcomed participation were included.

### **Exclusion criteria**

Current serious or unstable medical illnesses with severe chest pain or shortness of breath that cannot complete the interview were excluded and patients with active infectious diseases like TB and COVID19.

### **Data collection tools**

Basic socio-demographic variables, diagnosing methods, history of comorbid illnesses, history of previous attack of IHD, history of previous catheterization and history of treatment were compiled using a questionnaire filled through a direct interview.

### **Definition of variables**

The independent variables evaluated to explain the socio-demographics (age, gender, marital status, level of education, and occupation), smoking habits, characteristics of the disease, and comorbid condition or disease in patients with IHD.

### **Ethical issue**

Official approvals were granted from the officials in the study setting. Permission was obtained from each participant to be included in this study. Names were kept anonymous and interviews were conducted with privacy.

### **Results**

A total of 80 ischemic heart disease patients were included. About (57.5%) of the sample was male; (82.5%) were married, (3.75%) were single, (11.25%) were divorced and (2.5%) were widow; (17.5%) were still working; and about (25%) had poor education. About (52.5%) were live in rural areas. (41.25%) were aged between 41 and 60 years old, (37.5%) between 61 and 80 years old, only (12.5%) were above 81 years old and (8.75%) were below 40 years old. And the family income was below 500,000 IQD in (47%) of patients.

Distribution by socio-demographic and ischemic heart disease participants characteristics are shown in ( Table 1).

The methods used in the diagnosis of ischemic heart disease were depend mostly on the sign and symptoms of chest pain and ECG changes, admission to CCU, other investigations like treadmill test, and Echocardiograph study.

The diagnosis of ischemic heart disease was associated with high comorbidity of other illnesses. The majority show comorbidity with hypertension (62.5%), Diabetes Mellitus (56.25%), asthmatic bronchitis (5%), other heart disease (28.75%), and (5%) had other diseases. (25%) of participants were have history of previous attack(s) of IHD. (Table 2)

Nearly half of the participants were smoker (47.5%). The sample shows (1.25%) were alcohol drinker, (67.25%) had sedentary lifestyle, (20%) had family history of the disease. (Table 3).

Most of the patients have angina about (68.57%) and (31.25%) had myocardial infarction, (41.52%) of them had the attack at night. (Table 4)

All participants were on treatment; anti-hypertensives (80%), hypoglycaemic agents (48.5%), lipid lowering agents ( statins ) (30%), anti-anginal agents (55%),and anticoagulants (38.75%) (Table 5).

(Table 6) shows that (58.75%) of the participants do not get catheterisation whether it was diagnostic or therapeutic, and (70%) of them discharged from hospital and 4 patients dead (5%).

The available investigation for the patients show that (70%) had normal pulse rate, (18.75%) had bradycardia and (11.25%) had tachycardia. The mean of systolic Blood pressure was 132.125 and diastolic Blood pressure = 79.270. (Table 7)

TABLE I

Characteristics	Frequency	Percentage(%)
<b>Age</b>		
<40	7	8.75
41_60	33	41.25
61_80	30	37.5
>81	10	12.5
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Sex</b>		
Male	46	57.5
Female	34	42.5
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Residence</b>		
Urban	38	47.5
Rural	42	52.5
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Marital status</b>		
Single	3	3.75
Married	66	82.5
Divorced	9	2.5
Widow	2	11.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Occupation</b>		
Employee	14	17.5
Free worker	19	23.75
House wife	30	37.5
Student	0	0.0
Retired	17	21.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Family income</b>		
<500,000 IQD	38	47.5
500,000-1,000,000	31	38.75
>500,000 IQD	11	13.75
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Educational level</b>		
Illiterate	20	25
Primary	27	33.75
Secondary	17	21.25
High	16	20
<b>Total</b>	<b>80</b>	<b>100</b>

## SOCIO-DEMOGRAPHIC

TABLE 2

Characteristics	Frequency	Percentage %
<b>Chronic Disease</b>		
Diabetes Mellitus		
No	45	56.25
No	35	43.75
<b>Total</b>	<b>80</b>	<b>100</b>
Hypertension		
No	50	62.5
No	30	37.5
<b>Total</b>	<b>80</b>	<b>100</b>
Asthma		
No	4	5
No	76	95
<b>Total</b>	<b>80</b>	<b>100</b>
Heart Disease		
No	23	28.75
No	57	71.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Other</b>		
Yes	4	5
No	76	95
<b>Total</b>	<b>80</b>	<b>100</b>
<b>History of previous attack</b>		
Yes	20	25
No	60	75
<b>Total</b>	<b>80</b>	<b>100</b>

## COMORBIDITY AND HISTORY OF PREVIOUS ATTACK

TABLE 3

Characteristics	Frequency	Percentage %
<b>Tobacco use</b>		
Yes	38	47.5
No	42	52.5
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Alcohol use</b>		
Yes	1	1.25
No	79	98.75
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Physical Activity</b>		
Yes	19	23.75
No	61	76.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Family History</b>		
Yes	16	20
No	64	80
<b>Total</b>	<b>80</b>	<b>100</b>

## HABITS AND FAMILY HISTORY

TABLE 4

Characteristics	Frequency	Percentage %
<b>Type of Ischemia</b>		
Myocardial infarction	25	31.25
Angina	55	68.75
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Time of occurrence</b>		
Day	47	58.75
Night	33	41.25
<b>Total</b>	<b>80</b>	<b>100</b>

## TYPE OF ISCHEMIA AND TIME OF OCCURRENCE



TABLE 5

Characteristics	Frequency	Percentage %
<b>History of Treatment</b>		
<b>Antihypertension drugs</b>		
Yes	64	80
No	16	20
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Hypoglycemic drugs</b>		
Yes	39	48.75
No	42	51.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Anticoagulant drugs</b>		
Yes	31	38.75
No	49	61.25
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Statins</b>		
Yes	24	30
No	56	70
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Antianginal drugs</b>		
Yes	44	55
No	36	45
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Other</b>		
Yes	16	20
No	64	80
<b>Total</b>	<b>80</b>	<b>100</b>

## HISTORY OF TREATMENT

TABLE 6

Characteristics	Frequency	Percentage %
<b>Catheteraization</b>		
Yes	33	41.25
No	47	58.75
<b>Total</b>	<b>80</b>	<b>100</b>
<b>Fate of patient</b>		
Discharge from hospital	56	70
Discharge to ward	20	25
Death	4	5
<b>Total</b>	<b>80</b>	<b>100</b>

## FATE OF THE PATIENT AND CATHETERIZATION

TABLE 7

Characteristics	Frequency	Percentage %
<b>Pulse rate</b>		
Normal	56	70
Bradycardia	15	18.75
Tachycardia	9	11.25
<b>Total</b>	<b>80</b>	<b>100</b>

## PULSE RATE

**Mean of systolic Blood pressure = 132.125 Hgmm**

**Mean of diastolic Blood pressure = 79.2 Hgmm**

## Discussion

ischemic heart disease (IHD) ranks as the most prevalent.

Cardiovascular disease ranks first as a cause of disease related death in Iraq.

In addition to a major cause of chronic illness and disability. Both cardiovascular disease mortality and associated major risk factors vary widely between countries, with a major burden of cardiovascular diseases predicted in developing countries in the near future. 16 Observational studies have revealed large differences in the clinical management of patients with cardiovascular diseases when comparing different regions within a country, different countries in specific regions, or different regions across the globe.

The study found a significant rate of multiple risk factors in our patients. Current smoking was highly prevalent in this study followed by HT, then T2DM, obesity physical inactivity, and positive family history of IHD, respectively.

Most of patients had risk factors in combination especially the first four risk factors i.e. smoking, HT, dyslipidemia and diabetes.

Current study founded angina is 68.75% it is higher than Faris Hassan Lami ( AL Nahrin university college of medicine ) 50.6% , Ameen Mousa Mohammed 31.5% Percentage of smokers in this study is( 47.5%) while in the study of Zainab Abd Wady (33.3%)

All participants were on treatment; antianginal drugs and antigoagulant drugs are ( 55% , 38.75%) respectively

The diagnosis of ischemic heart disease was associated with high comorbidity of other illness, The majority show comorbidity with hypertension (62.5%), DM (56.25%)asthmatic bronchitis (5%) In the study of Faris Hassan Lami it was hypertension (50.9%), DM (33.7%) asthmatic bronchitis(1.56%)

## **Conclusion**

The results conclude that there is a prevalence of cardiovascular disease in Babylon , and the risk factors were strongly influenced by clinical and sociodemographic (such as age, sex, , residence , occupation and income) characteristics of the population.

Physical inactivity was common in 76.25% of patients, tobacco and alcohol were used by 47.5% and 1.25% of patients, respectively.

The prevalence of risk factors for developing heart diseases , diabetes mellitus, and hypertension disease were 28.75%,56.25%, 62.25%, , respectively.

Most patients have family history of heart attack 20%, angina 68.75%, MI 31.25% .

The time of occurance was 58.75% at day and 41.25% at nigh.

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