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ASSESSMENT OF COGNITIVE FUNCTION ON LIFESTYLE MODIFICATIONS AMONG SURVIVORS OF ACUTE CORONARY SYNDROME

Nursing

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ABSTRACT

Background: The heart disease is the single largest cause of death in India. According to a projection by the WHO and the Indian Council of Medical Research (ICMR), India will not only be the heart attack capital, but also the capital of diabetes and hypertension by 2020. Hence the present study is aimed to assess the level of cognitive function on lifestyle modifications among survivors of acute coronary syndrome.

Materials and Methods: Descriptive design was chosen for this study. 50 study participants were selected using purposive sampling technique. The cognitive function was assessed using devised self administered multiple choice tool which consists of 30 items. The collected data were analyzed statistically.

Results: 82% of respondents demonstrated inadequate level of cognitive function and only 18% elicited adequate level of cognitive function among ACS survivors. There was no association found with any of the selected demographic variables except for the treatment history which was significant at $p < 0.05$.

Conclusion: It is essential that health education on life style modification should be provided to the patients. It should focus on identification of the personal, cultural and psychosocial factors that act as a barrier to patients in modifying their lifestyle. Life style modification is most effective way of secondary prevention of acute coronary syndrome. A combination of education and home monitoring programs, family teaching cooking demonstration and other exercise program can be made helpful for the patients in turn to have a better quality life.

KEYWORDS

Acute coronary syndrome, survivors, cognitive function, lifestyle modifications.

INTRODUCTION:

Cardiovascular diseases (CVD) are the leading cause of the mortality in urban and rural India and foremost causes of the death worldwide. In India, heart disease is the single largest cause of death in the country with heart attack being responsible for one third of all deaths caused by heart diseases. According to a projection by the WHO and the Indian Council of Medical Research (ICMR), India will not only be the heart attack capital, but also the capital of diabetes and hypertension by 2020.(Atlas of heart disease and stroke, WHO September 2014).A cross sectional study conducted by Anu Mary et al (2016)1 in 2010 - 2012 revealed the prevalence of CAD in rural and urban India 3.4% among rural men, 7.4% among rural women, 7.3% among urban men, and 13.4% among urban women. In this Acute Coronary Syndrome (ACS) is a severe and sudden heart condition that requires immediate hospital admission and needs aggressive treatment. This refers to a spectrum of clinical presentation ranging from those for ST segment elevation Myocardial Infarction (STEMI) to presentations found in non- ST- segment elevation Myocardial Infarction (NSTEMI) or in unstable angina. In terms of pathology, more than 90% of ACS is almost always associated with rupture of an atherosclerotic plaque and partial or complete thrombosis of the infarct related artery. The epidemiology of ACS typically results from disruption of an atherosclerotic plaque in a blood vessel (Cattaneos GJ et al 2011) [2]. The risk factors for ACS therefore are those of atherosclerosis and include hypertension, smoking, diabetes, high plasma LDL and low HDL, elevated plasma triglycerides, family history and genetic polymo rphisms 9p21. Less common etiologies include any instance where there is significantly increased demand on the heart with poor myocardial perfusion (Redfern J et al 2010)[3]. Several behavioral factors that are modifiable such as smoking, physical activity and medication are found to help in secondary prevention of ACS. People with no major risk for cardiovascular diseases such as young adulthood and middle age, lower age are at specific risk for death from cardiovascular diseases and consequently have greater life expectancy than others in population, and it is reasonable for the people to have knowledge on secondary prevention by following the lifestyle modification pattern (Fernandez et al and Tillmans) [4,5].

OBJECTIVES

- Assess the level of cognitive function on lifestyle modifications among survivors of Acute Coronary Syndrome.
- Associate the level of cognitive function on lifestyle modifications with the selected demographic variables.

MATERIALS AND METHODS:

The descriptive design was adopted in this study. A formal permission was obtained from the Hospital. The samples were selected using purposive sampling technique of those who fulfill the inclusive criteria such as Patients of both sex diagnosed with ACS aged more than 40 years, who could read and speak Tamil or English. The study was conducted in the cardiac OPD department at selected hospital Chennai. The sample size for the study was 50. The structured multiple choice questionnaire was devised by the investigator that consists of 30 items. The reliability of the tool was assessed by split half technique and found to be reliable where r=0.8. Self administered questionnaire was distributed to the study participants and collected after the completion.

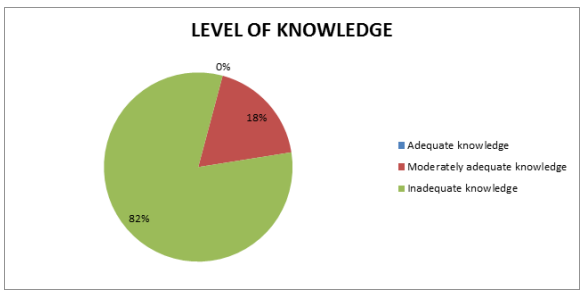
FINDINGS:

Table – 1 : Distribution Of Demographic Variables (N=50)

S. NO	VARIABLES	FREQUENCY (n)	PERCENTAGE (%)
1.	**Age (yrs)** a) 40-49	7	14
	b) 50-59	20	40
	c) 60-69	19	38
	d) Above 70	4	8
2.	Gender a) Male	30	60
	b) Female	20	40
3.	**Marital status** a) Married	47	94
	b) Unmarried	1	2
	c) Widow/widower	2	4

4.	**Educational status** a) Illiterate	10	20
	b) Primary education	30	60
	c) Higher secondary	6	12
	d) Graduate	4	8
5.	**Occupation** a) Private employee	18	36
	b) Government employee	2	4
	c) Unemployed	8	16
	d) Coolie	22	44
6.	**Religion** a) Hindu	42	84
	b) Christian	4	8
	c) Muslim	4	8
7.	**Monthly income (Rs)** a) Below 2000	17	34
	b) 2001-5000	21	42
	c) 5001-10000	9	18
	d) Above 10000	3	6
8.	**Residence** a) Village	37	74
	b) City	8	16
	c) Town	5	10
9.	**Number of MI attacks** a) Once	26	52
	b) Twice	22	44
	c) More than two times	2	4
10.	**Co morbidity** a) Nil	1	2
	b) Hypertension	15	30
	c) Diabetes	27	54
	d) Both	7	14
11.	**Food habits** a) Vegetarian	15	30
	b) Non-vegetarian	35	70
12.	**Treatment history** a) Oral hypoglycemic agents	4	8
	b) Insulin	1	2
	c) Atorvastatin	2	4
	d) Ecosprin	1	2
	e) Nil	42	86
13.	**Treatment availed after onset of chest pain:** a) Nil	12	24
	b) 20 minutes	1	2
	c) 30 minutes	4	8
	d) 60 minutes	18	36
	e) 120 minutes	13	26
	f) 180 minutes	1	2
	g) 360 minutes	1	2
14.	**Habits** a) Nil	18	36
	b) Smoking	20	40
	c) Alcoholism	8	16
	d) Both	4	8

Figure – 1: Distribution of Level of Knowledge N = 50



There was no association of selected demographic variables with the level of knowledge except for the variable treatment history significant at $p < 0.05$.

DISCUSSION:

The majority of the respondents (82%) included in the study had inadequate cognitive function on life style modifications. Only 18% had moderately adequate level of cognitive function and none of the respondents had adequate knowledge. This study results is consistent with the study conducted by Omar, et al (2009)[6] assessed the knowledge of modifiable risk factors of coronary atherosclerotic heart disease in New Delhi among 217 patients. The result showed that 41% of them had good knowledge. 68%, 72%, 73% and 57% of population identified smoking obesity, hypertension and high cholesterol respectively. The study result concluded that an Indian population in a hospital setting shows a lack of knowledge pertaining to modifiable risk factors of coronary atherosclerotic heart disease. Further this study result is substantiated with the study conducted by 'Kardiol Pol (2008)[7]' on level of knowledge of cardiovascular risk factors and recommended life style changes in patients after an acute coronary syndrome with a simple size of 31 patients. The result showed that after rehabilitation programme the subjects had significant improvem ent regarding knowledge on recommended lifestyle changes and cardiovascular risk factors. They concluded in the study that 80% of the patients after acute coronary syndrome have poor knowledge on cardiovascular risk factors and recommended life style modifications. The finding of this study is also supported by the study conducted by Muhammed Khan et al (2006)[8] on assessment of knowledge of modifiable risk factors of heart disease among patients with acute myocardial infarction among 720 subjects. The results showed that the mean age was 54 years and mere 42% had good level of knowledge. They concluded the study that there was lack of good level of knowledge of modifiable risk factors for heart disease among subjects admitted with acute myocardial infarction.

IMPLICATIONS:

A nurse can play an important role in the prevention of further attacks of Acute Coronary Syndrome by creating awareness among people that ACS is not a dreadful disease condition and prevention is possible with life style modifications. Nurse educators should help the nurses to improve their clinical practice. The student nurse should be well prepared with adequate knowledge to give prompt information to patients about the benefits and ill-effects of failing to modify the lifestyle, which will enable them to provide the proper health education to the patients on the lifestyle modification program. Nurse administrators may use the study findings to improve the quality of care in the hospitals. The nurse administrator should make arrangem ents to ensure that sufficient manpower, money, and material are available for disseminating health information. Various programs on primary and secondary prevention strategies should be introduced and carried out.

CONCLUSION:

The study findings showed that the respondents had inadequate knowledge. Hence it is essential that health education on life style modification provided to the patients should focus on identification of the personal, cultural and psychosocial factors that act as a barrier to patients in modifying their lifestyle. Life style modification is most effective way of secondary prevention of acute coronary syndrome. A combination of education and home monitoring programs, family teaching cooking demonstration and other exercise program can be made helpful for the patients in turn to have a better quality life. Unfortunately, direct contact between physician and patient after discharge is usually limited and patient's feelings of isolation as they try to change the lifestyle generally lead to poor results. Nurses are concerned on the health of every individual providing meticulous health education to people on lifestyle modification in the major role of nurse both in hospital and community. Thus, only the nurses have the ample of opportunity to intervene and support the people.

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