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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING MODIFIABLE RISK FACTORS OF ISCHEMIC HEART DISEASE AMONG TEACHERS OF A SELECTED SCHOOL AT KOLLAM

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ABSTRACT

A quantitative study was conducted to assess the effectiveness of structured teaching programme on modifiable risk factors of ischemic heart disease among teachers of a selected school at Kollam district. The objectives of the study were to assess the pretest knowledge regarding the modifiable risk factors of ischemic heart disease among the teachers, to evaluate the effectiveness of structured teaching programme regarding the modifiable risk factors of ischemic heart disease among the teachers before and after structured teaching programme, to find out the association between the pretest knowledge scores of teachers regarding modifiable risk factors of ischemic heart disease and the selected socio-demographic variables. The probability simple random sampling technique was used to select 60 teachers for the study. The tools used for data collection were demographic data, structured knowledge questionnaire, and structured teaching programme. The mean post-test knowledge score 23.6 with standard deviation 4.6 was significantly higher than the mean pre-test knowledge 11.5 with standard deviation 5.2. The study showed that there was improvement in the knowledge of teachers after conducting structured teaching programme and thus structured teaching programme was statistically significant at 0.01 level ($t=15.15$, $p<0.01$). There was no significant association between pre -test knowledge score with socio demographic variables. Hence, the study suggested that structured teaching programme was effective in improving the knowledge of teachers regarding modifiable risk factors of ischemic heart disease.

INTRODUCTION

The heart is the life-giving, ever-beating muscle in our chest.[1] Any damage that occurs in the heart can reduce the pumping power, forcing heart to work harder to keep our body's demand for blood.[2]

Cardiovascular diseases (CVDs) is the leading global cause of death, accounting for 17.3 million deaths per year, which is expected to grow more than 23.6 million by 2030.[3] Premature mortality in India due to CVD in terms of years of life lost has increased from 23.2 million in 1990 to 37 million in 2010 (59%). The global burden of disease study estimate of age-standardized CVD death rate of 272 per 1,00,000 population in India which is higher than the global average of 235 per 1,00,000 population.[4]

A study conducted by the Indian Council of Medical Research (ICMR), Public Health Foundation of India (PHFI) and Institute for Health Metrics And Evaluation (IHME) suggest that Kerala has one of the highest incidences of NCDs in the country. In Kerala, the deaths due to cardiovascular disease were increased to 12.2% (2016) from 7.1% (1990). The statistics done in Kerala in 2016 suggested that 37.8% of deaths between the age group of 40 to 69 years were due to cardiovascular diseases.[5]

Ischemic heart disease (IHD), also called coronary heart disease (CHD) or coronary artery disease (CAD), is the term given to heart problems caused by narrowed heart (coronary) arteries that supply blood to the heart muscle. Although the narrowing can be caused by a blood clot or by constriction of the blood vessel, most often it is

caused by build-up of plaque, called atherosclerosis.[6] The risk factor that precipitates ischemic heart disease is broadly classified as modifiable, non-modifiable and contributing risk factors. Modifiable risk factors include hypertension, diabetes mellitus, dyslipidemia, obesity, physical inactivity, alcoholism, unhealthy diet and smoking. Non modifiable risk factors include age, gender, heredity and race. Contributing risk factors include metabolic syndrome, psychologic stress, homocysteine level, substance abuse, menopause and inflammatory response.[7]

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme on knowledge regarding modifiable risk factors of ischemic heart disease among teachers of a selected school at Kollam.

OBJECTIVES

1. To assess the pre test knowledge regarding the modifiable risk factors of ischemic heart disease among the teachers.
2. To evaluate the effectiveness of structured teaching programme regarding the modifiable risk factors of ischemic heart disease among the teachers.
3. To find out the association between the pre test knowledge scores of teachers regarding modifiable risk factors of ischemic heart disease and the selected socio- demographic variables.

HYPOTHESES

The hypothesis will be tested at 0.05 level of significance.

H_1: There will be significant difference between the mean pre test and post test knowledge scores of teachers regarding modifiable risk factors of ischemic heart disease.

H_2: There will be significant association between pre test knowledge scores of teachers and the selected socio-demographic variables.

OPERATIONAL DEFINITIONS

Assess

In this study assess refers to make a judgment about knowledge among teachers regarding modifiable risk factors of ischemic heart disease.

EFFECTIVENESS

Effectiveness refers to the extent by which the change has occurred in knowledge regarding modifiable risk factors of ischemic heart disease among teachers.

Structured teaching programme

Structured teaching programme refers to organized systematic teaching programme given to teachers of a selected school regarding ischemic heart disease: definition, incidence, etiology, diagnostic measures, management, prevention and modifiable risk factors with the help of lesson plan and audiovisual aids by the investigator to improve the knowledge of the teachers.

KNOWLEDGE

Knowledge refers to information gained regarding modifiable risk factors of ischemic heart disease before and after giving structured teaching programme.

Modifiable risk factors

Modifiable risk factors refer to behaviour's that can be altered in day to day life of teachers which includes social problems, physical inactivity and dietary habits among the teachers.

Ischemic heart disease

Ischemic heart disease refers to impairment of heart function due to inadequate blood flow to the heart compared to its needs caused by obstructive changes in the coronary circulation of heart.

Teachers

Teacher refers to professionals who are qualified in teaching field and are assigned to impart knowledge to students of a selected school.

ASSUMPTIONS

- The teachers may have lack of knowledge regarding the modifiable risk factors of ischemic heart disease.
- Structured teaching programme will be an effective method to improve the knowledge of teachers of a selected school regarding modifiable riskfactors of ischemic heart disease.

DELIMITATIONS

1. The study is limited to a sample size of 60 school teachers.
2. The study is limited to teachers of a selected school at Kollam district, Kerala, India.

RESEARCH APPROACH

The research approach used for the study was quantitative approach. Quantitative approaches are said to use deductive methods, often testing hypothesis and deducting the result using inferential statistics.[8] This approach is used in this study to find out the effectiveness of structured teaching programme on knowledge regarding modifiable risk factors of ischemic heart disease among teachers.

RESEARCH DESIGN

A research design is the detailed outline that has been created to seek answers to research questions. It is the blue print for the collection, measurement and analysis of data.[9] The research design used in this study is pre experimental one group pre test post test design.

SETTING OF THE STUDY

Setting is the physical location and condition in which the data collection takes place in a research study.[8] The present study was carried out in St. Joseph Convent Higher Secondary School, Kollam.

POPULATION

A research population is generally a large collection of individuals or objects that is the main focus of a scientific query.[9] In this study the population included all teachers who had not undergone any awareness programme on modifiable risk factors of ischemic heart disease.

SAMPLE AND SAMPLING TECHNIQUE

Sample is a group of people, objects, or items that are taken from a larger population for measurement.[9] In this study the sample consists of 60 school teachers who were working in St. Joseph Convent School, Kollam. Sampling techniques are used to select the participants for their sample and helps to minimize cost whilst maximizing generalizability.[13] The researcher used probability-simple random sampling technique.

CRITERIA FOR SELECTION OF SAMPLE

INCLUSION CRITERIA

Teachers who are

- willing to participate in the study.
- present on the day of data collection.
- not attended any awareness programme regarding ischemic heart disease.

EXCLUSIONCRITERIA

Teachers who are

- not willing to participate in the study.
- attended any awareness programme regarding ischemic heart disease.

TOOLS / INSTRUMENT

Research Tool / Instrument can be defined as an instrument in the hands of a researcher to measure what they indent to do in their study.[10]

DEVELOPMENT/SELECTIONOFTHETOOL

The tool was prepared based on the objectives of the study. The sources for the tool construction were:

1. Review of literature from books, journals and other publications.
2. Consultation with subject experts
3. Investigators observation and experience.

In this study, the tool for data collection has two sections

Section A: Socio demographic data.

Section B: Structured knowledge questionnaire used to assess the knowledge regarding modifiable risk factors of ischemic heart disease.

DESCRIPTION OF TOOL

Tool I: Socio demographic proforma

Socio demographic proforma consist of many items such as include age, sex, religion, type of diet, type of family, type of physical activity, habit of smoking, habit of alcoholism, family history of heart disease and comorbid illness (diabetes mellitus, hypertension and dyslipidemia).

Tool II: Structured knowledge questionnaire

It was prepared for the assessment of knowledge regarding modifiable risk factors of ischemic heart disease.

The items were developed, as to cover different areas such as anatomy and physiology of heart, definition, incidence, risk factors, etiology, pathophysiology, clinical features, diagnostic measures, medical management, and health promoting behaviour's of ischemic heart disease. Structured knowledge questionnaire consisted of 30 items of multiple choice questions. The maximum score of each item was '1'. The total score was 30. The knowledge level has been arbitrarily divided into three categories based on the scores in the structured questionnaire.

Poor knowledge : 0-15
Moderate knowledge : 16-22
Good knowledge : 23-30

ANALYSIS AND INTERPRETATION

The findings have been organized and presented under the following sections

Section I: Description of socio demographic variables of teachers.

Section II: Description of pretest knowledge scores of teachers regarding modifiable risk factors of ischemic heart disease.

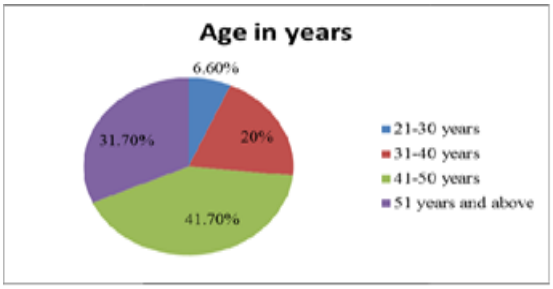
Section III: Effect of structured teaching programme of teachers on knowledge regarding modifiable risk factors of ischemic heart disease.

Section IV: Association between pre test knowledge scores with selected demographic variables.

Section I: Description of socio demographic variables of 60 teachers who attended structured teaching programme

- In this study, according to age 41.70% of teachers belong to age group of 41- 50 years, 31.70% of teachers belong to 51 years and above, 20% of teachers belong to 31-40 years and 6.60% of teachers belong to 21-30 years respectively.

Percentage distribution of the sample according to age.
(n=60)



- According to gender, among 60 samples 100% were female.
- Based on religion, 66.70% of teachers were Christian, 25% of teachers were Hindu, 5.0% of teachers were Muslim and 3.30% of teachers belong to other category respectively.
- Considering the type of diet, 53.30% of the teachers belong to mixed diet, 36.70% of the teachers belong to non-vegetarian category and 10% of the teachers belong to vegetarian category respectively.
- As per type of family, 70% of teachers have nuclear family and 30% of teachers belong to extended family.
- Based on the type of physical activity, 43.3% of the teachers have exercise type of physical activity, 43.3% of the teachers have non exercise type of physical activity and 13% of teachers belong to none category.
- The participants of the present study who did not have the habit of smoking that is 100%.
- The participants of the present study who did not have the habit of alcoholism that is 100%.
- According to family history of heart disease, 76.70% of teachers have no family history of heart disease and 23.30% of teachers have the family history of heart disease.
- Based on comorbid illness, 76.7% of teachers have comorbid illness and 23.3% of teachers have no comorbid illness.

Section II: Assessment findings of knowledge scores of teachers regarding modifiable risk factors of ischemic heart disease

In the present study the pretest knowledge assessment of teachers showed that 73.30% of samples had poor knowledge, 26.7% of the samples had moderate knowledge and none of the sample had good knowledge. The post test knowledge assessment of teachers showed that 68.30% of teachers had good knowledge, 26.7 % of the teachers had moderate knowledge and 5% of the sample had poor knowledge.

Section III: Effectiveness of structured teaching programme of teachers on knowledge regarding modifiable risk factors of ischemic heart disease

The statistical analysis of the knowledge of teachers before and seven days after implementation of structured teaching programme showed that, in the pre test 73.30% of samples had poor knowledge, 26.7 % of the samples had moderate knowledge and none of the sample had good knowledge. In the post test, 68.30% of teachers had good knowledge, 26.7 % of the teachers had moderate knowledge and 5% of the sample had poor knowledge.

The calculated paired 't' value for the pre test and post test knowledge scores is 15.15 which is greater than the table value at 0.01 level of significance and there is significance difference in the mean post test knowledge score. Hence, this indicates that the structured teaching programme was effective in improving the knowledge of teachers regarding modifiable risk factors of ischemic heart disease.

Section IV: Association between pre test knowledge scores with selected demographic variables.

Findings of the present study showed that the chi- square value reveals that the calculated chi- square values were lesser than the table values. Hence, null hypothesis was accepted and research hypothesis was rejected. Findings showed that there was no significant association between the pre test level of knowledge and selected socio demographic variables. Therefore it can be concluded that the level of knowledge was not influenced by any of the socio demographic variables such as age, sex, religion, type of diet, type of family, type of physical activity, habit of smoking, habit of alcoholism, family history of heart disease and comorbid illness (diabetesmellitus, hypertension and dyslipidemia)

CONCLUSION

This present study on structured teaching programme on knowledge regarding modifiable risk factors of ischemic heart disease amongteachers was done toimprove knowledge about risk factors of ischemic heart disease among them. The study was done to assess the effectiveness of structured teaching programme on knowledge regarding modifiable risk factors of ischemic heart disease among teachers of St. Joseph Convent Higher Secondary School, Kollam. The 60 samples was selected for the study by simple random sampling technique. The study was effective as the teachers has improvement in knowledge; 68.30% as the post test signifies with the score of pre test. The study finding emphasized the effectiveness of structured teaching programme in improving the knowledge of teachers. The overall conducting of this study was satisfying and enriching. The teachers participated in the study were co-operative. Since majority had poor pre test knowledge the researcher felt interesting to enhance the knowledge

and promote health. The study was a new learning experience for the researcher.

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