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Evaluate the effectiveness of STP on knowledge regarding prevention of heart diseases among patients with hypertension attending OPD in J. K. Hospital, Bhopal, Madhya Pradesh

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Abstract
Background: Hypertension is one of the most crucial health problem and the most common chronic disease in developed and underdeveloped countries. An estimated 972 million people in the world wide suffering from high blood pressure. Incidence rate of hypertension range 3% to 18% depending on the age, gender, ethnicity & body size.

Material & Methods: A Pre experimental study with one group pre-test post-test design with evaluative approach was adopted for the present study. The structured knowledge questionnaire was developed to collect the data from 40 hypertensive patients attending OPD in J.K. Hospital Bhopal. The samples were selected by using Non Probability convenient sampling technique and written& informed consent was taken from the Hypertensive patients.

Results: The finding of the study was found that pre test mean knowledge was (7.575+2.11) and post test mean knowledge score was (14.7+1.95) The significance of finding was obtained by using paired "t" test, the value of knowledge score was 29.28 ($p<0.005$) emphasizing the significance of findings

Conclusion: This study concludes that there is improvement in the level of knowledge of patient with hypertension which indicates that the structured teaching programme is effective. The socio demographic variables of patient with hypertension significantly associated with the pre test knowledge score.

Keywords: hypertension, hypertensive patients, structured teaching programme, heart disease

Introduction
Hypertension is one of the most crucial health problem and the most common chronic disease in developed and underdeveloped countries although hypertension is a preventable and treatable condition but without treatment it leads to serious and life threatening complications such as heart, kidney, and brain disorders which in most cases results in patient's disability. It was found in 2000 that 26% of the adult population of the world had hypertension and by 2025 29% were projected to have this condition. It was also estimated that 972 million adults had hypertension in 2000, and it was predicted that by2025 the number of adults with hypertension will increase to a total of 1, 56 billion.

Kavitha. T, (2015), reported that hypertension related cardiovascular disease caused 2.3 million deaths in India in the year 1990; this is projected to double by the year 2020. Hypertension is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease deaths in India.

American Heart Association, (2015), stated that cardiovascular disease is the leading global cause of death, accounting for 17.3 million deaths per year, a number that is expected to grow to more than 23.6 million by 2030.

Need for the study
Cardiovascular disease is an abnormal function of the heart or blood vessels. It can cause an increase in risk for heart attack, heart failure, sudden death, stroke and cardiac rhythm problems, thus resulting in decreased quality of life and decreased life expectancy. The causes of cardiovascular disease range from structural defects, to infection, inflammation, environment and genetics.

WHO (2014) reported that globally cardio-vascular disease accounts for approximately 17 million deaths a year, nearly one-third of the total deaths Dr. Nikhil Kumar, Director, Cardiology, Fortis Memorial Research Institute, Gurgaon, (2015) in India, out of the

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estimated population about 45 million people suffer from coronary artery disease. According to current estimates, India will soon have the highest number of cases of cardiovascular disease in the world. It is estimated to account for 35.9% deaths by the year 2030.

Joint National Committee -7(JNC-7), (2003), depicted that there is a direct relationship between hypertension and heart disease. It has been observed that there is a proportional increase in the risk of myocardial infarction, heart failure, stroke, and renal disease with higher Blood Pressure.

Damayanthi S, (2017) [1], stated that CAD is a fetal disease with no known cure; it is also highly predictable, preventable and treatable with the existing knowledge. Previous studies have shown variable success and the efforts at both primary and secondary prevention on CAD. Among the general public are still lacking and require proper education programme regarding lifestyle modification.

Problem statement
Evaluate the effectiveness of STP regarding knowledge on prevention of heart diseases among patients with hypertension attending OPD in J. K. Hospital, Bhopal, Madhya Pradesh.

Objectives
1. To assess the pre and post test knowledge score of patients with hypertension regarding prevention of heart disease before and after implementation of STP.
2. To evaluate the effectiveness of STP regarding prevention of heart disease among patients with hypertension.
3. To find out the association between pre-test knowledge score of patients with hypertension regarding prevention of heart disease with their selected demographic variables.

Materials and Methods
The present study is aimed at exploring the effect of structured teaching programme on knowledge regarding prevention of coronary artery disease among hypertensive patients. Quantitative & Experimental method with evaluative approach was used in present study. A Pre experimental design with one group pre test- post test design was adopted for the present study. The study was conducted in J.K Multi-specialty Hospital, Bhopal, M.P. The out patients departments were selected for data collection. In

this present study patients diagnosed with hypertension attending OPD in J.K. hospital, Bhopal. The sample size selected for the study is 40. & Non Probability Convenient sampling technique was used to select the sample. Informed consent was obtained in their regional language (Hindi). The pre test was administered and followed by structured teaching programmed was conducted. The samples were called for the post test after seven days and the same tool was used to collect that data then scored as for each item.

Result
Demographic social variable reveals that 32.5% of them were belong to 41-50 years age group, 55% of them were male Patients, 47.5% had secondary education, 22.5% of them were government employee, 72.5% of them were vegetarian, 57.5% of them were duration of hypertension 1-3 years, 67.5% of them had family history of hypertension, 80% of the patients do not have smoking and alcohol habits, only 22.5% of them were regular physical activities.

Table 1 depicts that in the pretest 57.5% of the patients were having inadequate knowledge whereas, 55% & 45% of them had moderate & adequate knowledge in post test respectively. It reveals that there is a significant improvement in the post test knowledge scores after implementation structured teaching programme.

Pretest mean knowledge score was (7.575 ± 2.11), whereas in post test mean knowledge score was (14.7 ± 1.95) and the mean difference was 7.125. There is a highly significant difference between the pre and post test knowledge score (t= 29.28 & $p < 0.05$).

Discussion
The findings of the study are supported by a study conducted by Ujjawala Ramchandra *et al*., (2015), to evaluate the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Coronary Artery Disease among 30 Adults in Kale Village Karad. It was found that there was deficit in knowledge about Heart Disease among adults during pre test percentage (46.17%), and post test knowledge percentage (70 %), and actual gain score was 23.83 The mean post –test knowledge score was found significantly higher than the pre test score therefore the structured teaching programme on Prevention of CAD is effective in improving the knowledge among adults.

Table 1: Distribution of samples based on pre test and post test knowledge score.

Sl. No	Knowledge level	Frequency		Percentage		Mean &SD		Paired 't' test value
		Pre Test	Post Test	Pre Test	Post Test	Pre test	Post Test	
1	Inadequate Knowledge	23	00	57.5	00			
2	Moderate Knowledge	17	22	42.5	55	7.575	14.7	29.28*
3	Adequate Knowledge	00	18	00	45			

$T_{39} = 2.023$ * Significant $p < 0.05$

Conclusion
After conducted the study, the investigator reached at the conclusion that half of (55%) the patient had average knowledge about prevention of heart disease. Structured teaching programme (health teaching) was found to be effective and they achieved good knowledge regarding prevention of heart disease.

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