

# Identify the Risk Factors Influencing Coronary Artery Disease among the Adult Patients with Coronary Artery Disease in the Cardiology Department of Government Rajaji Hospital, Madurai-20

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## Reprint Request

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## Abstract

Indians suffered a higher rate of cardiac arrest before reaching the hospital. This study was done to identify the risk factors influence in coronary artery disease. This Descriptive study reveals that Co-Morbid factors contribute 25% of High Risk than Psychosocial factors which is 15%. The association of age group indicates that higher the age group in the more risk of CAD. It is found females are higher risk than the males and the normal BMI in adults also has higher risk of CAD when combined with co-morbid factors.

**Keywords:** Risk Factors; Coronary Artery Disease; Adult Patients; Cardiology Department; Co-Morbid Factors.

## Introduction

*"An ounce of prevention is worth a pound of cure "*

Henry De Bracton -1240

Coronary heart disease is also known as coronary artery disease, and is the most common type of cardiovascular disease Gupta et al (1995, 2002, 2007) have identified various risk factors in the urban community like smoking, obesity, truncal obesity, hypertension, high cholesterol and diabetes to be associated with Atherosclerotic changes begin in the early ages and progress to great extent during adulthood. Physical inactivity, unhealthy habits, eating fast food, unhealthy competition and stress make today's adults vulnerable to CAD. Identifying risk factors among adults, the necessary modification in life style can be introduced early. Second trait of CAD amongst Indians is its severity. A British study<sup>7</sup> found that, among patients with myocardial infarction, Indians suffered a higher rate of cardiac arrest before reaching the hospital.

Indians have been known to have a higher prevalence of CAD in presence of low rates of traditional cardiac risk factors like obesity, smoking, cholesterol and hypertension as was demonstrated

in the CADI study. This characteristic has been termed. Indian paradox of course, some other traditional risk factors eg, diabetes, physical inactivity, low HDL levels have been shown to have a higher prevalence amongst Indians.

## Statement of the Problem

Identify the risk factors influencing coronary artery disease among the adult patients with coronary artery disease in the cardiology department of Government Rajaji Hospital, Madurai-20

## Objectives

1. To identify the risk factors that influence coronary artery disease among adult patients .
2. Associate the risk factors with demographic variables.

## Hypothesis

1. There is significant relationship between age and coronary artery disease
2. There is significant relationship between body mass index and coronary artery disease.

*Assumption*

There significant relationship between risk factors and coronary artery disease.

**Research Methodology**

*Research Design*

Descriptive design has been adopted.

*Population*

who have got admitted in the cardiology department with history of myocardial infarction.

*Sampling Technique*

Non - Randomized convenient sampling techniques was chosen by the investigator

*Sample Size*

The sample comprises of 20 adult patients (15 male, 5 female) who were admitted in the cardiology department of Govt. Rajai Hospital Madurai-20.

*Criteria for Sample Selection*

*Inclusion Criteria*

1. Adult patients diagnosed with coronary artery disease and with history of myocardial infarction.
2. Adult patients under the age group of 20 -50.

3. Adult patients who know to speak Tamil and English.

*Exclusion Criteria*

1. Adult patients with congenital heart disease
2. Adult patients who have undergone CABG
3. Adult patients admitted in the cardiology Intensive Care

*Data Collection Procedures*

Permission was obtained from the head of the department of cardiology department. As described I the sample selection procedure, a non randomized convenient sampling techniques was followed to select the sample from cardiology department. The subjects are selected as per the inclusion criteria. The data collection period from 23.2.2011 to 25.2.2011. The investigator initially established rapport and the purpose of the interview was explained and verbal consent was obtained. Each day 6-8 samples were interviewed and the time duration for each interview is about 10-15 minutes. The investigator ensured the privacy, dignity, religious and cultural beliefs were respected during the interview process.

*Data Analysis and Interpretation*

Assessment of demographic Data of the adult patients having coronary artery disease and Frequency and percentage distribution of demographic data.

**Table 1:** Assessment of demographic Data of the adult patients having coronary artery disease and Frequency and percentage distribution

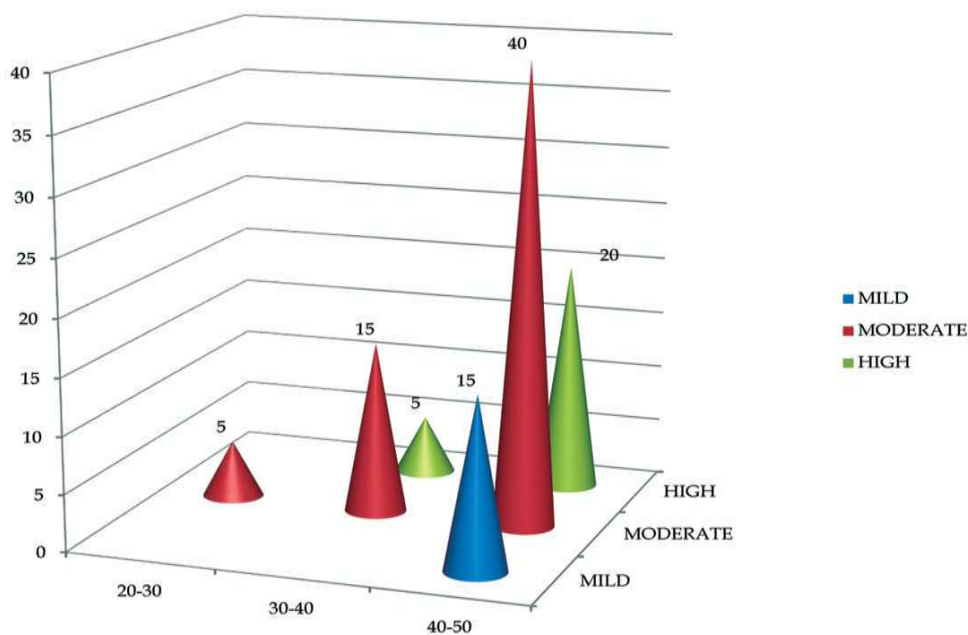
S. No.	Demographic Variable	Frequency	Percentage
1	<b>Age</b>		
	a. 20-30 yrs	1	5%
	b. 30-40yrs	4	20%
2	c. 40-50 yrs	15	75%
	<b>Sex</b>		
	a. Male	15	75%
3	b. Female	5	25%
	<b>Education</b>		
	a. Uneducated	1	5%
4	b.Primary education	7	35%
	c.High school	10	50%
	d.Highersecondary	-	-
5	e.Graduate	2	10%
	<b>Occupation</b>		
	a. Professional	-	-
5	b. Clerical work	2	10%
	c. Business	-	-
	d. Labourer	10	50%
5	e. Unemployed	8	40%
	<b>Family income /mth</b>		
	a.<Rs 5000	10	50%

	b. Rs 5001-10,000/-	9	45%
	c. Rs 10,001-15,000/-	1	5%
	d.>15000		-
6	<b>Religion</b>		
	a. Hindu	19	95%
	b. christian	-	-
	c. muslim	1	5%
	d.others	-	-
7	<b>Food habits</b>		
	a.Vegetarian	-	
	b.Non-vegetarian	20	100%
8	<b>Family type</b>		
	a. single family	14	70%
	b. joint family	6	30%
9	<b>Marital status</b>		
	a. married	19	95%
	b. unmarried	1	5%
10	<b>Body mass index</b>		
	a.obese>25.0	10	50%
	b.over weight-23.0-24.9	1	5%
	c.normal -18.5-22.9	9	45%

### Association of Selected Demographic Variables with Risk Factors

Table 2: Association of risk factors with age of adults

Age	Mild Risk		Moderate Risk		High Risk	
20- 30	-		1	5%		
30- 40			3	15%	1	5%
40 - 50	3	15%	8	40%	4	20%

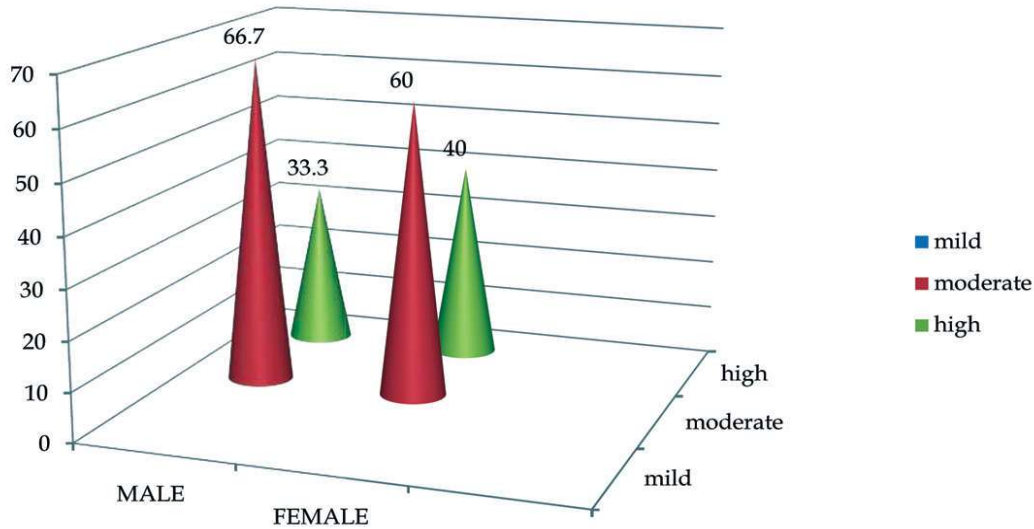


The Table 3 interprets the association of age group with risk factors in which it shows that the higher

the age group the more the risk of getting coronary artery disease rather than the lesser age group.

**Table 3** Association of risk factors with sex of adult patients

Age	Mild Risk		Moderate Risk		High Risk	
Male	-	-	10	66.7%	5	33.3%
Female	-	-	3	60%	2	40%

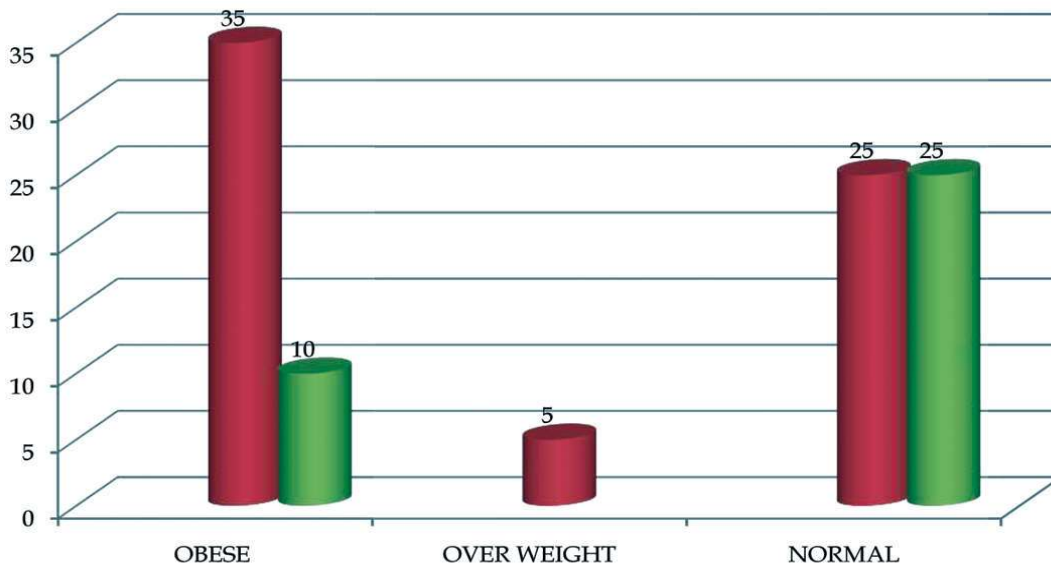


The above chart interprets that females are also in moderate risk which may lead to higher risk in future. higher risk like the male patients who are in more in

**Association of Body Mass Index with the Risk Factors**

**Table 4:** Association of Body Mass Index with the Risk Factors

Body Mass Index	Mild Risk		Moderate Risk		High Risk	
Obese	-	-	7	35%	2	10%
Over Weight	-	-	1	5%	-	-
Normal	-	-	5	25%	5	25%



The Table 4 shows that normal body mass index in adult patients also lies in higher risk of coronary artery disease rather than obese patients.

*Summary and Recommendations*

Creating awareness and imparting and also improving knowledge are foundations in preventing

coronary artery disease, the nurses responsibility is to provide health education to the individual to be an healthy individual and further guide the affected individual who are at more risk in recurrence of the condition with increasing number of risk factors .In order to identify the risk factors and save their lives with creating adequate awareness and health education. With this concept the investigator has selected this project.

#### *The Major Findings of the Study*

The comorbid factors were contributing 25% of high risk rather than the psychosocial factors which contribute 15% of high risk factors but both go hand in hand in increasing the incidence 15% of psychosocial factors and 85% of it influence coronary artery disease 15% of psychosocial factors and 85% of it influence coronary artery disease. the association of age group with risk factors in which it shows that the higher the age group the more the risk of getting coronary artery disease rather than the lesser age group. that females are also at higher risk like the male patients who are in more in moderate risk which may lead to higher risk in future. normal body mass index in adult patients also lies in higher risk of coronary artery disease rather than obese patients.

#### *Nursing Implications*

##### *Implications for Nursing Practice*

This study also implied the needs for integrated series feedback, follow up in collaborative approach of both hospital and individual. The concept that has to be changed which implies the need for change that has to be introduced from within the patient's expectations and needs.

##### *Implication for Nursing Education*

Nurses should update knowledge in prevention of coronary heart disease which starts with the knowledge of causative factors and their management also.

##### *Implications to Nursing Administration*

The nurse administrators should take active part in the health policy making developing protocols, procedures, standing orders related to coronary artery disease.

##### *Implications for Nursing Research*

The study helps the nurse researcher to develop

insight into the identification and prevention of coronary artery disease.

#### *Recommendation*

- Replication of this study may be done in different settings.
- A comparative study may be conducted among the male and female populations.
- A study can be conducted to assess the level of anxiety among the family members.
- Nurses working in the cardiology department should spend adequate time in meeting the physical and physiological needs of the patients.

#### **Conclusion**

An overall perusal of the results and discussion of this study has brought about he conclusion of the risk factors influencing coronary artery disease among adult patients .The health of the adult patient is essential in leading a healthy life and reduce the mortality rate .The reduction of the disability caused by the coronary artery disease is very much preventable through effective participation of the patient and the nurse. Adequate knowledge about the disease and the proper follow up care which also includes appropriate life style modification and the control of associated diseases which acts as the major factors in influencing coronary heart disease .

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