



## RESEARCH ARTICLE

### KNOWLEDGE AND PRACTICES ON MANAGEMENT OF CORONARY ARTERY DISEASE AMONG PATIENTS WITH CORONARY ARTERY DISEASE

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#### ARTICLE INFO

##### Article History:

Received 26<sup>th</sup> December, 2018

Received in revised form

10<sup>th</sup> January, 2019

Accepted 08<sup>th</sup> February, 2019

Published online 31<sup>st</sup> March, 2019

##### Key Words:

Coronary Artery Disease (CAD),  
Knowledge, Practice,  
Information Booklet.

#### ABSTRACT

The unprecedented economic development and rapid urbanization in Asian countries, particularly in India has led to a shift in health problems from Communicable to Non-communicable diseases<sup>1</sup>. Coronary Artery Disease (CAD) has been often considered as “affluent person’s disease”, that is a disease caused by easy and sedentary life style, high calorie and high fat diet<sup>2</sup>. The CAD not only brings mortality but also results in increased morbidity resulting from the complications due to the disease<sup>2</sup>. The nurses have a significant role in making a difference in people’s attitude regarding health care and life style modifications for CAD<sup>3</sup>. The purpose of the present study is to assess the Knowledge and Practices of CAD patients regarding management of CAD and to develop an information booklet so as to enable them to cope with the lifestyle modifications. **Objectives:** Assess the level of Knowledge on Practices regarding Management of Coronary Artery Disease among patients diagnosed and admitted with Coronary Artery Disease. Determine the relationship between Knowledge and Practices regarding Management of Coronary Artery Disease among patients diagnosed and admitted with Coronary Artery Disease. **Methods:** The descriptive survey approach was used for the present study. The study was conducted in R.L Jalappa Hospital and Research center and R.L.Jalappa Narayana Hrudayalaya Hospital, Tamaka, Kolar in the OPDs and Medical Wards. The formal permission along with patient consent was taken before collecting the data. The study participants were selected by using purposive sampling technique, which fulfilled the inclusion criteria. The data was collected by structured interview schedule by using Structured Knowledge and Knowledge on Practice Questionnaire from 80 CAD patients. **Major findings** of the study showed that, the overall mean Knowledge score of CAD patients regarding Management of CAD was found to be inadequate (39.60%). the overall mean Knowledge on Practice score of CAD patients regarding Management of CAD was found to be inadequate (37.52%). there was a positive correlation between Knowledge and Knowledge on Practice of CAD patients regarding Management of CAD ( $r_{(79)} = +0.97$ ,  $t_{(cal)} = 35.69$ ) at 0.05 level and was significant. **Conclusion:** Health maintenance is the self-responsibility of each individual patient. The study highlights the vital role of nurses in making the CAD patients aware about the prevention and control of the modifiable risk factors of CAD thus reinforcing the statement, “Prevention is better than Cure.”

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**Citation:** Dr. Zeanath C.J. 2019. “Knowledge and Practices on Management of Coronary Artery Disease among Patients with Coronary artery disease”, *International Journal of Current Research*, 11, (03), 2465-2473.

## INTRODUCTION

Heart is a vital organ in our body that supplies “liquid of life”; the blood to all organs of our body. Heart itself gets this “liquid of life” by means of coronary arteries. Coronary Artery Disease (CAD) has been often considered as “affluent person’s disease”, that is a disease caused by easy and sedentary life style, high calorie and high fat diet (Kumar Soumithra, 2009). According to WHO’s Global Health Statistics 2008 among the 200 member countries, CAD ranks the number one killer disease in 2030, causing 14.2% of all deaths world wide (<http://www.heartdiseases.com/>).

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The higher prevalence of CAD amongst Indians came to limelight by detecting high rate of CAD amongst Indians living abroad (<http://www.heartcentreonline.com/>). The Kaiser Study done in America among the local hospitals, showed that hospitalization rate for heart diseases among Indian patients were four times higher than rest of the American patient population (Raju Soma, 2007). Nurses worldwide are engaged in innovative activities on a daily basis; activities motivated by the desire to improve patient care outcome and the need to decrease costs of health system. In CAD, the nurses have a significant role in making a difference in people’s attitude regarding health care and life style modifications. The nursing care will be focussing on recognition and treatment of potentially life threatening complications, maintenance of therapeutic critical care environment, identification of psychosocial impact of the

disease its modifications and rehabilitation (<http://www.slokhass.com/>). In the care of suffering one needs scientific knowledge, technical skills and human understanding. He who uses these with courage, humility and with wisdom will provide a unique service to his fellow men and will build an enduring edifice of character within himself (Saradha, 2006).

**Need For The Study:** CAD in India has quadrupled in the last 40 years and WHO estimates that by 2020 close to 60% of CAD patients worldwide will be Indians. Indians have the highest mortality due to CAD among all ethnic groups<sup>7</sup>. According to Guinness Book of Records, Northern Ireland ranks first in occurrence of CAD and Massai of Africa with almost no heart disease (National Maternal Health and Family Welfare, 2007). CAD not only brings mortality but also results in increased morbidity resulting from the complications like Congestive Cardiac Failure (CCF) and Sudden Cardiac Arrest<sup>9</sup>. With modernization, a large proportion of Asians are trading healthy traditional diets for fatty foods, physical jobs for deskbound sloth, the relative calm of the countryside for the stressful city (Suzanne, 2004). A descriptive survey conducted by Lancet (2000) among inhabitants of Europe revealed that even after modifications of risk factors like diet, obesity, stress and physical exercise, South Asians in Canada have a higher rate of heart disease than natives. Doctors explained this vulnerability as “thrifty – gene theory”, which helped South Asians to adapt at times of famines (Affara, 2009). Nurses are sometimes the first and primary point of contact for health services for people who find it difficult to access the main stream of health care services (Raju Soma, 2007). Changes in demography and increased burden of diseases have put additional demands on both health care delivery system and on nurses<sup>11</sup>. This has put additional responsibilities and creative thinking on the shoulders of nurses in rendering services for CAD patients, especially in providing information regarding modifiable risk factors like diet, physical exercise, stress, smoking, alcoholism, obesity and therapeutic adherence (<http://www.janasamachar.net/>). Based on the available literatures on increased prevalence of CAD, its threat to human population, and economic prosperity of country; as well as investigator’s personal experience while working in ICU and nursing patients with CAD, it was found that more than 60% of the patients were not aware on the modifications of risk factors of CAD like diet, obesity, smoking, alcoholism, stress and physical inactivity that prevents the patient’s from developing complications due to CAD. The hospital selected for the present study is a multispecialty hospital with 850 bed capacity. Regarding the service rendered to CAD patients, it was found that nearly 40% of the in patients are CAD patients; the hospital also has a well equipped inpatient and outpatient services.

Thus the investigator strongly felt a need to assess the Knowledge and Practices of CAD patients on Management of CAD with a view to provide information regarding modification of selected risk factors of CAD like diet, obesity, smoking, alcoholism, stress and physical inactivity along with routine medical care. Our world has been likened to a beautiful book that is of little use to those who cannot read. And in a similar sense, our knowledge as nurses is a priceless asset the value of which is vastly diminished unless it is taught, disseminated and practiced throughout the world (<http://www.slokhass.com/>).

*“For it’s our privilege to shield the patients when they are bare and without defence*

*And to listen to the voice of the patient, not the voice of the disease.*

*And to clothe them not only with health but also with the ability to thrive*

*Once they have left our care (<http://www.slokhass.com/>)”.*

## Objectives

### Statement of the problem

“A Study to Assess the Knowledge and Practices on Management of Coronary Artery Disease among Patients Diagnosed and Admitted with Coronary Artery Disease in a Selected Hospital, Kolar with a view to develop Information Booklet.”

### Hypothesis

**H<sub>1</sub>** . There will be statistically significant relationship between Knowledge and Practices of patients with Coronary Artery Disease regarding the management of Coronary Artery Disease.

**H<sub>2</sub>** - There will be statistically significant association between Knowledge and selected socio-demographic variables of patients with Coronary Artery Disease.

**H<sub>3</sub>** - There will be statistically significant association between Practices and selected socio-demographic variables of patients with Coronary Artery Disease.

### Assumptions

- Coronary Artery Disease patients will have some Knowledge regarding the Management of Coronary Artery Disease.
- Knowledge of the patients regarding the Management of Coronary Artery Disease will affect their Practice.
- Information Booklet will improve the Knowledge and Practices of patients regarding Management of Coronary Artery Disease.

### Conceptual FRAME work

**Sampling Criteria:** The patients were selected with the following pre-determined set of criteria

#### Inclusion criteria

##### Coronary Artery Disease patients who are;

- Having stable vital signs and are maintaining oxygen saturation > 90%
- Admitted in medical wards of Sri R.L. Jalappa Hospital and Research Centre.
- Able to understand Kannada or English language.
- Willing to participate in the study.

**Exclusion criteria:** Coronary Artery Disease patients who were developing complications during the study period.

**Selection and development of tool:** The data collection followed in this study involves Structure interview schedule using the Structured Knowledge and Knowledge on Practice Questionnaire.

**Development of tool:** Based on the objectives of the study the following tool was developed to collect the data. Structured Knowledge and Knowledge on Practice Questionnaire which includes the following sections.

#### Section – A: Demographic data

It includes Age in years, Gender, Educational status, Type of occupation, Family income per month, Marital status, religion, Type of habits, Type of diet, Previous history, Family history, Number of admissions/year, Exposure to any type of mass media about CAD within 6 months, Known case of CAD, Body Mass Index.

**Section–B:** Structured Knowledge Questionnaire consisting of 30 items on Management of CAD.

**Section–C:** Structured Knowledge on Practice Questionnaire consisting of 25 items on Management of CAD.

The following steps were carried out in preparing Structured Knowledge and Knowledge on Practice Questionnaire.

#### For the selection of items and preparation of the tool the following steps were adopted:

- Search for review from electronic and non – electronic media was conducted in the areas related to management of CAD.
- Opinion and suggestions were taken from nine subject experts and necessary modifications were made in the tool.

**Plan for data analysis:** The analysis of data requires a number of operations such as establishment of different categories and the application of these categories to raw data through coding, tabulation and then drawing statistical inferences. The data obtained was analyzed by descriptive and inferential statistics, to achieve the objectives of the study.

#### Statistical analysis of data

##### The data was analyzed by the following steps

- Organization of data in master sheet.
- Frequencies and percentages were used for analysis of demographic characteristics.
- Calculation of mean, standard deviation and mean% of overall knowledge and Knowledge on Practice scores of CAD patients regarding Management of CAD.
- Area wise calculation of mean, standard deviation and mean% of overall Knowledge and Knowledge on Practice scores of CAD patients regarding Management of CAD.
- Calculation of relationship between Knowledge and Knowledge on Practice of CAD patients regarding Management of CAD with selected demographic variables will be analyzed by using Correlation test and the strength of relationship is analyzed by using 't' test.

- Calculation of association between the level of Knowledge and Knowledge on Practice of CAD patients regarding Management of CAD with selected demographic variables will be analyzed using chi-Square test.

#### The major findings of the study are discussed in the following sections:

##### Section –I

**Socio-demographic characteristics of cad patients:** This section deals with data pertaining to socio-demographic characteristics of patients with CAD. Patients with CAD were assessed for socio-demographic variables before collecting the data regarding Knowledge and Knowledge on practice of CAD patients on Management of CAD. Majorities (85.00%) of CAD patients were having inadequate knowledge and only (15.00%) were having moderate knowledge.

None of the CAD patients had adequate knowledge regarding management of CAD. Majorities (88.75%) of CAD patients were having Inadequate Knowledge on Practice and (11.25%) were having moderately adequate Knowledge on Practice. No patients were having adequate Knowledge on Practice regarding management of CAD.

##### Knowledge score:

Adequate knowledge (above 21 scores)- 70% and above  
Moderate knowledge (15-20 scores) - 50 - 69%  
Inadequate knowledge (below 14 scores) - 49% and below

##### Knowledge on practice score:

Adequate practice (above 18 scores) - 70% and above  
Moderate practice (12-17 scores) - 50 - 69%  
Inadequate practice (below 11 scores) - 49% and below

**Section – III:** Table 7 presents the data with regard to correlation coefficient between the Knowledge and Knowledge on Practice ( $r_{(79)} = +0.97$ ) at 0.05 level is significant and there is a positive correlation among the Knowledge and Knowledge on Practice regarding Management of Coronary Artery Disease

The t calculated value is greater than t table value. Based on the above description there is significant relationship between the Knowledge and Knowledge on Practice regarding Management of Coronary Artery Disease. Thus the first research hypothesis ( $H_1$ ) was accepted at 0.05 levels.

## DISCUSSION

The findings of the study are discussed under the following heading

#### Level of Knowledge and Knowledge on Practice regarding Management of Coronary Artery Disease among patients diagnosed and admitted with Coronary Artery Disease:

The findings of the study revealed that majority (85.00%) of CAD patients was having inadequate knowledge and (15.00%) were having moderately adequate knowledge and majority (88.75%) of CAD patients were having Inadequate Knowledge on Practice and (11.25%) were having moderately adequate Knowledge on Practice.

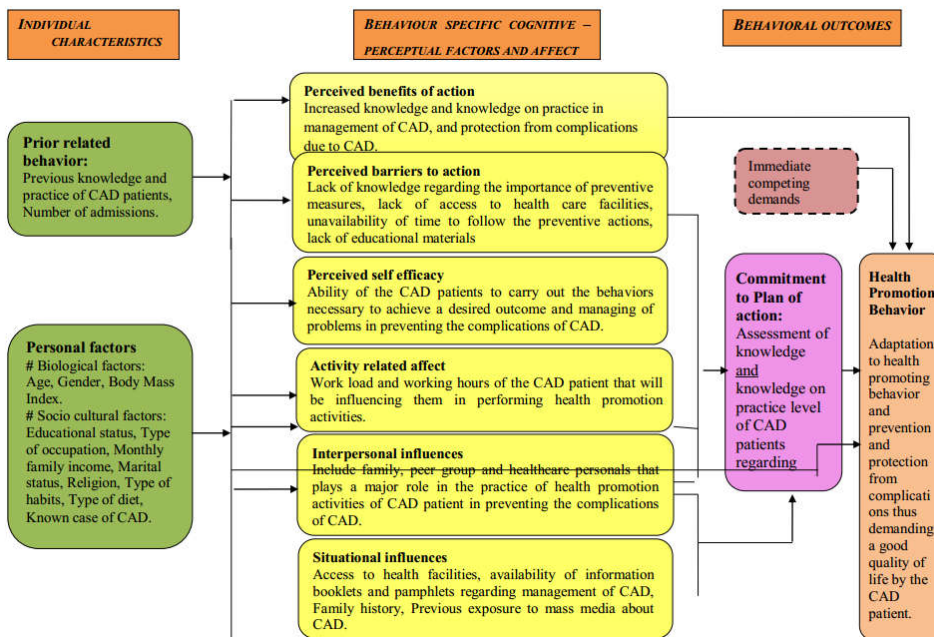


Fig No:1 Health Promotion Model (Revised) redrawn from Penderson.N.J – Health Promotion in Nursing Practice (2002)

Research Methodology

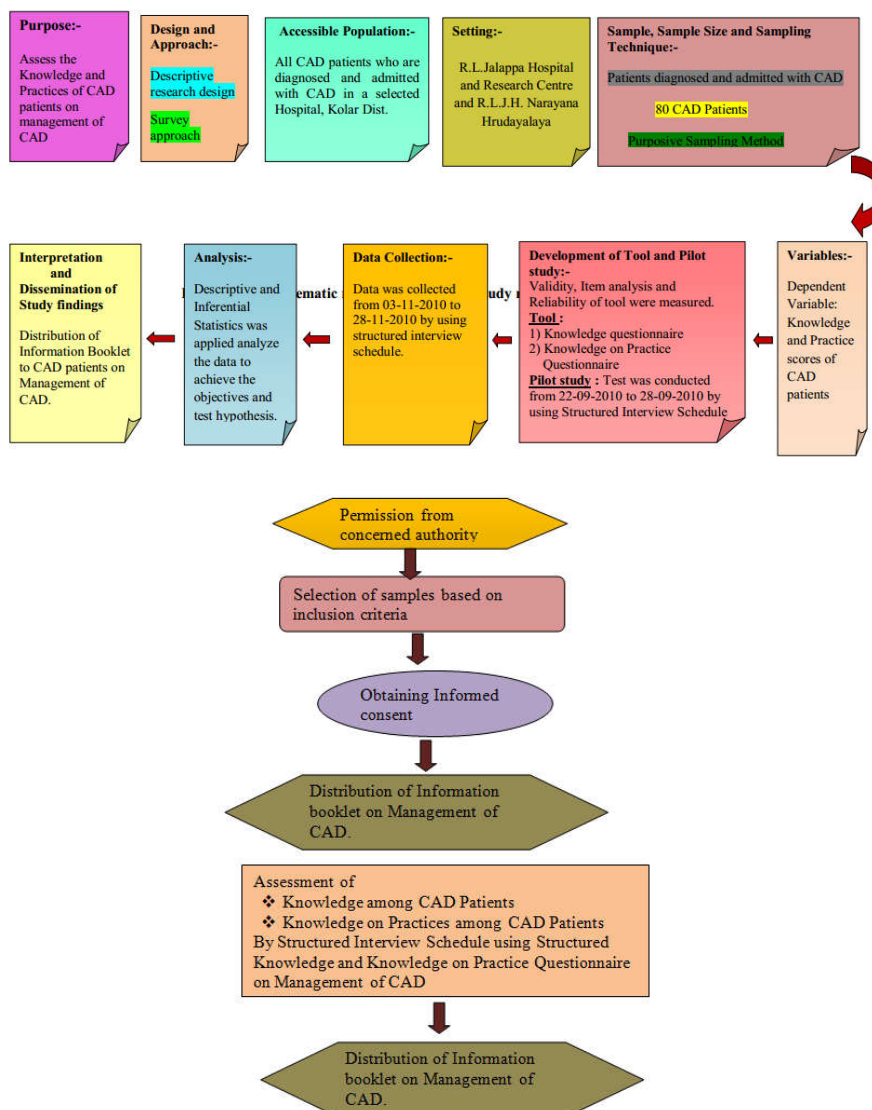


Figure 3. Schematic Representation of Method of Data Collection

**Table-1: Distribution of demographic characteristics of CAD patients.**

n= 80

Sl. No.	Variables	Frequency	Percentage
1	Age in years		
	a) 21 – 30 yrs	0	--
	b) 31 – 40 yrs	0	--
	c) 41 – 50 yrs	18	22.5
	d) 51 – 60 yrs	46	57.5
	e) 60 and above	16	20
2	Gender		
	a) Male b) Female	53 27	66.25 33.75
3	Educational status		
	a) Illiterate	24	30
	b) Primary education	21	26.25
	c) Higher primary	11	13.75
	d) High School	18	22.5
	e) PUC f) Degree	5 1	6.25 1.25
4	Type of Occupation		
	a) Farmer/ Agriculture	17	21.25
	b) Government employee	10	12.5
	c) Private employ	14	17.5
	d) Selfemployed e) Unemployed	22 17	27.5 21.25
5	Family Income / Month		
	a) Rs.1000-3000	7	8.75
	b) Rs.3001-5000	51	63.75
	c) Rs.5001- 7000 d) Rs.7001 and above	18 4	22.5 5.0
6	Marital status		
	a) Married	62	77.5
	b) Unmarried	0	-
	c) Divorced d) Widow	0 18	- 22.5
7	Religion		
	a) Hindu	54	67.5
	b) Muslim	23	28.75
	c) Christian d) Others (specify) -----	3	3.75
8	Type of Habits		
	a) Smoking	20	25
	b) Alcoholism	0	-
	c) Chewing betel leaves	18	22.5
	d) More than one e) Others(specify) -----	31 11	38.75 13.75
9	Type of Diet		
	a) Vegetarian	12	15
	b) Non vegetarian c) Mixed	0 68	- 85
10	Previous history		
	a) Hypertension	20	25
	b) Diabetes mellitus	21	26.25
	c) Hypercholestremia d) Other diseases(specify) -----	23 16	28.75 20
11	Family history		
	a) Hypertension	28	35
	b) Diabetes mellitus	19	23.75
	c) Hypercholestremia d) Other diseases (specify) ----- ]	21 12	26.25 15
12	Number of admissions/year		
	a) less than 2 times	26	32.5
	b) 3-4 times	45	56.25
	c) 5-6 times d) more than 6 times	9 0	11.25 -
13	Exposure to type of Mass Media about CAD within 6 months		
	NO	52	65
	YES: If yes through	28	35
	a) Television	22	27.5
	b) News paper c) Magazine d) Radio	6 0 0	7.5 - -
14	Known case of Coronary Artery Disease		
	a) Within 6 months	26	32.5
	b) 7 months- 1 year c) above 1 year	39 15	48.75 18.75
15	Body Mass Index		
	a) Under weight	3	3.75
	b) Normal weight	38	47.5
	c) Over weight d) Very Obese	34 5	42.5 6.25

**Table-2: Distribution of CAD patients according to the level of Knowledge regarding Management of CAD.**

n = 80		
Knowledge Criteria	Frequency of CAD patients	Percentage of CAD patients
Adequate knowledge	0	-
Moderately adequate knowledge	12	15
Inadequate knowledge	68	85

**Table 3. Distribution of CAD patients according to the level of Knowledge on Practice regarding management of CAD.**

n=80		
Practice Criteria	Frequency of CAD patients	Percentage of CAD patients
Adequate knowledge	0	-
Moderately adequate knowledge	9	11.25
Inadequate knowledge	71	88.75

**Table -4: Distribution of mean Knowledge and Knowledge on Practice score of CAD patients regarding Management of CAD**

n = 80							
Sl. No.	Overall	No. of Items	Max score	Range	Mean	Standard deviation	Mean %
1.	Information related to Knowledge regarding Management of CAD	30	30	7-19	11.88	3.05	39.60
2.	Information related to Knowledge on Practice regarding Management of CAD	25	25	6-13	9.38	1.80	37.52

**Table 5. Comparison of knowledge and knowledge on practice scores of CAD patients regarding management of CAD**

n=80					
Sl. No.	Variable	Correlation coefficient(r)	t calculated value	df	Interpretation
1	Relationship between the Knowledge and Knowledge on practice regarding Management of CAD	+ 0.97	35.69	79	P<0.05 SS*

t table value at 79 df=1.96

SS\* - Statistically Significant

**Table 6. Association of knowledge of CAD patients regarding management of CAD With selected demographic variablesn=80**

Sl. No	Demographic Variables	Knowledge level		$\chi^2$ Calculated value	df	Inference
		Below median	Above Median			
1	a) 21 – 50 yrs	5	13	6.22	1	P<0.05 SS*
	b) 51 years and above	31	31			
2	a) Male	24	29	0.005	1	P>0.05 NS
	b) Female	12	15			
3	a) Illiterate	12	12	3.53	2	P>0.05 NS
	b) Higher Primary and Below	17	15			
	c) High School and above	7	17			
4	a) Farmer/ Agriculture	12	5	16.19	4	P<0.05 SS*
	b) Government employee	2	8			
	c) Private employ	2	12			
	d) Self-employed	14	8			
	e) Unemployed	7	10			
5	a) Rs.1000-3000	6	1	7.83	2	P<0.05 SS*
	b) Rs.3001-5000	23	28			
	c) Rs.5001 and above	6	16			
6	a) Married	29	33	0.740	1	P>0.05 NS
	b) Single	7	11			
7	a) Hindu	25	29	4.94	2	P>0.05 NS
	b) Muslim	8	15			
	c) Christian	3	0			
8	a) Smoking	8	12	6.736	3	P>0.05 NS
	b) Chewing betel leaves	8	10			
	c) More than one	15	16			
	d) No habits	5	6			
9	a) Vegetarian	8	4	2.68	1	P>0.05 NS
	b) Mixed	28	40			
10	a) Hypertension	11	9	3.64	3	P>0.05 NS
	b) Diabetes mellitus	9	12			
	c) Hypercholestermia	7	16			
	d) Other diseases	9	7			
11	a) Hypertension	16	12	3.61	3	P>0.05 NS
	b) Diabetes mellitus	7	12			
	c) Hypercholestermia	7	14			
	d) Other diseases	5	7			
12	a) less than 2 times	10	16	0.912	2	P>0.05 NS
	b) 3-4 times	22	23			
	c) more than 5 times	4	5			

Continue .....

13	Exposure to type of Mass Media about CAD within 6 months a) Yes b) No	9 27	19 25	2.88	1	P>0.05 NS
14	Known case of Coronary Artery Disease a) Within 6 months b) 7 months- 1 year c) above 1 year	15 14 5	11 25 10	2.84	2	P>0.05 NS
15	Body Mass Index a) Normal weight b) Over weight	19 17	22 22	0.061	1	P>0.05 NS

NS – Not Significant

SS\* - Statistically Significant

 $\chi^2$  table value at 1df =3.84, 2df =5.99, 3df =7.82, 4df =9.49**Table 7. Association of Knowledge on Practice of CAD patients regarding management of CAD with selected demographic variable n=80**

Sl. No	Demographic Variables	Knowledge level		$\chi^2$ Calculated value	df	Inference
		Below median	Above Median			
1	Age in years a) 21 – 50 yrs b) 51 years and above	8 21	10 41	0.674	1	P>0.05 NS
2	Gender a) Male b) Female	23 4	30 23	6.77	1	P<0.05 SS*
3	Educational status a) Illiterate b) Higher Primary and Below c) High School and above	7 11 9	17 21 15	1.39	2	P>0.05 NS
4	Type of Occupation a) Farmer/ Agriculture b) Government employee c) Private employ d) Self-employed e) Unemployed	8 2 6 9 2	9 8 8 13 15	7.36	4	P>0.05 NS
5	Family Income / Month a) Rs. 1000-3000 b) Rs. 3001-5000 c) Rs. 5001 and above	4 16 8	3 35 14	1.79	2	P>0.05 NS
6	Marital status a) Married b) Single	25 2	37 16	5.64	1	P<0.05 SS*
7	Religion a) Hindu b) Muslim c) Christian	18 8 1	36 15 2	0.46	2	P>0.05 NS
8	Type of Habits a) Smoking b) Chewing betel leaves c) More than one d) No habits	10 3 13 1	10 15 18 10	8.54	3	P<0.05 SS*
9	Type of Diet a) Vegetarian b) Mixed	5 22	7 46	0.415	1	P>0.05 NS
10	Previous history a) Hypertension b) Diabetes mellitus c) Hypercholestermia d) Other diseases	5 8 8 7	15 13 15 9	1.709	3	P>0.05 NS
11	Family history of a) Hypertension b) Diabetes mellitus c) Hypercholestermia d) Other diseases	12 6 5 4	16 13 16 8	2.312	3	P>0.05 NS
12	Number of admissions/year a) less than 2 times b) 3-4 times c) more than 5 times	5 20 2	21 25 7	3.72	2	P>0.05 NS
13	Exposure to type of Mass Media about CAD within 6 months a) Yes b) No	8 19	20 33	0.526	1	P>0.05 NS
14	Known case of Coronary Artery Disease a) Within 6 months b) 7 months- 1 year c) above 1 year	9 13 4	17 26 11	0.496	2	P>0.05 NS
15	Body Mass Index a) Normal weight b) Over weight	13 13	28 26	0.0241	1	P>0.05 NS

NS – Not Significant. SS\* - Statistically Significant  $\chi^2$  table value at 1df =3.84, 2df =5.99, 3df =7.82, 4df =9.49

The overall mean Knowledge score of CAD patients regarding Management of CAD is 39.60% and Knowledge on Practice score is found to be only 37.52%. Thus the study findings indicated that CAD patients were having inadequate Knowledge as well as Knowledge on Practice regarding Management of CAD. The findings of the study was supported by a similar experimental study conducted in Asseei Central Hospital, Dubai<sup>16</sup> among 60 CAD inpatients; 30 men and women each which revealed that majority of the samples have poor knowledge (43%) and practice (35%) regarding life style modifications.

#### **Relationship between the knowledge and knowledge on practice of CAD patients regarding management of CAD:**

The findings of the study revealed that the correlation coefficient between the knowledge and knowledge on practice ( $r_{(79)} = +0.97$ ) at 0.05 level is significant and there is a positive correlation among the knowledge and knowledge on practice of CAD patients regarding management of CAD. The  $t$  calculated value is greater than  $t$  table value. Based on the above description there is significant relationship between the knowledge and knowledge on practice of CAD patients regarding management of CAD. Thus the first research hypothesis was accepted at 0.05 levels. The findings of the study was supported by a similar experimental study conducted in Asseei Central Hospital, Dubai<sup>16</sup> among 60 CAD inpatients; 30 men and women each which revealed that majority of the samples have poor knowledge (43%) and practice (35%) regarding life style modifications. The study concluded that cardiac patients have poor knowledge about their disease condition and improvement on the level of knowledge is needed that will be reflected in their practice also thereby improving their quality of life.

**Implications of the study:** The findings of the study can be used in the following areas of nursing profession.

#### **Nursing practice**

- Nursing professionals working in the hospital as well as in the community setups should educate the patient by using Informative Booklet regarding Management of CAD to prevent the complications and future attacks.
- Nursing professionals play a key role in enhancing the patient's knowledge on Management of CAD which will improve the quality of life of patients by providing Knowledge and Knowledge on Practice regarding the Management of CAD.

#### **Nursing education**

- As a nurse educator, there are abundant opportunities for nursing professionals to educate the patients as well as their family members regarding management of CAD.
- The study emphasizes on significance of short term in-service education programme for nurses, peripheral health workers and for students to educate patients regarding Management of CAD
- The study emphasizes on significance of workshops or in-service education program for nurses, regarding the Management of CAD so that nurses can effectively implement such interventions in the ward setting.

- The students can utilize the Information Booklet content in practical reparation of diet and to provide health education regarding Management of CAD in the community setting and Outpatient Department.

#### **Nursing administration**

- The nursing administrator can take part in developing protocols, standing orders regarding the health education programmes and strategies for CAD patients regarding Management of CAD.
- The nursing administrator can mobilize the available resource personnel towards the health education of patients regarding Management of CAD.
- The nurse administrator should plan and organize continuing nursing education programme for nurses and motivate them in conducting teaching programmes on Management of CAD in Wards and in Medicine and Cardiology OPDs. She/he should be able to plan and organize programmes taking into consideration the cost effectiveness to carry out successful educational programmes.
- It also helps the Nursing administrator to plan, manpower, money, material, methods and time to conduct successful patient's education in Outpatient department and in wards.
- Nursing administrator can conduct seminar to the Nursing staff on the current trends in management and prevention of CAD.

#### **Nursing research**

- This study helps nurse researches to develop appropriate health education tools for educating the patients regarding Management of CAD according to their demographic, socio economic, cultural and political characteristics.
- Nurses should come forward to carryout studies on management CAD and publish for the benefit of patients, public and nursing fraternity. The public and private agencies should also encourage research in this field through materials and funds.
- Nurses have no role in the prescription of the medicine in India but their role in non-pharmacological measures can be expanded which has a scope for independent function such as patient teaching.
- More and more research activity can be carried out on the alternative methods and preventive aspects of in occurrence of CAD complications.

#### **Limitations of the study**

- The study is limited to CAD patients above the age of 21 years in a selected hospital, Kolar.
- The study did not use any control group
- The study did not assess the attitude of CAD patients
- Small number of subjects limited the generalization of the study.
- The study doesn't have any intervention and assessment of its effectiveness.
- The study was limited only to CAD patients who were admitted to medical wards and were coming to OPDs.



- The patients were assessed about their Knowledge and Knowledge on Practice but their actual practice was not monitored.
- Nurses have no role in the prescription of the medicine in India but their role in non-pharmacological measures can be expanded which has a scope for independent function such as patient teaching.

### Recommendation

- A similar study can be replicated on a larger sample in different types of setting.
- A similar study can be replicated with a control group
- An interventional study can be done to assess the effectiveness of information booklet in improving the knowledge and knowledge on practice of CAD patients regarding Management of CAD.
- A similar study can be done to assess the effectiveness of structured teaching programme in improving the knowledge and knowledge on practice of CAD patients regarding Management of CAD.
- A descriptive study could be done on the causes of non-adherence to lifestyle modifications by patients with CAD.
- A prospective study can be conducted to identify the possible complication in future in the CAD patients due to non-adherence to lifestyle modifications.
- A qualitative study can be done to assess why people in Indian is more prone for getting CAD.

### Conclusion

This chapter highlighted on overall study findings, implications, limitation and recommendation of the present study. The present study clearly indicates its importance in the field of

Nursing practice, administration, education and research. The researcher had strongly emphasized the necessity to meet with information needs of the patient which will provide the

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