Effect of Planned Teaching Programme on Knowledge Regarding Secondary Prevention Strategies among Patients with Myocardial Infarction

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ABSTRACT: Heart disease is the leading cause of death in most of the developed and developing countries. Patients with history of myocardial infarction must adopt life style modifications as secondary prevention strategies. The aim of the present study was to assess effect of planned teaching program on knowledge among patients with myocardial infarction regarding secondary prevention strategies.A Quasi Experimental one group pre test post test research design was adopted for this study. The sample comprised of 80 patients from selected hospitals of Sangli Miraj Kupwad corporation area. Sample was selected using purposive sampling technique. Data was collected using structured knowledge questionnaire and analyzed using descriptive and inferential statistics. The results showed that planned teaching programme was effective in increasing the level of knowledge at p< 0.001 level. Awareness and knowledge plays important role regarding secondary prevention strategies among patients with myocardial infarction.

Index Terms—Myocardial Infarction, Planned teaching programme, Secondary prevention strategies

INTRODUCTION

Heart disease is the leading cause of death in most of the developed and developing countries. Coronary heart disease was the underlying causes of nearly 26% of death of the patients.[1] A quarter of all mortality is because of Cardio vascular disease. Stroke and Ischemic heart diseases are the predominant causes and are responsible for more than 80% of Cardio vascular disease deaths. According to the Global Burden of Disease study age-standardized estimates (2015), nearly a quarter (24.8%) of all deaths in India is attributable to CVD. The age-standardized CVD death rate of global average of 235 per 100 000 population is less than that of India of 272 per 100000. However, there is a major gap in knowledge, especially regarding the causes of death in rural India.[2] Indians develop heart disease about ten years earlier than other population and young Indians often have heart disease as severe as older Indians. In west 15% of men and 12% of women who die from heart disease die before reaching 65 years. In India the figure is 35%, more than double the figure of Europeans and Americans. In both Europe and US, heart disease is primarily a disease of senior citizens with more than 60% of heart attacks and bypass surgeries in the US occurring in people older than 65 years of age.[3] WHO conducted a study in 10 countries on prevention of reoccurrence of Myocardial Infarction and Stroke (WHO-PREMISE). The study concluded that Myocardial infarction in low and middle income countries, there is a significant gap in secondary prevention despite the availability of cost effective interventions.[4] Secondary prevention strategies including smoking cessation, weight control, and exercise are among the most difficult risk-reduction strategies to implement. Patients with previous heart attack and other vascular disease need to understand the rationale behind recommended lifestyle changes and recognize the potential benefits that can result are more likely to cooperate with physicians in implementing treatment. Setting goals, outlining methods for achieving these goals, and monitoring the patient's progress are also critical to the success of lifestyle modification strategies.[5] After Myocardial infarction many patients lead miserable an unproductive lives, they are frightened to return to work and unnecessarily become cardiac invalids. Recognizing that many patients after list require active intervention if they are to return to normal. Cardiac rehabilitation is an integral component of the care for patients who have undergone myocardial infarction. Education about modifiable risk factors change the patient's attitude and health practice in relation to diet, exercise, smoking, stress and behavior pattern helps to prevent heart disease and preserve life.[6] There is a dire need to improve the quality of provider – patient relationship and ease of access to cost effective drugs therapy. This will ensure that patients will benefit fully in secondary prevention of MI through available knowledge and medical technology.

The aim of the study was to educate the patients on importance of secondary prevention and measures to be taken to live life with myocardial infarction..

Statement: A study to assess the effectiveness of planned teaching programme on knowledge regarding secondary prevention strategies among patients with myocardial infarction admitted at selected hospitals of Sangli Miraj and Kupwad corporation

Objectives : (i) To assess the existing knowledge regarding secondary prevention strategies of Myocardial Infarction.

(ii) To assess the effectiveness of planned teaching programme on secondary prevention strategies.

  (iii) To find out the association between mean Pre test knowledge score with selected demographic variables.

Procedure and methodology

Quantitative research approach was used in this study and Quasi Experimental one group pretest-posttest research design was selected. This study was conducted in selected hospitals of Sangli Miraj and Kupwad city. The sample for the study includes of 80

patients with myocardial infarction. Non-probability purposive sampling technique was chosen. It was necessary to assess the knowledge before and after giving planned teaching programme through structured questionnaire to assess its effect.

The tool consisted of two sections that is demographic details andthe knowledge questionnaire. The content validity of the tool was done by 21 experts who were selected based on their clinical/teaching experience.

Reliability of knowledge questionnaire were done by using test retest method. "r" were calculated by an Karl Pearson's correlation formula and the reliability of the questionnaire was 0.89, which is more than 0.7, hence it was found to be reliable.

  10 patients for the pilot study selected using non probability purposive sampling technique. Pre test was followed by planned teachingand seven days later posttest was taken.. Mean pretestknowledge score of pilot study was 11.70, and mean post test was 17.1.The pilot study showed significant difference between pre testpost test knowledge score of the patients. This indicated that planned teaching programme was effective. Few refining was done in the questionnaire after the pilot study.

A formal permission was taken from three major local hospitals regarding the study and given the brief description about the study. The researcher himself personally approached the clients and informed consent was taken after verbal explanation about the study. Planned teaching programme was given and seven days later post test was taken, it took 45 minutes to collect the data of pre test and planned teaching programme and 15 minutes for post test data. The researcher waited in the setting for appropriate observation.

Result

In this study the majority of patients were of 46 years of age and above. While over 68% of patients were male and 58 % of the patients were graduates. 43 % of the patients had tobacco chewing habit on a daily basis and 33 % of the patients consumed alcohol.

Assessments of Knowledge in pre and post test

At the time of pre test, 15% of subjects were having poor knowledge, 77.50% were having average knowledge and remaining 7.50% subjects were having good knowledge. Average score at the time of pre test was 11.56 with standard deviation of 3.02.

At the time of post test, 1.25% of subjects were having poor knowledge, 23.75% were having average knowledge and 75% subjects were having good knowledge. Average score at the time of pre test was 18.33 with standard deviation of 3.26.
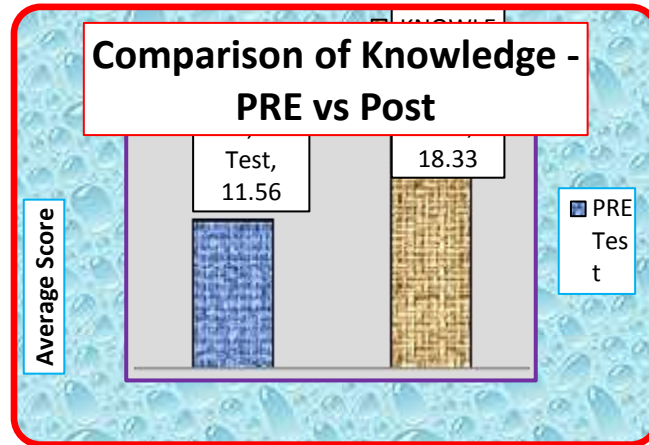
Comparison of the pre and post test Knowledge

The comparison of the pre test and post test means that of the knowledge were done by the paired t test. The pre test average score was 11.56 with standard deviation of 3.20. The post test average score was 18.33 with standard deviation of 3.26.

The test statistics value of the paired t test was 12.84 with p value 0.000. Here, p value less than 0.05, shows the significant difference in the pre and post test knowledge scores. Thus Showing that planned teaching programme (PTP) was effective.

Association of knowledge score with selected demographic variables

For the variables like age and gender, the **p value** of the association test with knowledge was **less than 0.05**, concludes that, there was significant association of these demographic variable with knowledge. For the variables like education and type of diet, the *p value* of the association test with knowledge *was more than 0.05,* concludes that, there was no significant association of these demographic variable with knowledge.

DISSCUSSION

A similar study was conducted by **Shweta Rasaria, SuchitaSawant** with quasi experimental study design in Bombay Hospital College of Nursing, Mumbai, Maharashtra, India. It was conducted to check on Effect of Planned Teaching Programme on Knowledge and Practice Regarding Management of Patient with Intra-Aortic Balloon Pump.The study was conducted in a multispecialty hospital. The study included 50 staff nurses working in ICU, who met the inclusion criteria. The sampling technique was non-probability convenient sampling. Based on the objectives, of the study, a structured knowledge questionnaire and self-reported checklist based on the practice were prepared to evaluate the knowledge and practice of staff nurses before and after planned teaching programme. The knowledge and practice level of staff nurses in the posttest had significantly increased than the pretest score. The calculated t-value was 31.76 for knowledge and it was greater than the table t-value 2.01 at 0.05 level and for practice the calculated t-value was found to be 27.77, which was greater than the table t-value 2.01 at 0.05 level of significance.[7]

A study done **by Constantinos Ergatoudes** et. al evaluates prevention guideline adherence and outcome of guideline-directed secondary prevention in patients surviving after MI. Secondary prevention 2 years after AMI proved suboptimal in our cohort of patients. Only 3.5% of our patients attained all six secondary prevention goals. Therefore, there is considerable potential to raise the standard of preventive cardiology care through more effective lifestyle intervention and to more rigorously control of risk factors.[8] A cross sectional study in Kuwait by **Awad A al Nafisa H** using a pretested self-administered questionnaire on Public knowledge of cardiovascular disease and its risk factors. The result showed that respondents' knowledge was low about types of CVD, heart attack and or stroke symptoms. The study concluded that there is a deficiency in CVD knowledge among Kuwaiti population, which could turn into insufficient preventative behaviours and suboptimal patient outcomes. There is an apparent need to establish more wide-spread and effective educational interventions, which should be sensitive to the perceptions, attitudes, and abilities of targeted individuals.[9] A study done by **Neha D Pagidipati** in sept 2017 on secondary prevention of cardiovascular diseases in patients with type 2DM. Attainment of 5 secondary prevention parameters—aspirin use, lipid control, blood pressure control, angiotensin-converting enzyme inhibitor or

angiotensin receptor blocker use, and nonsmoking status—was evaluated among 13 616 patients from 38 countries with diabetes mellitus and known cardiovascular disease. The study concluded saying in an international trial population, significant opportunities exist to improve the quality of cardiovascular secondary prevention care among patients with diabetes mellitus and cardiovascular disease, which in turn could lead to reduced risk of downstream cardiovascular events.[10] **Fernandez, Ritin & Griffiths** A randomized and quasi experimental study conducted to determine the effect of brief structured intervention on risk factor modification in patients with coronary heart disease. Seventeen trails involving a total of 4725 participants were included in the final review. Three trials compared the effect of brief structured interventions on diet modification, seven on smoking cessation and seven on multiple risk factors. The results showed that there is suggestive but inconclusive evidence from the trials of a benefit in the use of brief interventions for risk factor medication in patients with coronary heart disease.[11]

Another study to assess effectiveness of planned teaching on nurse's knowledge regarding diet was done by Dhudhum B Londhe N.The study showed that planned teaching was effective in increasing nurse's knowledge. Significant association between nurse's education and knowledge was also one of the findings of this study.[12]

Conclusion

The present study assessed the effectiveness of teaching programme on knowledge regarding secondary prevention strategies among patients with myocardial infarction. The results revealed that planned teaching programme was very effective in increasing the level of knowledge at $p< 0.001$ level. From the findings of the study, the investigator concluded that planned teaching programme has an important role in increasing the level of knowledge regarding secondary prevention strategies among patients with myocardial infarction.

Recommendation

- A comparative study can be carried out to assess the factors leading to the development of myocardial infarction between rural and urban population.

- A study can be conducted in larger sample for better generalization.

- A comparative study can be conducted to compare the effect of planned teaching programme among experimental group and control group without intervention.

- A similar study can be conducted by the different types of non pharmacological measures.

- A study can be conducted along with medical interventions.

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