The Effectiveness of Planned Teaching Program on Knowledge regarding Types of Angina Pectoris and it's Prevention among Adults in Selected Cardiac Hospital

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Abstract: *This study aims to assess the effectiveness of planned teaching programme on knowledge regarding types of angina pectoris and its prevention among adults in selected cardiac hospital.A Quasi- experimental research design was considered to be most appropriate to fulfill the objectives of the study. Material and Methods: A pre- experimental one group pretestposttest research design was used in the study.Principle:1) Age group 40-80yrs 2)Adults should be available during time of the study.Result: mean knowledge scores of pretest and posttest which reveals that majority of the adults 34(56.67%) had average knowledge and 90% had average knowledge score respectively. Conclusion: The conclusion of the finding suggests lack of adequate knowledge of cardiac symptoms and high potential for inappropriate responses when symptoms occur.*

Keywords: Knowledge, Angina pectoris, Adults

1. Introduction

The French Quotes Angina usually causes uncomfortable pressure, fullness, squeezing or pain in the center of the chest. You may also feel the discomfort in your neck, jaw, shoulder,backor arm. (Many types of chest discomfort — like heartburn, lung infection or inflammation aren't related to angina[1].

Angina pectoris is a severe chest pain due to ischemia of the heart muscle, generally due to obstruction or spasm of the coronary arteries. In coronary artery disease, the main cause of angina is atherosclerosis of the cardiac arteries. The term derives from the Greek ankhon ("strangling") and the Latin pectus ("chest"), and can therefore be translated as "a strangling feeling in the chest". It is not common to equate severity of angina with risk of fatal cardiac events. There is a weak relationship between severity of pain and degree of oxygen deprivation in the heart muscle i.e. there can be severe pain with little or no risk of a heart attack, and a heart attack can occur without pain[2].

Worsening angina attacks, sudden-onset angina at rest, an angina lasting more than 15 minutes are symptoms of unstable angina, usually grouped with similar conditions as the acute coronary syndrome.

As these may hear myocardial infarction, they require urgent medical attention and are generally treated as a presumed heart attack, likely as men are to have a heart attack. The number of people who go to the hospital for heart disease every year is about3.7 million. On these people stay in hospital for 4.6 days .And a whopping 12.4million people make heart disease related visits to their physician every year[3].

All those doctor's visits and hospitals stays add up-not to mention estimated economic cost of heart disease is about $192 billion in direct health expenditure and $121 billion in indirect costs. And that's not including the $135 million that American Heart Association spends on cardiovascular disease and stroke research every year[4].

2. Literature Survey

1) Literature related to incidence and prevalence
Miss. A Leach A cross sectional study was conducted to assess the prevalence of angina and its associated risk factors among 1556 people in **Goa.**The results revealed that prevalence of angina increased with age in both sexes. When compared with men the angina in women of all ages was 2.03 (95% CI 1.10 to 3.75). Angina was associated with depressive or anxiety symptoms in both sexes (men OR=5.65 95% CI=2.25 to 14.16, women OR=2.18, 95% CI=1.01 to 4.69). The study concluded that women are 18 at greater risk of angina pectoris than men and depression and anxiety is strongly associated with angina.[5]

Briethardt Gunther .A study was conducted on stable angina pectoris on July 2010.The study showed that coronary artery disease is the leading cause of death in the **United States.**Not only do 10.2 million Americans have this condition and approximately 500,000 new cases of angina occur each year. Moreover, the lifetime risk of developing CAD after 40 years of age is estimated at 49% for men and 32% for women[6].

2) Literature related to knowledge of angina pectoris
Some study shows that angina is a message from your heart to tell you that it is suffering from a lack of blood carrying oxygen. This is usually due to a narrowing in the coronary arteries supplying blood to your heart muscle. There is an important balance between the amounts of blood your heart muscle demands and the ability of the coronary arteries to supply that blood. The demands on your heart are increased by exercise, high blood pressure, exercise and infections, a

low blood count (anemia) or lack of oxygen. Correcting this imbalance allows patients to live their lives without pain. This is achieved through lifestyle changes and use of anti-anginal drugs. However, the other important aspect of treating angina is to prevent the disease in the arteries getting worse. This is the best long term strategy and is achieved by reducing cholesterol and blood pressure, giving up smoking, losing weight and becoming more active.[7]

3) Literature related to types of angina pectoris

Lewis CollierThe types of angina are stable, unstable, Microvascular, atypical, Varient, Printzmetals variant angina is a rare entity. When angina-like symptoms occur at rest, mostly at a specific hour in the early morning, together with transient ST segment elevations and angiographically normal arteries, provocative tests with ergoovine or acetylcholine should be performed. Endothelial dysfunction, a strong thrombotic tendency, an increased platelet aggregation together with changes in autonomic tone can trigger coronary vasospasms. Once treated with calcium antagonists and nitrates the prognosis is excellent and severe complications such as arrhythmias, myocardial infarction or sudden death are extremely rare. Coronary stunting can be useful for refractory coronary spasm; CABG can be used for important coronary atherosclerosis. This review is illustrated with three typical presentations of variant angina, a myocardial infarction without significant organic coronary atherosclerosis, an ergo ovine-induced coronary spasm with a no significant coronary lesion and a multivessel spasm complicated by ventricular arrhythmia. All these three patients became asymptomatic after a treatment with calcium antagonists and nitrates.[9]

3. Problem Definition

A quasi experimental study to assess the effectiveness of planned teaching programon knowledge regarding types of angina pectoris and it's prevention among adults in selected cardiac hospital.

Methodology /Approach

A pre- experimental one group pretestposttest research design was used in the study. The study was conducted among adults of age group 40-80yrs in selected cardiac hospital. Structured questionnaire used to collect the data.Quasi experimental study approach is used in this study. Structured knowledge questionnaire were used to collect the data. Sample size was and sampling technique used was non probability convenient sampling.[9]

4. Result

The overall mean knowledge scores of pretest and posttest which reveals that majority of the adults 34(56.67%) had average knowledge and majority of the adults 90% had average knowledge score respectively. The statistical Student's paired t test implies that the difference in the pretest and posttest knowledge score found to be 14.26 statistically significant at 0.05% level. Hence it is statistically interpreted that planned teaching program on knowledge regarding types of angina pectoris and its prevention was effective.

The table 1 - frequency and percentage wise distribution of farm workers Percentage wise distribution of adults according to their demographic characteristics

Demographic Variables	No. of adults	Percentage (%)
Age(yrs.)		
41-50 yrs.	3	5.0
51-60 yrs.	17	28.3
61-70 yrs.	18	30.0
71-80 yrs.	22	36.7
Gender		
Male	13	21.7
Female	47	78.3
Religion		
Hindu	13	21.7
Muslim	23	38.3
Christian	16	26.7
Any Other	8	13.3
Type of house		
Kaccha House	24	40.0
Pakka House	36	60.0
Type of family		
Nuclear Family	32	53.3
Joint Family	28	46.7
Educational Status		
Illiterate	9	15.0
Primary School	5	8.3
Secondary School	17	28.3
Graduate	29	48.3
Occupational Status		
Agriculture	8	13.3
Official	21	35.0
Business	13	21.7
Any Other	18	30.0
Monthly income of the family		
1001-5000 Rs	30	50.0
5001-10000 Rs	18	30.0
10001-15000 Rs	6	10.0
15001-20000 Rs	6	10.0
Previous information about angina pectoris		
Yes	36	60.0
No	24	40.0
Source of information		
Articles in newspapers	24	40.0
Heard from radio	16	26.7
Any programme on angina pectoris	15	25.0
Friends and Relatives	5	8.3

Table 2: Distribution of sample with regard to pre-existing knowledge regarding types of angina pectoris and its prevention among adults

Level of knowledge score	Percentage score	Pre Test	
		Frequency	Percentage
Poor	0-20%	22	36.67
Average	21-40%	34	56.67
Good	41-60%	2	3.33
Very Good	61-80%	2	3.33
Excellent	81-100%	0	0.00

The above table no 2 shows the frequency and percentage wise distribution of adults according to pretest level of knowledge regarding types of angina pectoris and its prevention. The levels of knowledge were seen into 5 categories, poor, average, good, very good and excellent of adults 36.67% of the adults had poor, 56.67% had average

and each 3.33% had good and very good level of knowledge score.

Table 3: Significance of difference between knowledge scores in pre and posttest of adults in relation to types of angina pectoris and its prevention

Overall	Mean	SD	Mean Percentage	t-value	p-value
Pre Test	7.93	3.76	26.44	14.26	0.0001*HS p<0.05

HS- Highly Significant

Table no 3 depicts the overall mean knowledge scores of pretest and posttest which reveals that posttest mean knowledge score was higher 18.25 with SD of ±3.70 when compared with pretest mean knowledge score value which was 7.93 with SD of ±3.76.

The statistical Student's paired t test implies that the difference in the pretest and posttest knowledge score found to be 14.26 statistically significant at 0.05% level. Hence it is statistically interpreted that planned teaching programme on knowledge regarding types of angina pectoris and its prevention was effective. Thus H1 is accepted and H0 is rejected.

Table 4: Comparison of knowledge score in pretest and posttest n=60

Level of knowledge score	Percentage Score	Pre Test		Post Test	
		F	%	F	%
Poor	0-20%	22	36.67	4	6.67
Average	21-40%	34	56.67	54	90.00
Good	41-60%	2	3.33	2	3.33
Very Good	61-80%	2	3.33	0	0.00
Excellent	81-100%	0	0.00	0	0.00
Total		60	100	60	100

Table no 4 depicts the overall mean knowledge scores of pretest and posttest which reveals that in pretest majority of the adults 34(56.67%) had average knowledge and 36.67% had poor knowledge. In posttest majority of the adults 90% had average knowledge, 6.67% had poor and 3.33% had good knowledge. Hence H1 is accepted and H0 is rejected.

5. Discussion

This study demonstrated the feasibility of family practice network research inpursuing longitudinal research. A cross-sectional study was carried out in Langata Constituency of Nairobi County. The aim of this study was to determine the prevalence and interrelation of conventional and novel risk factors for coronary heart disease among an urban population in Kenya10. The design was based on a three-stage cluster sampling methodology. In conclusion, the prevalence of coronary heart disease risk factors remains high in this urban Kenyan population. High blood pressure and dyslipideamic are the major contributors to the overall risk as evidenced by the strong dyslipideamic prevention adherence rates at discharge have been improving over time, particularly as public reporting of hospital performance has been implemented. This thesis will focus on the development of these guidelines, trends in adherence to these recommendations in Washington State, and the

challenges of using theseendpoints as markers of the quality of health care delivery[11].

This study conducted on cardiovascular disease prevention by the general practitioners (GPs). More specifically:-To document the CVD risk profile of general population as defined by selected, authoritative preventive clinical guidelines, by means of modeling studies[12].The guidelines appear to overestimate CVD risk and fail to correctly identify a manageable proportion of the population as —high-risk individualsǁ, for whom individual preventive strategies would be effective and beneficial. The strategy of targeting individuals at risk ends up being recommended at the level of mass strategy, which can hardly be regarded as sustainable or responsible[13].

The study was conducted on use of secondary prevention medications (aspirin, HMG-CoA reductase inhibitors [statins], beta-blockers and angiotensin converting enzyme inhibitors [ACEIs]. A follow up telephone call was performed 6 to 9 months after discharge, and a standardized questionnaire completed detailing current medication use, reasons for non-adherence, and smoking status at time of the interview[14].The result shows that Prescribing of secondary prevention medications at discharge was found to be high (aspirin 94.5%, statins 95.7%, beta blockers 85.4%, ACEIs/ARBs 85.9%), and 70.7% of patients were discharged on a combination of all 4 drugs[15.] At 6 to 9 month follow-up, the proportion of patients using these medications had reduced by 8.9% for aspirin, 10.1% for statins, 6.2% for beta-blockers and 17.9% for ACEIs/ARBs. Only 47.2% remained on all 4 drugs, a reduction of 23.5%. Of the 56% of patients who were smokers on admission to hospital, 31% had stopped smoking at the time of interview[16].

6. Conclusion

The overall mean knowledge scores of pretest and posttest which reveals that in pretest majority of the adults 34(56.67%) had average knowledge and 36.67% had poor knowledge.In posttest majority of the adults 90% had average knowledge, 6.67% had poor and 3.33% had good knowledge.

7. Future Scope

Nursing Services
Nurses should enhance their professional knowledge**.** The finding of the study can be used to best knowledge bring about awareness among nurses regarding the need of education and emotional support and their effect on treatment of angina patient and care. The nurses can utilize their body of knowledge while caring with adults in case of angina pectoris. The information is particularly useful for nurses caring for this patient population. It also ensures the adults and relatives cooperation. This study will help the nurses for coordinating health care services.

Nursing Education
The result of the study can be used by nursing teacher as an informative illustration for nursing students. It helps the nurse educators to explain what isangina pectoris, what are

the types, meaning, etiology, diagnostic test and preventive measure. It can be helpful to tell the students also.

Nursing Administration

Findings of the study can be used by the Nursing Administrator in creating policies and plans in clinical practice. It will help the nursing administrators and school administrators to plan and make new protocols to increase the knowledge of types of angina pectoris and its prevention.

Nursing Research

The findings of the study have added to the existing body of the knowledge in the nursing students. Other researchers may utilize the baseline data, suggestions and

recommendations for conducting further study. The tool and technique used has added to the body of knowledge and can be used for further references.

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