

EFFECTIVENESS OF AWARENESS MODULE ON PRACTICE REGARDING MAINTENANCE OF HEALTH AND PREVENTION OF COMPLICATIONS RELATED TO CABG AMONG CAREGIVERS OF CABG PATIENTS ADMITTED IN SELECTED HOSPITALS OF GUJARAT

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ABSTRACT

Coronary artery bypass grafting (CABG) is a major surgical operation where atheromatous blockages in a patient's coronary arteries are bypassed with harvested venous or arterial conduits. The bypass restores blood flow to the ischemic myocardium which, in turn, restores function, viability, and relieves anginal symptoms. With this model, the person is viewed as an adaptive system composed of input, control process, effectors and output. Input is the stimulus; control processes are coping mechanisms. Effectors are the changes in the four adaptive modes. Output is the effective or ineffective response to the situation and feedback is the responses to the system. In this study, the focus is on the maintenance of health and prevention of complications among CABG patients. **SETTING AND DESIGN:** A quantitative approach was considered for this study. The research design selected for the study was one group pre-experimental pre-test post-test design. The target population in this study is caregivers of CABG patients. In this study the sample consisted of 250 caregivers of CABG patients admitted in selected hospitals of Gujarat, full filling the inclusion criteria. Non-probability convenience sampling technique was used by the investigator in this study. The study was conducted in Satyam Multi-care Hospital and Trauma Center, Shri Jalaram Arogya Seva Trust and Sanjivni Heart & Cathlab center, Modasa, Gujarat. **RESULTS :** During pre-test most of the samples (90.8%) were having moderate level of practice regarding maintenance of health and prevention of complications related to CABG followed by 9.2% had poor level of practice and no samples had good level of practice. During post-test, 26.8% of samples were having good level of practice and 73.2% having moderate level of practice.

Key Words: Coronary artery, harvested venous, anginal symptoms, stimulus.

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INTRODUCTION

The myocardium of the heart is supplied by 2 major coronary arteries: the left main coronary artery and the right coronary artery (RCA). The left main coronary artery is usually a short segment that branches into the left anterior descending (LAD) artery and the circumflex artery. Risk factors constitute a health risk for the individual and impose an overall burden on the economy (Sekhri T et al, 2014).

Coronary artery bypass graft surgery (CABG) was first performed in India in 1975 about 13 years after its advent in 1962. In the mid 1990 some 10,000 CABG surgeries were being performed annually in India. Presently the annual number is about 60000 according to industry sources. (Kaul U, 2011). The prevalence of CAD in rural parts of country is nearly half than that in urban population. (Sreenivas Kumar A et al, 2020). A cohort study was conducted (Adekola O O et al, 2016) among patients anesthetized for open heart surgery from March 2012 to May 2012 at the Frontier Lifeline Hospital, Chennai, India. Primary outcome measures were the pattern of presentation and complications following cardiac surgery. Secondary outcome measure was the 30-day perioperative mortality associated with cardiac surgery. A total of 291 patients underwent cardiac surgery. A study (Yates B C et al, 2018) was conducted to examine changes over time in spousal caregivers of coronary artery bypass graft (CABG) patients in care giving demand and care giving difficulty and to identify the key demands and difficulties at each time point. Spouses (n=34) of CABG patients comprised the sample. This shift had a substantial impact on the mental health system and the families of people with mental illness because family members were and continue to be often inadequately prepared to be the main caregiver for their ill relative (Alzahrani SH et al, 2017). More than half of family caregivers provide 8 hours of care or more every week, and one in five provides more than 40 hours per week (Reinhard SC, 2004). As a result, caregivers often neglect their own health care needs in order to assist their family member, causing deterioration in the caregiver's health and well-being (Schumacher KL et al, 2000). Problems of the caregivers following the coronary arterial by-pass graft surgery was reviewed for the sake of forming a baseline for the progressive research in this field and emphasizing the role of nurses in the training of the caregivers (Hacalioglu N et al, 2008).

REVIEW OF LITERATURE

A community-based cross sectional study was conducted (Krishnan. M. N, 2016) to study the prevalence of CAD and its risk factors among adults in Kerala. 5167 adults (mean age 51 years, men 40.1 %) were selected using a multistage cluster sampling method. Information on socio-demographics, smoking, alcohol use, physical activity, dietary habits and personal history of hypertension, diabetes, and CAD was collected using a structured interview schedule. Anthropometry, blood pressure, electrocardiogram, and biochemical investigations were done using standard protocols. CAD and its risk factors were defined using standard criteria. Comparisons of age adjusted prevalence were done using two tailed proportion tests. The data revealed that the overall age-adjusted prevalence of definite CAD was 3.5 %: men 4.8 %, women 2.6 % ($p < 0.001$). Prevalence of any CAD was 12.5 %: men 9.8 %, women 14.3 % ($p < 0.001$). There was no difference in definite CAD between urban and rural population. Physical inactivity was reported by 17.5 and 18 % reported family history of CAD. Other CAD risk factors detected in the study were: overweight or obese 59 %, abdominal obesity 57 %, hypertension 28 %, diabetes 15 %, high total cholesterol 52 % and low level of high density lipoprotein cholesterol 39 %. Current smoking was reported only by men (28 %). The researchers concluded that the prevalence of definite CAD in Kerala increased nearly three times since 1993 without any difference in urban and rural areas. Most risk factors of CAD were highly prevalent in the state.

A cross-sectional study (Sampath V et al, 2020) of coronary risk factors of CAD and their association with premature CAD was conducted among male patients of freshly diagnosed and confirmed cases of CAD attending tertiary care cardiac hospital in Pune, Maharashtra. The estimated sample size was n=216. Only those patients who were freshly diagnosed as confirmed CAD and gave consent to participate in the study were included. Patients with known CAD attending either for the follow-up or review were excluded. A face-face interview method and a self-administered questionnaire were used to collect the data from the participants. Before interviewing them, they were informed of the scope and nature of the study, and their confidentiality was maintained. Out of 232 participants, 109 (47%) and 123 (53%) were premature CAD and late-onset CAD patients respectively. The mean age of the participants was 44.1±7.1 years. Hypertension, dyslipidemia, diabetes mellitus, tobacco use, alcohol use, psychosocial factors (anxiety and depression) and family history of CAD were present in 42.2%, 88%, 22%, 65%, 66%, 35.8%, 42.2% and 19.3% of premature CAD patients respectively. Physical inactivity, overweight, and obesity were found in 54%, 69.4% and 14.7% of 232 participants respectively. Young population warrant cost-effective interventions through various Information, Education and Communication (IEC) activities to impede the increasing incidence of premature coronary artery disease.

TITLE OF THE STUDY

Effectiveness of awareness module on practice regarding maintenance of health and prevention of complications related to CABG among caregivers of CABG patients admitted in selected hospitals of Gujarat

METHODOLOGY

A quantitative approach was considered for this study. The research design selected for the study was one group pre-experimental pre-test post-test design. . The target population in this study is caregivers of CABG patients. In this study the sample consisted of 250 caregivers of CABG patients admitted in selected hospitals of Gujarat, full filling the inclusion criteria. Non-probability convenience sampling technique was used by the investigator in this study. The study was conducted in Satyam Multi-care Hospital and Trauma Center, Shri Jalaram Arogya Seva Trust and Sanjivni Heart & Cathlab center, Modasa, Gujarat.

OBJECTIVES

1. To find the effectiveness of awareness module on practice regarding maintenance of health and prevention of complications related to CABG among caregivers of CABG patients.

RESULTS**Frequency and percentage distribution of samples according to level of practice before and after intervention**

Level of practice	Range of score	N=250			
		Pre-test		Post-test	
		f	%	F	%
Poor	≤ 54 (0 -33%)	23	9.2	-	-
Moderate	55-81 (34-66 %)	227	90.8	183	73.2
Good	82-108 (67-100%)	-	-	67	26.8

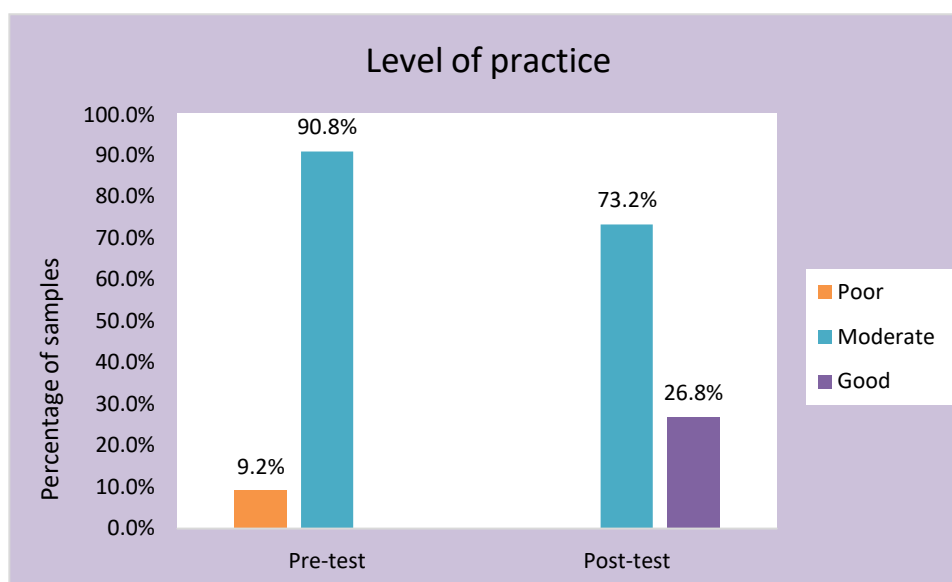


Figure 1: Percentage distribution of samples according to level of practice regarding maintenance of health and prevention of complications related to CABG

Data presented in table 16 and figure 15 revealed that during pre-test most of the samples (90.8%) were having moderate level of practice regarding maintenance of health and prevention of complications related to CABG followed by 9.2% had poor level of practice and no samples had good level of practice. During post-test, 26.8% of samples were having good level of practice and 73.2% having moderate level of practice.

Table 2 : Range, Mean, Standard deviation, Median and Mean percentage of practice score on maintenance of health and prevention of complications related to CABG before and after intervention. N=250

	Range	Mean	SD	Median	Mean percentage
Pre-test	49-75	64.42	5.83	65.0	59.65
Post-test	63-106	78.10	7.76	78.0	72.31

Data in table 2 depicts the range, Mean, Standard deviation, Median and Mean percentage of practice score on maintenance of health and prevention of complications related to CABG before and after intervention. Data revealed that the mean post-test practice score (78.10 ± 7.76) ranging from 63 to 106 was higher than the mean pre-test practice score (64.42 ± 5.83) ranging from 49 to 75.

Table 3: Mean, Standard deviation, mean difference, t value and p value of practice score on maintenance of health and prevention of complications related to CABG before and after intervention. N=250

	Mean	SD	Mean difference	t value	p value
Pre-test	64.42	5.83	13.68	28.969	<0.001**
Post-test	78.10	7.76			

t (249)= 1.651

** Significant at 0.001 level

Data revealed that the mean post-test practice score (78.10 ± 7.76) was higher than the mean post-test practice score (64.42 ± 5.83). Data also revealed that the t value (28.969) obtained was higher than the table value (1.651). Hence the null hypothesis was rejected and research hypothesis was accepted. Therefore there was a significant difference in the mean practice score before and after the administration of the awareness module (p<0.001).

Table 4: Association of practice score with demographic variables. N=250

Demographic variables	Practice score		χ ² value	p value
	≤ Median (≤65)	> Median (>65)		
Age in years			8.322	0.010*
< 30	6	8		
30-45	20	10		
45-60	45	52		
Above 60	58	51		
Gender			0.278	0.598 (NS)
Male	50	43		
Female	79	78		
Relation with patient			7.344	0.119 (NS)
Spouse	104	89		
Son/ daughter	14	12		
Parent	0	4		
Siblings	3	8		
Home nurse	8	8		
Religion			0.298	0.574 (NS)
Hindu	108	99		
Muslim	17	20		
Christian	1	1		
Any other	3	1		

*Significant at 0.05 level NS- Not significant

Table 5: Association of practice score with demographic variables N=250

Demographic variables	Practice score		χ ² value	p value
	≤ Median (≤65)	> Median (>65)		
Occupation			14.901	0.011 *
No occupation	26	19		
House wife	41	50		
Labourer	12	17		
Farmer	24	14		
Professional	19	6		
Business	7	15		
Education			10.134	0.037 *
No formal education	21	31		
Up to 10 th class.	56	57		
Pre degree/ Plus two	8	8		
Graduate/ Diploma	42	22		
Post- Graduate or above	2	3		

Monthly family income in rupees			8.099	0.044 *
Less than 5000	20	18		
5001 to 10000.	53	62		
10001 to 20000.	17	22		
Above 20000.	39	19		
Type of family			5.016	0.081 (NS)
Nuclear	34	43		
Joint	81	59		
Extended	14	19		

*Significant at 0.05 level NS- Not significant

Table 6: Association of practice score with demographic variables N=250

Demographic variables	Practice score		χ^2 value	p value
	≤ Median (≤65)	> Median (>65)		
Marital status			3.110	0.375 (NS)
Single	4	8		
Married	115	107		
Widow/ widower	8	4		
Divorced	1	2		
Source of information			4.259	0.372 (NS)
No such information	72	71		
Doctor/ Nurses	8	12		
Internet	36	22		
Television	10	12		
Books and magazines	3	4		
Age of the patient in years			1.252	0.740 (NS)
<30	1	3		
30 – 45	10	8		
45-60	36	34		
Above 60.	82	76		
Gender of patient			0.089	0.765 (NS)
Male	69	67		
Female	60	54		

NS- Not significant

Data presented in table 4, 5 and 6 depicts the association of practice score with demographic variables. Data revealed that there was a significant association between the practice score and age of care givers in years ($\chi^2=8.322$, $p<0.05$), occupation ($\chi^2=14.901$, $p<0.05$), education ($\chi^2=10.134$, $p<0.05$) and monthly family income ($\chi^2=10.134$, $p<0.05$). The null hypothesis was rejected and research hypothesis was accepted for these variables. Data also showed that there was no significant association between knowledge score and gender ($\chi^2=0.278$, $p>0.05$), relation with patient ($\chi^2=7.344$, $p>0.05$), religion ($\chi^2=0.298$, $p>0.05$), type of family ($\chi^2=5.016$, $p>0.05$), marital status ($\chi^2=3.110$, $p>0.05$), source of information ($\chi^2=4.259$, $p>0.05$), age of patient in years ($\chi^2=1.252$, $p>0.05$) and gender of patient ($\chi^2=0.089$, $p>0.05$). The null hypothesis was accepted for these variables.

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