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## **A Study to Evaluate the Effectiveness of Structured Teaching Programme on Hypertensive Heart Disease among III BSc Nursing Student in Selected Nursing Colleges at Bangalore.**

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### **ABSTRACT**

Back ground of the study

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. 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 from heart disease (CDC).

Aim

The aim of this study was to evaluate the effectiveness of structured teaching programme on Hypertensive heart diseases among III Bsc Nursing at selected Nursing colleges, Bangalore.

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### **INTRODUCTION**

—Prevention is better than cure, says the doctor. But in life, it is better to be cured than to be prevented, so you can know the worth of life. |

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.<sup>1</sup>

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 from heart disease (CDC). The signs and symptoms of hypertensive heart disease will depend on whether or not it is accompanied by heart failure. In the absence of heart failure, hypertension, with or without enlargement of the heart (left ventricular hypertrophy) is usually symptomless. Symptoms and signs of chronic heart failure can include: Fatigue, Irregular pulse or palpitations, Swelling of feet and ankles, Weight gain, Nausea, Shortness of breath, Difficulty sleeping flat in bed, (orthopnea) Bloating and abdominal pain, Greater need to urinate at night Altered mentation (in severe cases) An enlarged heart (cardiomegaly) Patients of can present acutely with heart failure and pulmonary edema due to sudden failure of pump function of the heart.<sup>3</sup>

Hypertension is a major risk factor for cardiovascular morbidity and mortality. The presence of hypertension more than doubles the risk for coronary heart disease, including acute myocardial infarction and sudden death, and more than triples the risk of congestive heart failure as well as strokes.<sup>4</sup>

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 failure by 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.<sup>3</sup>

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.<sup>5</sup>

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.<sup>6</sup>

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 by low 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.

Monitoring and preventing our blood pressure from getting too high is one of the most important ways to prevent hypertensive heart disease, Eating a healthy diet that is low in salt and unhealthy fats will help reduce your risk, Exercising regularly, maintaining a healthy weight, reducing alcohol intake, and not smoking are also important preventive steps. The goals of chronic antihypertensive therapy for individuals with early manifestations of hypertensive heart disease (e.g., LVH or diastolic dysfunction) are different from the goals for other hypertensive individuals. First, sufficient BP lowering must be achieved in order to relieve the mechanical stress initiating pathophysiological processes in susceptible individuals.<sup>8</sup>

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## NEED FOR THE STUDY

Hypertension is a major problem in India and the most prevalent chronic disease. Most of the subjects have mild to moderate hypertension and the initial strategies for management involve lifestyle changes focusing on reduction of dietary salt, fat and alcohol and increase in potassium and fruits and vegetables. Weight management and reduction in obesity and truncal obesity, regular physical exercise, tobacco cessation and stress management are important.

Pharmacological treatment should be initiated after lifestyle interventions and choice of drug depends on age, the overall cardiovascular risk and comorbidities. Management should focus on comprehensive risk reduction for better prognosis.<sup>9</sup>

Hypertension is a risk factor for coronary heart disease and the single most important risk factor for stroke. It causes about 50% of ischemic strokes and increases the risk of hemorrhagic stroke. Hypertension stresses your body's blood vessels, causing them to clog or weaken. Hypertension can lead to atherosclerosis and narrowing of the blood vessels making them more likely to block from blood clots or bits of fatty material breaking off from the lining of the blood vessel wall. Damage to the arteries can also create weak places that rupture easily or thin spots that balloon out the artery wall resulting in an aneurism.<sup>10</sup>

The cause of hypertensive heart disease is chronically elevated blood pressure (BP); however, the causes of elevated BP are diverse. Essential hypertension accounts for 90% of cases of hypertension in adults. Secondary causes of hypertension account for the remaining 10% of cases of chronically elevated BP.

According to the Framingham Study, hypertension accounts for about one quarter of heart failure cases. In the elderly population, as many as 68% of heart failure cases are attributed to hypertension. Community-based studies have demonstrated that hypertension may contribute to the development of heart failure in as many as 50-60% of patients. In patients with hypertension, the risk of heart failure is increased by 2-fold in men and by 3-fold in women.<sup>11</sup>

A recent review of the global burden of high blood pressure found that approximately 54 percent of stroke, 47 percent of IHD, 75 percent of hypertensive disease, and 25 percent of other CVDs were attributable to hypertension. This equates to an annual burden of approximately 7.6 million deaths, or 13.5 percent of the total number of annual global deaths, attributable to high blood pressure Furthermore, found that more than 80 percent of the attributable burden of hypertension in 2001 occurred in low and middle income countries, and both another recent review and an analysis commissioned for this report found the prevalence of hypertension to be equally high in developed and developing countries.<sup>12</sup>

In China alone, it is estimated that the current age-standardized prevalence rate of hypertension is 17.7 percent, which translates into 177 million people, and that approximately 20 percent of deaths in China are attributable to high blood pressure. A significant contributor to these levels is the high average daily salt intake in China, which is estimated at 12 g per day— twice the Chinese and WHO recommended levels. Further, only 30 percent of adults with hypertension are aware of their condition, and of those only 6 percent manage their hypertension effectively. While antihypertensive medications have become more effective, their widespread use remains low and the number of people with uncontrolled blood pressure is increasing.<sup>13</sup>

In Sub-Saharan Africa, hypertension is a predominant driver of CVD. Hypertensive heart disease and stroke, rather than ischemic heart disease, account for the majority of the CVD burden in the region, especially among black Africans. Prevalence of hypertension is particularly high in urban Sub-Saharan Africa, with between 8 and 25 percent of adults affected, depending on how hypertension is defined. In South Africa, the 2003 Demographic and Health Survey found that 12.5 percent of men and 17.9 percent of women were hypertensive. Unfortunately, the number of people with uncontrolled hypertension is also high in the region. Researchers found that more than 70 percent of South African hypertensive patients' blood pressure remained uncontrolled.<sup>14</sup>

According to World Health Report 2002, cardiovascular diseases (CVDs) will be the largest cause of death and disability by 2020 in India. In 2020 AD, 2.6 million Indians are predicted to die due to coronary heart disease which constitutes 54.1 % of all CVD deaths. Nearly half of these deaths are likely to occur in young and middle aged individuals (30-69 years). Currently Indians experience CVD deaths at least a decade earlier than their counterparts in countries with established market economies (EME).<sup>15</sup>

The initial study from urban Chennai, Mohan et al<sup>16</sup> reported 8.4% prevalence of hypertension among men and women aged 20 years and above and belonging to the low socioeconomic group (based on household income, occupation and dietary pattern). Similarly, in the middle socio economic group had a higher prevalence (15%) during 1996-97. A study conducted in the urban areas of Chennai during 2000<sup>73</sup> (age group  $\geq 40$ ) reported a higher prevalence of hypertension (54%) among low income group (monthly income < Rs 0000/annum and 40% prevalence among high-income group (monthly income > Rs 60000/annum). Misra et al<sup>18</sup> reported 12% prevalence of hypertension in the slums of Delhi.<sup>16</sup>

From the above studies it is clear that the hypertensive heart diseases are common around the world. The same HHDs have been causing a silent epidemic that is devastating the lives of human beings. Thousands of human beings die needlessly each year from the consequences of these diseases. Today, the nurse being an important member of the health care team, she has to play a vital role in the community and hospital because she has greater access to nursing care as per the needs of persons. A nurse can diagnose, treat and educate human beings regarding HHDs. Many studies have recommended for primary programmes that would prevent an increase in the incidence of HHDs. The investigator had come across many people life with recurrent HHDs and is reluctant to seek health care. HHD if it is not prevented and treated at an earlier stage leads to serious problems. As prevention is better than cure, the investigator feels that there is a need for this study.

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## REVIEW OF LITERATURE

Review of literature is an essential step in the development of a research project. It helps the researcher to design the proposed study in a scientific manner so as to achieve the desired result. In this chapter, the researcher presents the review of literature under the following headings.

1. Review regarding prevalence of hypertensive heart disease.
2. Review regarding treatment of hypertensive heart disease.

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## RESEARCH METHODOLOGY

Research methodology is a way to solve the problem systematically. It is a procedure in which the researcher starts from initial identification of the problem to final conclusion.

Methodology of research organizes all the component of the study in a way that is most likely to lead to valid answer to the problems that have been posed.<sup>51</sup>

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 III BSc nursing students at selected colleges, Bangalore.

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## DISCUSSION

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. Hence the investigator felt the need for awareness programme regarding hypertensive heart disease among III BSc nursing students helps to provide appropriate nursing services.

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## CONCLUSION

This chapter deals with the finding of the study and their nursing implications. This study was conducted to evaluate the effectiveness of STP regarding hypertensive heart disease among III BSc nursing students in selected nursing colleges, Bangalore. In the present study 60 nursing students were selected by simple random sampling technique. 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 STP on hypertensive heart disease among III BSc nursing students. A structured knowledge questionnaire was used to assess the knowledge of III BSc nursing students. The data was interpreted by using appropriate statistical methods.

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## SUMMARY

This chapter provides the process employed in this study. The primary aim of the study was to evaluate the effectiveness of STP on knowledge regarding hypertensive heart disease among III BSc nursing students and to find association between the knowledge of III BSc nursing students women with their selected socio demographic variables.

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## BIBLIOGRAPHY:

1. Chitra Badii Hypertensive Heart Disease. Chitra Badii | August 7, 2012
2. Coronary Heart Disease. (n.d.). National Library of Medicine - National Institutes of Health. Retrieved June 19, 2012, from <http://www.nlm.nih.gov/medlineplus/ency/article/007115.htm>
3. Hypertension.From Wikipedia, the free encyclopedia.
4. G. Y. H. Lip, D. C. Felmeden, F. L. Li-Saw-Hee and D. G. Beevers. Hypertensive heart disease, *European Heart Journal* (2000) 21, 1653–1665 doi:10.1053/euhj.2000.2339, available online at <http://www.idealibrary.com> on
5. Hypertensive heart disease - Wikipedia, the free encyclopedia. [en.wikipedia.org/wiki/Hypertensive\\_heart\\_disease](http://en.wikipedia.org/wiki/Hypertensive_heart_disease)
6. Elmer .J Patrica ,Ph.D etal .Effects of comprehensive life style modification and blood pressure control .available at [http://www.oxford\\_journal.org](http://www.oxford_journal.org).accessed 25.10.2008.
7. Integrated management of cardiovascular risk :report of WHO meeting ,Geneva ,9-12 july 2002
8. Hypertensive Heart Disease. (n.d.). National Library of Medicine - National Institutes of Health. Retrieved June 19, 2012, from [:http://www.nlm.nih.gov/medlineplus/ency/article/000163.htm](http://www.nlm.nih.gov/medlineplus/ency/article/000163.htm).
9. Rajeev Gupta and Soneil Guptha Strategies for initial management of hypertensionIndian J Med Res. 2010 Nov; 132(5): 531–542. PMID: PMC3028941
10. Cardiovascular disease risk factors - Hypertension | World ...[www.world-heart-federation.org](http://www.world-heart-federation.org)
11. Kamran Riaz, MD Hypertensive Heart Disease .Dec 18, 2014.from: <http://emedicine.medscape.com/article/162449-overview>.
12. DA Calhoun. Resistant Hypertension: Diagnosis, Evaluation, and Treatment [circ.ahajournals.org/content/117/25/e510.full2008](http://circ.ahajournals.org/content/117/25/e510.full2008) - Cited by 1600.
13. V Fuster .Epidemiology of Cardiovascular Disease - 2010 [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov) > NCBI > Literature > Bookshelf.
14. Akinkugbe O. O. Epidemiology of Hypertension and Stroke in Africa. *Mongor Citation*. 1976;29: 28–42
15. McKeigue PM, Miller GJ, Marmot MG. Coronary hear t disease in south Asians overseas: