RESEARCH ARTICLE

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF ANTIOXIDANT DIET AMONG CARDIAC PATIENTS

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ABSTRACT

Introduction: Antioxidants are natural substances that include vitamins, minerals, and other compounds in foods. They are believed that helps to prevent diseases by fighting substances called "free radicals" that are produced when our body uses oxygen. ***Methodology:*** A Quantitative research approach and one group pre-test – post-test research design was selected. The study includes 60 cardiac patients selected by convenient sampling technique. The study was conducted in Narayana Medical College and General Hospital at Nellore. Structured questionnaire was used to collect the data by period of 4weeks schedule. ***Results:*** The results revealed that, there was a significant difference between mean pre test scores and mean post test scores of knowledge regarding antioxidant diet among cardiac patients. The pre-test mean knowledge score is 8.08 with SD 4.2 and the post test mean score is 38.03 with SD 6.16. The calculated value of paired t'test is 1.3 which is statistically significant at $P < 0.05$ level. ***Conclusion***: The study concludes that the structured teaching programme is effective in enhancing the knowledge regarding antioxidant diet among cardiac patients.

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death and a major contributor to disability worldwide. Since the majority of cardiovascular events are preventable, identification of modifiable CVD risk factors and implementation of primordial prevention strategies should be a public health priority. A strategic goal to reduce total CVD mortality by eliminating major CVD risk factors such as poor-quality diet, cigarette smoking, physical inactivity, obesity, dyslipidemia, hypertension and diabetes. The traditional Vedic diet emphasizes fruits and fresh vegetables, nuts; these are rich dietary sources for antioxidants. Each patient's diet is tailored to compensate for specific physiologic imbalances and pathophysiologic processes. Oxidative modification of LDL is thought to occur primarily in the arterial wall, an antioxidant is a natural defence substance which produced into body to control free radicals. It is a molecule capable of slowing or preventing the oxidation of other molecule. Oxidation is a chemical reaction that transfer electron. It is proved that a diet rich in antioxidant can help prevent the cardiac disease. It slow down cell damage and may improve immune function and keep the heart healthy in three important way (i.e.) they

prevent blood clots, protection against oxidation of LDL (bad cholesterol) and lower blood pressure.

STATEMENT OF THE PROBLEM

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge of Antioxidant Diet among Cardiac Patients in NMCGH, NELLORE, AP.

OBJECTIVES

- To assess the pre test level of knowledge on antioxidant diet among cardiac Patients.
- To assess the post test level of knowledge on antioxidant diet among cardiac patients.
- To determine the effectiveness of structured teaching program by comparing the pre and post test levels of knowledge of antioxidant diet among cardiac patients.
- To associate the post test knowledge on antioxidant diet among cardiac patients with selected demographic variables

HYPOTHESIS

- **H1:** There will be significant difference between mean pre test score and post test score of knowledge regarding antioxidant diet among cardiac patients.
- **H2:** There is a significant association of post test knowledge regarding antioxidant diet among cardiac patients with selected demographic variables.

Assumptions

- Patients with cardiac disease may have some knowledge regarding the importance of antioxidant diet.
- Structured teaching programme on antioxidant diet for patient with cardiac disease may help in enhancing their knowledge.

MATERIALS AND METHODS

A Quantitative research approach and one group pre test post test design was adopted. The study subjects were Cardiac patients attending cardiac outpatient department in NMCGH at Nellore, Nellore district, AP.

- **Sample Size:** 60 cardiac patients of (21-60yrs) were selected by convenient sampling technique. Data were obtained by the following methods: Semi structured self administered Questionnaire was used to assess the knowledge of cardiac patients. The study period was one month. The data entry & analysis was done and the statistical methods used for analysis. Results were presented in percentage of number of cardiac patients with correct Responses. Mean and standard deviation of knowledge scores (at 95% Confidence Intervals) and paired t test and chi-square used to determine the effectiveness and association between socio demographic variables with post test knowledge of antioxidant diet among cardiac patients.
- **Ethical Clearance:** A written permission was obtained from the director, medical superintendent, departmental HOD and ethical committee to conduct the study.
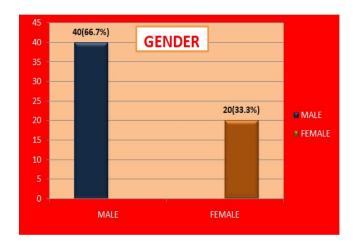
RESULTS

Fig. 1. frequency percentage distribution of sample with gender
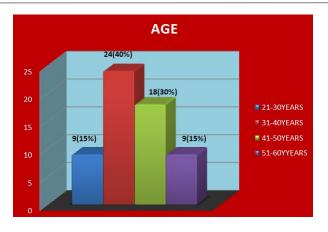

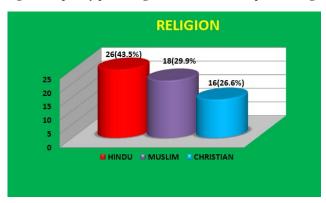Fig. 2. Frequency percentage distribution of samples with age

Fig 3. Frequency Percentage distribution of cardiac patients according to their religion
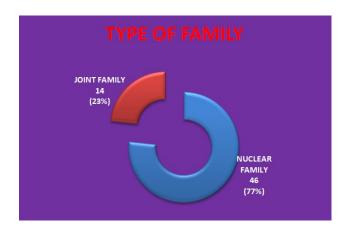

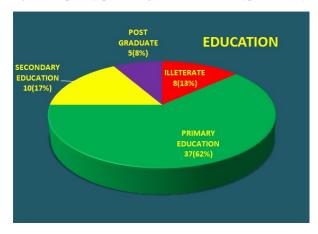Fig. 4. Frequency percentage distribution of type of family

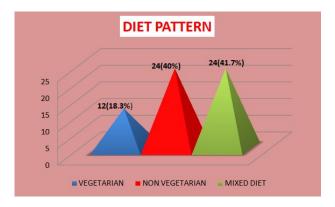Fig 5. frequency percentage distribution of education

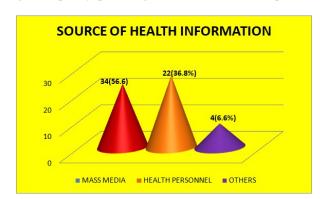**Fig. 6. frequency percentage distribution of the diet parttern**

Fig. 7. frequency percentage distribution of source of health information

Table 1: Comparison of Pre and Post Test Mean, Standard Deviation and Paired T Test Value of the cardiac Patients Regarding Knowledge of Antioxidant Diet

Test	knowledge		Paired t test
	Mean	sd	
Pre test	8.08	4.2	T test=1.3
Post test	38.03	6.16	P<0.005 level significant

The analysis reveals that with respect to knowledge the mean value 8.08 with SD 4.2 of pre test and the mean value of 38.03 with SD 6.16 of post test projects 't' value as 1.3   is Statistically significant at P <0.05 level.

Table 2 shows the association of post test knowledge scores that reveals significant association between the demographic variables of sex, type of family, dietary pattern and source of health information .there is no significant association with respect of other demographic variables

DISCUSSION

The findings are discussed based on the demographic characteristics, objectives of the study. Description about Demographic Data Among 60 samples, in relation to age 9(15%) comes under the age group of 21-30years, 24(40%) in the Age group of 31-40years, 18(30%)in the age group of 41-50years,and 9(15%) in the age group of 51-60years.in relation to gender females are 20(33.3%) and males in the group of sample are 40 (66.7%). In relation to religion 26(43.5%) were Hindu, 18(29.9%) were Muslims and 16(26.6%) were Christians. In relation to type of family 46(76.7%) were lives in nuclear family and 14(23.3%) of the samples were under joint family.in relation to educational status 8(13.3%) of the samples were illiterate, 37(61.7%) of the samples are completed primary education, 10(16.7%) of the samples completed secondary education and 5(8.3%) of the samples were completed post graduation. In relation to Dietary pattern 12(18.3%) vegetarians, 24(40%) were non-Vegetarians and 24(41.7%) were following mixed dietary patterns. In relation to source of health information using by mass media 34(56.6%), by health care personnel 22(36.8%) and by others like family relations 4(6.6%).

Findings related to pre test level of knowledge on antioxidant diet among cardiac Patients: The data reveals that among 60 samples   in pre test , having 86.7 %   were inadequate knowledge, 11.6%, of them having moderate knowledge and 1.7% of them have adequate knowledge regarding antioxidant diet.

Findings related to post test level of knowledge on antioxidant diet among cardiac patients: The findings of the study revealed a significantly increase in the post test knowledge score after structured teaching programme. The analysis reveals that moderate knowledge 12(20%) and 48(80%) patients are having adequate knowledge in post test.

Table 2. Association between Post Test Knowledge and With Selected Demographic Variables on antioxidant diet among cardiac patients

S.NO	Demographic Variables	Post Test						Chi square
		Inadequate Nowledge <50%		Moderate Nowledge 50-75%		Adequate Knowledge >75%		
		F	%	F	%	F	%	
1	Age: 21-30years 31-40years 41-50years 51-60years			3 4 3 2	5 6.8 5 3.3	6 20 15 7	10 33.3 25 11.6	5.6 Non significant
2	Sex: Male female			7 5	11.7 8.3	33 15	55 25	0.46** significant
3	Religion: Hindu Muslim Christian			5 2 5	8.3 3.3 8.3	21 16 11	35 26.6 18.3	3.1 Non significant
4	Type of family: Nuclear family Joint family			10 2	16 3.3	36 12	60 20	0.2** significant
5	Education: Illiterate Primary education Secondary education Post graduate			6 5 1 0	10 8.3 1.6 0	2 32 9 5	3.3 53.5 15 8.3	1.797 Non significant
6	Diet pattern: Vegetarian Non vegetarian Mixed diet			4 3 5	6.8 5 8.3	8 21 19	13.3 35 31.6	0.085 significant
7	Source of health information: Mass media Health personnel others			6 5 1	10 8.3 1.6	28 17 3	46.6 28.5 5	0.28 significant

Comparison of pre and post test levels of knowledge of antioxidant diet among cardiac patients: The findings revealed that comparison between the knowledge score before and after STP on antioxidant diet is computed by Karl Pearson correlation co-efficient, and it is denoted significance $p < 0.05$. In the present study it was concluded that the research hypothesis was accepted. That there is a significant difference between mean pre test scores and mean post test scores of knowledge regarding antioxidant diet among cardiac patients.

Findings related to association between post test knowledge of cardiac patients with selected demographic variables: The findings of the study reveal that significant increases in the knowledge of patients in post tests, out of several demographic variables education were significantly associated with knowledge on antioxidant diet. Hence the research hypothesis was accepted that there will be significant association between the post test knowledge of cardiac patient with selected demographic variables such as sex, type of family, dietary pattern and source of health information. and there is no significant association with age, religion, education. The findings of the study revealed a significantly increased in the post test knowledge scores after structured teaching.

RECOMMENDATIONS

- A similar study can be conducted in large sample.
- An experimental study can be done to assess the effectiveness of STP in improving the knowledge and attitude regarding antioxidant diet among cardiac patient.
- A study can be conducted in patient and out patient settings also.

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