



# A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE OF HYPERTENSION AMONG PATIENTS WHO ARE VISITING OPD OF NMCH, ROHTAS, BIHAR

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## ABSTRACT

### Background:

It is estimated that at least one in four adults in India has hypertension<sup>1</sup>, but, only about 12% of them have their blood pressure under control. In 2008, out of the 57 million global deaths, 36 million deaths, or 63%, were due to non communicable diseases, which principally involve hypertension, diabetes, cancers and chronic respiratory diseases. Nearly 80% of hypertension deaths occur in low-and middle-income countries. It is projected that globally hypertension and other non communicable diseases will account for nearly 44 million deaths in 2020. The leading causes of non communicable diseases death rate in 2008 was: 17 million deaths due to hypertensions i.e. 48% of total non communicable diseases deaths. Hypertension affects at a younger age in low and middle-income countries (WHO, 2010).

In India, the estimated deaths due to NCDs in 2008 were 5.3 million. The overall prevalence of hypertension, Ischemic Heart Diseases (IHD) and stroke in India is around 1.54 per 1000 population (ICMR, 2006).

**Material & Methods:**

A survey was conducted at, Narayan Medical College and Hospital (NMCH). The researchers collected 106 responses from general population visiting OPD area of NMCH hospital of Sasaram, Bihar. The data was collected using designed and developed knowledge questionnaire, in both English and Hindi language; analysis was done using SPSS.

**Result:**

The results showed that knowledge questionnaire were completed; with 77.4% (n=82) responses were having good knowledge and 22.6% (n=24) had average knowledge related to hypertension. The researchers enlisted several factors like prolonged standing, long working hours, stressful interpersonal interaction, poor amenities and time constrained self care deficit.

**Conclusion:**

It was concluded that most of the general population were having good knowledge about hypertension. Hence, these findings shows even though good knowledge about hypertension is present among general population, the incidence rate keeps growing among them clearly indicating that there is lack of preventive practice's.

**Keywords:** Effectiveness, Narayan Medical College and Hospital (NMCH), Out Patient Departments (OPD's), General Population.

**BACKGROUND:**

Blood pressure is the force exerted by circulating blood against the walls of the body's arteries, the major blood vessels in the body (WHO, 2021); hypertension is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is  $\geq 140$  mmHg and/or the diastolic blood pressure readings on both days is  $\geq 90$  mmHg. Treatment and control of hypertension are critically important for the prevention of consequent cardiovascular and kidney diseases (Pereira et al., 2009).

The preventive measures of hypertension includes maintain healthy weight, eat a balanced diet, cut on salt, exercise regularly, limit alcohol, manage stress, monitor blood pressure regularly, do not smoke, get enough sleep (Welch, 2021). The hypertension can be diagnosed by ambulatory monitoring, lab tests includes blood and urine tests example, cholesterol, blood sugar levels, kidney, liver and thyroid function; further, electro-cardiogram and echocardiogram (Muntner et al., 2019).

The treatment of hypertension depends on your overall health and how high your blood pressure gets managed; two or more blood pressure drugs often work better than one. It can take some time to find the medicine or combination of medicines that works best for the client. There are many drugs available, some of them are water pills (diuretics) including thiazide, loop and potassium sparing; diuretics commonly used

to treat blood pressure include chlorthalidone, hydrochlorothiazide (Microzide) (Whelton et al., 2018). some of the other drugs include angiotensin-converting enzyme (ACE) inhibitors, Angiotensin II receptor blockers; calcium channel blockers. Some of the other drugs include alpha blockers, alpha-beta blockers, beta blockers, aldosterone antagonists, renin inhibitors. aliskiren (tekturna), vasodilators, central-acting agents (Flynn et al., 2017).

Treating resistant hypertension, a hypertension is said to be resistant hypertension, when a client takes at least three different blood pressure drugs, including a diuretic, but blood pressure remains stubbornly high. A resistant hypertension doesn't mean blood pressure will never get lower; if client and health care provider identify and determine the cause, further planning a more effective treatment plan will help resolve the issue (Chernova & Krishnan, 2019). Treating resistant hypertension may involve many steps, including: changing blood pressure medicines to find the best combination and dosage; reviewing all your medicines, including those bought without a prescription; checking blood pressure at home to see if medical appointments cause high blood pressure which is called white coat hypertension; eating healthy, managing weight and making other recommended lifestyle changes; high blood pressure during pregnancy (Chernova & Krishnan, 2019).

Potential future treatments; researchers have been studying the use of heat to destroy specific nerves in the kidney that may play a role in resistant hypertension. The method is called renal denervation. Early studies showed some benefit; but more-robust studies found that it doesn't significantly lower blood pressure in people with resistant hypertension. More research is underway to determine what role, if any, this therapy may have in treating hypertension.

In the current research the researcher conducted a survey in assessing the knowledge of the general population visiting the OPD's of Narayan Medical College and Hospital, regarding Hypertension, the main aim of the researcher was to understand the level of knowledge regarding general aspects of hypertension, diseases associated with hypertension and also whether general population is aware of signs and symptoms of hypertension.

### **Objectives:**

- The aim of the researchers in the current study was to understand the level of knowledge regarding general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension

### **METHODOLOGY:**

**Research approach:** Descriptive research approach was used for this study.

**Research design:** Population based survey design was conducted in the present study

**Study Population:**

General population with a minimum age of 25 to above 65 years were used, both male and female who were willing to participate in the study were included in the study.

**Sample size calculation**

Considering the effect size 0.5 at 5% level of significance, 95% confidence interval and 100% power the minimum calculated sample size is 95. In current study the researcher was able to cover 106 samples.

**Sampling technique:**

Purposive sampling technique was used to select the general population.

**Outcome variable**

The outcome variable of the study was descriptive analysis of participant's knowledge regarding general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension

**Data collection tool****Tool consist of following section**

**Section – A:** Questions related to demographic variables of general population

**Section – B:** Questions related to various regarding general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension

**Data collection procedure**

- Knowledge questionnaire was prepared in such a manner that it was easily understandable and easy to answer among the general population
- Consent was obtained
- 106 general populations who visited the OPD's of NMCH hospital, Sasaram, Bihar, participated in the study.
- Socio-demographic was collected.
- Responses to questionnaire related to knowledge regarding general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension

**Data analysis**

Descriptive data analysis was carried out using SPSS statistical system

**RESULT:**

According to the objectives of the study results were organized, tabulated, and analyzed and interpreted descriptive statistics. This part deals with descriptive data and presents frequency and percentage distribution of health care professionals who participated in the current cross sectional survey.

- Frequency and percentage distribution of the demographic variables.
- Frequency distribution of general population's level of knowledge in relation to general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension.

**Table 1: Description of frequency and percentage distribution of demographic variables****N=106**

Variables	Classifications	Frequency (f)	Percentage (%)
Age	25 – 35	71	67.0
	36 – 45	8	7.6
	46 – 55	21	19.8
	56 – 65	6	5.6
	>65	0	0
Gender	Male	59	55.6
	Female	47	44.4
Literacy	Literate	103	97.2
	Illiterate	3	2.8
Occupation	Government	4	3.8
	Private	6	5.6
	Buisness	89	83.9
	Unemployed	7	6.7
Marital status	Unmarried	21	19.8
	Married	85	80.2
weight	25 – 35	1	0.9
	36 – 45	2	1.8
	46 – 55	4	3.7
	56 – 65	83	78.6
	>65	16	15.0
Height	5-5'5'	59	55.6
	5'5-6	47	44.4
BMI	<18	18	17.0
	18 – 24	88	83.0
	>24	0	0

The above table 1: depicts that majority of the samples were aged between 25 – 35 (n=71) i.e. 67.0%, majority of the samples were males (n=59) i.e. 55.6%, further, (n=103) 97.2% were literates; majority i.e. 83.9% (n=89) were doing business as their occupation; majority i.e. 80.2% (n=85) were married; regarding the weight of the samples (n=83) were having weight between 56-65, whereas the majority height of the samples was 5-5'5' i.e. (n=59) 55.6%, BMI of the samples showed majority were having 18-24 (n=88) i.e. 83%.

**Table 2: Frequency distribution of general populations level of knowledge in relation to hypertension.**

**N = 140**

Group	Good Knowledge		Average Knowledge		Poor Knowledge	
	f	%	f	%	f	%
<b>Level of Knowledge in relation general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension</b>	82	77.4	24	22.6	0	0

The above table 2: depicts that general populations knowledge levels in relation to general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension; with 77.4% (n=82) responses were good in knowledge and 22.6% (n=24) had average knowledge, these findings shows even though good knowledge about hypertension is present among general population, but the incidence rate keeps growing among them clearly indicating that there is lack of preventive practice's.

## DISCUSSION

A descriptive survey study in which the knowledge related to general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension among general population visiting OPD's of NMCH at Sasaram, Bihar. The study was carried out using designed and developed knowledge questionnaire along with demographic variables. The analysis provided by the SPSS statistical analysis. majority of the samples were aged between 25 – 35 (n=71) i.e. 67.0%, majority of the samples were males (n=59) i.e. 55.6%, further, (n=103) 97.2% were literates; majority i.e. 83.9% (n=89) were doing business as their occupation; majority i.e. 80.2% (n=85) were married; regarding the weight of the samples (n=83) were having weight between 56-65, whereas the majority height of the samples was 5-5'5' i.e. (n=59) 55.6%, BMI of the samples showed majority were having 18-24 (n=88) i.e. 83%.

The current study also revealed that general populations knowledge levels in relation to general aspects of hypertension, diseases associated with hypertension and signs and symptoms of hypertension; with 77.4% (n=82) responses were good in knowledge and 22.6% (n=24) had average knowledge, these findings shows even though good knowledge about hypertension is present among general population, but the incidence rate keeps growing among them clearly indicating that there is lack of preventive practice's.

This study finding was supported by a similar study where the researcher conducted a study evidence to demonstrate the prominent role of elevated blood pressure (BP) on risk of other diseases like heart diseases and stroke. Current approaches to primary preventive action emphasize the need to target lifestyle interventions which serve as a basis for primary prevention of hypertension and associated diseases. It is estimated that 70% of strokes are potentially preventable by lifestyle modification derived from

epidemiological studies. Different strategies for drug interventions in primary prevention need to be discussed, including the poly-pill strategy. Additional measures are needed for the primary prevention of stroke which focuses on blood pressure, and possibly lipids (Endres et al., 2011).

## CONCLUSION:

The researchers in the current study concluded that most of the general population were having good knowledge about hypertension. Hence, these findings shows even though good knowledge about hypertension is present among general population, the incidence rate keeps growing among them clearly indicating that there is lack of preventive practice's; there is need for preventive regime which is planned for the focused group along with importance of practice of preventive measures. Further a planned intervention to increase the knowledge of general population regarding various preventive measure practices. Furthermore a planned alternative educational programme that would impact effectively in reducing associated diseases of hypertension among general population. There is need for research to identify the factors affecting preventive practices in relation to hypertension and its impact on the society. The researcher also recommends finding relationship between knowledge of general population and incidence rate of hypertension in future studies

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