

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON COMPLIANCE TO THERAPEUTIC REGIMEN AMONG CARDIAC PATIENTS WITH CARDIOVASCULAR DISEASE IN SELECTED HOSPITAL, KOLLAM.

Cardiology

Preethi Das* Second year M.Sc. Nursing student, Bishop Benziger College of Nursing Kollam.
*Corresponding Author

Mrs. Binutha V P HOD, Medical Surgical Nursing Department, Bishop Benziger College of Nursing Kollam.

ABSTRACT

Introduction: Achieving the health of a person is an ongoing and continuous process, formed by the health care knowledge and the practices, and also the personal strategies and organized interventions for staying healthy. The coronary arteries supply blood to the heart muscle and alternative blood supply exists, so a blockage in the coronary arteries reduces the supply of blood to heart muscle. Most of the cardiovascular diseases is caused by atherosclerosis, usually present even when the artery lumens appear normal by angiography.

Materials And Methods

- Research approach: Quantitative approach was used in this study.
- Research design: Quasi experimental pretest posttest control group design.
- Sampling Technique: Convenient sampling was used in this study.
- Sample: In this study, the sample consisted of 60 cardiovascular patients, 30 in the experimental group and 30 in the control group who fulfilled the inclusion criteria.
- Tools:

Section A: - Demographic proforma

Section B: - Checklist to assess the compliance to therapeutic regimen among cardiac patients.

Result: The data were analyzed using both descriptive and inferential statistics on the basis of the hypotheses of the study. Section A deals with the result of the sample characteristics under study. It included age in years, gender, education, occupation and previous knowledge of cardiac patients. The demographic characteristics of the selected samples were analyzed using descriptive statistics including frequency and percentage distribution. Section B deals with the evaluation of effectiveness of structured teaching program on compliance to therapeutic regimen among cardiac patients with cardiovascular disease. Pretest was conducted for both experimental and control group on first day followed by implementing structured teaching program and 14th day posttest were conducted. The structured teaching program provided only experimental group, with 20 minutes duration, no intervention was given for control group. The result of the study showed that the mean posttest compliance score of experimental groups (50.77 ± 5.08) was higher than the mean pretest score (35.83 ± 10.23). The calculated 't' value was greater than the table value at 0.05 level of significance. Hence the research hypothesis was accepted. So there was significance difference between pretest and posttest compliance score of patients diagnosed with cardiovascular disease in experimental group. This shows that structured teaching programme was effective in improving compliance to therapeutic regimen among cardiac patients with cardiovascular disease in selected hospitals.

Conclusion: The study revealed that there is statistically significant difference between mean pretest and posttest score on compliance of therapeutic regimen among cardiac patients with cardiovascular disease in experimental group. The study revealed that there is no significant difference between mean posttest score on compliance to therapeutic regimen among cardiac patients with cardiovascular disease in experimental and control group. The study revealed that there is no significant association between pretest compliance score and demographic variables like, age, gender, education, previous knowledge and occupation.

KEYWORDS

Compliance of therapeutic regimen, structured teaching program, patients with cardiovascular disease, outpatient department.

INTRODUCTION

Cardiovascular diseases (CVDs) are the number one cause of death globally, taking an estimated 17.9 million lives each year. CVDs are a group of disorders of the heart and blood vessels which include coronary heart disease, Cerebrovascular disease, rheumatic heart disease and other conditions.

Four out of five CVD deaths are due to heart attacks and strokes, and one third of these deaths occur prematurely in people under 70 years of age. Individuals at risk of CVD may experience raised blood pressure, glucose level, and lipids as well as overweight and obesity.

These can all be easily measured in primary care facilities. Identifying those at highest risk of CVDs and ensuring that they receive appropriate treatment can prevent premature deaths.

MATERIALS AND METHODS

Quantitative approach with quasi experimental pretest posttest control group design was used in this study. Institutional ethics clearance certificate was obtained from Bishop Benziger Hospital.

Samples were selected by convenience sampling method based on inclusion criteria. Informed consent was taken from the samples and pretest was administered. Immediately after the pretest, structured teaching program of 30 minutes was given to the samples in experimental group.

No intervention was given to control group. On the 7th day posttest was done in experimental and control group.

RESULTS

Graphical Representation of Demographic Variables

N=60

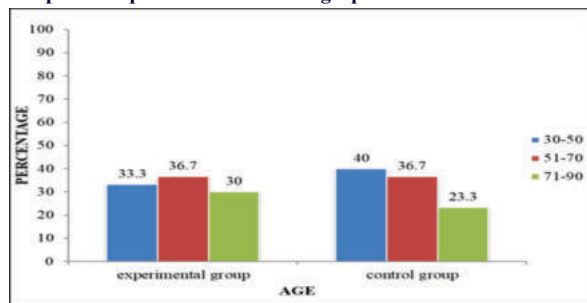


Figure 1: Percentage Wise Distribution Of Sample According To Age In Experimental And Control Group.

N=60

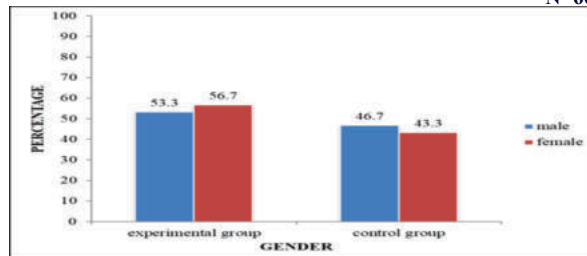


Figure 2: Percentage Wise Distribution Of Sample According To

Gender In Experimental And Control Group.

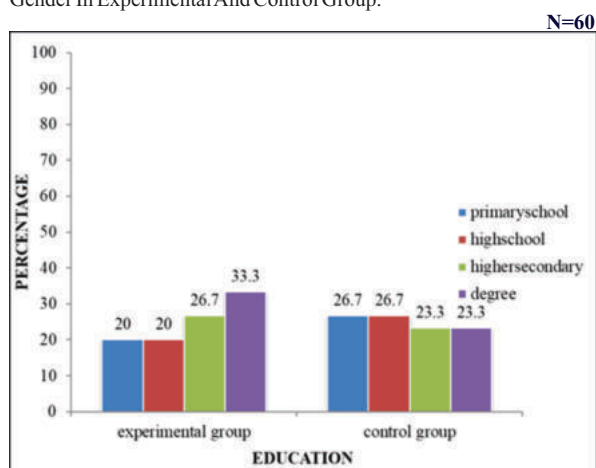


Figure 3: Percentage Wise Distribution Of Sample According To Education In Experimental And Control Group

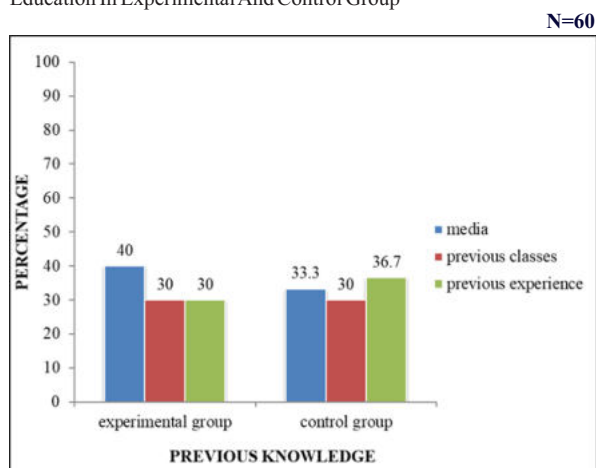


Figure 4: Percentage Wise Distribution Of Sample According To Their Previous Knowledge In Experimental And Control Group.

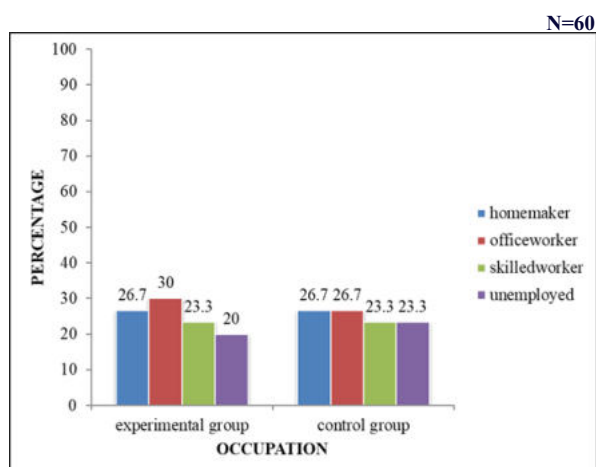


Figure 5: Percentage Wise Distribution Of Sample According To Occupation In Experimental And Control Group.

Section II: Frequency And Percentage Distribution Of Compliance Scores Of Therapeutic Regimens Among Cardiac Patients With Cardiovascular Disease.

The data were tabulated and analysed in terms of frequency and percentage. The score range was categorized as poor (20-40), average (41-50) and good (51-60).

Table 1: Frequency And Percentage Distribution Of Compliance

78	International Journal of Scientific Research
----	--

Scores Of Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease.

Sl No	Compliance Score	Experimental Group		Control Group	
		Frequency	Percentage	Frequency	Percentage
1.	Poor Compliance (20-40)	19	63.3%	18	60%
2.	Average Compliance (41-50)	6	20%	7	23.3%
3.	Good Compliance (51-60)	5	16.7%	5	16.7%

Data in the table 1 shows that in experimental group, 63.3% of sample had poor compliance to therapeutic regimen, 20% had average compliance to therapeutic regimen, and 16.7% of the sample had good compliance to therapeutic regimen. In control group, 60% of sample had poor compliance to therapeutic regimen, 23.3% had average compliance to therapeutic regimen, and 16.7% had good compliance related to therapeutic regimen among cardiac patients with cardiovascular disease.

Section B

Table 2: Mean, Standard Deviation And T Value Of Pretest And Posttest Compliance Score On Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease In Experimental Group (N=30)

Test	Mean	standard deviation	t value
Pretest	35.83	10.23	12.17
Posttest	50.77	5.08	

Table value $t(29) = 2.05$ $p < 0.05$ level of significance

Table 2 shows the mean, standard deviation and t value of pretest and posttest compliance score on therapeutic regimen among cardiac patients with cardiovascular disease in experimental group. The calculated paired 't' value (12.17) is greater than table value (2.05) at 0.05 level of significance. Hence the research hypothesis H_1 - There is significant difference between mean pretest and posttest score on compliance to therapeutic regimen among cardiac patients with cardiovascular disease - was accepted.

Table 3: Mean, Standard Deviation And 't' Value Of The Pretest And Posttest Compliance Score Of Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease In Control Group. (N=30)

Test	Mean	standard deviation	t value
Pretest	36.03	9.45	1.37
Posttest	35.17	6.75	

Table value $t(29) = 2.05$ $p < 0.05$ level of significance

Table 3 shows the mean, standard deviation and t value of pretest and posttest compliance score on therapeutic regimen among cardiac patients with cardiovascular disease in control group. The calculated paired 't' value (1.37) is less than table value (2.05) at 0.05 level of significance. So, there is no significant difference in the mean pretest and posttest compliance of therapeutic regimen among cardiac patients with cardiovascular disease in control group.

Table 4: Mean, Standard Deviation And T Value Of Pretest Compliance Score Of Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease In Experimental And Control Group. (N=60)

Pretest	Mean	standard deviation	t value
Experimental group	35.83	10.23	0.07
Control group	36.03	9.45	

Table value $(t_{59} = 2.00)$ $p < 0.05$ level of significance

The calculated 't' value is less than tabulated value at 0.05 level of significance, hence there is statistically no significant difference between the mean pretest score on compliance of therapeutic regimen among cardiac patients with cardiovascular disease in experimental and control group. Thus, the homogeneity of the sample was ensured.

Table 5: Mean, Standard Deviation And T Value Of Mean Posttest Score On Compliance Of Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease In Experimental And Control Group (N=60)

Posttest	Mean	standard deviation	t value
Experimental group	50.77	5.08	10.10
Control group	35.17	6.75	

Tabulated t (t=2.00) p<0.05 level of significance

The calculated 't' value (10.10) is greater than tabulated value (2.00) at 0.05 level of significance. There is significant difference between mean posttest score on compliance to therapeutic regimen among cardiac patients with cardiovascular disease of experimental and control group. Hence the hypothesis H₂ was accepted.

Section C

Table 6: Association Between Pretest Compliance Scores To Therapeutic Regimen Among Cardiac Patients With Cardiovascular Disease And Selected Demographic Variables. Chi-square Value Showing Association Between Pretest Knowledge Score With Selected Demographic Variable Like Age In Years, Sex, Education, Occupation, Previous Knowledge Regarding Cardiac Disease.

Sl no	Demographic variables	Compliance			X ²	df	Table value	Significance
		Poor	Average	Good				
1. Age in years								
	a. 30-50	15	7	0	3.61	2	5.99	NS
	b. 51-70	13	9	0				
	c. 71-90	14	2	0				
2. Gender								
	a. Male	21	11	0	0.23	1	3.84	NS
	b. Female	20	8	0				
3. Education								
	a. Primary school	13	3	0	7.61	6	12.59	NS
	b.High school	11	7	0				
	c.Higher secondary	11	5	0				
	d. Degree	5	5	0				
4. Previous knowledge								
	a. Media	17	5	0	0.88	2	5.99	NS
	b. Previous classes	13	7	0				
	c.Previous experience	12	6	0				
5. Occupation								
	a.home maker	12	4	0	1.51	3	7.82	NS
	b.office worker	10	7	0				
	c.skilled worker	10	3	0				
	d.unemployed	10	4	0				

Significant at 0.05 level NS Non significant S significant

The association between pretest compliance score and selected demographic variables were calculated using chi square test. The chi square values of all the demographic variables were higher than the table value at 0.05 level of significance. So, there was no significant association between compliance score and demographic variables like age, gender, education, previous knowledge, and occupation.

DISCUSSION

The findings of the present study were supported by another quantitative study conducted to evaluate the effectiveness of structured teaching program on compliance to therapeutic regimen among cardiac patients with cardiovascular disease in selected hospitals, Erode. In both the studies quasi experimental pretest posttest control group design was used. Convenient sampling technique was used in both studies. Both the studies had 60 participants as sample size. The findings of both studies revealed that the compliance score to

therapeutic regimen in the experimental group was significantly higher than the control group. Both studies arrived at the conclusion that structured teaching program was effective in increasing the level of compliance to therapeutic regimen among cardiac patients with cardiovascular disease.

REFERENCES

- Levit M. The Future of the Public's Health in the 21st Century. [Thesis on the Internet]. Washington: The Health Care Delivery System; 2002 [Cited 2019 Nov 20] Available from <https://www.ncbi.nlm.nih.gov/books/NBK221227/>.
- Wikipedia free encyclopedia. Cardiovascular disease. [Cited 2019 Nov 20] Available from https://en.wikipedia.org/wiki/Cardiovascular_disease.
- WHO. Cardiovascular diseases: Geneva: WHO Publications; 2017.
- Wikipedia free encyclopedia. Acute coronary syndrome. [Cited 2019 Dec 05] Available from https://en.wikipedia.org/wiki/Acute_coronary_syndrome.
- Mendis S. Global progress in prevention of cardiovascular disease. Cardiovasc Diagn Ther. 2017; 7(1): 32-8.
- MR Bhattacharyya, L Perkins-porras, DL Whitehead. A stepwise psychological and clinical predictors of return to work after cardiovascular disease. Eur Heart J. 2007; 28(7): 42-8.
- Bhetor M. Kerala health statistics. [Thesis on the Internet]. Maharashtra: Indus Health Plus; 2011 [Cited 2019 Dec 10] Available from <https://www.indushealthplus.com/kerala-health-statistics.html>.
- Migwed J, Joase M, Rose B. Educational qualities and cardiovascular risk factors a cross sectional population based study in southern Spain. ANA J. 2014; 15(2): 52-5.
- Polit DF, Beck CT, editors. Essentials of nursing research appraising evidence for nursing practice. 7th ed. New Delhi: Wolters Kluwer; 2010.
- Kenny JW, Christensen PJ. Nursing process Application of conceptual model. 4th ed. Philadelphia: Mosby publishers; 1995.
- Grace MG, Kumar SK, Siva S, Ramakrishnan, Sanjeev KG. Cardiovascular risk factors and its knowledge among school children of Delhi. Indian Heart J. 2014; 66(3): 263-71.
- Suadcani P, Hein HO, Gynzelberg F. Antihypertensive treatment high triglycerides and low high density lipoprotein cholesterol and risk of ischemic heart disease mortality a 16 year follow up in the Copenhagen male study. J Am Coll Cardiol. 2010; 55(25): 2833-42.
- Ochoa A, Andrade S, Huynh T, Verstraeten R, Lachat C, Rojas R, et al. Prevalence and socioeconomic differences of risk factors of cardiovascular disease in Ecuadorian adolescents. Pediatr Obes. 2012; 7(4): 274-83.
- Anand S, Hawkes C, Desuza JR, Mente A. Food Consumption and its Impact on cardiovascular disease importance of solutions focused on the globalized food system report from the workshop convened by the world heart federation. J Am Coll Cardiol. 2015; 66(14): 1590-1614.
- Cobb SI, Brown DJ, Davis LL. Effective interventions for lifestyle change after myocardial infarction or cardiovascular disease J Acad Nurse Pract. 2006; 18(1): 31-9.
- Fernandes CE, Pinho JL, Gebara OE, Santos RD, Pinto AM, Pereira AS, et al. Brazilian guideline on cardiovascular disease prevention in climacteric women and the influence of hormone replacement therapy of the Brazilian Cardiology Society and the Brazilian association of climacteric. Arq Bras Cardiol. 2008; 91(1): 1-23.
- Frank BH. Plant based foods and prevention of cardiovascular disease an overview. American J Clin Nutr. 2003; 78(3): 544-51.
- Bartecchi C, Alsever RN, Nevin WN, Thomas WM, Estacio RO, Bartelson BB, et al. Reduction in the incidence of acute myocardial infarction associated with a citywide smoking ordinance. National Lib Med. 2006; 114(14): 1490-6.
- Desouza JF, Araujo BS, Delima GC, Dornelas AA, Campos SL, Aguiar MR, et al. Effect of exercise on endothelial function in heart transplant recipients: systematic review and meta analysis. Heart Fail Rev. 2020; 25(3): 487-4.
- Aladin AI, Whelton SP, Almallah MH, Micheal JB, Steven J, Stephen P, et al. Relation of resting heart rate to risk for all-cause mortality by gender after considering exercise capacity. Am J Cardiol. 2014; 114(11): 1701-1706.
- Buys R, Coeckelberghs E, Cornelissen VA, Goetschalckx K, Vanhees L. Prognostic value of the post training oxygen uptake efficiency slope in patients with coronary artery disease. Eur J Prev Cardiol. 2016; 23(13): 1363-71.
- Almerud OS, Baigi A, Bering C, Fridlund B. Knowledge of heart disease risk in patients declining rehabilitation. Br J Nurs. 2010; 19(5): 288-93.
- Dharan M, Dhanya S. Factors influencing compliance to therapeutic regimen among patients with hypertension. Asian J Pharma Clin Res. 2017; 10(12): 286.
- Kones R. Is prevention a fantasy or the future of medicines a panoramic view of recent data status and direction in cardiovascular prevention. Therapeutic advances in cardiovascular disease. 2011; 17(5): 61-81.
- Sharma KS. Nursing research and statistics. 2nd ed. New Delhi: Elsevier Publishers; 2012.
- Nieswiadomy MR. Foundations of nursing Research. 3rd ed. USA: Prinrice hall; 1998.
- Burns N, Groove SK. Understanding nursing research. 2nd ed. New Delhi: Saunders Publishers; 2002.
- Wood GR, Haber J. nursing research methods and critical appraisal for evidence based practice. 6th ed. Philadelphia: Mosby publishers; 2006.
- Treece EW, Trace JW. Elements of research in nursing. 1st ed. Philadelphia: Mosby Company; 1995.
- Tablot LA. Principles and practice of nursing research. Philadelphia: Mosby Publishers; 1995.
- Manap NA, Sharoni S, Rahman PA, Majid H. Effect of an education programme on cardiovascular health index among patients with myocardial infarction a preliminary study. MJMS. 2018; 25(2): 105-115.
- Tomey AM, Alligood MR. Nursing theories and their work. 6th ed. Missouri: Mosby Elsevier; 2006.