

# **Knowledge and attitude on cardiac rehabilitation among patients admitted in Gauhati medical college and hospital (GMCH) with a view to develop an information booklet**

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## **ABSTRACT**

Cardiac rehabilitation is a complex multidisciplinary intervention which comprises of personalised psychological support, management of cardiovascular risk factors, exercise and physical activity promotion tailored to the needs of each patient suffering from heart disease. Many research studies found that the patients have less knowledge regarding cardiac rehabilitation. Therefore, this study is conducted to assess the knowledge and attitude on cardiac rehabilitation among patients admitted in Gauhati Medical College and Hospital (GMCH) with a view to develop an Information Booklet. Objectives: (1) To assess the level of knowledge on cardiac rehabilitation among patients admitted in GMCH. (2) To assess the attitude on cardiac rehabilitation among patients admitted in GMCH. (3) To find the association between knowledge on cardiac rehabilitation and selected socio- demographic variables. (4) To find the association between attitude on cardiac rehabilitation and selected socio- demographic variables. (5) To find out the correlation between knowledge and attitude on cardiac rehabilitation. (6) To develop and validate an information booklet on cardiac rehabilitation. Methodology: The quantitative research approach and descriptive survey design was adopted for the current study. The study was conducted on 125 patients admitted in cardiology and cardiothoracic areas of Cardiothoracic and Neuroscience Center, Gauhati Medical College and Hospital. The sample were selected by non-probability purposive sampling technique. A structured interview was used to assess the knowledge and attitude on cardiac rehabilitation from the patients. Result: It is found that majority of majority of the patients i.e., 97(77.6%) had moderately adequate knowledge, 18 (14.4%) had adequate knowledge and 10(8%) had inadequate knowledge regarding cardiac rehabilitation. The study also found that majority of the patients i.e., 101(80.8%) had moderately favorable attitude, 13 (10.4%) had favorable attitude and 11 (8.8) of the patients had unfavorable attitude towards cardiac rehabilitation, A significant association is found between knowledge with place of residence and previous history of any cardiovascular diseases. In case of attitude, a significant association is found with age. The correlation coefficient indicates moderate positive correlation ( $r=0.362$ ) and is statistically significant ( $p=0.001$ ). Conclusion: It can be concluded that majority of the patients had moderate adequate knowledge and moderately favorable attitude on cardiac rehabilitation. So, information booklet can help the patients to increase their awareness regarding cardiac rehabilitation.

**Keywords:** Knowledge, Attitude, Cardiac Rehabilitation.

## 1. INTRODUCTION

Non-communicable diseases (NCDs) are a broad category of illnesses which includes chronic respiratory diseases, cancer, diabetes and cardiovascular diseases. Cardiovascular disease is the major cause of death globally. Around 38 million (68%) of all deaths worldwide and 5.87 million (60%) in India were due to non communicable diseases. Non-communicable diseases together account for the majority of mortality and morbidity according to World Health Organization (2014).<sup>1</sup>

Cardiovascular disease is the leading cause of death worldwide. The majority of deaths from cardiovascular disease occur in low income and middle income countries. Cardiovascular disease can be defined as a group of disorders that involves the heart and blood vessels. It includes coronary artery disease, cerebrovascular disease, peripheral artery disease rheumatic heart disease, congenital heart disease, deep vein thrombosis, valvular heart disease, cardiomyopathy, heart failure, hypertension, myocardial infarction etc. The underlying mechanisms vary depending on the disease.<sup>2</sup>

## 2. REVIEW OF LITERATURE

Literature review is one of the most important step in the research process. It is an account of what is already known about a particular phenomenon. The main purpose of literature review is to know about the work already done and the knowledge and ideas that have been already established in a particular topic of research.<sup>3</sup>

The relevant literature reviewed has been organized and presented under the following sections:

1. Literature related to knowledge on cardiac rehabilitation among patients.
2. Literature related to attitude on cardiac rehabilitation among patients.

### **SECTION I: Literature related to knowledge on cardiac rehabilitation among patients.**

A non-experimental descriptive study was conducted by Kurane SC, Dani P, Kurane C (2016) to assess the knowledge and practices of patients regarding cardiac rehabilitation, to correlate the knowledge and practices regarding cardiac rehabilitation and to develop Video Assisted Educational Module for cardiac rehabilitation. The study was conducted among 100 patients in selected hospitals i.e., Bharati hospital and Wanless hospital Miraj, Maharashtra India. Non probability purposive sampling technique was used for selecting the patients. The study found that the majority of patients 83.5% knew about diet, 76% knew about precautions, 65.5% knew about exercise, 57.5% knew about disease and risk factors and 50.6% knew about the idea of cardiac rehabilitation. The study concluded that patients were not properly implementing healthy lifestyle practises and were not knowledgeable about the several facets of cardiac rehabilitation which placed them at a significant risk of coronary heart disease progression and recurrence.<sup>4</sup>

### **SECTION II: Literature related to attitude on cardiac rehabilitation among patients.**

Wong EML, Zhong XB, Sit JWH, Chair SY, Leung DYP, Leung C, Leung KC (2015) conducted a study to assess the “Attitude toward the out-patient cardiac rehabilitation program and facilitators for maintenance of exercise behaviour” in Hong Kong, China. The study was conducted on 22 coronary heart

disease patients using a qualitative descriptive study. The result showed that informant attitude (perception, attachment, and practice) towards the out-patient cardiac rehabilitation program and exercise behaviour (intention, maintenance, and its related factors) were two themes that is recognised. Majority of the patients showed positive perception and affection on outpatient rehabilitation programme. The study concluded that a positive attitude towards the out-patient cardiac rehabilitation program increased participation rates, while peer and social support from family, friends and the workplace helped to promote the maintenance of exercise behaviour.<sup>5</sup>

### **3. METHODOLOGY**

In the present study, quantitative research approach is adopted by the researcher to assess the “Knowledge and Attitude on Cardiac Rehabilitation among patients admitted in Gauhati Medical College and Hospital (GMCH) with a view to develop an Information Booklet.”

In the present study, descriptive survey research design was selected.

**SETTING OF THE STUDY:** This study was conducted in Cardiothoracic and Neuroscience Center, Gauhati Medical College and Hospital.

**TARGET POPULATION:** Population includes patients who are above 18 years suffering from heart disease.

**ACCESSIBLE POPULATION:** It consists of patients with heart disease attending cardiology and cardiothoracic areas of Cardiothoracic and Neuroscience Center, Gauhati Medical College and Hospital.

**SAMPLE:** In the present study, samples were drawn from Cardiothoracic and Neuroscience Center, Gauhati Medical College and Hospital who have met the inclusion criteria. The sample size was calculated from the accessible population i.e., 125.

**Inclusion Criteria:** 1. Patients willing to give consent for the research study. 2. Patients able to understand Assamese, Hindi and English language. 3. Patients who are present during the time of data collection.

**Exclusion Criteria:** 1. Patients who are seriously ill and unresponsive. 2. Patients under sedation.

**SAMPLING TECHNIQUE:** In this study, non-probability purposive sampling technique was used.

**VARIABLES:** In the present study following types of variables were being used: 1. Socio-demographic variables: The socio-demographic variables are age, gender, religion, educational status, occupation, family income per month, type of family, place of residence, marital status, duration of illness, any rehabilitation programme previously attended, family history of cardiovascular diseases and previous history of any cardiovascular diseases. 2. Research variable: Knowledge and attitude.

**TOOL:** The tool consists of three sections which are as follows- **SECTION I-** Socio-demographic Performa: This performa was developed by the investigator which includes 13 items on demographic variables which includes age, gender, religion, educational status, occupation, family income per month, type of family, place of residence, marital status, duration of illness, any rehabilitation programme previously attended, family history of cardiovascular diseases and previous history of any cardiovascular diseases. **SECTION II-** Knowledge questionnaire related to cardiac rehabilitation: This section comprised of structured questionnaire on cardiac rehabilitation. It consists of 15 multiple choice questions and having

one correct answer. Respondents were informed to reply only one answer for each question. The correct answer was given score 1 (one) and wrong answer was given a score of 0 (zero). The knowledge scores were interpreted as inadequate=0-1, moderately adequate=2-6 and adequate=7-15. SECTION III-Attitude scale related to cardiac rehabilitation: It comprised of attitude scale on cardiac rehabilitation. A 5-point Likert Scale was formulated by the researcher to assess the attitude on cardiac rehabilitation. The tool consists of 20 items. Respondents were informed to reply on one response of the Likert Scale on each item. Each item was categorized and score as “Strongly agree=5, Agree=4, Uncertain=3, Disagree=2, Strongly disagree= 1 for positive statements and for negative statements score is reverse. In the present study, the attitude score was interpreted as Unfavourable=20-78, Moderately favourable=79-89 and Favourable=90-100.

#### **4. RESULTS AND DISCUSSION:**

**MAJOR FINDINGS OF THE STUDY:** The findings related to sample characteristics were as follows: • Majority of patients i.e., 43 (34.4%) out of 125 patients belonged to the age group of 40-50 years. 81 • Most of the patients i.e., 87 (69.6%) were males. • The maximum number of patients i.e., 63 (50.4%) belonged to Hinduism. • Majority of patients i.e., 53 (42.4%) had no formal education. • Majority of patients i.e., 52 (41.6%) in case of occupation were daily wagers. • Majority of patients i.e., 76 (60.8%) has family income  $\leq$  9,226 • Majority of patients i.e., 118 (94.4 %) belonged from nuclear family. • In place of residence, the maximum number i.e., 113 (90%) lives in rural areas. • It is found that majority of patients i.e., 111(88.8%) were married. • Majority of patients i.e., 85 (68%) had duration of illness less than 1year. • All 125 patients 125(100%) did not attend any rehabilitation programme. • Majority of patients i.e., 99 (79.2%) had no family history of cardiovascular diseases. • It is found that majority of patients i.e., 87 (69.6%) had no previous history of cardiovascular diseases. • Maximum number of patients i.e., 97 (77.6%) had moderately adequate level of knowledge on cardiac rehabilitation. • The mean knowledge score was 4.304 and standard deviation was 1.972. • Maximum number of patients i.e., 101 (80.8%) had moderately favorable attitude on cardiac rehabilitation. • The mean attitude score was 84.08 and standard deviation was 4.538. • There is a significant association present between knowledge and selected socio demographic variables such as place of residence and previous history of any cardiovascular diseases. There was no significant association found between knowledge and selected demographic variables such as age, gender, religion, educational status, occupation, family income per month, type of family, marital status, duration of illness, family history of cardiovascular diseases. Chi square test and Fisher’s Exact test was applied to test the association at 0.05 level of significance. • There is a significant association present between attitude and age. There was no significant association found between attitude and selected demographic variables such as gender, religion, educational status, occupation, family income per month, type of family, place of residence, marital status, duration of illness, family history of cardiovascular diseases and previous history of any cardiovascular diseases. Chi square test and Fisher’s Exact test was applied to test the association at 0.05 level of significance. • There was a moderate positive correlation ( $r=0.362$ ) between the knowledge and attitude on cardiac rehabilitation at 0.05 level of significance.

## 5. DISCUSSION

The discussion of the study is divided under the following sections: 1. Discussion related to knowledge on cardiac rehabilitation among patients. 2. Discussion related to attitude on cardiac rehabilitation among patients. 3. Discussion related to correlation between knowledge and attitude on cardiac rehabilitation.

### **Discussion related to knowledge on cardiac rehabilitation among patients.**

The present study revealed that most patients 10(8%) had inadequate knowledge 97(77.6%) had moderately adequate knowledge and 18 (14.4 %) had adequate knowledge on cardiac rehabilitation. This has been supported by Biji IB, Sreelakshmy UR (2021). They had conducted a descriptive study to assess the knowledge and attitude on cardiac rehabilitation among 115 myocardial infarction patients at Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum where the investigator found that more than half 53% had average knowledge about cardiac rehabilitation.<sup>6</sup>

In contrast to this study, a study conducted by Patel ES, Patel R, Patel R, Patel S, Solanki (2020) to assess the knowledge regarding cardiac rehabilitation among cardiac patients admitted in selected hospital, Vadodara”, Gujarat India where the investigator found that majority of the patients had inadequate level of knowledge i.e., 63.33% and 36.67% had adequate knowledge on cardiac rehabilitation.<sup>7</sup>

Another study was found contrast to the study which was done by Shrestha R, Singh JP, Shrestha K, Shrestha S (2020), to explore the knowledge on cardiac rehabilitation among patients with coronary artery disease. 85 patients were selected for the study attending cardiac out-patient departments of Chitwan Medical College and Teaching Hospital, Bharatpur, Nepal. Non-probability consecutive sampling technique was used for the study. Adequate knowledge level was found as 3.5%, 52.9% has poor knowledge and 43.6% has insufficient knowledge on cardiac rehabilitation. The study concludes that coronary artery disease patients in Bharatpur had less awareness of cardiac rehabilitation programmes.<sup>8</sup>

### **Discussion related to attitude on cardiac rehabilitation among patients.**

In the present study, it was found that most patients 11(8.8%) had unfavorable attitude, 101(80.8%) had moderately favorable attitude and 13(10.4%) had favorable attitude on cardiac rehabilitation. In contrast to this study, descriptive study was conducted to assess the knowledge and attitude regarding cardiac rehabilitation among patients with myocardial infarction by Biji IB, Sreelakshmy UR (2021). 115 patients at Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Trivandrum was selected for the study. The study result showed that 100% of subjects had positive attitude towards cardiac rehabilitation.<sup>6</sup>

### **Discussion related to correlation between knowledge and attitude on cardiac rehabilitation.**

The present study findings revealed that Karl Pearson's correlation coefficient was found to be  $r=0.362$  which indicate moderate positive correlation between knowledge and attitude on cardiac rehabilitation among patients admitted in GMCH and  $p=0.001$  which was statistically significant. The study was supported by the study done by Kumar S, M, VM (2017) to assess the level of knowledge and attitude regarding cardiac rehabilitation among patients with coronary artery disease in outpatient department in Chettinad Hospital and research Institute, Tamil Nadu, India. The study was conducted among 100 patients

with coronary artery disease. It was found that there was a moderate positive correlation ( $r=0.353$ ) between knowledge and attitude on cardiac rehabilitation among patients.<sup>9</sup>

**CONCLUSION:** The study was conducted to assess the knowledge and attitude on cardiac rehabilitation among patients admitted in Gauhati Medical College and Hospital (GMCH) with a view to develop an information booklet. The following conclusions are drawn from the study's findings: • Majority of the patients had moderately adequate knowledge and moderately favorable attitude on cardiac rehabilitation. • Significant association was found between knowledge and selected socio demographic variables such as place of residence and previous history of any cardiovascular diseases. • Significant association was found between attitude and age. • Significant correlation was found between knowledge and attitude on cardiac rehabilitation.

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