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Efficacy of Planned Teaching Programme on Knowledge and Practices Regarding Rehabilitation among the Clients with Selected Cardiac Conditions from Tertiary Care Hospital

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Abstract:

Background: In order to improve quality of life, cardiac rehabilitation's ultimate goal is to let patients resume their normal daily activities while also ensuring their psychological stability. Cardiovascular disease (CVD) is the leading cause of death worldwide, with low- and middle-income countries accounting for the majority of fatalities. Cardiovascular rehabilitation is made more understandable to patients, which lowers the burden of sickness and boosts survival rates. Education about healthy habits that will keep people healthy is a duty of the nursing profession. The objective of this study assessed pre-existing knowledge & practice regarding cardiac rehabilitation, add the impact of planned teaching programs on cardiac rehabilitation among clients with selected cardiac conditions, and find out the association between knowledge and practice with demographic variables.

Material and Methods: The current study's methodology was evaluative. In that, 60 patients from Krishna Hospital Karad with specific heart problems were included. Utilizing a single group pre-test and post-test design with non-probability purposeful sampling. On the first day of the pre-test, selected cardiac patients were asked about their knowledge of exercise, diet, medication, lifestyle patterns, follow-up, and check-up procedures for cardiac patients using structured questionnaires, and information about cardiac rehabilitation was provided side by side. A post-test was then administered after seven days. Data was gathered, collated, and examined in light of the study's goal.

Result: The mean knowledge score after the test (19.28 ± 4.26) was higher than the mean knowledge score before the test (12.66 ± 3.20). This demonstrates the value of a carefully thought-out teaching program in raising the level of knowledge of chosen cardiac patients about exercise, food, medicine, lifestyle choices, follow-up, and checkups. Therefore, the study came to the conclusion that an organized planned teaching program was an

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efficient way to enhance cardiac patients' health and stop further difficulties.

Conclusion: It was successful to administer the intended planned teaching program chosen for cardiac patients regarding exercise, food, medication, lifestyle patterns, follow-up, and check-ups of cardiac patients.

1. Introduction

The WHO defines health as "lasting physical, emotional, social, and spiritual well-being" In addition to avoiding narcotics, alcohol, and tobacco, a healthy diet, regular exercise, and self-health evaluation can help maintain good health. Cancer risk factors include obesity, lack of exercise, poor eating, excessive alcohol and drug use, and smoking. [1]. CVD is the world's leading killer. CVDs cause more deaths than all other causes combined. In 2015, cardiovascular illnesses caused 17.7 million deaths, or 31% of all deaths. Overall, Cardiac rehabilitation tries to help patients resume everyday activities while maintaining psychological stability. Most deaths from cardiovascular disease (CVD), the world's biggest killer, occur in low- and middle-income countries¹. CVD is the fourth leading cause of YLL in South Asia (India).

YLL measures working years lost. The age-adjusted CVD mortality rate for men and women is 386 and 283, respectively, per 100,000. These rates are comparable to those in other South Asian nations, although they're substantially higher than in the US and Europe 2. Smoking, sedentary behaviour, obesity, hypertension, and hypercholesterolemia are more common in the US. Urbanization, epidemiological change, and demographic transitions have increased risk factors in India. These factors have increased CVD prevalence in rural areas 4. Rising risk factor prevalence and a lack of preventive interventions have contributed to India's rising CVD mortality 5. Recent research reveals that more individuals are leaving hospitals alive after cardiac events or treatments. Most of these individuals qualify for cardiac rehab and secondary prevention. WHO defines health as "a constant state of physical, emotional, social, and spiritual well-being" Healthy food, frequent exercise, and

self-health evaluation for early diagnosis of serious illnesses are all approaches to maintain health. Overweight or obesity, lack of exercise, poor diet, and drug, alcohol, or tobacco use are cancer risk factors. [2]. Globally, cardiovascular disease is the leading killer. CVDs kill more individuals than every other cause combined. Cardiovascular diseases (CVDs) caused 17.7 million deaths globally in 2015, or 31%. Estimates assign 7.4 million fatalities to CHD and 6.7 million to stroke. Patients require a public education effort to live healthy lives. Medical, psychological, social, sexual, and occupational rehabilitation are cardiac rehabilitation goals. Cardiac rehabilitation aims to help patients resume normal daily activities and improve their quality of life. Cardiovascular disease (CVD) is the leading cause of death in low- and middle-income countries¹. CVD is the fourth largest cause of YLL in South Asia (India). YLL measures working years lost. The age-adjusted CVD mortality rate for men and women is 386 and 283, respectively, per 100,000. These rates are comparable to those in other South Asian nations, although they're much higher than in the US and most of Europe. [3] Smoking, sedentary behaviour, obesity, hypertension, and hypercholesterolemia are more common in the US. Urbanization, epidemiological change, and demographic transitions have increased risk factors in India. Rural areas have more CVD. Rising risk factor prevalence and a lack of preventive interventions are mostly responsible for India's rising CVD mortality [5]. Recent research reveals that more individuals are leaving hospitals alive after cardiac events or treatments. Most patients qualify for secondary prevention and cardiac rehab.

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The Study Objectives were-

1. To assess the existing knowledge and practices regarding cardiac rehabilitation among clients with selected cardiac conditions.
2. To assess the knowledge and practices after the planned teaching program regarding rehabilitation among the clients with selected cardiac conditions.
3. To compare the pre-test and post-test knowledge scores among the clients with selected cardiac conditions.
4. To compare the pre-test and post-test practice scores among the clients with selected cardiac conditions.
5. To find out the association of Pre-test knowledge and practice score with selected demographic variables.

2. Materials and Methods

A quantitative evaluative research methodology was used as the study's chosen method of inquiry.

RESEARCH DESIGN: A pre-experimental, pre-test, and post-test design were used.

THE STUDY'S SETTING -The study was carried out in Karad's tertiary care hospitals.

POPULATION: The study's population consisted of patients with heart problems who were treated in Karad's tertiary care facilities.

SAMPLE-The population of this study consisted of patients with particular cardiac problems who were treated in particular tertiary care facilities in Karad.

60 patients with specific cardiac problems from specific tertiary care institutions in Karad made up the sample for the study, and participants were chosen through sampling selection procedures at the time of data collection.

SAMPLING TECHNIQUE -Non-probability purposive sampling technique was chosen.

SAMPLE SIZE-With the aid of a statistician, the sample size was determined in accordance with the prevalence rate of the earlier study.

The study's sample size was determined to be 60.

SAMPLING CRITERIA- INCLUSION CRITERIA- customers with specific cardiac conditions- with or without other co-morbidity, able to understand Marathi, Hindi, and English, and eager to take part in the study. Patients who are gravely ill and unresponsive meet the exclusion criteria.

The goal of the study was to evaluate the current knowledge and practices regarding rehabilitation among patients with specific cardiac conditions in tertiary care hospitals after the administration of a planned teaching program and a post-test after seven days.

DATA COLLECTION TECHNIQUES AND INSTRUMENTS- A structured knowledge questionnaire is used to evaluate the existing knowledge, and a checklist is used to determine self-reported behaviors.

DESCRIPTION OF THE TOOL-It comprises of three sections-

Section-I It included sociodemographic information including age in years, gender, educational level, weight, habits, type of diet, and co-morbidities.

Section II: Organized questionnaire on cardiac rehabilitation knowledge. Each right response received one point, while the wrong one received zero. 22 was the overall score. The marks were distributed on a scale of 0 to 5, meaning that a knowledge score between 0 and 25% was regarded to be below average (6-10). The scores between 26 and 50% were regarded as having an average knowledge score; (11- 15). According to a statistician's consultation, a score between 51 and 75% was deemed to have a good knowledge score, and a score between 76 and 100%, was deemed to have an exceptional knowledge score.

SECTION III:

self-reported Practices-The SRP's objective was to evaluate and keep track of the procedures used to treat a particular cardiac

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disease. Each effective practise received a mark of 1, whereas ineffective procedures received a mark of 0. There were 11 observations overall in SRP. The scoring was separated into bad,

moderate, good, and excellent practice scores based on the proportion of the practices: 0-25% (0-3), 26-50% (4-6), 51-75% (7-9), and 76-100%(10-11).

3. Results

SECTION I

Analyses the demographic information of patients with specific cardiac problems who are admitted to tertiary care hospitals in terms of frequency and proportion.

Table 1: Frequency Clients with various heart problems are distributed (n=60)

Sr. No	Variable	Groups	Frequency	Percentage
1	Age in years	25-34	9	15
		35-44	19	31.66
		45-64	11	18.33
		>65	21	35
2	Gender	Male	35	58.33
		Female	25	41.67
3	Education	Primary	4	6.65
		Secondary	9	15
		Higher secondary	13	21.65
		Graduate	34	56.65
4	Weight(Kg)	40-60	10	16.67
		60-80	38	63.33
		80-100	9	15
		>100	3	5
5	Habits	Smoking	21	35
		Alcohol	18	30
		Tobacco chewing	11	18.33
		None	10	16.67
6	Type of Diet	Vegetarian	21	35
		Non-Veg	39	65
7	Co-morbidities	Hypertension	20	33.33
		Diabetes mellitus	17	45
		Ischemic heart disease	13	21.67

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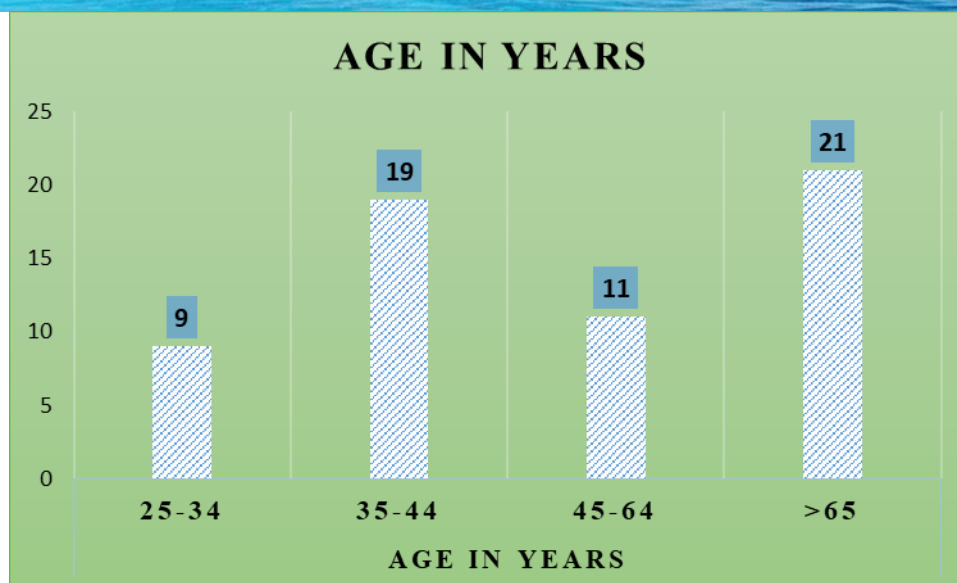


Figure No. 1 shows that, according to age, in the study of the clients with particular cardiac diseases, 15% were between the ages of 25 and 34, 31.66% were between the ages of 35 and 44, 18.33% were between the ages of 45 and 64, and 35% were 65 years of age and beyond.

Table No. 1 findings show that, in the study of clients with particular cardiac diseases, 58.33% of them were men and 41.67% were women. Further, the findings show that, in the study of the patients with specific cardiac diseases, 8.75% had completed their primary education, 13.75% had completed their secondary school,

18.75% had completed their higher secondary education, and 58.75% had graduated.

In a study of patients with specific cardiac issues, 25% of them reported smoking as a habit, 33.75% reported drinking as a habit, 43.75% reported chewing tobacco, and 22.50% reported having no such habits.

In terms of diet, 71.25% of participants and 28.75% of patients were vegetarians, respectively.

SECTION II-Analyses data to determine the frequency and percentage of clients with particular cardiac problems who are knowledgeable about rehabilitation.

Table 2: compares knowledge levels between pre- and post-testing (n=60).

Level of Knowledge	Groups	Scores	Pre-Test		Post-Test	
			Frequency	Percentage	Frequency	Percentage
	Poor	0-8	12	15.00	1	1.25
	Average	9-16.	62	77.50	19	23.75
	Good	17-24	6	7.50	60	75.00

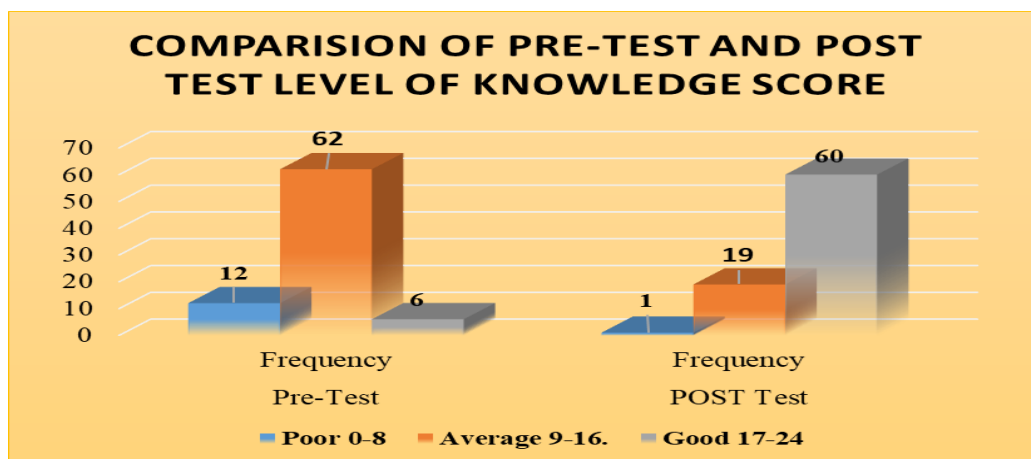
Table No. 2 and the following graph demonstrate that at the time of the pre-test, 15% of the subjects had bad knowledge, 77.50% had average knowledge, and the remaining 7.50%

had strong knowledge. Pre-test scores were on average 11.56, with a standard deviation of 3.02, while post-test knowledge scores showed that 1.25 percent of individuals had low

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knowledge, 23.7 percent had average knowledge, and 75 percent had strong knowledge. At the time of the pre-test, the

average score was 18.33, with a standard deviation of 3.26.



SECTION III

Analyses information about the pre-and post-test means for the proposed teaching program's effectiveness on knowledge.

Table 3: Knowledge comparison between the pre-and post-tests (n = 60)

KNOWLEDGE	Frequency	Mean	S.D.	t value	P value
Pre-Test	60	12.66	3.20	13.77	0.000
POST Test	60	19.28	4.26		

The paired t test was used to compare the knowledge means before and after the test. The average pre-test score was 11.56, with a 3.20 standard deviation. The average post-test score was 18.33, with a 3.26 standard deviation. The paired t test had a test statistic value of 12.84

and a p value of 0.000. demonstrates the success of the planned teaching programme (PTP) on secondary prevention techniques among patients with certain heart problems admitted to tertiary care institutions.

Table 4: Distribution of knowledge score according to various areas

Area		Maximum score	Mean score	Mean Percentage%
Concept of CR		5	2.53	50.6
Disease & Risk factors		6	3	50
Process of CR	Phases	4	1.36	34
	Diet	2	1.67	83.5
	Precaution	1	0.76	76
	Exercise	4	1.36	34

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Table No. 04 demonstrates that while only 34% of patients knew about the phases of cardiac rehabilitation, the majority of patients (83.5%) had good awareness about dietary adjustments

required in cardiac rehabilitation. This shows that improving awareness of the concepts, stages, and scientific methodologies of cardiac rehabilitation needs more emphasis.

SECTION IV-ANALYSIS OF SELF REPORTED PRACTICE SCORE

Table 5: Frequency and percentage distribution of practice score (n = 60)

PRACTICES SCORE	FREQUENCY	PERCENTAGE%
0-3 (Poor)	0	0
4-6 (Average)	5	8.33
7- 9 (Good)	31	51.66
10-11 (Excellent)	14	23.33

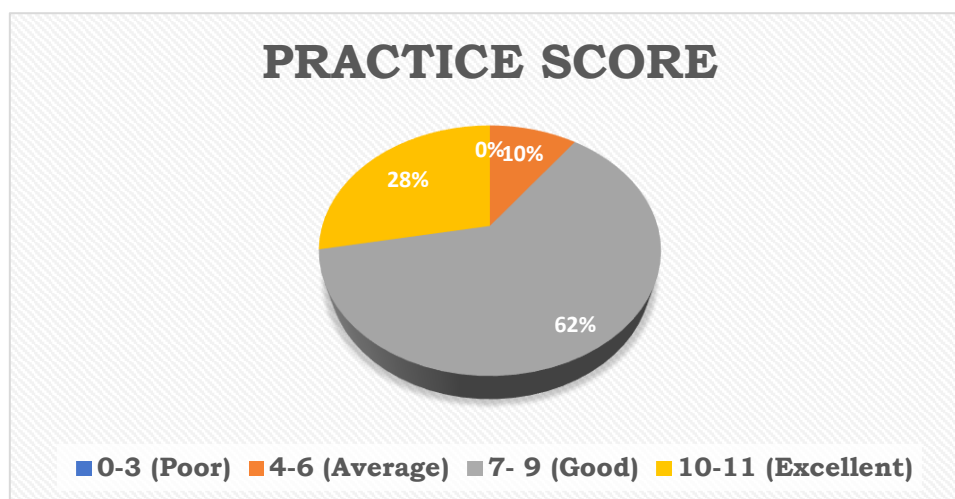


Table No. 5 and Figures indicate that 51.66 percent of patients had a satisfactory practice score. This demonstrates that there is still room for improvement in practices if

participants consistently work to increase their understanding of certain cardiac rehabilitation topics.

Table 6: Distribution of self-reported practices score according to various areas N=60

Area		Maximum score	Mean Score
Healthy diet intake		4	5.67
Smoking cessation		2	0.65
Regular Monitoring	1	0.88	0.76
	2	0.68	0.80
	1	0.55	0.54
	1	0.45	0.45
Regular exercises		1	0.14

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Mind relaxation methods	1	0.12
Regular medication intake	1	0.86

Table no-6 and the figure show that only 12% of patients practiced stress management methods and 14% practiced exercise regimens in cardiac rehabilitation. Cholesterol monitoring was followed by

45% of patients while weight monitoring was followed by 54% of patients. This highlights that practices about proper exercises and stress management and self-monitoring need further improvement.

SECTION V-ASSOCIATION OF KNOWLEDGE SCORE IN RELATION TO DEMOGRAPHIC VARIABLES

The examination of data relating to the correlation between the mean pre-test knowledge score and a few demographic characteristics is covered in this part-

Table 7 : shows the correlation between knowledge score and a few demographic factors (n = 60).

Variable	Chi-Square	p-value	Significance
Age	10.74	0.097	Significant
Gender	4.7	0.095	Significant
Education	3.028	0.805	Not Significant
Type of Diet	0.61	0.730	Not Significant
Habits	9.32	0.075	Significant

The p-value of the association test with knowledge for the variables of age, gender, and habits was less than 0.05, indicating that there was a significant link between this demographic variable and knowledge of the patients with specific cardiac diseases admitted about rehabilitation. The p-value of the association test with

knowledge was greater than 0.05 for variables like education and diet type, indicating that there was no significant correlation between these demographic factors and knowledge of the patients with specific cardiac conditions admitted regarding rehabilitation.

4. Discussion

High mortality and morbidity rates in CHD patients reduce quality of life. Early CHD diagnosis and therapy reduce CHD mortality [6]. These people also need psychosocial, physiotherapeutic, and educational help [7]. Comprehensive cardiac rehabilitation programmes enable CHD patients heal

physically, emotionally, and psychologically, change their lifestyles, and minimise risk factors to prolong and improve the quality of their lives [8].

According to the current study, CHD affects men more often than women and older people, which may be related to oestrogen's anti-atherosclerosis effects [9]. The bulk of the

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study's patients were between 45 and 64, which may be related to their sedentary lifestyles [10]. This study found that most patients were married and hadn't finished high school. This is because marital stress reduces quality of life [11]. The patient's behaviour and belief that they can accept and modify their situation are also influenced by their educational level and lifestyle [12].

Cardiac rehabilitation programmes require awareness of CHD risk factors, especially for educational support that might help patients change their risk factors and enhance their quality of life [13]. Most patients in the research had diabetes, hypertension, and smoked. Wexler and Aukerman [14] discussed six CHD risk variables, supporting their results.

93% of patients had appropriate eating habits, according to the research. If a cardiac rehabilitation programme including food advice is implemented at the indicated institute, these patients may adhere to such dietary needs regularly. Sulaimon found that two-thirds of patients reduced salt intake after the treatment. [15]

14% of patients routinely exercise, whereas 34% know workouts. Exercise treats diabetes, high cholesterol, and high blood pressure and improves heart muscle function after a cardiac incident. [16] Regular activity reduces your risk of another MI 94. According to Carlsson's 1997 research, all levels of exercise diminish the risk of heart attack, stroke, or diabetes 95 mortality. Studies show that cardiac rehabilitation with exercise instruction reduces CHD mortality and morbidity. [17]

76% of patients check their blood sugar regularly, and 80% check their blood pressure. 54% and 45% of people watch their cholesterol and weight, respectively. In a 2007 study by Ghattas, none of the patients tested measured body weight as a self-care technique. [18] Studies show that cardiac rehab improves patients' quality of life [19]. Health education

shows the value of these activities and encourages patients to modify bad habits [20].

In our study, 97% of individuals quit smoking; this result is similar to that of Seto et al., who said quitting smoking is the most effective way to minimise cardiac risk [21]. 86% of patients take their medicines, according to the study. A cardiac rehabilitation programme would help patients adhere to medications and manage hypertension, blood sugar, and cholesterol, reducing their risk of CHD development and recurrence [22].

Stress management is vital to cardiac rehab. Long-term lifestyle modification requires psychological therapy [23]. Only 12% of patients in our study use mind-body approaches, which supports integrating mental health treatment into cardiac rehab.

Our study found that cardiac rehabilitation programmes improve patients' long-term lifestyle decisions. Appel et al. suggested that healthcare practitioners help individuals minimise controllable CHD risk factors through lifestyle changes [24].

5. Conclusion

Planning for cardiac rehabilitation should consider the patient's present level of knowledge, lifestyle modification approaches, and risk factor assessment, which helps adapt the educational programme for each patient. Expand and improve CHD cardiac rehab programmes. All CHD patients should modify their lifestyle to reduce risk factors and improve quality of life.

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