"A study to evaluate the effectiveness of self-instructional module (SIM) in terms of knowledge and skills regarding emergency management of patient with myocardial infarction among staff nurses"

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ABSTRACT

Background and aims

Cardiovascular diseases (CVDs), especially coronary heart disease (CHD), have assumed epidemic proportions worldwide. According to WHO, the South Asian region has one of the highest cardiovascular mortality rates in the world. Acute myocardial infarction (AMI) is a life-threatening condition characterized by the formation of localized necrotic areas within the myocardium. Nurses play the important first line of role in emergency management of patient with myocardial infarction. **Objective:** To assess the effectiveness of self-instructional module on

knowledge and skills regarding emergency management of patient with myocardial infarction among staff nurses working in ICCU and to find the association of pretest knowledge and skills scores regarding emergency management of patient with myocardial infarction among staff nurses working in ICCU with their socio demographic variables.

Methods

The sample of 62 nurses working in Intensive Coronary Care Unit (ICCU) of KLES Dr. Prabhakar Kore Hospital and Medical Research Centre, Belagavi, India was selected by using purposive sampling technique. A pre-experimental, evaluative research approach was used with one group pre-test post-test design. A self-structured knowledge questionnaire and observation checklist was used for data collection. A self-structured knowledge questionnaire was used to assess the knowledge regarding emergency management of patients with myocardial infarction and observation checklist was used to assess the skills regarding ECG, defibrillator, and thrombolytic therapy. For the validation of the tool and self instructional module, the blue print of the tool and self instructional module was sent to 8 experts from the department of medical surgical nursing. Reliability of the tool was tested by using split half method using Karl Pearson's Coefficient of correlation and was found to be reliable to assess the knowledge and skills on emergency management of myocardial infarction. Reliability of structured knowledge questionnaire was r=0.95 and for observational checklist for ECG was r=0.91, defibrillation was r=0.95 and thrombolytic therapy was r= 0.88. The pilot study was conducted on 6 staff nurses working in ICCU of Deccan hospital, Belagavi**.** Ethical approval for main study was obtained from the ethical clearance committee and KLES Dr Prabhakar Kore Hospital and Medical Research Centre, Belagavi and permission for pilot study was obtained from Deccan Hospital, Belagavi. Descriptive and inferential statistics was used to analyze the data by using SPSS software. Descriptive statistics

was used to describe the sample characteristics mean, median, mode, standard deviation, percentage, frequency, and range. Inferential statistics (paired t test was used to test the hypothesis and Chi square test was used to find the association).

Result: Highly significant difference was found between the pre test and post test scores ($p<0.05$) which indicates that self instructional module was helpful in increasing knowledge and skills of the staff nurses. The table below also shows calculated paired "t" value is greater than tabulated value. This shows H_1 is accepted and gain in knowledge and skills scores is statistically significant at $p<0.05$ levels. Among the socio-demographic variables of nurses, professional qualification was found to have significant association with pre-test knowledge scores. Age, Gender and total years of experience in ICCU were found to have significant association with pre-test skill scores regarding ECG. Total years of clinical experience and total years of experience in ICCU were found to have significant association with pre-test skill scores regarding defibrillator and thrombolytic therapy.

Table: Testing of hypothesis on effectiveness of Self Instructional Module (SIM) on knowledge and skills regarding emergency management of patient with myocardial infarction.

	Mean Difference (d)	Standard Error Difference (SEd)	Paired "t" values	
			Calculated value	Tabulated Value
Knowledge	13.500	0.529	25.530	1.960
Skills				
1. ECG	6.258	0.350	17.869	1.960
2. Defibrillator	11.290	0.537	21.043	1.960
3. Thrombolytic Therapy	4.806	0.377	12.747	1.960

Conclusion: Self instructional module was helpful in increasing knowledge and skills of the staff nurses regarding emergency management of patient with myocardial infarction.

KEY WORDS:

Emergency management of patient with Myocardial Infarction, Nurses, Intensive Coronary Care Unit, Knowledge, Skills