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Knowledge & Life Style Practice on Heart Disease & Its Prevention among Middle Aged People in Rural Areas of Rewari

Rekha Yadav[1], Pranati Barua[2], Naveena J H[3]

[1]M.Sc. nursing 2nd year (Medical Surgical Nursing)

[2]Professor, Principal, Amity College of Nursing, Amity University Haryana

[3]Assistant Professor III Amity College of Nursing, Amity University Haryana

Abstract: ***Background of the study: The heart muscle must have an adequate blood supply to function properly. The myocardium receives blood from the coronary arteries. If one or both of these arteries are blocked and collateral circulation fails, ischemia and infarction of the heart muscle as results .The major disorders due to the insufficient blood supply to the myocardium are angina pectoris, congestive heart failure, myocardial infarction and sudden death. These disorders are collectively known as coronary heart disease (CHD) also called as coronary artery disease (CAD).[1] Aim: The aim of the study was to assess the knowledge and life style practice on heart disease and it's prevention among middle aged people in a selected rural areas of Rewari. Methodology: The descriptive survey study was conducted using descriptive research design at rural area of Rewari. The conceptual framework used in the study was Health Promotion model. The total sample size for the study was 100 middle aged. Peoples. Written consent has obtained from the samples. Non Probability Purposive sampling technique has used and data collection by structured knowledge questionnaire and checklist. Results: The major finding of the study revealed that 65% of the middle aged were having moderate knowledge and n=29% of them having inadequate knowledge and n=6%of them having adequate knowledge. Practice score on heart disease, n= 70% of the middle aged were having average practice and n=18% of them having poor practice and n=12% of them having good practice. There was significant relation between knowledge and practice. There was no significant association found between knowledge and practice with demographic variables. Conclusion: The finding revealed that middle aged people who were had moderate knowledge and average practice on heart disease and it's prevention. So there is a need to organize public health programs to improve their knowledge and life style practice regarding heart disease and it's prevention.***

Keywords: Heart disease, knowledge, life style practice, Prevention, Middle aged people

1. Introduction

Coronary heart diseases is, when one or more of the coronary arteries become narrowed or totally blocked by a gradual build up of fat (cholesterol) within the artery wall, which reduces blood flow to the heart muscle. As a result, the heart muscle does not get the oxygen rich blood that it needs and it begins to die.[2]

With the turn of the century, cardiovascular diseases (CVDs) have become the leading cause of mortality in India. In comparison with the people of European ancestry, CVD affects Indians at least a decade earlier and in their most productive midlife years. Coronary heart disease (CHD) is the most common type of heart disease and cause of heart attack. Incidence of CHD occurs in men between 35 to 45 years age. After the age of 65 the incidence of men and women equalizes, although there is evidence suggesting that more women are being seen with CHD earlier because of increased stress, smoking and menopause.[3]

The risk of coronary heart disease increases as age increases. Middle aged adults are mostly affected by CHD .For men, the risk starts to climb at about age 45, and by age 55, the risk becomes double. It continues to increase until, by age 85. For women, the risk of coronary heart disease also climbs with age, but the trend begins about 10 years later than in men and especially with the onset of menopause.[4]

It has been established that Coronary heart Disease (CHD) is the leading cause of mortality and morbidity in many countries worldwide. The World Health Organization (WHO) estimated that if no appropriate action is taken, 20 million people would die from cardiovascular disease every year. Coronary heart diseases typically occur in middle age or later, risk factors are determined to a great extent by behaviours learned in childhood and continued into adulthood such as Dietary habits, Smoking, Obesity, Life style, Physical inactivity, and Alcoholism . Studies have shown that -knowledge has an impact on prevention of heart disease. Significant correlations between patient's specific knowledge about risk factors of coronary heart disease and self reported life style changes.[5]

2. Review of Literature

1) Studies related to risk factors and prevalence of heart disease

A comparative study was conducted on Prevalence of coronary artery disease and coronary risk factors in rural and urban populations of north India. A cross-sectional survey of two randomly selected villages from the Moradabad district and 20 randomly selected streets in the city of Moradabad. The 3575 subjects were between 25 and 64 years old; 1769 (894 men and 875 women) lived in the countryside and 1806 (904 men and 902 women) lived in the city. The survey methods were questionnaires, physical examination and electrocardiography. Results of the study was overall

prevalence of coronary artery disease, based on a clinical diagnosis and an electrocardiogram, was 9·0% in the urban and 3·3% in the rural population. The prevalences were significantly higher in the men compared with the women in both urban (11·0 vs 6·9%) and rural (3·9 vs 2·6%) populations, respectively. Smoking was a significant risk factor of coronary disease in men.[6]

A cross-sectional study was conducted on Different government workplaces in Bahrain. Data was collected from 1139 employees between October 2010 and March 2011 through interviews, including physical measurements, patient blood testing, and expired carbon monoxide (CO) levels as particles per million (ppm) for smokers. The following overall prevalence rates were reported: overweight and obesity 78.4% and reported hypertension 36.9% (included both those who were on and not on treatments), with an estimated prevalence of 21.6% for measured systolic blood pressure (Sbp) ≥ 140 mmHg and 23.3% for diastolic blood pressure (dbp) ≥90 mmHg. The majority of the participants (95.35%) had either no or less than 3 CVD risk factors. Only 4.65% had 3–5 risk factors.[7]

2) Studies related to knowledge of people regarding heart disease and it's prevention.

A study was conducted on Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Primordial Prevention of Cardiac Diseases among High School Teachers in Selected Schools, Bangalore". 40 high school teachers of Jyothi School, Bangalore were selected for the study using non-probability convenient sampling technique. The findings of the study showed that the mean pre-test knowledge score 15.23+3.04 was less than the post-test knowledge score 22.55+ 2.72. The't' test value computed between the pre-test and post-test score was statistically significant at 0.05 level (t=28.820, df=39). The findings also denoted a significant correlation between the post-test knowledge and the demographic variables, age, monthly income, educational status and teaching experience in years of high school teachers.[8]

A study was conducted on Knowledge on Risk Factors of Coronary Heart Disease among Middle Aged Administrative Staffs of Kathmandu result shows that 62.4% participants had moderate knowledge, 20.8% of them had adequate knowledge and only 16.8% had inadequate knowledge on prevention.[9]

A study conducted on Knowledge regarding preventive measures of heart disease among the adult population in Kathmandu. This study was conducted by interviewing house to house survey. A total of 405 respondents who met the eligible criteria were systematically sampled and interviewed face to face for the study. result shows that among total respondents, 57.8 percent had adequate knowledge on heart disease.[10]

3) Studies related to practice of people regarding heart disease and its prevention

A study was done to determine the knowledge, attitude and practice/behaviour of cardiovascular health in residents of a semi urban community of Nepal. The study population included 777 respondents from six randomly selected clusters in both villages. Result shows that 70% of all participants were women and 26.9% lacked formal education. The burden of cardiovascular risk factors was high; 20.1% were current smokers, 43.3% exhibited low physical activity and 21.6% were hypertensive. Participants showed only poor knowledge of heart disease causes; 29.7% identified hypertension and 11% identified overweight and physical activity as causes, whereas only 2.2% identified high blood sugar as causative. The study concluded that a gap was found between cardiovascular health knowledge, attitude and practice/ behaviour in a semi urban community in a low-income nation, even among those already affected by cardiovascular disease.[11]

A case control study was done to find out the relationship between physical activity and acute MI. Data was collected form 350 cases of acute MI and 700 controls matched in age, gender in a hospital at New Delhi and Bangalore. Findings revealed moderate intensity exercises such as brisk walking for a frequency of 35-40 minutes a day is protective for CAD and sedentary activity such as television viewing is also associated with increased CAD risk.[12]

3. Statement of Problem

"A descriptive study to assess the knowledge and life style practice on Heart disease and it's prevention among middle aged people in a selected rural areas of Rewari with a view to develop an information booklet."

3.1 Objectives

- To assess the knowledge and life style practice on Heart disease and it's prevention among middle aged people in selected rural area of Rewari.
- To correlate knowledge and life style practice of middle aged on heart disease and it's prevention.
- To find the association between knowledge and life style practice scores of middle aged people on heart disease and it's prevention with their selected demographic variables.

3.2 Research hypothesis

H_1- There will be a significant correlation between the knowledge and practice score regarding heart disease and it's prevention among middle aged people.

H_2- There will be a significant association between demographic variables with knowledge and practice scores regarding heart disease and it's prevention among middle aged people.

3.3 Assumptions

- Middle aged may have some knowledge and practice regarding heart disease and its prevention.
- The information booklet on heart disease and its prevention can bring about desired changes in the lifestyle of middle aged people.
- There may be positive correlation between knowledge and life style practice of middle aged people regarding heart disease and it's prevention.

4. Conceptual Framework

The present study was focused on assessing the knowledge and life style practice on heart disease and it's prevention among middle aged people by applying Nola J Pender, Health Promotion Model (1982).

4.1 Operational definition

- **Assess:** In this study it is an organised, systematic and continuous process of collecting data from middle aged regarding heart disease and its prevention.
- **Knowledge:** In this study knowledge refers to middle aged people awareness regarding Heart disease and its prevention.
- **Life style practice:** Refers to the regular activity and practice of middle aged regarding prevention of heart disease assessed by a checklist.
- **Prevention:** In this study, it refers to the steps that can be taken to prevent the occurrence of heart disease.
- **Heart disease:** it refers to the syndrome associated with the failing heart.
- **Middle aged:** It refers to the people who are in the age group between 30-45years.
- **Rural area:** Refers to People living in the selected village mainly depending on agriculture and other allied occupations For the study purpose the rural area was under Rewari District.

4.2 Methodology

- **Research Approach:** quantitative survey approach was used to carry out the study.
- **Research Design** Descriptive research design.
- **Setting –** The present study was conducted in selected village of, Rewari district.
- **Research variables-** The research variables in the present study were knowledge, and life style practice of middle aged regarding heart disease and it's prevention in rural area of Rewari.
- **Population-** In this study middle aged from a selected rural areas of Rewari were taken as sample.
- **Sample –** The sample of the present study consists of middle aged people who are living in selected rural areas of Rewari.
- **Sample Size** -The sample size of the present study comprises 100 middle aged people in selected rural areas of Rewari.
- **Sampling Technique** – Non Probability Purposive sampling technique
- **Method of Collection of Data-** Structured Questionnaire and Structured practice checklist was used to collect the data.

5. Results and Discussion

Table 1: Frequency and percentage distribution of demographic variables N=100

Demographic variables		No. of middle aged people (n)	Percentage %
Age in years	a) 41-45	51	51
	b) 46-50	33	33
	c) 51-56	16	16
	d) 56-59	0	0
Gender	a) Male	64	64
	b) Female	36	36
Religion	a) Hindu	10	100
	b) Muslim	0	0
	c) Christian	0	0
	d) Any other	0	0
Dietary pattern	a) Vegetarian	52	52
	b) Nonvegetarian	48	48
	c) Eggetarian	0	00
Occupation	a) Unemployed	31	31
	b) Govt .employed	11	11
	c) Private employed	30	30
	d) Self employed	28	28
Family history of heart disease	a) Yes	13	13
	b) No	87	87
Personal history	a) Smoking	44	44
	b) Alcoholism	0	00
	c) Tobacco chewing	0	00
	d) All of the above	0	00
	e) None of the above	56	56
	f) Any other	0	00
Source of health Information	a) Mass media	63	63
	b) Friends /Neighbors	7	07
	c) Family /Relatives	23	23
	d) Health workers	0	00
	e) Medical /Nursing Professional	7	07

The majority of middle aged people were of age group 41 to 45 years,64% maximum number of male, most of middle aged people Hindu, dietary pattern indicate that 52% were vegetarian and 48% of them were non vegetarian. Majority of occupation status were unemployed, and majority of middle aged were have family history of heart disease, about 63% were get information from mass media.

Table 2: Knowledge score of middle aged people on different aspect of heart disease, N = 100

	General aspect of heart disease	Prevention of heart disease	Overall
Mean Score	4.68	6.25	10.93
S.D.	1.449	1.866	2.641
Max Possible	8	12	20
Mean Percentage%	58.50	52.08	54.65

Total Questions =20, 1-8 = on general aspect of heart disease and 9-20 = on prevention of heart disease. Table no. 2 shows knowledge score regarding general aspect of heart disease with a mean score is 4.68 and mean percentage is 58.50 %. In prevention of heart disease, mean score is 6.25 and mean percentage is 52.08 %.

Table 3: Level of knowledge score on heart disease, N=100

Criteria measure of knowledge score		
Category Score	Percentage	Frequency
Adequate knowledge (16-20)	6.0	6
Moderate knowledge (10-15)	65.0	65
Inadequate knowledge(<10)	29.0	29

Maximum Score=20 MinimumScore=0

Table no. 3 shows the level of knowledge score on heart disease, n= 65% of the middle aged were having moderate knowledge and n=29% of them having inadequate knowledge and n=6%of them having adequate knowledge.

Table 4: Practice score on heart disease, **N=100**

Descriptive Statistics	Mean	SD	Median	Maximum	Minimum	Range	Mean %
Practice Score	25.04	4.36	25.00	36	16	20	62.6

Maximum= 40 Minimum= 0

Table no. 4 shows they were having 62.6% of practice on heart disease and it's prevention.

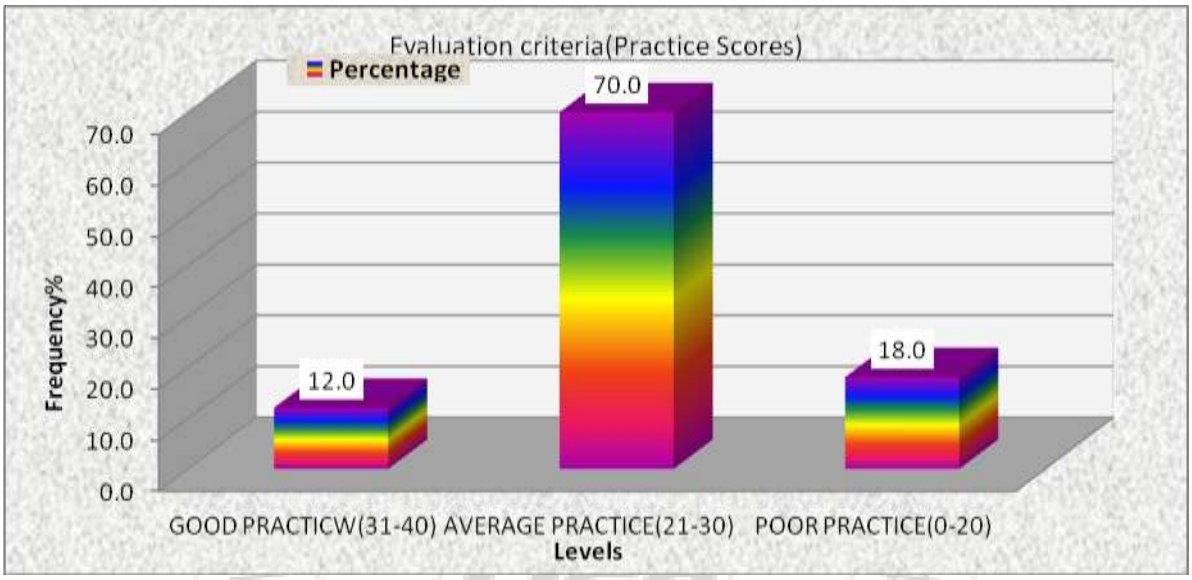

Figure: Level of Practice on Heart disease

Maximum Score=40 Minimum Score=0

Table no. 5 shows the level of Practice score on heart disease, n= 70% of the middle aged were having average practice and n=18% of them having poor practice and n=12% of them having good practice.

Table 7: Correlation of knowledge and life style practice score regarding heart disease and it's prevention among middle aged people

Variable	Mean	Median	SD	r	df	p value
Knowledge	10.93	11.00	2.64	0.28	98	0.004*
Practice	25.04	25.00	4.36			

*** Significant at 0.05 level, 'r'$_{(98)}$= 0.19 ,p <0.05**

Table 6 shows that the mean score of knowledge was 10.93±11.00 and practice score was 25.04± 25.00. The calculated karl Pearson's correlation value of r= 0.28 shows a statistical significant relationship between knowledge (r=0.28,p=0.004), and practice scores(r=0.28,p=0.004) at p<0.05 level. This clearly indicate that when the knowledge regarding prevention of heart disease among middle aged increase their practice level also increases. Hence H_{01} rejected and H_1 accepted.

6. Conclusion

The present study was coducted among 100 middle aged from rural area of Rewari. The finding revealed that middle aged people who were had moderate knowledge and average practice on heart disease and it's prevention. So there is a need to organize public health programs to improve their knowledge and life style practice regarding heart disease and it's prevention.

7. Nursing Implication

The findings of the study suggest many implications for the nursing education, nursing practice, nursing administration and nursing research.

Nursing education: The study had provided the importance of improving the knowledge and practice of nursing .The findings will help the nursing students to understand the need to be equipped with adequate knowledge and practice. and the nursing faculty to give more importance for planning and organizing to improve the knowledge and practice of Heart Diseases and provide information to all so, that they all will have adequate knowledge regarding heart disease and it's prevention.

Nursing practice: For improving the practice of middle aged, there is a need for teaching programme. which will improve their practice level. Present study shows that most of the middle aged had moderate knowledge on heart disease and it's prevention this present study enable them to become aware about heart disease and it's prevention and cure the disease, so the nurse can take help from the study and practice will be updated and refined.

Nursing administration: Nursing administrators should take part in health policy making, developing protocols and standing orders related to prevention of heart diseases. Health camps can be conducted in rural areas and referrals should be cared adequately. Cost-effective preventive programmes like emphasis on reduction and eventual elimination of the use of all tobacco products, increased physical activity, and weight control should be emphasized. Nurse administrators play a very crucial role in identifying the individuals who should be targeted for maximum lifestyle changes beginning in childhood. Nurse administrators should also look into the extent to which nurses provide health education to individuals. As a administrative role of nurse will enhance the working capabilities of middle aged in rural areas. the nurse administrator assess the level of knowledge regarding heart disease and it's prevention.

Nursing research: This study will serve as a valuable reference material for future investigators. Research should focus on practicing new methods of teaching to enable high school teachers to improve the quality of life. The nurse researcher can inculcate evidence-based practice by a strong base research. The findings of the present study are helpful for the nursing professionals and nursing students to conduct further studies for providing education on improving knowledge and practice regarding heart disease and it's prevention among middle aged and public. Their is a growing need for furnishing nursing research in all areas of health care. The nurses researcher especially beginner need to enhance their knowledge. The nuse researcher may effectively use the result of available studies and recommended on the importance of early identification and prevention of further illness.

8. Recommendation

Keeping in view the findings of the study following recommendation were made

- A similar study can be replicated on a large sample.
- A same study can be conducted in different setting like urban and hospital.
- Quasi experimental study can be conducted to see the difference between experimental and control group.
- A follow up study can be conducted to assess the STP on knowledge on risk factors of heart disease.
- Comparative studies between rural and urban population can be done, including the experimental study on the knowledge of heart disease and it's prevention.
- Study can be done also on the population of adolescent and younger people.

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Author Profile

Ms. Rekha, M.Sc. nursing 2nd year (Medical Surgical Nursing). Ms. Rekha did M.SC Nursing (Medical Surgical Nursing) from Amity college of nursing, Amity university Haryana in 2018.and also did BSC Nursing from Rajasthan University of health science (Jaipur) in 2015.

Prof. Pranati Barua, Principal, Amity College of nursing, Amity University Haryana. Prof. Pranati Barua, presently working as a Principal in the Amity College of Nursing, Amity University Haryana since 12th Sept., 2011. The educational background includes B.Sc. (Biology), B.Sc. (Hons.) Nursing and M.Sc. Nursing from Delhi University. Also has done M.A. in Population Studies and M. Phil from Annamalai University. Her field of specialization is in Community Health Nursing and Population Studies. Has got extensive experience for more than 30 years in nursing service, education, administration and research activities including guiding the students of M.Sc. & B.Sc. Nursing. Her journey of experience started in 1982. To begin with as Staff Nurse in a reputed hospital of Delhi. Then as School health Nurse. After that joined as Public Health Nurse in University college of Medical Sciences, Delhi University. Next working area was as Tutor, Lecturer, Sr. Lecturer in Jamia Hamdard (Hamdard University), for more than 18 years. In between she also completed a foreign assignment in Ministry of Health, Sultanate of Oman as Senior Clinical Teacher. Took voluntary retirement from Jamia Hamdard & then joined as Principal at Himalayan College of Nursing, HIHT University, Dehradun. After that worked as Principal & Dean Students Welfare at Teethankar Mahaveer College of Nursing, Teethankar Mahaveer University, Muradabad before joining at Amity University Haryana. Other activities and experiences as: Member of Academic Councils, Executive Councils, Jamia Hamdard University Teachers Association, Nursing board of studies etc. and attended many and national and international conferences, seminars, workshop, short term training courses and also as resources person. Connected with different Universities for setting up of and examining the papers. To add few more, a member of National & International professional bodies in India & USA.Social activities include her active participation in National Polio Eradication Program as Nodal Officer in Delhi and different Health Projects with students in Community including the Health Mela and socialy reveant healt activities . Registered as RN and RM with Delhi Nursing Council and Haryana Nurses Registration Council.

Mr. Naveena J H Assistant Professor III Amity College of nursing, Amity University Haryana. Mr. Naveena J H is working as a Asst. Professor III in Amity College of Nursing, Amity University, Gurgaon, Haryana since 1st sep 2016. His area of Specialization in Department of Community health nursing. Worked as a Assistant Professor/Senior Lecturer and HOD in Department of Community Health nursing for a period of 1 and 1/2 years at Subharti Nursing College, Swami Vivekananda Subharti University, Meerut, UP. Worked as a Assistant Professor and HOD in Department of Community Health nursing over a period of 4 and 1/2 years at Nisarga college of Nursing, Hassan, Karnataka, India. Worked as Nursing Tutor/Assistant Lecturer cum Clinical Instructor over a period of 1 year in S.S Institute of nursing sciences, Davanagere, Karnataka, India. He did M.SC Nursing (Community Health Nursing) from Rajiv Gandhi University of Health Sciences, Bangalore /N.D.R.K College of Nursing, Hassan, Karanataka from 2008-10 and B.SC Nursing from from Rajiv Gandhi University of Health Sciences, Bangalore Karanataka from 2002-06. He received gold medal for I rank in M.sc Nursing from N.D.R.K. College of nursing, Hassan. Karnataka and Received Meritorious award for PG distinction from AVOPA, Davanagere, Karnataka. Attended many national and international conferences, seminars, workshop, short term training courses and also as resources person. Connected with different Universities for setting up of and examining the papers. He has published 5 research papers in international journals and 2 papers in national journal. He ia review author to the textbook of fundamentals of nursing under Kumar Publisher, New Delhi. He received Best paper presentation for his research on knowledge and attitude of nursing students on Eye donation at Shardha University, Greater Noida, UP during the year 2018.