



## ASSESSMENT OF THE IMPACT RELATED TO PREVENTION OF STROKE ASSOCIATED WITH HYPERTENSION BY IMPARTING HEALTH EDUCATION

### Genetics

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### ABSTRACT

**Background and Objectives:** Cardiovascular diseases 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. Nurses are faced with a profound urgency to enhance public and professional education towards this end and to translate the results of research into improved practice. With this intention the present study attempts to assess the impact of health education related to prevention of stroke associated with hypertension among the inpatients of district hospital, Chitradurga.

**Methods:** Evaluative research approach and pre-experimental design was used. Non probability purposive sampling technique was used to select the sample that is 50 adults at government hospital Chitradurga. The tool used is structured knowledge questionnaire.

**Results:** The Pre-test knowledge score obtained by the patients was 17.1 (58%). After administering health education post test mean knowledge score increased to 25.3 (84%) which evidenced that the developed health education was effective in increasing the knowledge of hypertensive patients. Hence the research hypothesis stated that there is significant difference between the pre- and post-test knowledge scores of hypertensive patients regarding stroke prevention was accepted.

**Interpretation and Conclusion:** The present study attempted to assess the effectiveness of health education on knowledge of hypertensive patients regarding stroke prevention found that the developed health education was effective in improving the knowledge of hypertensive patients regarding stroke prevention associated with hypertension.

### KEYWORDS

Stroke Prevention, Hypertensive Patients, Knowledge.

### INTRODUCTION

Stroke is a frequent medical problem occurring in patients with hypertension and other risk factors. Hypertension is an important risk factor for cardiovascular and renal diseases including stroke, coronary heart diseases, heart failure and kidney failure. "Hypertension (HTN)" or "high blood pressure" is a disease of vascular regulation in which mechanism that control arterial pressure within the normal range are altered. It is classified as either primary (essential) or secondary. The greater prevalence of stroke in men is well known, but recent issues emphasize the importance of stroke in women. In the United States, it is estimated that 1 in 6 women will die of stroke, whereas 1 in 25 will eventually die of breast carcinoma and over the entire lifetime,  $\approx 16\%$  of women but only 8% of men will die of stroke. Stroke is defined as an abrupt onset of a neurological deficit that is attributable to a focal vascular cause. It is manifested either, as brain infarction or haemorrhage. More than any other organ brain depends on adequate oxygenated blood supply.<sup>2</sup>

About 90–95% of cases are termed "primary hypertension", which refers to high blood pressure for which no medical cause can be found. In the remaining 5–10% of cases Secondary hypertension is caused by other conditions that affect the kidneys, arteries, heart, or endocrine system. Individuals older than 50 years are classified as having hypertension if their blood pressure is consistently at least 140 mmHg systolic and 90 mmHg diastolic. Arterial blood pressure is measured with sphygmomanometer and is expressed with systolic blood pressure above the diastolic pressure. Normal range is 120/80 mmHg.<sup>4</sup>

It is estimated that nearly one billion people or 26% of the adult population have hypertension worldwide. It was common in both developed (333 million) and undeveloped (639 million) countries. India will soon face an enormous socio-economic burden on the costs of the rehabilitation of stroke-survivors because the population is now surviving through peak years (age 55–65) of occurrence of stroke (CVD).<sup>4</sup> The Global Burden of Disease (GBD) Study (1997) reported 9.4 million deaths in India, of which 619,000 were from 'Stroke', and the Disability Adjusted Life Years (DALYs) that were lost, almost amounted to 28.5 million; nearly six times higher than that due to Malaria.<sup>2</sup> In 2005, stroke deaths accounted for 87% of all deaths from developing countries and this burden will increase with

ageing population. An estimated 5.7 million people died from stroke in 2005 and projected deaths will rise to 6.5 million by 2015.<sup>3</sup>

The prevalence of hypertension in the United States is increasing and reached 29% in men (though menopause tends to decrease this difference) and those of low socioeconomic status.<sup>4</sup>

Cardiovascular diseases 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. Indian urban population studies in the mid-1950s used older WHO guidelines for diagnosis (BP 160 and/or 95 mmHg) and reported hypertension prevalence of 1.2–4.0%. Subsequent studies report steadily increasing prevalence from 5% in 1960s to 12–15% in 1990s. Hypertension prevalence is lower in the rural Indian population, although there has been a steady increase over the time here as well. Recent studies using revised criteria (BP 140 and/or 90 mmHg) have shown a high prevalence of hypertension among urban adults: men 30%, women 33% in Jaipur (1995), men 44%, women 45% in Mumbai (1999), men 31%, women 36% in Thiruvananthapuram (2000), 14% in Chennai (2001), and men 36%, women 37% in Jaipur (2002). Among the rural populations, hypertension prevalence is men 24%, women 17% in Rajasthan (1994). Hypertension diagnosed by multiple examinations has been reported in 27% male and 28% female executives in Mumbai (2000) and 4.5% rural subjects in Haryana (1999).<sup>6</sup>

Pooling of epidemiological studies shows that hypertension is present in 25% urban and 10% rural subjects in India. At an underestimate, there are 31.5 million hypertensives in rural and 34 million in urban populations. A total of 70% of these would be Stage I hypertension (systolic BP 140–159 and/or diastolic BP 90–99 mmHg). Recent reports show that borderline hypertension (systolic BP 130–139 and/or diastolic BP 85–89 mmHg) and Stage I hypertension carry a significant cardiovascular risk and there is a need to reduce this blood pressure. Population-based cost-effective hypertension control strategies should be developed.<sup>7</sup>

There is a strong correlation between changing lifestyle factors and increase in hypertension in India. The nature of genetic contribution

and gene-environment interaction in accelerating the hypertension epidemic in India needs more studies. From above statistics it indicates that paralysis associated with hypertension is burning issue need to bring awareness among hypertensive patients. The investigator has found many hypertensive patients gradually develop CNS associated problems like stroke.

Hence investigator felt there is a need to increase the level of knowledge of inpatient admitted at District Hospital Chitradurga through health education by using lesson plan with attractive audio visual aids. So that this study will be able to enhance knowledge and in turn the incidence of the stroke among hypertensive patients can be reduced.

### METHODOLOGY

Sample size of the present study consists of 50 hypertensive patients who are admitted in the District Hospital of Chitradurga. Purposive sampling technique was adopted to select the samples for the present study. Study group subjects included in patients suffering with hypertension and inpatients not suffering with hypertension associated with CNS problem. The patients who are willing to participate in study were enrolled after taking their consent. Those patients who were

followed by health education in two sessions (10-11-11 and 11-11-11) on stroke prevention in hypertensive patients. On the 6th day (17-11-11) post test was conducted by using the same tool. The Pilot study findings revealed that the overall post-test mean knowledge score (21.5) was higher than the overall pre-test mean knowledge score (11.2).

### Results

The present study aims to assess the knowledge regarding stroke prevention before and after a health education among 50 hypertensive patients. Majority 56% (28 of 50) were in the age group of <50 years and 44% were of age >50 years. 52% (26 out of 50) were males as compared to 48% females (24 out of 50). 70% of respondents in the study group (35 out of 50) came from joint family background. The study group consisted of 84% married subjects (42 out of 50). The educational status of respondents plays a major role. In the present study 76% (38 out of 50) had attained qualification up to primary and least 24% (12 out of 50) had passed upper primary. 74% of patients were residing in rural areas while as 26% were from urban areas. 62% percent were in agriculture sector (31 out of 50) and 38% (19 out of 50) were government sector. The percentage distribution of Hypertensive Patients as per family income/month shows that