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Effectiveness of video assisted instruction on knowledge and expressed practice regarding cardiac rehabilitation among post myocardial infarction patients selected hospital

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Abstract
A quasi experimental study to evaluate the effectiveness of video assisted instruction on knowledge and expressed practice regarding cardiac rehabilitation among post myocardial infarction patients. The 60 study samples selected by Non probability convenience sampling technique. The data collected with the help of demographic data, clinical variables and self-structured questionnaire regarding Cardiac rehabilitation. The study results shows that after the Video assisted instruction the level of knowledge improved as 83.3% had adequate level of knowledge, 16.7% had moderately adequate level of knowledge and 0% had inadequate level of knowledge in experimental group and the level of expressed practice improved as 73.3% had favourable practice, 26.7% had moderately favourable practice and 0% had unfavourable practice in experimental group. The effectiveness of Video assisted instruction is proved effective at $p<0.05$ level. The study conclude that the Nurses are health care providers actively involved in prevention and early detection of Myocardial infarction and its complications by conducting various education methods

Keywords: Myocardial infarction, cardiac rehabilitation, prevention, management, awareness, video assisted instruction

Introduction

Myocardial infarction is defined as a sudden occlusion of a coronary artery and the abrupt cessation of blood and oxygen flow to the heart muscle. Myocardial infarction is an abnormal accumulation of fatty substances. Myocardial infarction occurs as a result of sustained ischemia, causing irreversible myocardial cell death.80-90% of all acute myocardial infarction are secondary to thrombus formation. The main cause of myocardial infarction is obesity, hypertension, diabetes mellitus, fatty substances, age, family history and smoking. Myocardial infarction is usually caused by reduced blood flow in a coronary artery due to rupture of an atherosclerotic plaque and subsequent occlusion of the artery by a thrombus. The symptoms are

pain in chest, discomfort, weakness, shortness of breath, fatigue and change in mental status, pulmonary edema, dizziness and dysrhythmia.

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 the best possible physical, mental and social conditions. So that they may by their own efforts, preserve or resume when lost a place as normal as possible in the life of the community. The complication of myocardial infarction includes dysrhythmias, heart failure, cardiogenic shock, papillary muscle dysfunction, ventricular aneurysm, and pericarditis and Dressler syndrome. The component of cardiac rehabilitation include, management of hypertension and Diabetes mellitus, Lipid management, Smoking cessation, Exercise training, Nutritional counseling, Psychosocial management, Patient assessment and General education.

There are four phases in cardiac rehabilitation

- Phase 1-Inpatient cardiac rehabilitation (5-7 days)
- Phase 2-Immediate cardiac rehabilitation (2-12 weeks)
- Phase 3-Intermittent cardiac rehabilitation (6-8 weeks)
- Phase 4-Maintanence cardiac rehabilitation

Aims

The aim of the study is to educate the patients, who are all affected by myocardial infarction, through imparting them with adequate knowledge regarding myocardial infarction and the forewarning symptoms of myocardial infarction for the further prevention of reoccurrence of the disease.

Materials and Methods

1. **Setting and participants:** This study is conducted at selected hospital i.e experimental group (G.V.N. Hospital and ABC hospital, Trichy) and for control group (Dr. G. Viswanathan specialty Hospital and Moorthy hospital, Trichy). The participants in this study were 60 patients diagnosed as post myocardial infarction patients & who coming for checkup during data collection period.
2. **Tools and Techniques:** In this study the tools used were demographic variable, self-administered questionnaire to assess the level of knowledge and expressed practice on Cardiac rehabilitation, prevention and video assisted instruction.
3. **Description of Intervention:** There are of 25 items to assess the level of knowledge and 15 items to assess the expressed practice regarding general, signs and symptoms, management and prevention aspects on myocardial infarction.
4. **Ethical Considerations:** The research proposal was approved by the ethical committee of the institution. The investigator took written consent from the patients by explaining the purpose of the information and the confidentiality mentioned and tit will be used for the purpose of research.
5. **Statistical Methods:** The descriptive statistical analysis method such as mean, standard deviations and inferential statistics

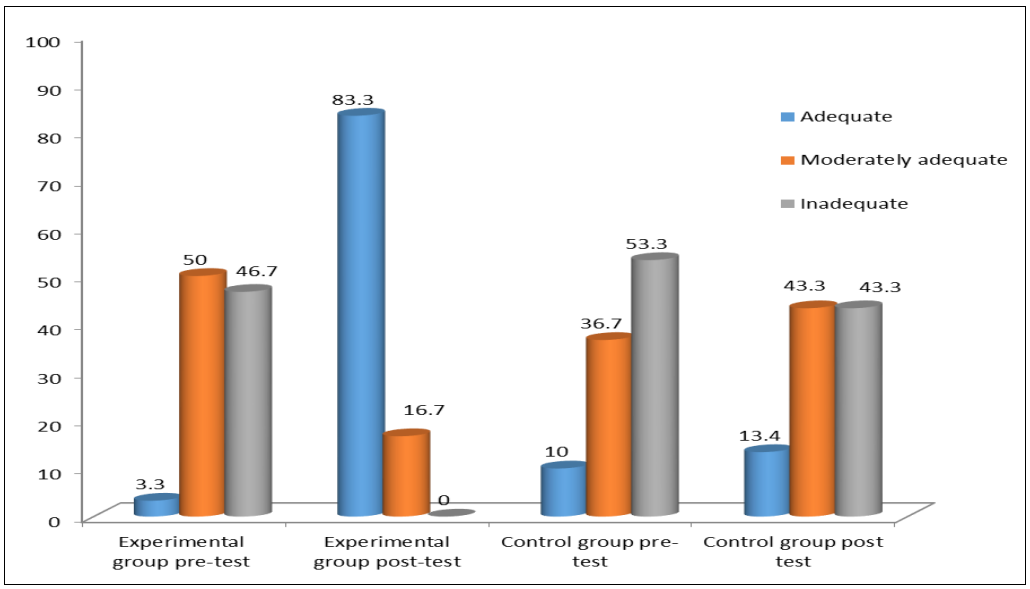
Section I

Table 1: Demographic variables in control, experimental groups N = 60

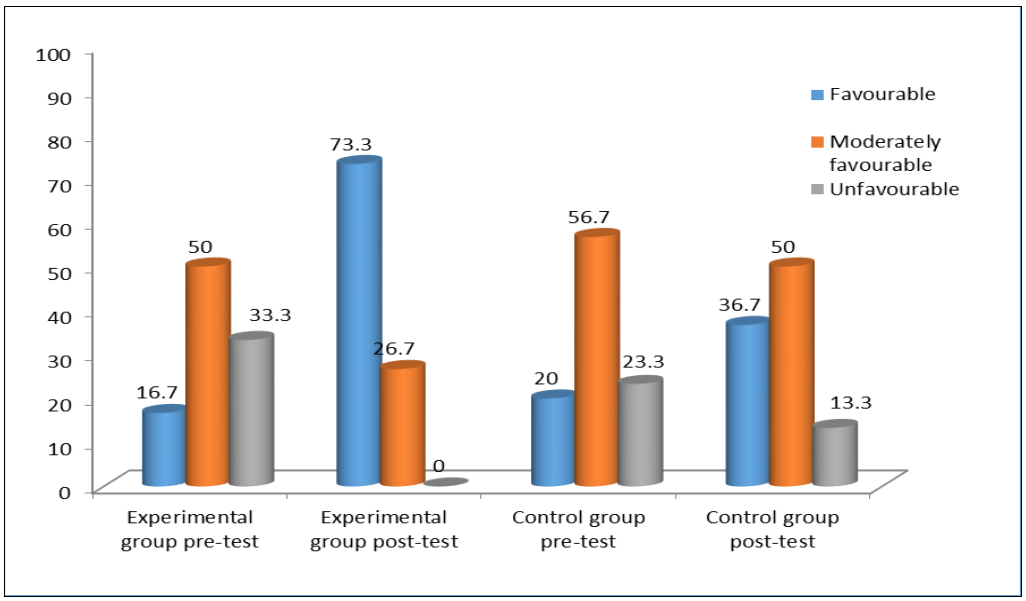
S. No	Demographic Variables	Control Group (n = 30)		Experimental Group (n = 30)	
		Frequency	Percentage %	Frequency	Percentage %
1.	**Age**				
	20 - 30 years	3	10.0	1	3.3
	31- 40 years	11	36.6	6	20.0
	41-50 years	8	26.7	11	36.7
	Above 50 years	8	26.7	12	40.0
2.	**Sex**				
	Male	16	53.3	19	63.3
	Female	14	46.7	11	36.7
	Transgender	0	0	0	0
3.	**Marital status**				
	Married	24	80.0	26	86.6
	Unmarried	4	13.3	2	6.7
	Divorce / widow	2	6.7	2	6.7
4.	**Education**				
	Illiterate	7	23.3	6	20.0
	High school	12	40.0	16	53.3
	Higher secondary	7	23.3	7	23.4
	Graduate	4	13.4	1	3.3
5.	**Occupation**				
	Unemployed	10	33.3	7	23.4
	Business	11	36.7	10	33.3
	Government	2	6.7	9	30.0
	Coolie	7	23.3	4	13.4
6.	**Monthly income**				
	Below 5000	11	36.7	2	6.7
	Rs.5001-10,000	13	43.3	17	56.7
	Rs.10,001-15000	3	10.0	7	23.3
	Rs. Above 15000	3	10.	4	13.3
7.	**Habits**				
	Alcoholism	5	16.7	6	20.0

	Smoking	5	16.7	4	13.3
	Alcoholism with smoking	11	36.6	14	46.7
	Nil	9	30.0	6	20.0
8.	**Religion**				
	Hindu	16	53.3	24	80.0
	Christian	10	33.3	2	6.7
	Muslim	4	13.4	4	13.3
9.	**Food habits**				
	Vegetarian	4	13.3	3	10.0
	Non vegetarian	26	86.7	27	90.0
10.	**Co morbid illness**				
	Hypertension	9	30.0	9	30.0
	Diabetes mellitus	9	30.0	18	60.0
	Hypertension with diabetes mellitus	11	36.7	3	10.0
	Nil	1	3.3	0	0.0
1.	Body mass index	4	13.3	10	33.3
	a. Below 18	12	40.0	9	30.0
	b.18-24	14	46.7	11	36.7
	c. Above 24				

Section II



Section -3



Section-4

Table 2: Pre-test, post-test mean differences analysis.

Groups	Pre-test		Post-test		Mean difference	Paired 't' test
	Mean	SD	Mean	SD		
Control Group knowledge expressed practice	13.97 9.50	3.135 2.224	14.53 10.50	3.203 2.224	0.56 1.00	1.292 1.936
Experimental Group knowledge expressed practice	12.23 8.27	2.046 3.183	20.73 12.40	2.348 1.589	8.5 4.13	16.77** 6.275**

**at $p<0.01$

Section-5

Table 3: Post-test mean differences in groups.

Groups	Sample (n)	Post-test mean	Post-test SD	Mean difference	Independent 't' test
Knowledge					
Control group	30	14.53	3.203	0.56	
Experimental group	30	20.73	2.438	8.5	8.551**
Expressed Practice	30	10.50	2.224	1.00	3.807**
Control group	30	12.40	1.589	4.13	
Experimental group					

** at $P<0.01$

Section-6

Table 4: Post-test correlation between groups' variables

Post-test	Correlation
Control group	
Knowledge	0.076
Expressed Practice	
Experimental Group	
Knowledge	0.337**
Expressed Practice	

**at $p<0.01$

Discussion.

The investigator found out in control group the level of knowledge in pre-test most of them were inadequate 16(53.3), and post-test 13(43.3) were inadequate and moderately adequate. In control group the level of expressed practice in pre-test most of them were moderately favourable expressed practice 17(56.7), and post-test 15(50.0) were moderately favourable expressed practice. The findings extended suggested that is not reasonable to expect that improving knowledge and expressed practice without intervention. The investigator found out in experimental group the level of knowledge in pre-test most of them 14(46.7) were inadequate. After nursing interventions most of them 25(83.3) were adequate, 5(16.7) of them were moderately adequate. The pre-test expressed practice 15(50.0) of them had moderately favourable expressed practice. After nursing interventions most of them 22(73.3) were favourable expressed practice, 8(26.7) of them were moderately favourable expressed practice.

The mean post-test knowledge (20.73) was higher than the mean pre-test knowledge (12.23) with standard deviation (2.348) and the obtained 't' value (t= 16.77) was significant at $p<0.01$, where as the mean post-test assessment of expressed practice was improved (mean=12.40, SD= 1.589) than pre-test assessment of expressed practice and obtained 't' value (t= 6.275) was significant at $p<0.01$ level. So, the first hypothesis (H_1) was accepted. The mean post-test knowledge score regarding cardiac rehabilitation was significantly higher (20.73) in experimental group of post myocardial infarction patients who received video assisted instruction than (14.53) control group and the mean post-test expressed practice score was also higher (12.40) in experimental group than (10.50) in control group. So hypothesis 2 (H2) was accepted. There was a positive correlation between post-test knowledge and expressed practice. The present study also concluded that the level of knowledge and expressed practice were improved after video assisted instruction. So the hypothesis 3 (H_3) was accepted

The present study also concluded that there was a significant association only one selected demographic variable, food habits ($\chi 2$ =6.667) with pre-test expressed practice scores in experimental group and no significant association for selected demographic variables with pre-test expressed practice scores in control group. So, the hypothesis 5 (H_5) was rejected. The study finding was contradicted by Grace J (2010).

Conclusion

The knowledge and expressed practice regarding cardiac rehabilitation among post myocardial infarction patients was inadequate knowledge and unfavorable expressed practice

during pre-test. The study showed that video assisted instruction was effective an improving knowledge and expressed practice regarding cardiac rehabilitation among post myocardial infarction patients. So the result reveals that there is a positive relationship between knowledge and expressed practice.

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