



Research Paper

Study to Assess the Effectiveness of Structured Teaching Program on Warning Signs of Hypertension Among General Public At Selected Community Area, Puducherry

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ABSTRACT:

Hypertension, or high blood pressure, is a global health concern that often goes unnoticed due to its lack of obvious symptoms. It is diagnosed when blood pressure readings consistently exceed 130/80 mmHg. The main objective of the study to assess the effectiveness of structured teaching program on warning signs of hypertension among general public and to associate the level of knowledge on warning signs of hypertension among general public with selected demographic variables. The research approach used for this study was quantitative research approach. A pre-experimental one group pre-test post-test design was adopted for this present study. By using convenient sampling technique, 50 general public were selected for the present study. The present study reveals that in pre-level of knowledge, majority 27 (54%) of them had moderately adequate knowledge, 23 (46%) of them had inadequate knowledge. In post-level of knowledge, majority 41 (82%) of them had adequate knowledge, 41 (82%) of them had an adequate knowledge on warning signs of hypertension. The study findings concluded that majority of them had a moderate knowledge on warning signs of hypertension

I. INTRODUCTION:

Hypertension, or high blood pressure, is a global health concern that often goes unnoticed due to its lack of obvious symptoms. It is diagnosed when blood pressure readings consistently exceed 130/80 mmHg. Risk factors for hypertension include age, gender, ethnic origin, diet, stress, sedentary lifestyle, urbanization, family history, blood cholesterol, diabetes mellitus, and pre-existing vascular diseases. Hypertension can be primary (essential) or secondary, with over 90% of cases being primary. Primary hypertension is caused by obesity, family history, and unhealthy diet, while secondary hypertension is caused by other conditions or diseases.

Some signs and symptoms of hypertension include frequent headaches, shortness of breath, nosebleeds, chest pain, visual changes, flushing or a red face, and blood in the urine. These symptoms should prompt an evaluation of blood pressure, especially in individuals with risk factors or a family history of high blood pressure. Regular blood pressure monitoring is crucial, and lifestyle modifications like a healthy diet, regular exercise, limiting alcohol intake, and stress management can help control blood pressure. Early detection and management of hypertension are key to preventing life-threatening complications.

NEED FOR THE STUDY

The World Health Organization (WHO) reports that 4 out of every 5 people with hypertension are not adequately treated, and if countries can scale up coverage, 76 million deaths could be averted between 2023 and 2050. The number of adults aged 30-79 years with hypertension has increased from 650 million to 1.28 billion in the last thirty years, with nearly half of these people not knowing they had hypertension. Globally, the prevalence of hypertension is projected to decrease from 22.1% in 2015 to 20.3% in 2040, with cluster one countries having the highest prevalence in males and females.

In the United States, hypertension was a primary or contributing cause of 691,095 deaths in 2021, with 48.1% of adults having hypertension. In India, the National Family Health Survey reported a hypertension prevalence of 24% in men and 21% among women, an increase from 19% and 17% respectively. In Kerala,

awareness, treatment, and control of hypertension were significantly lower among men compared to women. Participants who had checked blood pressure at least once during the previous year had significantly better awareness and treatment.

In Tamil Nadu, Anu Maria Jacob et al. (2023) found that prevalence of hypertension (Stage II) among people with diabetes and without diabetes was 44.8% and 42.6%, respectively. Obesity and overweight were significantly associated with hypertension prevalence among people with diabetes. In Puducherry, Venkatachalam Jayaseelan et al. (2020) found that prevalence of hypertension among sanitary workers was 36.6%, with only 29.8% of participants being aware of their hypertension status. Assessing knowledge about warning signs of hypertension among the general public will help them modify their lifestyle and reduce blood pressure levels.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching program on warning signs of hypertension among general public at selected community area Puducherry.

OBJECTIVES OF THE STUDY

- To assess the pre and post-test level of knowledge on warning signs of hypertension among general public
- To assess the effectiveness of structured teaching program on warning signs of hypertension among general public.
- To associate the level of knowledge on warning signs of hypertension among general public with selected demographic variables

HYPOTHESIS:

- H1: There is a significant difference between pre-test and post-test level of knowledge on warning signs of hypertension among general public.
- H2: There is a significant association between the level of knowledge on warning signs of hypertension among general public with selected demographic variables

ASSUMPTION

- General public may have some knowledge on warning signs of hypertension
- Nurses have major role in creating awareness on hypertension among general public

II. REVIEW OF LITERATURE

Nurussyifa Afiana Zaen et al. (2023) conducted a study on Effects of Overweight and Obesity on Hypertension in Adolescents. Meta-analysis was carried out using the PRISMA flow chart and the PICO model. Population: adolescents aged 10 to 19 years. Intervention: overweight and obesity. Comparison: normoweight. Outcome: hypertension). The databases used are PubMed, Science Direct, Springer Link, and Google Scholar with the keywords (hypertension OR "High Blood Pressure") AND "BMI Status" AND (adolescent OR teenager) AND "cross sectional". There were 9 cross-sectional studies published in 2012-2022 with odds ratio (OR) effect size that met the inclusion criteria. Analysis was performed with RevMan 5.3. Results: A meta-analysis was conducted on 9 articles with a cross-sectional study design originating from China, South Korea, India, Turkey, Tunisia, Lithuania and Poland involving 63,239 adolescents aged 10-19 years. The results of the meta-analysis showed that overweight adolescents were 2.44 times more likely to experience hypertension compared to normal weight adolescents.

Abbas H. Zaidi et al. (2022) conducted a review study on prevalence of high blood pressure among youth in India and association with future cardiovascular disease. The analysis shows an alarming prevalence of high BP in Indian youth: 35% of 10- to 12-year-olds and 25% of 13- to 19-year-olds had BP in the stage 1 or 2 hypertension range, defined according to 2017 American Academy of Pediatrics cut points. Moreover, youth with high BP were more likely to have other CVD risk factors, such as overweight or obesity, high blood glucose levels, or lipid abnormalities. Using 2011 Indian census data, this finding translates to approximately 69 million Indian youth with high BP and possibly other CVD risk factors. The prevalence of high BP in Indian youth is substantially higher in this study¹ than previously reported. The largest prior study² from 2007 to 2014 that measured BP in 11 312 youth from central India aged 5 to 15 years reported the prevalence of hypertension as approximately 7%, which is substantially lower than the current study. Another study reported variable rates of hypertension in Indian youth, from approximately 2% to 25%. Geographic variability may be important.

III. RESEARCH METHODOLOGY:

RESEARCH APPROACH:

A quantitative research approach was adopted for the present study.

RESEARCH DESIGN:

A quasi experimental research design was adopted for the present study.

RESEARCH VARIABLES

- **INDEPENDENT VARIABLES**

The independent variable of the study is a structured teaching program on warning signs of hypertension.

- **DEPENDENT VARIABLES**

The dependent variable of the study is hypertension among the general public.

SETTING OF THE STUDY:

The present study was conducted in selected community areas in Kalitheerthalkuppam, Puducherry. Kalitheerthalkuppam is located 1.2 km away from SMVNC.

POPULATION:

The study population comprised of general public in the selected community area, Puducherry

SAMPLE:

The study samples comprised of general public in the selected community area, Puducherry, who meet the inclusion criteria

SAMPLE SIZE:

The sample size consists of 50 of general public in the selected community area, Puducherry.

SAMPLE TECHNIQUE:

A convenient sampling technique was used for the present study.

SAMPLE SELECTION CRITERIA:

Inclusion criteria:

- General public, including male and female
- General public who are willing to participate in this study
- General public who could speak Tamil / English.

Exclusion criteria:

- General public who are not willing to participate in this study
- General public who couldn't speak Tamil / English.

DESCRIPTION OF THE TOOL

SECTION A:

Demographic variables include Age, gender, education status, occupational status, marital status, family income per month, dietary pattern, types of family, previous knowledge regarding hypertension and its warning signs.

SECTION B:

Knowledge questionnaire on warning signs of hypertension. It included 20 multiple-choice questions. Each question has 4 options, among which one was the correct answer.

SCORING INTERPRETATION:

S.NO	LEVEL OF KNOWLEDGE	PERCENTAGE
1	Inadequate	0-50%
2	Moderately adequate	50 – 75%
3	Adequate	75-100%

DATA COLLECTION PROCEDURE:

The data was collected in the selected community area, kalitheerthalkuppam, Puducherry. Formal approval was obtained. The purpose of the study was explained to the participants before starting the data collection. Informant consent was obtained from the participants after explaining the purpose of the study. 50 general public were selected by convenient sampling technique who fulfil the criteria. A pre-test was conducted using a knowledge questionnaire on warning signs of hypertension. A structured teaching program on warning signs of hypertension was administered to the samples. Post-test was conducted, and the collected data were noted. The researcher assured the participants of the confidentiality of their responses.

MAJOR FINDING

Regarding the age groups, the majority 22 (44%) were in the age group of 40-60 years, 16(32%) were above the age group of 30-40 years and 10(20%) were above the age group of 18-30 years. In the aspect of religion, the data shows majority 38 (76%) were Hindu. Regarding education qualification, 30 (60%) completed only school, 8 (16%) were Illiterate. In the aspect of occupation status majority, 28 (56%) were unemployment. With regards to family income majority, 18 (36%) belong to an income of Rs. 10,001 -20,000. With regards to type of family, the data shows that the majority 38 (76%) were in nuclear family and 12 (24%) were in joint family. In aspect of previous knowledge, majority 40 (80%) had no previous knowledge on warning signs of hypertension.

IV. RESULTS AND DISCUSSION

The study was conducted study to assess the effectiveness of structured teaching program on warning signs of hypertension among general public at selected community area Puducherry. The table 1 reveals the distribution of level of knowledge on warning signs of hypertension among general public. The finding shows that in pre-level of knowledge, majority 27 (54%) of them had moderately adequate knowledge, 23 (46%) of them had inadequate knowledge. In post-level of knowledge, majority 41 (82%) of them had adequate knowledge, 41 (82%) of them had an adequate knowledge on warning signs of hypertension.

The table 2 shows that that the pre-test mean score for the level of knowledge was 10.59, SD 1.794 and the post-test mean score for the level of knowledge was 16.75, SD 1.481. The calculated 't' value was 13.066, and the p-value is 0.001. Hence it is highly significant. This clearly shows structured teaching program on warning signs of hypertension among general public had significant improvement in their level of knowledge in the post-test.

There is no significance association between level of stress among premenopausal women with age, sex, marital status, education, family income, occupation, dietary pattern type of family and previous knowledge on warning signs of Hypertension.

Table 1: Distribution of level of knowledge on warning signs of hypertension among general public

N=50

S.NO	LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
		Frequency (n)	Percentage %	Frequency (n)	Percentage %
1.	Inadequate	23	46%	0	0%
2.	Moderately adequate	27	54%	9	18%
3.	Adequate	0	0%	41	82%

Figure 1: Percentage wise distribution of the level of knowledge on warning signs of hypertension among general public

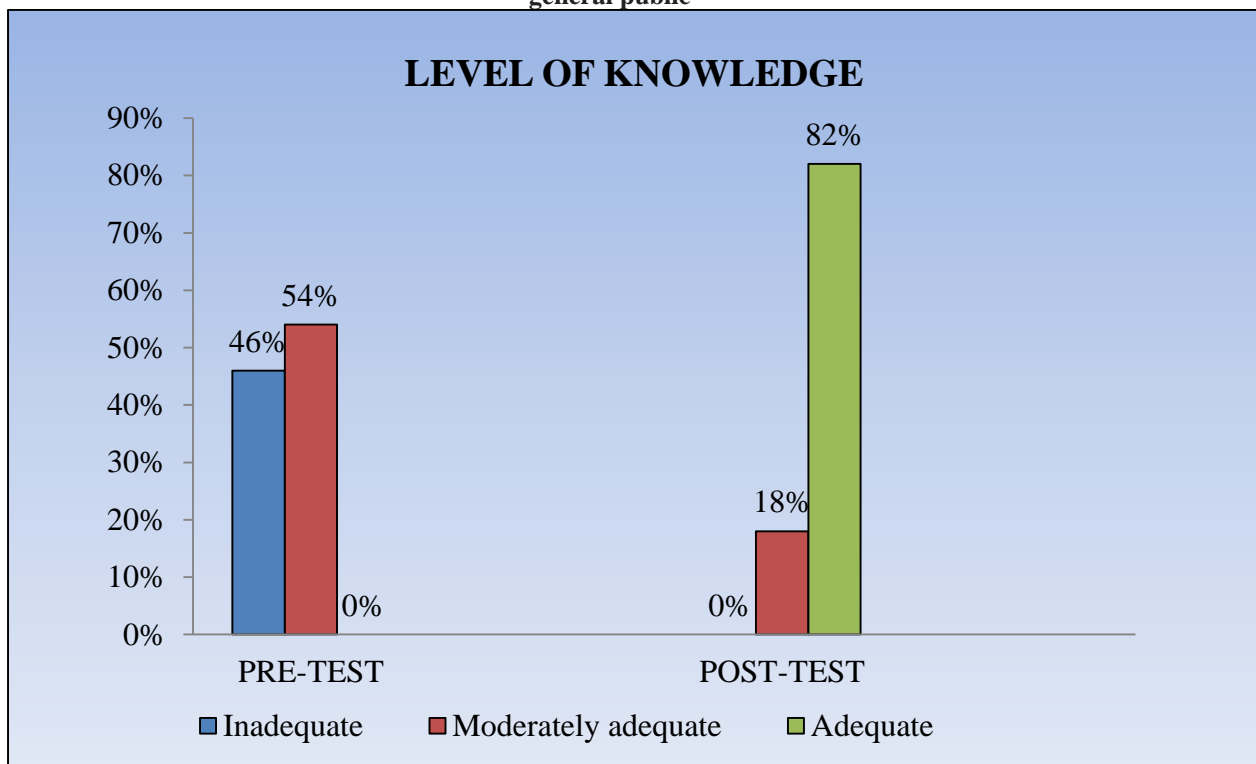
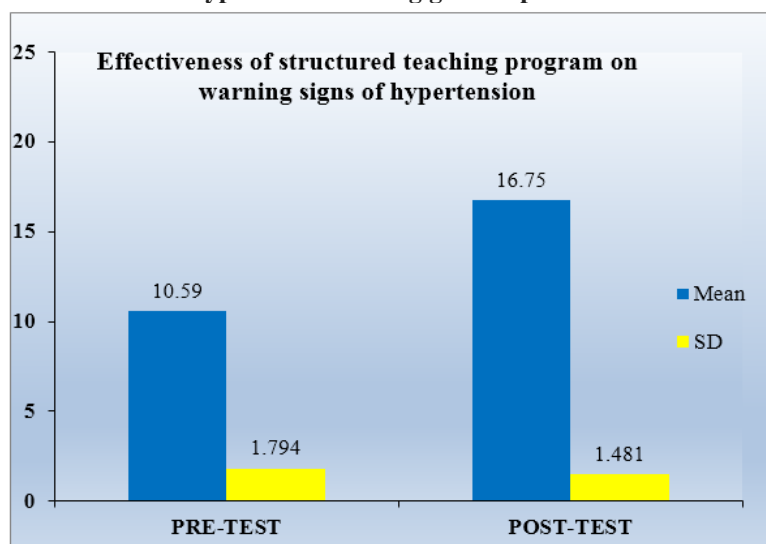


Table 2: Effectiveness of structured teaching program on warning signs of hypertension among general public N = 50

S.NO	Level of Knowledge	Mean	SD	Paired 't' value	'p' Value
1.	PRE-TEST	10.59	1.794	t = 13.066	p = 0.001* (HS)
2.	POST-TEST	16.75	1.481		

*p<0.05 - Significant; p<0.01 - Highly Significant

Figure 2: Bar diagram shows effectiveness of structured teaching program on warning signs of hypertension among general public



V. CONCLUSION:

The present study assessed the effectiveness of structured teaching program on warning signs of hypertension among general public at selected community area Puducherry. The study findings concluded that majority of them had a moderate knowledge on warning signs of hypertension. There is no significance association between effectiveness of structured teaching program on warning signs of Hypertension with age, sex, marital status, education, family income, occupation, dietary pattern type of family and previous knowledge on warning signs of Hypertension.

RECOMMENDATIONS:

- Same study can be conducted with large samples.
- Same study to complication and management of hypertension can be conducted among the general public.

NURSING IMPLICATIONS

The findings of the study have implications for various areas of nursing practice, nursing education, nursing administration and nursing research.

NURSING EDUCATION

- Nurse educator should take the initiative to conduct education programme to enhance the knowledge on warning signs of hypertension among general public.
- Lifestyle modification needed to prevent the hypertension among general public.

NURSING PRACTICE

- The study results may help the nursing personnel to understand the importance of warning signs of hypertension among general public

NURSING ADMINISTRATION

- In-service education can be arranged to the staff nurses along with awareness programme on warning signs of hypertension among general public in both clinical and community setting.

NURSING RESEARCH:

- This research findings can be utilized for the development of research-based protocols and polices in health care setting.

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