

## AWARENESS REGARDING HYPERTENSION AMONG HYPERTENSIVE PATIENTS ATTENDING HOSPITAL OF SIDDHARTHANAGAR MUNICIPALITY, NEPAL

Gita Neupane,<sup>1</sup> Sanju Gyawali,<sup>2</sup> Chanda Sah<sup>1</sup>

### ABSTRACT

#### INTRODUCTION

Hypertension is one of the most common health condition that affects most of the population throughout the world and is a leading risk factor for morbidity and mortality. Hypertension related knowledge and practice such as life style modification, physical activity, nutrition etc. plays an important role in controlling and preventing its long-term complications of hypertension. The objective of the study was to find out the awareness of hypertension among hypertensive patients.

#### MATERIAL AND METHODS

A descriptive cross sectional study was conducted among 70 hypertensive patients selected as study sample by using non-probability purposive sampling technique. The data were collected by using semi-structured interview schedule and was analyzed by using descriptive and inferential statistics with Statistical Package for Social Sciences version 20.

#### RESULTS

The findings of the study revealed that more than half (52.9%) of respondents had low awareness regarding hypertension.

#### CONCLUSION

Based on the findings, it is concluded that more than half of the respondents have low awareness on hypertension. The respondents had low awareness on investigations of hypertension. Beside this, the respondents had high awareness regarding meaning, risk factors, main symptoms, causes, measures to control hypertension and complications of hypertension.

**KEYWORDS** Awareness, Hypertension, Patients.

1. Universal College of Nursing Sciences, Bhairahawa, Nepal
2. Staff Nurse, Lumbini Hospital Pvt Ltd, Nepal

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#### For Correspondence

Ms. Gita Neupane  
Universal College of Nursing Sciences  
Bhairahawa, Nepal  
Email: [gitaneupan@gmail.com](mailto:gitaneupan@gmail.com)

## INTRODUCTION

An estimated 1.13 billion people worldwide have hypertension, most (two-thirds) living in low- and middle-income countries. In 2015, one in four men and one in five women had hypertension. Fewer than one in five people with hypertension have the problem under control. High blood pressure causes around eight million deaths in the world every year, which is about 13% of all deaths. Around 50% of all global deaths from stroke and heart disease are attributed to high blood pressure.<sup>1</sup> The prevalence of hypertension in Nepal is 17% of women and 23% of men age 15 and above.<sup>2</sup> Management of hypertension includes lifestyle modifications such as salt restriction, avoiding intake of alcohol, stop smoking and tobacco use, reducing weight, physically active, high consumption of fresh vegetable and fruits and low in fat and salt foods and in case of uncontrolled blood pressure managing with anti-hypertensive medications.<sup>3</sup>

In 2025, an estimated 1.56 billion adults will be living with hypertension. Hypertension kills nearly eight million people every year worldwide and nearly 1.5 million people each year in South East Asia region. Approximately one-third of adults in South East Asia region have high blood pressure.<sup>1</sup> Hypertension is a worldwide public health challenge because of its high frequency and related risks of cardiovascular and kidney disease so, it is dangerous to ignore high blood pressure, because this increases the chances of life-threatening complications. There is no doubt that knowledge of the patients has an impact on the management of their illness, as they can compliance, hypertension control, morbidity and mortality of the patients.<sup>4</sup> Obtaining the general information about the level of awareness from the patients is the first step in formulating a preventive program for the disease. So, researcher is interested to conduct a study on this topic.

## MATERIAL AND METHODS

Descriptive cross sectional study design was used to find out awareness regarding hypertension among hypertensive patients. The study was conducted in Universal College of Medical Sciences, Teaching Hospital of Siddharthanagar municipality, Bhairahawa, Nepal. Total 70 hypertensive patients who had been diagnosed as hypertension and attended the outpatient department of UCMS-TH were selected as study sample by using non-probability purposive sampling technique. During the month of January 2019, two hundred fifty two hypertensive patients attended the OPD of UCMS-TH. Approximately 126 patients had visited the OPD within two weeks period. Sample size was estimated by using Slovin's formula (Kothari, 2011).<sup>15</sup> Therefore, the estimated sample size (n) was 70. The interview method was used for data collection by using pretested semi-structured interview

schedule developed by researchers by reviewing the related literature consulting with the subject experts. Data collection was done in the month of March 17<sup>th</sup> to 29<sup>th</sup>, 2019. Administrative and ethical approval was obtained from concerned authority prior to data collection (UCMS/IRC/023/19). Researcher contacted each respondent and included who were willing to participate and obtained the written informed consent for the study and interviewed in separate place maintaining privacy. Researcher interviewed six to seven respondents per day. Descriptive and inferential statistics was used to analyse the collected data with SPSS version 20.

## RESULTS

The findings of the study showed that out of 70 respondents, 47.1% of the respondents had high awareness and 52.9% of the respondents had low awareness regarding hypertension. (On the basis of mean score, awareness was classified into two categories. The mean score was 18.45, above the mean score was high awareness and below the mean score was low awareness).

Most (52.9%) of the respondents were of age groups 35-59 years and majority (64.3%) were male. Most (78.6%) of the respondents were Pahadi and majority (81.4%) were Hindu. Regarding educational status, 61.4% of respondents were literate. Majority (57.1%) of the respondents were diagnosed hypertension within 1-10 year and 32.8% of respondents had family history of hypertension.

Table 1 shows awareness regarding risk factors, which showed that cent percent of respondents knew stress, (98.6%) high fat and salt diet, (92.8%) sedentary lifestyle, (77.1%) smoking and alcoholism, (72.8%) advancing age, (68.6%) obesity, (50.0%) hereditary and (41.4%) diabetes respectively as risk factor of hypertension.

**Table 1. Respondents' awareness regarding risk factors (n=70)**

Risk factors	Correct response	
	Frequency	Percentage
Smoking and alcoholism	54	77.1
Obesity	48	68.6
High fat and salt diet	69	98.6
Sedentary lifestyle	65	92.8
Diabetes	29	41.4
Stress	70	100.0
Advancing age	51	72.8
Hereditary	35	50.0

Table 2 shows the respondents awareness regarding causes and main symptoms of hypertension, which showed that majority (54.3%) knew thyroid disorders, (51.4%) chronic kidney disease and (20.0%) adrenal tumor respectively are the disease causing hypertension. Regarding main symptoms of

hypertension, most (98.6%) of respondents knew dizziness, (88%) headache, (81.4%) facial flushing, (77.1%) irregular heart rate, (71.4%) vision problems and (38.6%) nasal bleeding respectively.

**Table 2. Respondents' awareness regarding causes and main symptoms of hypertension (n=70)**

Variables	Frequency	Percentage
<b>Causes**</b>		
Chronic kidney disease*	36	51.4
Jaundice	29	41.4
Thyroid disorder*	38	54.3
Gout	29	41.4
Adrenal tumor*	14	20.0
<b>Main symptoms**</b>		
Dizziness*	69	98.6
Fever	10	14.3
Facial flushing*	57	81.4
Weight loss	19	27.1
Irregular heart rate*	54	77.1
Headache*	62	88.6
Excessive hunger	19	27.1
Nasal bleeding*	27	38.6
Nocturia	23	32.8
Vision problems*	50	71.4
Diarrhoea	20	28.6

\*Correct responses; \*\*Multiple responses

Table 3 shows the awareness of respondents regarding diet necessary to control hypertension, which showed that cent percent of respondents knew low fat diet and low salt diet and 85.7% of respondents knew fibrous diet respectively. Majority (90.0%) of respondents knew pickles, (82.8%) fried foods and (75.7%) red meat respectively as restricted food necessary to control hypertension.

Findings of the study showed that there is statistically significant association between respondents' level of awareness of hypertension and educational status ( $p=0.005$ )

**Table 3. Respondents' awareness regarding types of diet to control hypertension (n=70)**

Variables	Frequency	Percentage
<b>Types of diet necessary**</b>		
Low fat diet*	70	100.0
Low protein diet	22	31.4
Low salt diet*	70	100.0
Fibrous diet*	60	85.7
High carbohydrate diet	10	14.3
<b>Restricted food**</b>		
Pickles*	63	90.0
Whole grains	21	30.0
Red meat (Mutton, pork, sheep)*	53	75.7
Fruits and vegetables	2	2.8
Fried foods*	58	82.8

\*Correct responses; \*\*Multiple responses

## DISCUSSION

The study was conducted to find out the awareness regarding hypertension among hypertensive patients attending Hospital of Siddharthanagar, Bhairahawa, Nepal. The findings of the study showed that out of 70 respondents, 47.1% of the respondents had high awareness and 52.9% of the respondents had low awareness regarding hypertension. Concerning the socio-demographic characteristics, the finding of the study revealed that 52.9% of the respondents were from age group between 35-59 years, more than half of the respondents 64.3% were male and 35.7% were female. Majority of respondents were 61.4% literate and 34.3% belongs to formal occupation whereas, 57.1% had duration of diagnosis in between 1-10 years and 32.8% were having family history of hypertension.

The study showed that 71.4% of respondents were aware about meaning of hypertension as blood pressure equals or more than 140/90 which is consistent with study<sup>5</sup> conducted in India which shows that 74% of patients were aware about meaning of hypertension as blood pressure equals or more than 140/90. The study revealed that 97.1% and 75.7% of respondents were aware that hypertension is dangerous for health and hypertension is a lifelong disease respectively which are not consistent with the study<sup>6</sup> conducted in Samarkand, Uzbekistan which shows that 60.80% and 60% of respondents were aware that hypertension is dangerous for health and hypertension is a lifelong disease respectively. It might be due to difference in sample size.

The finding of the study revealed that 52.8% of respondents were aware that hypertension may be asymptomatic initially which is not consistent with the study<sup>7</sup> conducted in Nigeria which shows that 15.2% of respondents were aware that hypertension is asymptomatic. The present study showed that 77.1% of respondents were aware that smoking and alcohol consumption as a risk factor of hypertension which is not consistent with the study<sup>8</sup> conducted in India which shows that 56.88% of respondents were aware that smoking and alcohol consumption as a risk factor of hypertension. It is found that 100% and 72.8% of respondents were aware that stress and advancing age as a risk factor of hypertension which are not consistent with the study<sup>9</sup> conducted in Iran which shows that 87.3% and 48.20% of respondents were aware that stress and advancing age as a risk factor of hypertension respectively. The finding of the study revealed that 50.0% of respondents were aware that hypertension is hereditary which is consistent with the study<sup>10</sup> conducted in Nigeria which shows that 53% of respondents were aware that hypertension is hereditary. Similarly, the study showed that 54.3%, 51.4% and 20.0% of respondents were aware that thyroid disorder, chronic kidney disease and adrenal tumor as the disease that may cause hypertension respectively.

The present study showed that dizziness (98.6%) and headache (88.6%) of respondents aware as a main symptoms of hypertension which are not consistent with study<sup>5</sup> conducted in India which shows that dizziness (22%) and headache (48%) as main symptoms of hypertension. The findings of the study showed that facial flushing (81.4%), irregular heart rate (77.1%), vision problems (71.4%) and nasal bleeding (38.6%) of respondents aware as main symptoms of hypertension respectively. Similarly, 100% of respondents were aware that blood pressure measurement is correct diagnosis of hypertension which is not consistent with the study<sup>10</sup> conducted in Nigeria which shows that 74% of respondents were aware that blood pressure measurement is correct diagnosis of hypertension. The findings of the study showed that blood test (71.4%), ECG (45.7%), urinalysis (24.3%) and chest X-ray (14.3%) of respondents were aware as investigations of hypertension respectively. The finding of the study revealed that 100% of respondents were aware that regular follow up is necessary to control hypertension which is not consistent with the study<sup>11</sup> conducted in Tamil Nadu, India which shows that 74% of respondents were aware that regular follow up is necessary to control hypertension.

The results show that cent percent of patients were aware that regular medication helps to control hypertension which are not consistent with study<sup>5</sup> conducted in India which shows 94% of patients were aware that regular medication helps to control hypertension. Also, the study revealed that 100% of respondents were aware that low salt diet is necessary to control hypertension which is not consistent with the study<sup>6</sup> conducted in Samarkand, Uzbekistan which shows that 51.70% of respondents were aware that low salt diet is necessary to control hypertension. The finding of the study showed that 85.7% of respondents were aware that fibrous diet is necessary to control hypertension which is not consistent with the study<sup>12</sup> conducted in Sri Lanka which shows that 45% of respondents were aware that fibrous diet is necessary to control hypertension. The findings of the study showed that 90%, 82.8%, and 75.7% of respondents were aware that pickles, fried foods and red meat are restricted food to control hypertension respectively. The finding of the study showed that 72.9% of respondents were aware that at least 30 min simple exercise per day is necessary to control hypertension.

The findings of the study revealed that 100% of respondents were aware that regular physical exercise is necessary to control hypertension which is not consistent with the study<sup>9</sup> conducted in Iran which shows that 84.5% of respondents were aware that regular physical exercise is necessary to control hypertension. The results show that 90% and 87.1% of respondents were aware that heart and kidney are the organs mostly affected due to uncontrolled hypertension which are not consistent with study<sup>12</sup> conducted in Sri Lanka which

shows that 50% and 26% of respondents were aware that heart and kidney are the organs mostly affected due to uncontrolled hypertension respectively. The findings of the study revealed that 87.1% and 85.7% of respondents were aware that brain and eye are the organs mostly affected due to uncontrolled hypertension respectively.

Similarly, our study show that heart attack (100%), stroke (82.8%), vision loss (81.4%), aneurysm (77.1%), dementia (51.4%) and atherosclerosis (41.4%) of respondents aware as the complications of hypertension which are not consistent with the study<sup>13</sup> conducted in Pakistan which shows that heart attack (56.3%), stroke (27.9%), vision loss (16.1%), aneurysm (14.8%), dementia (9.9%) and atherosclerosis (3.0%) were aware as the complications of hypertension respectively. Also, the study revealed that cent percent were aware about hypertension through health personnel and 35.7% of respondents through health personnel and mass media.

The findings from results show that there is statistically significant association between level of awareness and education status ( $p=0.005$ ) which is consistent with the study<sup>14</sup> conducted in Iraq which shows that there is statistically significant association between level of awareness and education status ( $p=0.0001$ ). And there is no statistically significant association between level of awareness and age ( $p=0.220$ ), sex ( $p=0.164$ ), caste ( $p=0.227$ ), religion ( $p=0.990$ ), occupation ( $p=0.175$ ), duration of diagnosis as hypertension ( $p=0.679$ ) and family history ( $p=0.311$ ).

## CONCLUSION

On the basis of the finding, it is concluded that more than half of the patients have overall low level of awareness regarding hypertension. More than three-fifth of patients were aware of meaning of hypertension as blood pressure equals or more than 140/90. Nearly cent percent of patients have awareness regarding risk factor as obesity, high fat and salt diet, sedentary lifestyle. More than half of the patients have awareness regarding disease causing hypertension as chronic kidney disease and thyroid disorder. Four-fifth of patients have awareness regarding main symptoms of hypertension as dizziness, facial flushing and headache. Nearly cent percent of patients have awareness regarding types of diet necessary to control hypertension as low fat diet and low salt diet. Three-fifth of patients have awareness regarding complications of hypertension as heart attack, stroke, kidney failure and vision loss. There is statistically significant association between education status ( $p=0.005$ ) and respondents' awareness regarding hypertension.

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