Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Lifestyle Modifications for Prevention of Modifiable Risk Factors for Myocardial Infarction among Cardiac Patients Admitted in Various Wards of Indira Gandhi Medical College and Hospital Shimla Himachal Pradesh

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Abstract: *Background: Cardiovascular diseases are burden on both individual and healthcare providers. Cardiovascular disease is an umbrella term for a number of linked pathologies among them one is myocardial infarction or heart attack. A change in lifestyle significantly reduces the risk of heart attack by modifying modifiable risk factors such as smoking, tobacco chewing, alcohol drinking, diabetes, hypertension, hyperlipidemia etc. The strength of scientific literature supporting the health promoting effect of positive lifestyle habits and play important role in prevention of cardiovascular diseases. Objectives: The study was conducted with a main objective to assess the effectiveness of structured teaching programme on knowledge regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients. Methodology: A pre experimental study was conducted in Jan 2021 in I. G. M. C and hospital Shimla.60 cardiac patients were selected on the basis of convenient sampling technique. Structured teaching programme regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction was provided to the patients. The pre-test before structured teaching programme and post-test (after one week) was assessed. Data was collected by self designed questionnaire related to lifestyle modifications for prevention of modifiable risk factors for myocardial infarction. The gathered data was analysed by calculating mean, median, mean percentage, mean difference, standard deviation, paired t-test, to evaluate knowledge score and chi square test to find association of knowledge with selected demographic variables. Results: The study findings showed that in pre-test majority of 42 (70%) patients had average knowledge, 4 (6.7%) patients had poor knowledge. In post test majority of 43 (71.7%) patients had good knowledge, 0 (0%) patients had poor knowledge regarding lifestyle modification for prevention of modifiable risk factors for myocardial infarction. Conclusion: The Structured teaching programme has improved post interventional knowledge score of cardiac patients regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction.*

Keywords: Cardiac patients, knowledge, lifestyle modifications, structured Teaching Programme

1. Introduction

An acute myocardial infarction, also known as a heart attack, coronary occlusion is a life threatening condition characterized by formation of localized necrotic areas within the myocardium. Myocardial infarction usually follows the sudden occlusion of a coronary artery and the abrupt cessation of blood and oxygen flow to the heart muscle.1

Lifestyle modifications, such as a balanced diet, smoking cessation, limited alcohol consumption and increased physical activity, are recommended for the first-line management for coronary artery disease (CAD). The American Heart Association/American College of Cardiology guidelines recommend a healthy diet with an emphasis on vegetables, fruits and whole grains along with physical activity including 3 to 4 aerobic sessions per week for average 40 minutes per session.2

Lifestyle practices and behaviors can have positive or negative effects on health. The lifestyle risk factors have gained increased attention because it is known that many of the leading cause of death are related to lifestyle patterns or habits. This also represents huge impact on the economy of health care system. Several lifestyle modifications have been strongly linked to a reduction in recurrent myocardial infarction and prevention of further progression of cardiovascular disease. Therefore it is important to understand the impact of lifestyle behaviors on health status[3].

A management program by nurses including follow-up through telephone could be a successful and practical model for behavior change in patients with MI. Lifestyle modifications to prevent the incidence of coronary vascular disorders is among the basic programs of WHO.4

Several studies indicate that lifestyle change not only prevents but also controls the progress of cardiac diseases and reduces the occurrence of cardiac events in the patients with cardiovascular diseases. So, current study was undertaken to assess the knowledge regarding lifestyle modification for prevention of modified risk factors of myocardial infarction among cardiac patient and providing structured teaching programme to enhance their knowledge regarding lifestyle modification for prevention of modifiable risk factors for myocardial infarction.

2. Objectives

1) To assess the pre-test level of knowledge regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients admitted in various wards of Indira Gandhi Medical College and hospital Shimla Himachal Pradesh.
2) To develop and administer structured teaching programme regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients admitted in various wards of Indira Gandhi Medical College and hospital Shimla Himachal Pradesh.
3) To assess the post test level of knowledge regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients admitted in various wards of Indira Gandhi Medical College and hospital Shimla Himachal Pradesh.
4) To find the association of level of knowledge regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients admitted in various wards of Indira Gandhi Medical College and hospital Shimla with selected demographic variables.

3. Methodology

In this study quantitative research approach and pre-experimental research design were used to collect the data from the sample size of 60 cardiac patients who were admitted in various wards (male cardiac, female cardiac, male medical ward, female medical ward, post cath recovery room, superspeciality CTVS ward) of Indira Gandhi Medical college and Hospital Shimla, who were willing to participate and able to read and write.

Convenience sampling technique was used to select the study sample and self structured knowledge questionnaire was used to collect data. Tool consists of the two sections: **Section A:** It includes questionnaire related to demographical variables related to participants i. e age,

gender, marital status, educational status, family monthly income, religion, place of residence, perform exercise daily and dietary habits. **Section B:** It includes self structured questionnaire related to lifestyle modifications for prevention of modifiable risk factors for myocardial infarction and consisting of 30 items. To ensure the content validity of the tool, it was submitted to ten experts and reliability of the tool was tested by using karl pearson formula and was found reliable with value 0.89.

Official permission was taken from concerned authority that was research committee of SNGNC, I. G. M. C. H., Shimla for the research study. Permission was sought before data collection from the Principal of S. N. G. N. C, I. G. M. C. H. Shimla, Medical Superintendent and Nursing superintendent of I. G. M. C. H., Shimla. Written Informed consent was obtained from the cardiac patients of various wards of I. G. M. C. H., Shimla. Privacy and confidentiality was maintained. After taking pretest, STP was administered and post test was conducted after 7 days. Data was analyzed by using descriptive and inferential statistics.

4. Result

Study findings concluded that Majority of cardiac patients were between the age group of 55.1-65 years (33.3%). According to gender both male and female patients were equally present (50.0% each). Majority of patients were married (90.0%). Majority of patient were educated upto primary school (38.3%). Majority of patient were having low family income (61.7%). All patients were belonging to Hindu religion. Majority of patients lived in rural areas (93.3%). Majority of patients were not having any habbit of smoking, drinking alcohol or chewing tobacco (43.3%). Majority of patients do not perform exercise daily (53.3%). Majority of patients were non vegetarian (63.3%). Using chi square it was found that there is significant association between educational status, dietary habbits and knowledge score.

In the present study pre-test mean knowledge score was 12.57 ± 3.872, majority of cardiac patients 42 (70%) had average knowledge and in post-test the mean knowledge score was 20.50 ± 2.908. Hence it was found that there is significant change in post test knowledge score and the majority of patients 43 (71.7%) have good knowledge. In post-test, 15 (25%) of cardiac patients knowledge was excellent, 43 (71.7%) had good knowledge score, 2 (3.3%) has average knowledge score and none of the patient had poor knowledge score. Hence, these findings indicate that structured teaching programme increases the level of knowledge of cardiac patients.

Table 1: Comparison between pre-test and post-test with 'paired t-test' N=60

Paired T Test	Mean±S. D.	Mean%	Range	Mean Diff.	Paired T Test	P value	Table Value at 0.05
Pretest Knowledge	12.57±3.872	41.90	3-22	7.930	15.547 *Sig	<0.001	2.00
Posttest Knowledge	20.5±2.908	68.30	14-27				
** 't value 15.547, Significance at ≤ 0.05							

Maximum=30 Minimum=0

Table 1 Revealed that by using paired t-test, it was found that there is significant change in post knowledge score with 't' value 15.547 at degree of freedom 59 where table

value at 0.05 is 2.00, hence it is significant at the level of 0.05 level of significance.

5. Conclusion

The study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction among cardiac patients. Study findings shows that there was a significant difference in the level of knowledge score between pre-test and post-test score after administering structured teaching programme. Hence, the study findings concluded that the administration of structured teaching programme had significantly improved the knowledge of cardiac patients regarding lifestyle modifications for prevention of modifiable risk factors for myocardial infarction.

6. Acknowledgement

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