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## **A study to assess the effectiveness of structured teaching programme on knowledge and practice regarding self-care activities among the clients with myocardial infarction**

**Mercy Madan Lal, K Ramu and Dr. Madan Lal**

### **Abstract**

Heart disease is the largest killer disease over the globe and India is no exception. Cardiovascular disease is the leading cause of death in United States for men and women of all racial and ethnic group and more people die of cardio vascular disease than of all the type of cancers combined. Myocardial infarction is a chronic life long illness. Self-care is a critical component of therapy for persons with myocardial infarction (M.I.). Patient need to manage his medication, diet, exercise, stress reduction, maintenance of body weight to detect early sign of fluid retention. "A study was done to assess the effectiveness of structured teaching programme on knowledge and practice regarding self-care activities among 60 clients with myocardial infarction in Sree devi Hospital and District Hospital of Tumkur. Orem's self-care theoretical frame work guided, A structured questionnaire was administered to the 60 clients. Who were selected from both the hospitals in the language which they understood. Pre and post test were done.

After the administration of structured teaching program the knowledge and practice was improved. The knowledge and practice of myocardial infarction clients was influenced by educational status. The calculated chi-square value for association of knowledge with education in the pre-test was 0.025 significant and in the post test was 0.03 significant and for the practice in the pre-test was 0.02 significant and in the post test was 0.01 significant.

The teaching programme on self-care activity improved knowledge and practice of clients on identification, avoiding trigger factors, self monitoring of pulse exercise, regular use of medication and thereby enabling the client to lead a normal active life. It is suggested for further research that a study can be conducted on a larger sample.

**Keywords:** myocardial infarction (MI), self-care activity, structured teaching program knowledge

### **Introduction**

Health is the most valued and sought virtue with human beings "WHO" in 1948 stated "Health is a state of complete physical mental and social well being and not merely absence of any disease or infirmity. WHO sees health as a process of continues adjustments to changing meanings we give to life. It is a dynamic concept [1].

Heart disease is the largest killer disease over the globe. In recent years, education has come to be considered as an integral component of health care. The modern trend of health care in every society is considering physical exercises, diet, psychological socio environment culture, stress management through alternative therapies such as yoga, meditation and other mean of relaxation [2]. Cardiovascular disease is the leading cause of death in United States Emphasis was laid on medication, diet, muscles stretching exercise and stress reduction technique. This was done with a view to assess the effectiveness of health guidelines on health teachings, regular follow up to maintain healthy active life and successful readjustment by careful planning [3].

Self-care is a critical component of therapy for persons with myocardial infarction (M.I.). Patient need to manage his medication, diet, exercise, stress reduction, maintenance of body weight to detect early sign of fluid retention [4].

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Few patients master myocardial infarction self-care. It may be that myocardial infarction is too complex, probably because patient is unable to understand the diagnosis and treatment regimen. He requires to learn the links between behavior and physiology [5]. With this information in the back ground the study was designed with following objectives.

**Objectives of the study**

1. To assess the pretest knowledge and practice regarding self-care activities among myocardial infarction clients.
2. To plan and implement structured teaching program regarding self-care activities in myocardial infarction clients.
3. To assess the post test knowledge and practice regarding self-care among myocardial infarction clients.
4. To compare pre and post test knowledge and practice of myocardial infarction clients regarding self-care activities

**Need for the study**

Since 1990, Cardio Vascular disease, has been the number one cause of death in United States of America .2.5 death taking place every minute in US [6].

In India, Cardio vascular disease is projected to be the largest cause of death and disability by 2020 with 2.6

million Indians predicted to die due to coronary heart, which constitutes 54.1% of all CVD death [7]. Since the world come in to existence humanity has striven relentlessly to be happy. Modification of cardiovascular risk factors can reduce the incidence of ischemic heart disease effectively [8]. Eighty five percent of people who die of acute myocardial infarction are 65 yrs of age or older. Women are higher in hospital mortality rates than men [9].

Limited number of studies have been conducted in the areas of patient teaching programs. A need was felt to improve the knowledge and practice regarding self-care activities of myocardial infarction clients for the better quality of life.

**Material and Methods**

**Research hypothesis**

There will be a significant difference between pretest and post test knowledge and practice score among myocardial infarction client regarding self-care activities.

Orem’s self-care theoretical frame work is used in present study to give guidelines and to provide direction to the study which evaluates a structured teaching programme on self-care activities of myocardial infarction clients in terms of gain in knowledge and change in practice of myocardial infarction clients.

**Research design**

**Table 1:** The schematic representation of the study design is given is figure 1

Group	Pre-test (administration of structured questionnaire) On Day- 1	Intervention/treatment (administration of STP on pulse monitoring, exercise and medication) On Day-1	Post-test (Administration of structured questionnaire) On Day- 7
Cardiac patients	X1	Y	X2

X1- Administration of Structured questionnaire to the cardiac patients on day-1.

Y- Administration of Structured Teaching Programme on the same day.

X2- Administration of Structured questionnaire to cardiac patient’s after 7 days of administration of STP.

**Study setting**

The study was conducted in medical ward, cardiac ward, OPD and intensive unit of selected hospitals Shridevi Hospital and District Hospital, Tumkur.

**Population**

Population for this study includes all the myocardial infarction clients admitted in selected hospital of Tumkur.

**Sampling technique**

The sample of the study comprises of 60 myocardial infarction clients, subjects to a maximum of 30 clients from Shridevi Hospital and 30 clients from district hospital Tumkur the sampling technique used was purposive.

**Sampling size:** The sample size for the study was 60 clients.

**Data collection procedure**

After obtaining formal permission from the hospital authorities and from the clients, data was collected from 60 clients selected by non probability purposive sampling technique.

Structured teaching programme questionnaire was administered to selected diagnosed myocardial infarction clients to educate the them on self-care activities. It took about 50 minutes to collect data.

**Results**

**Plan for data analysis**

The data collected was analysed by descriptive and inferential statistics. Findings of the study are depicted as follows.

**Age distribution of myocardial infarction patients**

**Table 2:** Table depicting age

Age (Years)	Frequency	%
35-40	25	41.67
45-50	18	30
55-60	13	21.67
65 Yeas and above	4	6.66

**Table 3:** Table depicting educational status

Educational status	Frequency	%
Primary education	18	30
Secondary education	14	23.33
Higher secondary education	7	11.67
Graduation	21	35

**Table 4:** Table depicting occupational status

Occupational status	Frequency	%
Employed	18	30
Home maker	20	33.33
Coolie	16	26.67
Shop Keeper	6	10

**Table 5:** Table depicting marital status

Marital status	Frequency	%
Married	29	48.33
Unmarried	23	38.33
Widow	8	13.34
Divorce/separated	0	0

**Table 6:** Table depicting nutritional status

Nutritional status	Frequency	%
Vegetarian	18	30
Mixed	42	70

**Table 7:** Table depicting history of previous illness

History of previous illness	Frequency	%
Diabetes mellitus	16	26.67
Hypertension	19	31.67
Heart disease	20	33.33
Any other	5	8.33

**Table 8:** Table depicting gender

Gender	Frequency	%
Male	39	65
Female	21	35

**Place of living distribution of myocardial infarction patients**

**Table 9:** Table depicting place of living

Place of Living	Frequency	%
Urban area	37	61.67
Rural Area	23	38.33

**Table 10:** Table depicting source of information

Source of information	Frequency	%
Family members and Neighbor	13	21.67
Mass media	16	26.67
Health centers	27	45
Elders	4	6.66

**Table 11:** Table depicting religion

Religion	Frequency	%
Hindu	31	51.67
Muslim	16	26.67
Christian	12	20
Any other	1	1.66

**Table 17:** I Evaluating the effectiveness of structured teaching programme regarding to knowledge

Parameter	Mean	S.D	SEM	Range	Mean%	t -value	Result
Pre-test	10.52	1.62	1.17	8-14	35.06	77.96	H.S P<0.001
Post-test	26.12	0.78	3.72	25-27	87.06		
Improvement	15.6	0.84					

The result undoubtedly confirms that the structured teaching programme significantly effective in improving the knowledge on self-care activities among Myocardial infarction clients.

**Table 18:** II Evaluating the effectiveness of structured teaching programme regarding practice

Parameter	Mean	S.D	SEM	Range	Mean%	t -value	Result
Pre-test	10.7	1.61	17.83	8-14	53.5	24.36	H.S P<0.001
Post-test	17.13	0.73	3.72	25-27	85.65		
Improvement	6.43	0.88					

**Table 12:** Table depicting duration of illness

Duration of illness	Frequency	%
1 Year	19	31.67
1 – 3 Years	26	43.33
3 – 5 Years	8	13.33
5 Years and above	7	11.67

**Assessment of knowledge and practice of Myocardial infarction clients**

**Table 13:** I Assessment of knowledge before structured teaching programme

Parameter	Mean	S.D	SEM	Range	Mean%
Pre-test	10.52	1.62	1.17	8-14	35.06

From the result it was found that the sample was having inadequate knowledge regarding self-care activities

**Table 14:** II Assessment of knowledge after structured teaching programme

Parameter	Mean	S.D	SEM	Range	Mean%
Post-test	26.12	0.78	3.72	25-27	87.06

The score and the outcome were appraisable more in this table compared to the score observed before structured teaching programme.

**Table 15:** III Assessment of practice before structured teaching programme

Parameter	Mean	S.D	SEM	Range	Mean%
Pre-test	10.7	1.61	17.83	8-14	53.5

From the result is found that sample was having inadequate practice regarding self-care activity.

**Table 16:** IV Assessment of practice of after structured teaching programme

Parameter	Mean	S.D	SEM	Range	Mean%
Post-test	17.13	0.73	3.72	25-27	85.65

The score and the outcome were appreciable more in this table compared to the score observer before structured teaching programme

After the teaching programme. The mean score is increased by 15.6. The variation is decreased from pre-test to post-test. The SD score was 1.62 in the pre-test and 0.78 in the post-test. It is decreased by 0.84.

The results undoubtedly confirmed that structured teaching programme significantly effective in improving the practice on self-care activities among myocardial infarction clients

#### 4. Discussions

1. The first objective of the study was to assess the pre-test knowledge and practice regarding self-care activities among myocardial infarction clients.

The present findings of the study revealed that the overall knowledge score in pre test was 10.52 component wise pre test knowledge score was inadequate in all the area like, general information, pulse monitoring, exercise and medication. And therefore it is evident from there findings that, the necessity of educating M.I clients regarding knowledge of self-care activities. The overall practice score in pretest was 10.7, hence practice also was inadequate. And therefore it is evident from these findings that, there was a necessity of educating M.I clients regarding practice of self-care activities.

Regarding the knowledge about management, the overall pre-test score found to be 77.7%. The mean enhancement between pre-test and post-test is 21.4% and the obtained paired 't' value is 31.28 which is significant at  $P < 0.05$  level. The finding of the present study is consistent with the similar study conducted by Mahadev Prasad. K.B *et al*; and findings revealed that everyone should be aware of cardiac disease<sup>[11]</sup>.

2. The second objective of the study was to plan and implement structured teaching program regarding self-care activities in myocardial infarction client
3. The third objective of the study was to assess the post-test knowledge and practice regarding self-care activities among myocardial infarction clients

The study had confirmed the effectiveness of STP with each component. Regarding STP, the client had shown knowledge score in post test 26.12 compared with pre test 10.52. The client had showed practice score in post test 17.13 compared with pretest 10.7

4. The fourth objective of the study was to compare pre and post-test knowledge and practice of myocardial infarction clients regarding self-care activities.

Before the implementation of the structure teaching program the pre-test knowledge and practice was inadequate i.e., 10.52 and 10.7 in comparison to the post-test knowledge and practice score i.e., 26.12 to 17.13.

The pre test knowledge score was found to be only 35% of the maximum possible score which indicates inadequate knowledge. The pre test practice score was found to be 53.5% of the maximum possible score which indicates moderate practice. The post test knowledge score found to be 87% of the maximum possible score which indicates adequate knowledge. The post test practice score was found to be 85.6% which indicates adequate practice.

#### Testing of hypotheses

Based on the study findings the comparison between pre test and post test score revealed that there was a significant difference between pre test and post test knowledge and practice of myocardial infarction clients. Hence research hypotheses (H) are accepted.

#### 5. Conclusions

The following conclusions are drawn on the basis of findings of the study.

Majority of myocardial infarction clients belongs to the age group 35-40 i.e., 41.67% and 65% of myocardial infarction clients were male. Most of them 35% had graduation. Majority of samples, occupation is home maker 33.33% and most of them live in urban areas 61.67%. After the administration of structured teaching program the knowledge and practice was improved. The overall mean score percentage of knowledge in pre test is 35.06 and in post test is 87.06 and in practice the pre test is 53.5 and post test is 85.65. The current study concludes that the knowledge and practice regarding self-care activities in myocardial infarction clients was inadequate in pre test. The knowledge and practice of myocardial infarction clients was influenced by educational status. The calculated chi-square value for association of knowledge with education in the pre-test was 0.025 significant and in the post test was 0.03 significant and for the practice in the pre-test was 0.02 significant and in the post test was 0.01 significant.

Since the majority of the people with myocardial infarction have inadequate knowledge about the disease process, trigger factors and management, education of the patient in these aspects is very essential for proper management of myocardial infarction. Hence structured teaching program on management of self-care activity was developed and administered to the clients which was aimed to provide knowledge to the clients on identification and avoiding trigger factors, self monitoring of pulse exercise and regular use of medication and thereby enabling the client to lead a normal active life. It is suggested, that similar study can be replicated on a large sample to assess the knowledge and practice of self-care activities among myocardial infarction clients.

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