'Effectiveness Of Structured Teaching Program On Hypertensive Heart Disease And Its Prevention Among Patients At Apollo Hospital Madurai.

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Abstract:
Hypertensive heart disease refers to heart conditions caused by high blood pressure. It's not a single disease, but rather, a number of different heart disorders all caused by the same thing the heart working under increased pressure. Hypertensive heart disease includes, among other conditions, heart failure, thickening of the heart muscle, and coronary artery disease. Coronary heart disease, for example, occurs when high blood pressure causes narrowing of the blood vessels that supply your heart with blood and oxygen. Hypertensive heart disease can be dangerous and is the leading cause of death from high blood pressure.
Background: *The main risk factor for hypertensive heart disease is high blood pressure, risk increases if overweight or get too little exercise. Smoking and eating high-fat foods and a diet rich in cholesterol also increase risk. Also, men are more likely to get heart disease than women, at least until the age of menopause; men and postmenopausal women are equally at risk. As we grow older, our risk for heart disease increases whether we are male or female. Heart disease is the leading cause of death for both men and women in the United States. In 2008, over 616,000 Americans died f and rom heart disease (CDC).*
Materials and Methods: *The research approach adopted for the study was pre experimental approach. The research design selected for the study was pre-experimental one group pre-test post-test research design.*
Convenience sampling technique was used for the study. Sixty patients were selected for this study.
The tool used for the data collection was structured knowledge questionnaire, which has two sections. Section-A was about socio-demographic data and Section-B dealt with knowledge on Hypertensive heart diseases. Collected data was analyzed by using descriptive and inferential statistics in terms of frequencies, percentage, mean, standard deviation, paired 't' test and chi-square values.
Results: *The difference of pre-test and post-test knowledge scores of patients regarding hypertensive heart disease. In pre-test, the overall mean score was 13.84±5.39 whereas the mean post-test score was 28.64±4.61. The enhancement mean score was 14.8±0.78. The obtained 't' value was 10.59, which was higher than the table value 2.6 so it is highly significant at P≤0.05 level.*
Conclusion: *This study was conducted to evaluate the effectiveness of Self-instructional module regarding hypertensive heart disease and its prevention among. In the present study 60 patients were selected by simple random sampling technique.*
Key Word: *Evaluate, Effectiveness, Patients, Self-instructional module,hypertensive heart disease, prevention, Socio-demographic variables.*

I.   Introduction

Hypertension or high blood pressure affects at least 1 billion people worldwide. Hypertensive heart disease is only one of several diseases attributable to high blood pressure. Other diseases caused by high blood pressure include ischemic heart disease, stroke, peripheral arterial disease, aneurysms and kidney disease. Hypertension increases the risk of heart failureby two or three-fold and probably accounts for about 25% of all cases of heart failure. In addition, hypertension precedes heart failure in 90% of cases and the majority of heart failure in the elderly may be attributable to hypertension.

Hypertensive heart disease was estimated to be responsible for 1.0 million deaths worldwide in 2004 (or approximately 1.7% of all deaths globally), and was ranked 13th in the leading global causes of death for all ages. A world map shows the estimated disability-adjusted life years per 100,000 inhabitants lost due to hypertensive heart disease in 2004.

About 15 % - 37% of the adult population worldwide is affected with hypertension. In those older than 60 years of age, as many as one-half are hypertensive in some populations. In general, hypertension prevalence is higher in urban settings compared to rural settings. In 1997, an assessment commissioned for the WHO and

HOC committee on Health Research estimated the percentage of deaths globally that were associated with common risk factors. For 1990, smoking and hypertension were the major causes of global mortality.

Cardiovascular disease is a leading cause of mortality and is responsible for one third of all global deaths. Nearly 85% of the global mortality and disease burden from CVD borne bylow and middle income countries. In India, for example, approximately 53% of CVD deaths are in people younger than 70 years of age; in China, the corresponding figure is 35%. The majority of the estimated 32 million heart attacks and strokes that occur every year are caused by one or more cardiovascular risk factors – Hypertension, diabetes, smoking, high levels of blood lipids and physical inactivity.

II. Material And Methods

This study was conducted to evaluate the effectiveness of STP regarding hypertensive heart disease among patients at Apollo hospitals Madurai. In the present study 60 patients were selected by simple random sampling technique.

Research design: - quasi exprimental pre-experimental one group pre and post test design

Setting: - apollo speciality hospital madurai .

Target population: -patients above the age group of 18 yrs .

Accessible population: - patients at apollo hospitals madurai

Sample: - 60 samples of patients

Tool: - structured knowledge questionnaire

Intervention: -. Self-instructional module

Data analysis: - the knowledge regarding prevention of hypertensive heart disease among admitted Patients would be measured in terms of knowledge score. Structured knowledge questionnaire would be prepared to assess on knowledge consisted of three responses each with one right answer. Each correct answer was given a score of one and a wrong answer score of zero. The total attainable score in the knowledge questionnaire is 20.

The total score is converted in to percentage and the resulting score is ranged as follows;

Level of knowledge	Scores	Percentage (%)
Inadequate	< 10	< 50
Moderate	13-16	51-75
Adequate	17-20	76-100

Inclusion criteria:
The Study includes who are:
a) IP Patient above age group of 18yrs.
b) Willing to Participate in the study.
c) Available at the time of data collection
d) Whose stay is minimum 3 days and above.

Exclusion criteria:
Study excludes who are:
a) Not available at the time of data collection
b) Patients stay less than 3 days
c) Op Patients

Methodology

This chapter deals with the methodology adopted for the present study such as research approach, research design, setting, variables, population, sample, sampling technique, sampling criteria, development of tool, content validity, reliability, pilot study, method of data collection, plan for data analysis. The present study is aimed to evaluate the effectiveness of STP on hypertensive heart disease of Patients at Apollo hospitals Madurai.

Research Approach

The research approach explains the researcher regarding the data collection that is, what to collect, how to collect, and how to analyze. It also suggests possible conclusions to be drawn from the available data. The investigator used an pre experimental approach to conduct the study.

In the view of the nature of the problem and to accomplish the objectives of the study pre-experimental one group pre-test and post-test design was used to evaluate the effectiveness of SIM on hypertensive heart disease among patients admitted at Apollo hospitals Madurai.

$$O_1 \rightarrow X \rightarrow O_2$$
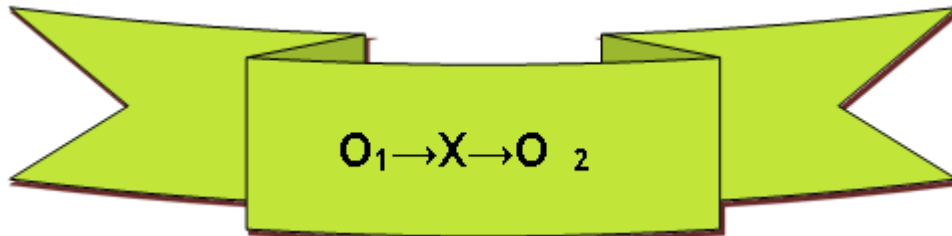
Fig.2: Schematic Representation of Research Design

Keys

O_1- Pre-test– Pretest on knowledge regarding hypertensive heart disease X - Intervention (Structured Teaching Programme)

O_2 – Post-test to evaluate the effectiveness of SIM on knowledge regarding hypertensive heart disease among patients.

Statistical analysis

The data analysis is the systematic organization and synthesis of research data and testing hypothesis.[52] It involves the translation of information in the interpretable and managing form. The data obtained was analyzed by using both descriptive and inferential statistics on the basis of objectives and hypothesis of the study.

☐ Socio demographic data containing sample characteristics will be analyzed using frequencies and percentage.

☐ The knowledge scores before and after the administration of the Self Instructional Module will be calculated by using mean and standard deviation.

☐ The significant difference between the mean pre-test and post-test score would be analyzed by paired 't' test.

☐ Associations between pre-test knowledge scores of patients regarding hypertensive heart disease with their selected socio demographic variables would be analyzed by using chi square (χ^2) test.

☐ The level of significance will be set at $p \leq 0.05$ levels for paired 't' test and chi square test

☐ In the view of the nature of the problem and to accomplish the objectives of the study pre-experimental one group pre-test and post-test design was used to evaluate the effectiveness of STP on hypertensive heart disease among patients admitted at Apollo hospitals Madurai

III. Result

Overall and aspects wise knowledge scores on hypertensive heart disease among patients

Table-1: Classification of pre-test knowledge scores on hypertensive heart disease among patients

| Level of Knowledge	Score	No of Respondents (%)	
		No	%
Inadequate	< 50%	49	81.67
Moderate	51-75%	11	18.33
Adequate	>76%	0	0.0
Total		60	100

N=60
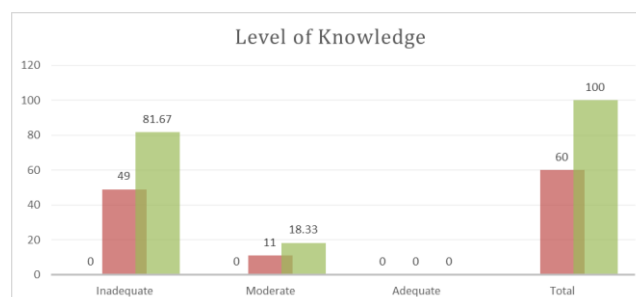
Table 2 : Aspect wise pre-test mean knowledge scores of patients onhypertensive heart disease.

Aspects wise knowledge	Max Statement	Max Score	Range	Mean	SD
General information of hypertensive heart disease	15	15	5-13	7.68	4.67
Prevention of hypertensive heart disease	15	15	3-11	6.16	3.92
Overall	30	30	8-24	13.84	5.39

N=60

Table-3: Classification of post-test level of knowledge on hypertensive heart disease among Patients .

N=60

Level of Knowledge	Score	No of Respondents (%)	
		No	%
Inadequate	< 50%	0	0
Moderate	51-75%	21	35
Adequate	>75%	39	65
Total		60	100
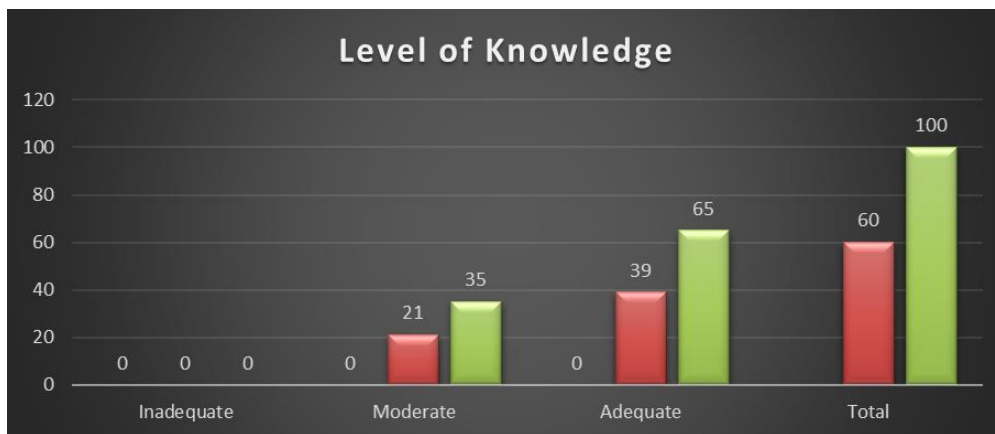
Table-4: Aspect wise post-test mean knowledge scores of Patients got admitted at Apollo Speciality Hospital Madurai

N=60

Aspects wise knowledge	Max Statement	Max Score	Range	Mean	SD
General information hypertensive heart disease	15	15	12-17	14.71	2.29
Prevention of hypertensive heart disease pregnancy	15	15	8-17	13.93	3.07
Overall	30	30	20-34	28.64	4.61

Comparison of mean pre-test and post-test knowledge scores to evaluate the effectiveness of structured teaching programme.

Table-5: overall mean pre-test and post-test knowledge on hypertensive heart diseaseamong III BSc nursing students

N=60

Aspect	MaximumScore	Knowledge of Respondents		Paired 't'test
		Mean	SD	
Pre-test	30	13.84	5.39	
Post-test	30	28.64	4.61	**10.59**
Enhancement	30	14.8	0.78	

**Significant at P<0.05 level, df 59, table-value 2.6

The above table shows that, the obtained value (10.59) were significantly higher than thetable value (2.6) at $P \leq 0.05$ level of significance. Hence the research hypothesis H_1 is accepted

Table-5: Aspect wise mean pre-test and post-test knowledge scores hypertensive heart disease among Patients

N=60

Sl: No:	Aspect wise knowledge	Knowledge of respondents				Paired 't' test
		Pre-test		Post-test		
		Mean	SD	Mean	SD	
I	General information of hypertensive heart disease	7.68	4.67	14.71	2.29	**7.34****
II	Prevention of hypertensiveheart disease	6.16	3.92	13.93	3.07	**6.91****
	Overall	13.84	5.39	28.64	4.61	**10.59****

*****Significant at P<0.05 level, df 59, table-value 2.6*

The below table-6 shows that, the aspect wise mean pre-test and post-test knowledge scores on hypertensive heart disease among 60 patients. With regard to general information of hypertensive heart disease, the mean scores in pre-test and post test were 7.68±4.67 and 14.71±2.29 respectively, obtained 't' value was 7.34. In area of prevention of hypertensive heart disease, mean scores in pre-test was 6.16±3.92 and in post-test was 13.93±3.07 and obtained 't' value was 6.91. The overall 't' value was 10.59 which was above the table value 2.6 at P≤0.05 level of significance.

The above table-7 shows that, the aspect wise mean pre-test and post-test knowledge scores on hypertensive heart disease among 60 patients. With regard to general information of hypertensive heart disease, the mean scores in pre-test and post test were 7.68±4.67 and 14.71±2.29 respectively, obtained 't' value was 7.34. In area of prevention of hypertensive heart disease, mean scores in pre-test was 6.16±3.92 and in post-test was 13.93±3.07 and obtained 't' value was 6.91. The overall 't' value was 10.59 which was above the table value 2.6 at P≤0.05 level of significance.
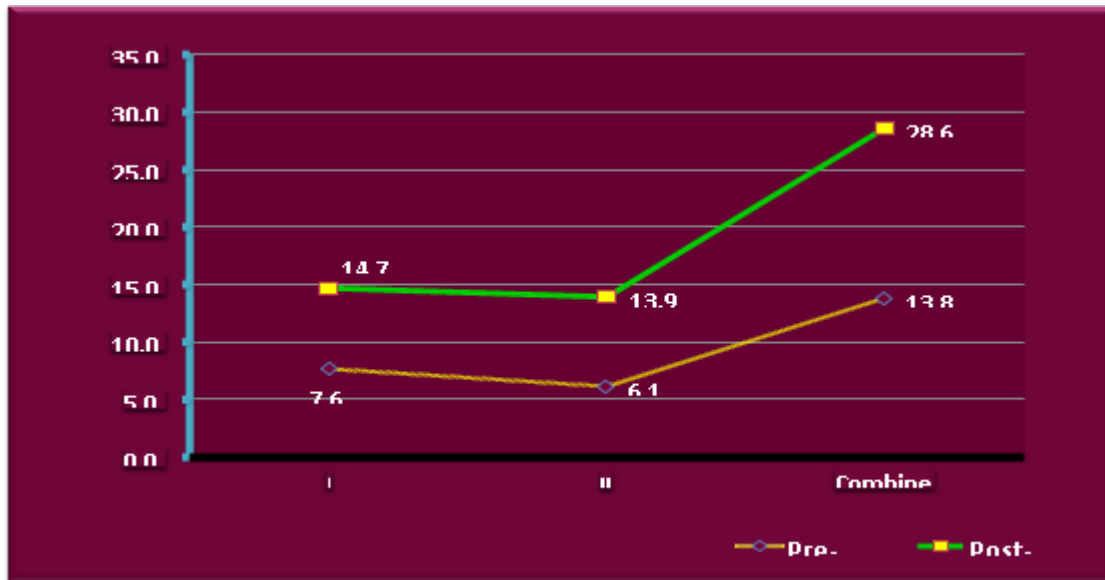
IV.   Conclusion:

This chapter deals with the finding of the study and their nursing implications. This study conducted to evaluate the effectiveness of SIM regarding hypertensive heart disease among patients at Apollo hospitals madurai. In the present study 60 patients are selected by convenience sampling method .

The research approach adopted for this study was pre experimental approach with quasi experimental one group pre-test post-test research design with a view to measure the pre-test knowledge level and the effectiveness associated with the post-test knowledge level following administration of SIM on hypertensive heart disease among the patients .

The data analysed using descriptive and inferential statistics. Descriptive statistics like mean, mode, median, and percentage standard deviation will be used. Inferential statistics like 't' test and Chi- square methods were used .

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