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"A STUDY TO EVALUATE THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE (SIM) ON CARDIAC REHABILITATION (CR) AMONG POST MI PATIENTS ATTENDING CARDIAC OPD IN SELECTED HOSPITALS AT KANPUR"

Mrs. Anjani Devi Nelavala, Mr. Deepak Suwalka, Mr. Alan V Joseph, Ms. Kanika

Faculty of Nursing, Rama University, Kanpur
Email id: dean.nursing@ramauniversity.ac.in

ABSTRACT

Cardiac rehabilitation (CR) is an established form of treatment for patients with acute myocardial infarction that is designed to provide a range of lifestyle and medical interventions to reduce cardiac mortality and morbidity through the promotion of a healthy lifestyle and reduction in coronary artery disease risk factors. Myocardial Infarction results in enormous burden of increased mortality and morbidity. The experience of a serious illness, particularly if it is a sudden and life threatening event is a crisis not only for the individual sufferer but also for the spouse and wider family. A study to evaluate the effectiveness of Self Instructional Module (SIM) on Cardiac Rehabilitation (CR) among post Myocardial Infarction (Ml) patients attending cardiac outpatient department in selected hospitals in Kanpur. In this study sample consisted of 60 post myocardial infarction patients attending cardiac out patient department in Geetanjali medical college & hospital, Kanpur and who are willing to participate In this study non probability purposive sampling technique was adapted. This section shows the analysis of selected demographic variables of the subjects, according to the frequency and percentage distribution which includes age, gender, type of work, dietary pattern, and type of family and personal habits. the result of the study is Data presented in Table 5 reveals that the calculated Chi-squire (χ^2) value of Age (13.303), Type of work (11.742), and type of family (10.259) was greater than the table value (3.84) which

indicates that there was significant association between pre-test knowledge score and Demographic variables (age, type of work, type of family) of the subjects at 0.05 level of significance. Hence the research hypothesis (H_2) was accepted and statistical hypothesis (Ho) was rejected. Data presented in Table 5 reveals that the calculated χ^2 value of Gender (0.090), Dietary pattern (2.348), and Personal habits (0.136) was lesser than the table value 3.84, which indicates that there was no significant association between pre-test knowledge score and Demographic variables (Gender, Dietary pattern, Personal habits) of the subjects at 0.05 level of significance. Hence, the research hypothesis (H_2) was rejected and the statistical hypothesis (H_o) was accepted.

Introduction

Cardiac rehabilitation (CR) is an established form of treatment for patients with acute myocardial infarction that is designed to provide a range of lifestyle and medical interventions to reduce cardiac mortality and morbidity through the promotion of a healthy lifestyle and reduction in coronary artery disease risk factors.

Another important objective of CR is improvement in health-related quality of life (HRQOL) and several studies have reported on the HRQOL of patients with coexisting acute myocardial infarction, cardiac surgery, and heart failure,

A study says that Indians generally fall prey to heart attacks around 50 years of age. It also seems that the risk of heart attack in young adults, in 3rd and 4th decades of life is rising in India. Myocardial Infarction (Ml) refers to the process by which myocardial tissue is destroyed in regions of the heart that are deprived of an adequate blood supply of a reduced coronary blood flow. [1]

Need of the study

Myocardial Infarction results in enormous burden of increased mortality and

morbidity. The experience of a serious illness, particularly if it is a sudden and life threatening event is a crisis not only for the individual sufferer but also for the spouse and wider family. These events threaten the patient's stability, security, adaptability, belief and assumptions.[5]

Recognizing the needs and action priorities in cardiac rehabilitation and secondary prevention, World Health Organization (WHO) suggested a new definition, which reflects the aims of modern cardiac rehabilitation. "The rehabilitation of cardiac patients is the sum of activities required to influence favorably the underlying cause of the disease, as well as to ensure the patients best possible physical, social and mental conditions, so that they may by their own efforts, preserve or resume when lost, as normal a place as possible in the life of the community".

STATEMENT OF THE PROBLEM

"A study to evaluate the effectiveness of Self Instructional Module (SIM) on Cardiac Rehabilitation (CR) among post MI patients attending cardiac OPD in selected hospitals atKanpur"

OBJECTIVES OF THE STUDY

- To assess the pre-test knowledge score about cardiac rehabilitation among post, myocardial infarction patients.
- To administer Self Instructional Module on cardiac rehabilitation for myocardial infarction.
- To assess the post-test knowledge score about cardiac rehabilitation among post myocardial infarction patients after implementation of SIM.
- To assess the effectiveness of pre-test and post-test knowledge scores on cardiac rehabilitation.

- To find association between mean pre-test knowledge score and the selected demographic variables such as age, gender, type of work, dietary pattern, type of family, and personal habits.

HYPOTHESIS

H_1: The mean post test knowledge scores of the subject of cardiac rehabilitation after implementation of SIM will be significantly higher than their mean pre-test knowledge scores.

H_2: There will be significant association between the mean pre-test knowledge scores and the selected demographic variables such as age, gender, type of work, dietary pattern, type of family, and personal habits.

Methods and materials:

Research approach

Qualitative evaluative research approach chosen for the study

Research design

The research designs used in quasi experimental one group pre-test and post test used in the current study.

Variables:

VARIABLES OF THE STUDY

a) Dependent variables - Knowledge of the post Myocardial Infarction (Ml) patients regarding Cardiac Rehabilitation (CR)

b) Independent variables - Self Instructional Module (SIM) on Cardiac Rehabilitation (CR).

c) Demographic variables - Demographic variables are age, gender, type of work, dietary pattern, type of family, and personal habits.

DELIMITATIONS

The study is delimited only to patients with myocardial infarction attending cardiac outpatient department, in Geetanjali medical college & hospital. The total period of

data collection is delimited only for six weeks.

POPULATION

Population is the entire set of individuals or objects having the same common characteristics.

The population included in the study was post myocardial infarction patients from 30 and above years of age who attended cardiac outpatient department at Geetanjali medical college & hospital, Kanpur during the period of study.

SAMPLING TECHNIQUE

Sampling refers to the process of selecting the portion of population to represent the entire population.

Purposive sampling is based on the belief that a researcher's knowledge about the population can be used to hand pick the cause to be included in the study.

In this study non probability purposive sampling technique was adapted. The researcher-selected the subjects based on personal judgment that depends on the problem statement and objectives that has to be achieved.

SAMPLING SIZE

Sample is a subset of a population and selected to participate in a research study.

In this study sample consisted of 60 post myocardial infarction patients attending cardiac out patient department in Geetanjali medical college & hospital, Kanpur and who are willing to participate.

SAMPLING TECHNIQUE:

Criteria for sample selection

The subjects were selected based on predetermined criteria.

Inclusive criteria

- Both genders from 30 and above years of age.
- Post myocardial infarction patients, who attend the outpatient department

in Geetanjali medical college & hospital, Kanpur

- Who are willing to participate in the study
- Who could understand either English or Hindi.

Exclusive criteria

- Who have other cardiac disease along with myocardial infarction.
- Who have already received content regarding cardiac rehabilitation in any form.

Methods of data collection

Description of the tool:

The tools used for the data collection in this study were in two sections:

Section I: Demographic Data.

Section II: Structure knowledge questionnaire on cardiac rehabilitation.

Section I - Demographic data

This section deals with demographic data, which was used to collect the characteristics of the subjects. It contains 06 items such as age, gender, type of work, dietary pattern, type of family, and personal habits.

Section II - Structured knowledge questionnaire on Cardiac Rehabilitation

This section deal with structured knowledge questionnaire which was used to measure the knowledge of cardiac rehabilitation among post myocardial infarction subjects and it consists of 36 multiple choice questions in 6 areas of knowledge, which is given below in detail.

Analysis is a process of organizing and synthesizing data in such a way that research questions can be answered and hypothesis can be tested.

Kerlinger (1995) defines analysis as the categorizing, ordering, manipulating and summarizing of data to obtain answers to research questions. The purpose of analysis is to reduce the data into interpretable form so that relations of research

problem can be studied and tested.

This chapter deals with analysis and interpretation of the information collected from 60 post myocardial infarction subjects who attended cardiac out patient department in Geetanjali medical college & hospital in Kanpur

The collected data was tabulated in the master sheet and was analyzed based on the objectives of the study using descriptive and inferential statistics.

A Pre experimental one group pretest – Post-test design with evaluative approach was used in the present study.

The collected data was tabulated, organized and analyzed using descriptive and inferential statistics as follows.

Section I - Description of the demographic variables of the subjects.

Section II - Analysis of mean pretest and mean post-test knowledge Scores on cardiac rehabilitation of the subjects.

Section III - Comparison of mean pre-test and mean post-test Knowledge Scores on cardiac rehabilitation of the subjects.

Section IV - Association between the mean pre-test knowledge scores and the demographic variables of the subjects.

Section I: Description of the demographic variables of the subjects.

This section shows the analysis of selected demographic variables of the subjects, according to the frequency and percentage distribution which includes age, gender, type of work, dietary pattern, and type of family and personal habits.

Table 2: Frequency and percentage distribution of subjects according to their demographic variables N=60

SL No	Demographic variables	Variables	No of subjects	Percentage
1	Age of the mother in years	30-39	1	1.7
		40-49	7	11.7
		50-59	22	36.7
		>60	30	50
2	Gender	Male	45	75
		Female	15	25
3	Type of Work	Sedentary Worker	10	16.7
		Moderate Worker	30	50.0
		Skilled Worker	20	33.3
4	Dietry Pattern	Vegetarian	9	15.0
		Non-vegetarian	51	85.0
5	Type of Family	Nuclear Family	32	53.3
		Joint Family	28	43.7
6	Personal Habits	Smoking	20	33.3
		Alcohol	9	15.0
		Coffee Drinking	7	11.7
		Tobacco chewing	9	15.0

		None of the above	15	25.0

Section II: Analysis of mean pre-test and mean post-test knowledge scores on cardiac rehabilitation among the subjects.

This section deals with the details of analysis in regard to pre-test knowledge scores which was measured through the structured knowledge questionnaire administration and post-test knowledge scores using the same structured knowledge questionnaire after implementation of SIM to post myocardial infarction subjects.

Table-3 Area wise Mean pre-test knowledge scores on cardiac rehabilitation among the subjects. N=60

S. NO	Areas of knowledge	Maximum possible score	Pre - test knowledge score			Mean score %
			Mean	SD	Range	
1	Structure and functions of heart	5	1.97	1.582	0-5	39.4
2	Myocardial infarction	6	4.52	1.302	2-6	75.3
3	Physiological rehabilitation	10	6.65	1.858	3-10	66.5
4	Psychological rehabilitation	5	3.00	1.289	0-5	60.0
5	Vocational rehabilitation	5	3.50	1.066	1-5	70.0
6	Genderual rehabilitation	5	1.22	1.151	0-4	24.4

		36	**20.85**	**5.931**	**12-33**	**57.9**

Table 3 - represents that the mean score percentage of knowledge on 'structure and functions of heart' in pre-test was 39.4%, on 'Myocardial infarction' 75.3%, on 'Physiological rehabilitation' 66.5%, on 'Psychological rehabilitation' 60.0% , on 'Vocational rehabilitation' 70.0% , and on 'Genderual rehabilitation' was 24.4%.

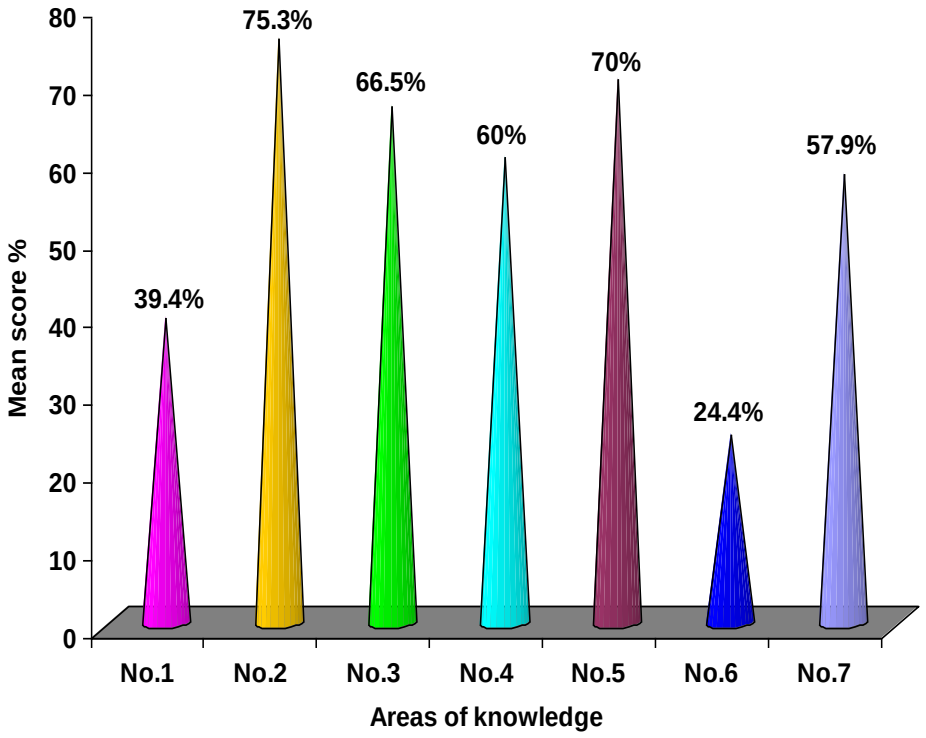

Figure: 9 Diagrame showing the Mean pre-test knowledge scores of the subjects

Section III - Comparison of mean pre-test and mean post-test Knowledge Scores on cardiac rehabilitation of the subjects.

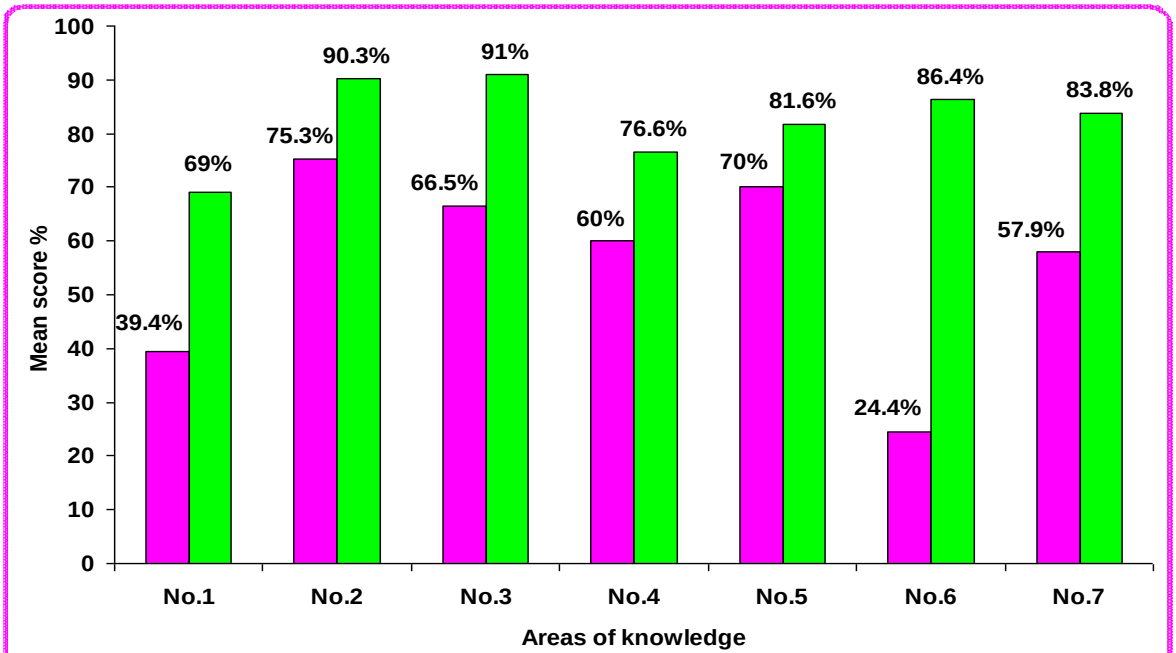

Figure: 11 Diagrame representing the Mean score percentage of pre-test and post-test knowledge of subjects on cardiac rehebilitation

Figure 11 represent the following knowledge scores:-

- The mean score percentage of knowledge on structure and functions of heart in pre-test was 39.4% and after implementation of SIM it was increased to 69.0%.
- The mean score percentage of myocardial infarction in pre-test and post-test was 75.3% and 90.3% respectively.
- The mean score percentage of knowledge on physiological rehabilitation in pre-test and post- test was 66.5% and 91.0%.
- The mean score percentage of knowledge on psychological rehabilitation in pre-test and post-test was 60.1% to 76.6%.
- The mean score percentage of knowledge on vocational rehabilitation in pre-test and post-test was found to be increased from 70.0% to 81.6%.
- The mean score percentage of knowledge on genderual rehabilitation in pre-test was also found to be highly increased from 24.4% to 86.4% respectively.
- The mean score of overall areas of knowledge in pre-test was 20.85 with SD of 5.931 which ranged between 12-33 with mean score percentage of 57.9%.
- The mean score of overall areas of knowledge in post-test was found to be 30.20 with SD of 3.944 which ranged between 20 - 36 with mean score percentage increased to 83.8%.

- The knowledge regarding cardiac rehabilitation among the samples after implementation of SIM was considerably increased.

Section IV - Association between the mean pre-test knowledge scores and the demographic variables of the subjects.

This section deals with the association between demographic variables and pre-test knowledge scores of subject on cardiac rehabilitation. It was associated by using Chi-square test. The cross tabulation analysis was employed effectively and the result of chi-square analysis were observe.

Table 5: Chi-square value of demographic variables age, gender, type of work, dietary pattern, type of family and personal habits. N=60

S.No.	Demographic Variables	X^2	df	P – value at (0.05) level
1	Age	13.303^{s}	1	3.84
2	Gender	0.090^{NS}	1	3.84
3	Type of work	11.742^{s}	1	3.84
4	Dietary pattern	2.348^{NS}	1	3.84
5	Type of family	10.259^{s}	1	3.84
6	Personal habits	0.136^{NS}	1	3.84

Data presented in Table 5 reveals that the calculated Chi-squire (χ^2) value of Age (13.303), Type of work (11.742), and type of family (10.259) was greater than the table value (3.84) which indicates that there was significant association between pre-test knowledge score and Demographic variables (age, type of work, type of family) of the subjects at 0.05 level of significance. Hence the research hypothesis (H_2) was accepted and statistical hypothesis (Ho)

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