

# A Pre Experimental Study to Assess the Effectiveness of Planned Teaching about Knowledge regarding Initial Drug Use in Myocardial Infarction among Staff Nurses Working in Selected Hospitals

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**Abstract:** Coronary heart disease accounting for 17.3 million per year, 3.8 million male and 3.4 million female are affected with cardiovascular disease. It is a major public health problem in developing countries. <sup>[1]</sup> Emergency management and immediate treatment of myocardial infarction will help to avoid heart attack and associated complications. <sup>[2]</sup> Treatment of myocardial infarction is critical. When the patient reaches the hospital, the first goal is to minimize the size of infarct. <sup>[3]</sup> Objectives: To assess the existing knowledge of staff nurses about initial drug use in myocardial infarction. To determine the effectiveness of planned teaching about initial drug use in myocardial infarction among staff nurses working in selected hospitals. To associate the knowledge of staff nurses about initial drug use in myocardial infarction with selected demographic variables. Methods and Materials: A quantitative one group pre - test post - test design was used. Sixty staff nurses was collected by using non - probability convenient sampling technique. Inclusion criteria staff nurses who are willing to participate in the study, who are available at the time of data collection and able to read and write English. Exclusion criteria Staff nurses who suffered from myocardial infarction. Those who attended similar type of teaching programme regarding initial drug use in myocardial infarction. Framed the item and same were incorporated into the tool and planned teaching programme. The reliability of questionnaire was done by split half method using Karl Pearson formula. Results: In Pre - test the test 7 (11.66%) subjects were having poor level of knowledge, 43 (71.66%) subjects were having average level of knowledge, 10 (16.66%) were having good level of knowledge. The minimum score was 10 and the maximum score was 20, the mean score was 15.28 and pre - test SD was 2.3. In Post - test 9 (15%) of the subjects were having good level of knowledge, 19 (31.66%) subjects were having very good level of knowledge and 32 (53.33%) subjects were having excellent level of knowledge score. The minimum score was 18 and the maximum score was 33, the mean score was 26.61.

**Keywords:** initial drug, myocardial infarction, staff nurses

## 1. Introduction

Living a healthier life can not only extend your life, it can also improve the quality. Heart diseases is one of the leading cause of death throughout the world. In low income countries like India, case fatality attributable to cardiovascular diseases are much higher than middle and high income countries. Cardiovascular disease will be the leading cause of mortality in India by the end of this century.

<sup>[4]</sup> According to Center For Disease Control and Prevention (CDC) India, 2016 report, 1.7 million Indians die due to heart disease and cardiovascular diseases have been responsible for more death as compared to other diseases. <sup>[5]</sup>

Mortality due to myocardial infarction is most common in world among the cardiovascular disease. Myocardial infarction (M. I.) affects the patient in an extremely stressful way. It is described as a threat that leads to a life crisis in one's whole life. <sup>[6]</sup> Acute myocardial infarction (AMI) is caused by complete blockage of the coronary artery due to a thrombus attach to a ruptured plaque which requires an immediate diagnosis and treatment. If the condition is left untreated for a sufficient period of time it can cause damage of myocardium. Myocardial necrosis begins at approximately 30 minutes after occlusion of an coronary

artery and require immediate medical emergency treatment. Prolonged ischemia resulting in permanent loss of function of large regions in cell death. If prolonged ischemia not treated on time it may lead to permanent death of heart muscles cells. Emergency management of myocardial infarction is very necessary to avoid the complications and recurrent heart attack. <sup>[7]</sup> Emergency management and immediate treatment of myocardial infarction will help to avoid heart attack and associated complications. The advent of coronary care unit and early reperfusion therapy has substantially decreased mortality rates and has improved the outcome in survivor of acute phase of myocardial infarction. <sup>[2]</sup>

### Problem Statement

A pre experimental study to assess the effectiveness of planned teaching about knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals.

### Objectives

- 1) To assess the existing knowledge of staff nurses about initial drug use in myocardial infarction.

- 2) To determine the effectiveness of planned teaching about initial drug use in myocardial infarction among staff nurses working in selected hospitals.
- 3) To associate the knowledge of staff nurses about initial drug use in myocardial infarction with selected demographic variables.

## 2. Methodology

- 1) Research approach: Quantitative research approach
- 2) Research design: The research design is One Group Pre - Test Post - Test Design
- 3) Setting of the study: This study was conducted in selected hospitals.
- 4) Sample: Staff Nurses.
- 5) Sampling technique: Samples will be selected by Non - probability convenient sampling technique.
- 6) Sample size: Sample size for this study is 60.
- 7) Tool: Structured knowledge questionnaire including demographic variables and structured teaching programme was used for the study.

## Sampling Criteria

**Inclusion Criteria:** - Staff nurses,

- 1) Who are willing to participate in the study.
- 2) Who are available at the time of data collection.
- 3) Who are able to read and write English.

**Exclusion Criteria:** - Staff nurses,

- 1) Who suffered from myocardial infarction.
- 2) Those who attended similar type of teaching programme regarding initial drug use in myocardial infarction.

## 3. Result

The present study has been taken up to assess the effectiveness of planned teaching about knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals. Analysis and interpretation is based on the objectives of the study. A structured knowledge questionnaire was used for data collection. The analysis was done with the help of inferential and descriptive statistics.

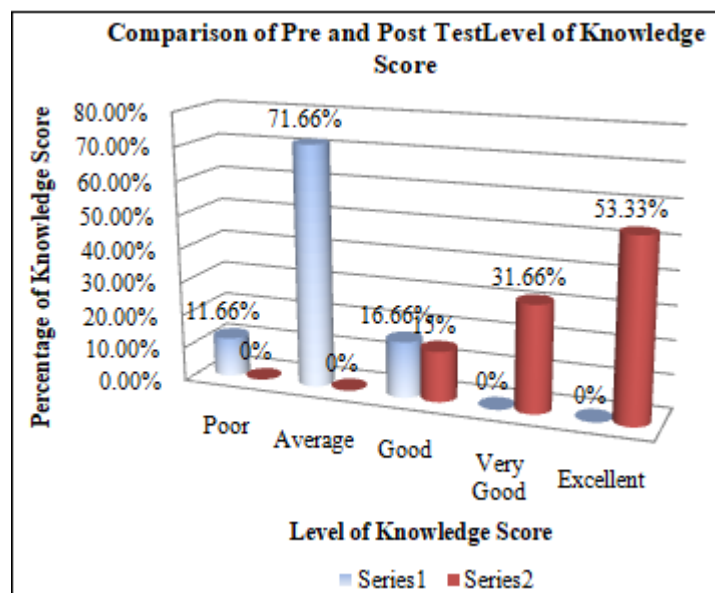
**Table 1:** Percentage wise distribution of Effectiveness planned teaching about knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals, n = 60

| Level of knowledge score | Percentage score | Knowledge Percentage Score |                |               |                |
|--------------------------|------------------|----------------------------|----------------|---------------|----------------|
|                          |                  | Pre Test                   |                | Post Test     |                |
|                          |                  | Frequency (f)              | Percentage (%) | Frequency (f) | Percentage (%) |
| Poor                     | <35%             | 07                         | 11.66          | 0             | 0              |
| Average                  | 36% - 50%        | 43                         | 71.66          | 0             | 0              |
| Good                     | 51% - 65%        | 10                         | 16.66          | 09            | 15             |
| Very good                | 66% - 75%        | 0                          | 0              | 19            | 31.66          |
| Excellent                | >75%             | 0                          | 0              | 32            | 53.33          |
| Minimum score            |                  | 10                         |                | 18            |                |
| Maximum score            |                  | 20                         |                | 33            |                |
| Mean knowledge score     |                  | 15.28                      |                | 26.61         |                |
| SD                       |                  | 2.3                        |                | 3.64          |                |

The above table and below graph shows that in **Pre - test** 07 (11.66%) of staff nurses were having poor level of knowledge score, 43 (71.66%) of staff nurses were having average level of knowledge score, and 10 (16.66%) of staff nurses were having very good and non of the subjects were having very good and excellent level of knowledge score. The minimum score was 10 and the maximum score was 20, the mean knowledge score was 15.28 and SD was 2.3. **Post test** knowledge score indicate non of the subjects were having poor and average level of knowledge, 9 (15%) subjects were having good level of knowledge, 19 (31.66%) subjects were having very good level of knowledge and majority 32 (53.33%) excellent level of knowledge regarding initial drug use in myocardial infarction. The minimum score was 18 and the maximum score was 33, the mean score was 26.61 and SD was 3.64.

Effectiveness of planned teaching on knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals.

This section deals with the effectiveness of planned teaching on knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals. The hypothesis is tested statistically with distribution of pre test and post test mean and standard deviation and mean percentage knowledge score. The level of knowledge during the pre test and post test are compare to prove the effectiveness of planned teaching. Significance difference at 5% level of significance is tested with student's paired 't' test and tabulated 't' value is compared with calculated 't' value. Hence, H1 hypothesis is accepted for the present study.



**Figure 1:** Percentage wise distribution of Effectiveness planned teaching about knowledge regarding initial drug use in myocardial infarction among staff nurses working in selected hospitals.

#### 4. Discussion

The major findings of the study shows that the pre test mean score of staff nurses is 15.28 and post test mean is 26.61 after administering planned teaching. The statistical analysis was done by 't' test where the overall calculated 't' value was 14.03 when compared to the tabulated 't' value with degree of freedom at the level of 0.05 significance was higher showing high level of significance making the conclusion that planned teaching is effective in improving the knowledge of staff nurses on initial drug use in myocardial infarction.

Similar finding was conducted by, X. Binu was conducted a descriptive Quasi experimental study on 98 staff nurses to assess the effectiveness of SIM regarding emergency management of patients with myocardial infarction on knowledge among staff nurses in Odisha, India in 2013. Convenient sampling technique was used for data collection. The result shows that, the overall pretest mean score was 22.06 which is 48% whereas in the post test the mean score 30.04 which is 65% of the total score with an overall difference of 17% of pretest score. In pre - test and post test knowledge scores of different areas of emergency management of myocardial infarction shows highly significant difference between the pretest and post test knowledge scores in all the areas. [8]

#### 5. Conclusion

In this study from detail analysis it shows that of post test mean score is 26.61 and pre test mean score is 15.28. The hypothesis is tested statistically with distribution of pre test and post test mean, standard deviation and mean difference. It is interpreted that selected demographic variables of age, sex, professional qualification and area of work is significantly not associate with their pre test knowledge score but year of experience is significantly associate with their pre test knowledge score.

#### 6. Recommendations

On the basis of the findings of the study, it is recommended that -

- A similar study may be replicated with a control group and on a larger subjects.
- Studies may be conducted to evaluate the effectiveness of planned teaching versus other method of teaching on initial drug use in myocardial infarction.
- Can be conducted to evaluate the skill of emergency department staff nurses regarding initial drug use in myocardial infarction.
- All the hospital where the study was conducted may be intimated about the finding of the study so as to improve their nursing care.

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