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Effectiveness of information booklet regarding life style modification on prevention of coronary artery disease among middle adult age group in selected areas of Ahmedabad, Gujarat

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Abstract

Introduction: Nurse have important role in prevention of disease, as an ounce of prevention is worth a pound of cure. Knowledge about adaptation of several healthy lifestyle measures can help in prevention of coronary heart disease thus, serve as remarkable factor for reduction of mortality and morbidity related to coronary artery disease.

Methodology: The conceptual is based on general system model by Ludwing von bertanlaffy. The study was conducted on a sample of 30 middle adult age people from selected areas of Gujarat. Purposive sampling technique was used for selecting samples. In the present study one group pre-test post-test research design was used. The tool used for study was structured knowledge questionnaire. The data were collected, tabulated and analyzed by using descriptive and inferential statistics. The level of significance was at 0.05 levels.

Results: the study revealed that the mean Pre-test score was 10.73 and the mean post test score was 17.23, the results also shows that the Standard deviation of Pre-test score of Knowledge was 2.174 and Standard deviation of post test score of knowledge was 1.822.

Conclusion: the study in tends to assess the effectiveness of information booklet regarding lifestyle modification on prevention of coronary artery disease in selected areas of Gujarat. The study reveals that the post-test knowledge score is higher than the pre-test knowledge score regarding prevention of coronary artery disease through lifestyle modification.

Keywords: Coronary artery disease, lifestyle modification, information booklet, prevention

Introduction

Coronary artery disease is a type of blood vessel disorder that is included in the general category of atherosclerosis. India is facing an epidemiological transition for prevalence of CAD^[1].

The common heart disease is an abnormal accumulation of lipid or fatty substances and fibrous tissue in the vessel walls, these substances create blockage or narrow the vessels in a way that reduces blood flow to myocardium^[2].

According to World Health Organization estimates for 2003, deaths from CAD totaled 16.7 million. Approximately 80% of CAD related deaths occur in countries with low and middle income populations. By 2010 CAD was one of the leading causes of death in developing countries^[3].

Indians have the highest role of Coronary Artery Disease all over the world it is 2-4 times higher at all ages and 5-10 times higher in those below 40 years of age due to industrialization and changing features of socio-economic scenario the incidence of Coronary Artery Disease are rising in the developing countries as prevalence of Coronary Artery Disease in India is 3 to 4 fold higher than in America and Europe. Increase in Coronary Artery Disease prevalence in India is attributed to social and economic change and its consequences including changes in dietary habits physical inactivity and increase incidence of diabetes and HTN^[4]. Because coronary artery disease often develops over decades, you might not notice a problem until you have a significant blockage or a heart attack. But you can take steps to prevent and treat coronary artery disease. A healthy lifestyle can make a big impact^[5]. There has been a rise in the incidence of coronary artery disease (CAD) in young Indians, according to recent statistics.

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Over 50% of cardiovascular disease mortality is seen to occur in individuals below 50 years of age. According to the ICMR State Level Disease Burden Report, among all age groups, the prevalence of heart disease has increased by over 50% from 1990 to 2016 in India, with an increase observed in every state. Heart disease contributed 17.8% of total deaths of total deaths [6].

Accordingly, to a WHO report in 2014 the age adjusted cardiovascular diseases mortality rates in India were 349 and 265 per 100,000 in men and women respectively [7].

A lifestyle score was constructed using for lifestyle factors in the American Heart Association (AHA) guidelines no current smoking, no obesity (BMI < 30kg/m²) moderate physical activity at least once weekly, and a healthy diet these guidelines are similar to lifestyle recommendations issued for diseases prevention in Sweden [8].

For the prevention of Coronary Artery Disease, lifestyle modifications are part of a treatment approach to forestalling further problems—that is, modify the many factors that are in your control, like diet, exercise, de-stressing and not smoking [9].

In conclusion, Coronary heart disease is a very serious disease; it causes one in every five deaths worldwide. Occurring mostly when the arteries become blocked or ruptured, in more serious cases, it may cause heart attacks that may even lead to death. This can be prevented by exercising, proper dieting and dropping bad habits such as smoking and drinking [10].

Method

This is a quantitative research study. The study population consisted of middle adult age group people living in selected areas of Gujarat in the year of 2020 and are willing to be part of the study. The samples were selected using purposive sampling technique, after explaining the purpose of the study, samples requested to read and sign consent form. Questionnaire were distributed among participant by researcher and asked them to answer all questions and returned completed questionnaire to researcher. Inclusion criteria in the present study were as follows: Middle adult age group people available during data collection period, Middle age people who are willing to participate in the study, Middle age people who understand English and Gujarati language.

Structured knowledge questionnaire was used for data collection. The questionnaire contains two sections, first section was related to demographic variables such as age, gender, weight, religion, educational status, dietary pattern and occupation. The second section contains 20 questions divided into 7 areas such as Introduction of Coronary artery disease and Life style modification, Definition, Sign and

symptoms of CAD, Importance of lifestyle modification, Modifiable risk factors, Preventive measures and Myths and facts related to CAD. Score of each question sums to the total score obtained. Higher score indicate a greater impact on the knowledge regarding lifestyle modification on prevention of coronary artery disease. The validity & reliability of the questionnaire were determined by experts; master of Community health nursing, master of pediatric nursing, master of gynecology, master of psychiatric nursing and master of Medical surgical nursing in Apollo institute of nursing.

The study participants requested to read and sign consent form and all data obtained from participants remained anonymous. Also, participation in our study was completely voluntary. After completing the data collection, the data were analyzed. Frequency, mean and standard deviation were used to describe and analyze the data.

Results

Table 1 revealed that 3 samples were in the age group of 31-34 years, 6 were in the age group of 35-38 years, 1 was in the age group of 39-42 and 20 were in the age group 43-46 year, Majority of the samples i.e. 18, were females and 12 were male. In the variable of weight 19 samples has 51-70kg weight, 9 of sample has 71-90kg weight and 2 samples has >90kg weight. Majority of the participants i.e. 28 were Hindu, 1 was Muslim, and 1 was Christian. Education of majority of samples i.e. 14 were high-school, 12 of them were graduate, 2 were illiterate and 2 were post-graduate. Majority of samples i.e. 27, were vegetarian, 2 of them were Egg vegetarian and 1 was following mixed diet. Occupation of 14 samples were unemployed, 7 were doing job/service and 9 were doing business.

Graph 1 revealed that the pre-test mean knowledge score of samples was 10.73 and post-test mean knowledge score was 17.23.

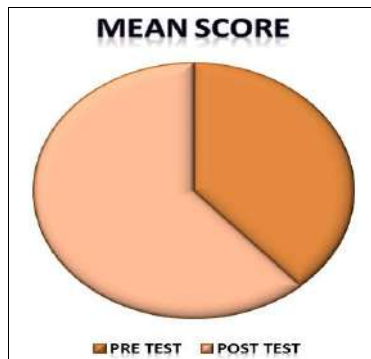
Graph 2 revealed that before administration of information booklet 3.33% of samples had poor knowledge, 86.66% had average knowledge and 10.01% had good knowledge regarding lifestyle modification on prevention of CAD. After administration of information booklet 6.66% of samples had average knowledge and 93.33% had good knowledge regarding lifestyle modification on prevention of CAD.

Table 3 revealed that chi-square calculated value of six demographic variables i.e. age, gender, weight, Religion, Education and occupation were lesser than table value, so they were not associated and chi-square calculated value of dietary pattern was higher than table value, so it was associated.

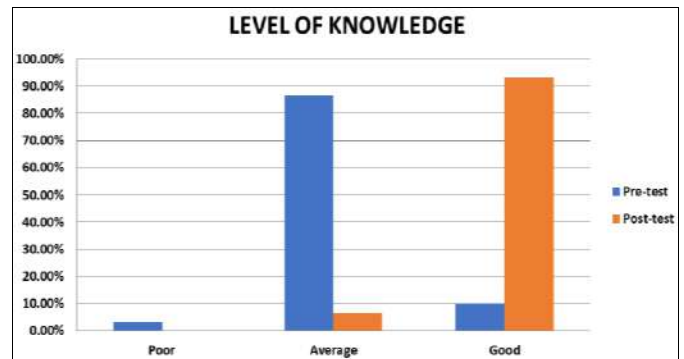
Table 1: Distribution of frequency and percentage analysis of selected demographic variables (N=30)

S.N.	Demographic variables	Frequency (f)	Percentage (%)	
1	Age of people (in years)	(a) 31-34	3	10%
		(b) 35-38	6	20%
		(c) 39-42	1	3.33%
		(d) 43-46	20	66.66%
2.	Gender of people	(a) Male	12	40%
		(b) Female	18	60%
		(c) Transgender	0	0%
3.	Weight (in kilogram)	(a) <50	0	0%
		(b) 51-70	19	63.33
		(c) 71-90	9	30
		(d) >90	2	6.66
4.	Religion	(a) Hindi	28	93.33
		(b) Muslim	1	3.33

		(c) Christian	1	3.33
		(d) Other	0	0
5.	Education	(a) Illiterate	2	6.66
		(b) High-school	14	46.66
		(c) Graduate	12	40
		(d) Post-graduate	2	6.66
6.	Dietary pattern	(a) Vegetarian	27	90
		(b) Egg-vegetarian	2	6.66
		(c) Non-vegetarian	0	0
		(d) mixed	1	3.33
7.	Occupation	(a) unemployment	14	46.66
		(b) service (job)	7	23.33
		(c) business	9	30



Graph 1: Mean score of samples before and after administration of information booklet based on data collected on structured knowledge questionnaire



Graph 2: Knowledge of participants regarding lifestyle modification on prevention of CAD before and after administration on information booklet.

Table 3: Association of Pre-test Knowledge score with selected Demographic Variables of samples (N=30).

Sr no.	Demographic variables	Frequency(f)	χ^2		df	Significance
			Calculated value	Table value		
1	Age (in year)		0.033	12.59	6	Non-significant
	1. 31-34 years	3				
	2. 35-38 years	6				
	3. 39-42 years	1				
	4. 43-46years	20				
2	Gender		0.45	9.49	4	Non-significant
	1. Male	12				
	2. Female	18				
	3. Transgender	0				
3	Weight		0.61	12.59	6	Non-significant
	1. <50 kg	0				
	2. 51-70 kg	19				
	3. 71-90 kg	9				
	4. >90 kg	2				
4	Religion		0.053	12.59	6	Non-significant
	1. Hindu	28				
	2. Muslim	1				
	3. Christian	1				
	4. Others	0				
5	Education		0.32	12.59	6	Non-significant
	1. Illiterate	2				
	2. High school	14				
	3. Graduate	12				
	4. Post graduate	2				
6	Dietary pattern		28.07	12.59	6	Significant
	1. Vegetarian	27				
	2. Egg-vegetarian	2				
	3. Non-vegetarian	0				
	4. Mixed	1				
7	Occupation		0.38	9.49	4	Non-significant
	1. Unemployed	14				
	2. Service (job)	7				
	3. Business	9				

Discussion

This section evaluated the findings of the present study in the light of previous research studies. The discussion is organized based on finding of the study.

Finding on knowledge regarding the lifestyle modification for prevention of coronary artery disease among middle adult age group people of selected areas of Gujarat before administration of information booklet, the pre-test mean is 10.73. Finding on knowledge regarding the lifestyle modification for prevention of coronary artery disease among middle adult age group people of selected areas of Gujarat after administration of information booklet, the post-test mean is 17.23.

Conclusion

The Study intends to assess the effectiveness of information booklet regarding life style modification on prevention of coronary artery disease among middle adult age group in selected areas of Gujarat. The Study reveals that the post-test knowledge score is higher than the pre-test knowledge score regarding importance of antioxidants in reducing risk related to heart attack among Middle age group people.

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