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A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ANTIOXIDANT DIET AMONG CARDIAC PATIENTS IN THE SELECTED HOSPITALS OF JALANDHAR, PUNJAB.

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ABSTRACT:

Introduction: Cardiovascular diseases are creating the major health burden worldwide. Among them coronary heart disease is the major cause of mortality. The changing lifestyle is a contributing to the CHD which could be prevented by modifying the diet such as antioxidant diet.

Aim: To study to assess the effectiveness of structured teaching programme on knowledge regarding antioxidant diet among cardiac patients in the Selected hospitals of Jalandhar, Punjab.

Methods: A Quantitative research approach with quasi-experimental non randomized pre-test post-test control group design was used for the study. Total 60 cardiac patients were selected for study 30 were taken as experimental group and 30 as control group using non-probability purposive sampling technique. The self-structured knowledge questionnaire was used to assess pre-test knowledge and after providing structured teaching programme the post-test was conducted on 7th day using same tool for assessing knowledge regarding Antioxidant diet.

Results: Finding revealed that the comparison of pretest and post-test knowledge score of cardiac patients among experimental and control group. In the control group, there was no significant (t_{cal} 12.914 at $p<0.05$) difference between pretest and post-test knowledge score of cardiac patients. There was significant (t_{cal} 12.914 at $p<0.05$) difference between pretest and post test knowledge score of cardiac patients in the experimental group significance.

Conclusion: The study concluded that structured teaching programme had significant influence on improving knowledge of cardiac patients regarding antioxidant diet.

Keywords: Antioxidant diet, knowledge, effectiveness, structured teaching programme, cardiac patients.

1. Introduction

Cardiovascular disease has emerged as a major health burden worldwide. Heart conditions include a wide variety of diseases that affect the heart and sometimes the blood vessel too. The heart conditions include angina, heart attack, atherosclerosis, heart failure and cardiac arrhythmias, congenital heart defects, cardiomyopathy, heart valve disorders are the largest causes of death in middle aged adults.[1]

Coronary heart disease is the major cause of mortality in developing countries. The incidence of CHD is increasing day by day due to changing lifestyle. Coronary heart disease means the coronary arteries become blocked by gradual build up of atherosclerotic lesions within arterial wall which decreases blood flow. This led to chest pain or heart attack and contribute to heart failure.[2]

Diet is a cornerstone of cardiovascular disease (CVD) and treatment efforts. A nutritious diet promotes good health. A healthy diet means consuming the right quantities of food in order to lead a healthy life. In order to run a car, need petrol as fuel same as our human body needs food for energy to keep warm and for growth and repair. Changing lifestyle habits include healthy heart diet known to be effective in managing risk factors such as blood cholesterol level, blood glucose level and blood pressure.[3]

Approximately 80% of heart disease could be prevented by adapting the healthy lifestyle practice including eating healthy diet to boost heart health & prevent the heart diseases. Meditarrean diet, DASH diet, antioxidant diet are some kind of healthy heart diet. Out of these kinds of diet- antioxidant diet which helps in lowering the cholesterol in order to reduce coronary events like CAD.[4]

2. Material and Methods

A Quantitative research approach with quasi-experimental non randomized pre-test post-test control group design was used for the study.

Inclusion Criteria

Patients diagnosed with cardiac disease (coronary artery disease) and willing to participate.

Exclusion Criteria

Patients diagnosed with kidney disease and not present at the time of post-test.

Sample and Sampling Technique

Total 60 cardiac patients were selected for study 30 were taken as experimental group and 30 as control group to assess the knowledge regarding antioxidant diet.

Phase I Selection of sample (Pre-test)

The sample selection was done using non-probability purposive sampling technique. The study samples were given self-structured knowledge questionnaire during pre-test.

Phase II Structured teaching Programme intervention

After the pre-test on the same day the structured teaching programme on knowledge regarding Antioxidant diet was given to the study subjects after taking the informed written consent.

Phase III (Post-test)

The post-test was conducted on 7th day using same tool for assessing knowledge regarding Antioxidant diet.

Description of tool

Section I- It consists of age, gender, education, occupation, dietary pattern and previous knowledge regarding antioxidant diet.

Section II- It consist of self-structured knowledge questionnaire consisted of 28 multiple choice questions assess the knowledge. It includes mechanism of action of antioxidant diet, benefits, sources, dietary requirements, method of cooking.

Criterion measure of Knowledge

Level of Knowledge	Score	Percentage
Excellent	22-28	100
Good	15-21	75
Average	8-14	50
Poor	≤7	25

Maximum Score-28 **Minimum Score-0**

Each item had a single correct answer. Every correct answer was awarded score of 1 and incorrect response was given 0 score. The maximum score was 28 and minimum possible score was 0.

Analysis

The data was analysed by descriptive statistics (Frequency, Percentage, mean, Standard deviation) and inferential statistics unpaired t test was used to determine the difference between pre and post test score.

3. Results

Table 1: Distribution of study subject according to demographic variables among experimental and control group.

N= 60

Demographic Variables		Experimental group n = 30		Control group n = 30	
		n	%	n	%
Age (in years)	40-50	04	13.33	06	20
	51-60	16	53.34	14	46.67
	61-70	10	33.33	10	33.33
Gender	Male	21	70	21	70
	Female	09	30	09	30
Education	Primary	07	23.34	08	26.66
	Secondary	17	56.66	16	53.34
	Graduation	06	20.00	06	20
	Post graduation	00	00.00	00	00
Occupation	Government employed	02	06.66	01	03.33
	Private employed	03	10.00	04	13.33
	Self employed	11	36.66	10	33.33
	Retired	07	23.34	07	23.34
	Other	07	23.34	08	26.67
	Vegetarian	15	50	18	60

Dietary pattern	Non-Vegetarian	11	36.67	10	33.33
	Eggetarian	04	13.33	02	06.67
Previous knowledge regarding antioxidant diet	Yes	00	00	00	00
	No	30	100	30	100

Table 1 Shows the distribution of study subjects according to demographic variables. In present study, Majority of the subjects in both experimental and control group 16 (53.34%) & 14 (46.67%) were in the age group of 51-60 years. According to gender 21 (70%) & 21 (70%) were male in both experimental and control group. In case of education, 17(56.66%) &16 (53.34%) had secondary education among experimental and control group. In experimental group 11(36.66%) & 10(33.33%) in control group were self-employed. In the dietary pattern, 15 (50%) in experimental group and 18 (60%) in control group were vegetarian. According to the knowledge about antioxidant diet, the respondents had no knowledge about antioxidant diet were 30(100%) in each group.

Table 2: Frequency & Percentage distribution of cardiac patients according to pre-test & post-test knowledge score regarding antioxidant diet **N=60**

Level of knowledge	**Score**	**Experimental group n=30**		**Control group n=30**	
		Pre-test n (%)	**Post-test n (%)**	**Pre-test n (%)**	**Post-test n (%)**
Excellent	22-28	00 (0)	06 (20)	00 (0)	00 (0)
Good	15-21	02 (6.67)	23 (76.67)	03 (10)	04 (13.33)
Average	8-14	24 (80)	01 (3.33)	24 (80)	19 (63.34)
Poor	≤7	04 (13.33)	00 (0)	03 (10)	07 (23.33)

Table 2 described that during pre-test in the experimental group & control group 24(80%) respondents had average level of knowledge respectively. After structured teaching programme, the knowledge of respondents increased.

Table3: Comparison of pre-test and post-test knowledge regarding antioxidant diet among cardiac patients in experimental and control group. **N=60**

Group	**Experimental group n=30**		**Control group n=30**			
	Mean	**SD**	**Mean**	**SD**	**Df**	**'t' test**
Pre-test	10.80	2.64	10.33	2.72	28	12.914*
Post-test	19.13	2.34	10.60	3.04	28	0.358 NS

*Significant ($p<0.05$)
NS = Non-Significant

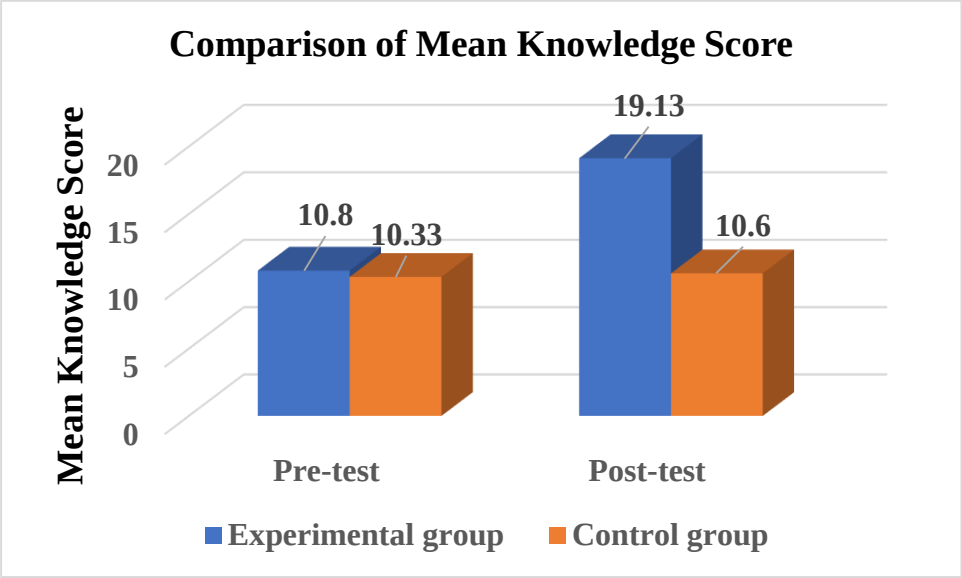

Figure 1: Comparison of pre-test and post-test knowledge score regarding antioxidant diet among cardiac patients in experimental and control group

Finding revealed that the comparison of pretest and post-test knowledge score of cardiac patients among experimental and control group. In the control group, there was no significant (t_{cal} 12.914 at $p<0.05$) difference between pretest and post-test knowledge score of cardiac patients. There was significant (t_{cal} 12.914 at $p<0.05$) difference between pretest and post-test knowledge score of cardiac patients in the experimental group significance. Hence the research hypothesis (H_1) is accepted & H_0 is rejected.

So, it is concluded that structured teaching programme had significant influence on improving knowledge of cardiac patients regarding antioxidant diet.

4. Discussion

The finding indicated that pre-test knowledge of cardiac patients was 4 (13.33%) had poor knowledge, 24(80%) had average knowledge and 2(6.67%) good knowledge score in experimental group. In the control group 3(10%) of cardiac patients had poor knowledge, 24(80%) had average knowledge and 3 (10%) had good knowledge score. The findings of the study were supported by Mahadev Prasad K.B & Fathima L conducted a study to assess the effectiveness of planned teaching programme on knowledge regarding antioxidant diet among cardiac patients of selected hospital of Bangalore. The results of pre-test knowledge score of experimental group was suggested thar 33(55%) had inadequate knowledge, 27(45%) had moderate knowledge and no subject had adequate knowledge.[5]

The post-test knowledge regarding antioxidant diet among cardiac patients in experimental group was suggested that 24(76.67%) cardiac patients had good knowledge & 6(20%) had excellent knowledge. In control group, 19(63.43%) had average knowledge & 7(23.33%) had poor knowledge regarding antioxidant diet. In contrast to the result of the study was supported by Mahadev Prasad K.B & Fathima L conducted a study to assess the effectiveness of planned teaching programme on knowledge regarding antioxidant diet among cardiac patients of selected hospital of Bangalore. The results of post-test knowledge score of experimental group was suggested thar 31(51.7%) had inadequate knowledge, 29(48.3%) had moderate knowledge and no subject had adequate knowledge.[5]

The results of study described that dietary pattern found to be significantly associated (F value= 4.098, df=2) with post-test knowledge at 1% level in control group. In contrast to the result of the study was supported by Mahadev Prasad K.B & Fathima L conducted a study to assess the effectiveness of planned teaching programme on knowledge regarding antioxidant diet among cardiac patients of selected hospital of Bangalore. The result was educational status found to be significantly associated (x^2=7.53, df=2) with post-test knowledge at 5% level in experimental group.[5]

5. Conclusion

The study revealed that a structured teaching programme significantly enhances the knowledge of cardiac patients regarding antioxidant diet. This is evident from the substantial increase in post-test knowledge scores as compared to pre-test scores. Educational interventions are crucial in creating awareness among patients regarding dietary management.

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