



# Nurses' Knowledge Regarding Nursing Care Of Obesity And Hypertensive Patients In Bangladesh

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## ABSTRACT

Heart diseases, hypertension, diabetes, COPD and cancer are some of the major NCDs and account for more than three-fifths of a death in Bangladesh. This study was aimed to assess the level of nurses' knowledge regarding nursing care and management of the hypertensive patients. This study utilized a descriptive cross-sectional study type and the data were collected using self-administered questionnaire. The respondents were informed about the purpose of the study to obtain their consent and they were given clear instructions on how to fill the questionnaires. All the data were analyzed using Statistical Package for Social Sciences (SPSS) version 22. In this study slightly above 60.0% of the participants were female and 73% of them were Muslims. More than half (53.0%) of the respondents had B.Sc. in nursing and 51.3% of them had <10 years of service experience. About 70.4% of the respondents had attended training on hypertension and 92.2% of them know about normal blood pressure measurement. About 92.2% of the participants know the causes of hypertension and 82.6% of the respondents mentioned that hypertension management aims to prevent morbidity and mortality and only 39.1% of them know the recommended diet for people with hypertension. The finding reported that the nurses' knowledge regarding the management of hypertensive patients and knowledge on hypertension were very good. Developing knowledge among the nurses in relation to hypertension is the key factor to plan for comprehensive nursing care for better prognosis of the patient.

**Keywords:** *Diseases, Hypertension, Knowledge, Nurses, Patients*

## INTRODUCTION

Hypertension is the most important preventable risk factor for premature death worldwide.<sup>1</sup> It increases the risk of ischemic heart disease, strokes, peripheral vascular disease, and other cardiovascular diseases, including heart failure, aortic aneurysms, diffuse atherosclerosis, chronic kidney disease, and pulmonary embolism.<sup>1</sup> Hypertension is also said to be a risk factor for impairment and dementia. Other complications of hypertension includes hypertensive retinopathy and hypertensive nephropathy.<sup>2-5</sup> A study reported that as of 2014, approximately one billion adults i.e. about 22% of the population of the world have hypertension.<sup>6</sup> The prevalence of hypertension increases with age and it is slightly more frequent in men. It is common in high, medium and low income countries.

Bangladesh has come a long way combating some of the major communicable diseases causing existence of double burden of the diseases at the same time. Nevertheless, the current surveillance system is yet to be implemented appropriately. Stroke/heart disease, hypertension, diabetes, COPD and cancer are some of the major NCDs and cumulatively account for 68% death in Bangladesh. Among these public health problems, hypertension is an emerging epidemic and its prevalence was found to be within 15-20% among the adult population of Bangladesh. It's the major modifiable risk factor for cardiovascular disease and some other complications like heart failure, renal failure etc.<sup>11</sup> Hypertension has modifiable risk factors related to lifestyles, primarily tobacco smoking, lack of physical activity, unhealthy diet, harmful use of alcohol etc, are modifiable.

## METHODOLOGY

In this paper primary and secondary data has been used by reviewing relevant literature. In doing so, the desktop survey that includes, browsing internet sources related to Obesity and Hypertensive patients, and content analysis from the texts of Obesity and Hypertensive journal articles and policy papers was used.

## RESULTS

### **Socio-demographic characteristics of the respondents**

Table 1 showed that little above three-fifths (61.8%) of the respondents belongs to age group 33 years and below. Most of the participants (61.7%) were female and the majorities (69.6%) of the participants were married.

**Table 1: Socio-demographic characteristics of the respondents (n=115).**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Age (years)</b>		
≤32	72	60.8
≥33	43	39.2
<b>Sex</b>		
Male	45	37.3
Female	70	62.7
<b>Marital Status</b>		
Married	82	67.6
Unmarried	33	32.4
<b>Religion</b>		
Muslim	82	71.0
Hindu	32	28.1
Buddhist	1	0.9
<b>Qualifications</b>		
Diploma	39	33.9
B.Sc. in Nursing	61	53.0
Masters	15	13.0
<b>Years of Service Experience</b>		
<10 years	60	50.3
10-20years	40	34.7
>20 years	15	13.0
<b>Training on hypertension</b>		
Yes	80	69.4
No	35	30.6

More than seven-tenths (73%) of the respondents were Muslims, followed by Hindu (26.1%) and the remaining were Buddhist. More than half (53.0%) of the respondents had B.Sc. in nursing, followed diploma in nursing (33.9%) and the rest had masters level of education. Little above half (51.3%) of the respondents had <10 years of service experience, followed by 35.7% who had 10-20 years' service experience and 13% had more than 20 years of service experience. 70.4% of the respondents had attended a training on hypertension.

## Nurses knowledge regarding nursing care and management of hypertensive patients

Table 2 shows that more than nine-tenths (92.2%) of the participants knows about normal blood pressure measurement and 81.7% of them knows blood pressure level that indicate pre-hypertension. About 92.2% of the participants know the causes of hypertension and 67.0% of them know the hypertension risk factors. About 62.6% of the respondents know about maintaining bed rest and elevating head of bed and 60% of the respondents know about monitoring and recording of BP while the patient is at rest. About 62.6% of the respondents can observe the sudden hypotension and 60% can monitor electrolytes, BUN and creatinine. More than seven-tenths (73%) of the respondents knows about observe skin color, moisture, temperature, and capillary refill time and 29.6% of the respondents knows about monitoring response to medications to control blood pressure. About 82.6% of the respondents mentioned that hypertension management aims to prevent morbidity and mortality and only 39.1% of them knows the recommended diet for people with hypertension. About 66.1% of them knows the moderate salt restriction of hypertensive patient and 87% mentioned that weight loss is important in management of hypotensive patient. 70.4% of the respondents said decrease in ethanol intake helps in the management of hypertension and 91.3% of them stated that relaxation is a technique that aims to reduce tension or anxiety.

**Table 2: Nurses knowledge regarding nursing care & management of hypertensive patients (n=115)**

Items	Yes N (%)	No N (%)
<b>Knowledge regarding hypertension</b>		
Knows normal blood pressure measurement	105(91.2)	10(8.8)
Knows blood pressure level that indicate pre-hypertension	95(80.7)	20(19.3)
Knows causes of hypertension	104(90.2)	11(9.8)
Knows that hypertension is a risk factor for cardiovascular diseases	54(46.8)	59(51.2)
Knows hypertension risk factors	76(66.0)	39(32.0)
Knows how to measure blood pressure of a patients	75(65.3)	40(34.7)
Systolic pressure represents the pressure when the heart contracts	80(69.4)	35(30.0)
Diastolic pressure represents the pressure when the heart is relaxed	74(64.5)	43(37.5)
<b>Knowledge regarding nursing care for hypertensive patients</b>		
Knows about maintaining bed rest and elevating head of bed	72(62.6)	43(37.4)
Know about assessing blood pressure in both arms during admission	69(60.0)	46(40.0)
Knows about monitoring and recording of BP while the patient is at rest	92(79.9)	23(20.1)

Can you Observe the sudden hypotension	72(62.6)	43(37.4)
Can you Monitor electrolytes, BUN and creatinine	69(60.0)	46(40.0)
Can you Measure inputs and expenditures	70(60.9)	45(39.1)
Observe skin color, moisture, temperature, and capillary refill time	85(74.0)	30(27.0)
Instruct in relaxation techniques, guided imagery and distractions	83(72.2)	32(27.8)
Monitoring response to medications to control blood pressure	35(30.6)	80(69.4)
<b>Knowledge on management of hypertensive patients</b>		
Hypertension management aims to prevent morbidity and mortality	94(81.6)	21(18.4)
Knows the recommended diet for people with hypertension	44(38.1)	71(61.9)
Knows about advising the patient to Stop smoking	100(87.0)	15(13.0)
Knows moderate salt restriction of hypertensive patient	77(67.1)	38(34.9)
Is good for the hypertensive patient to consume diets low in cholesterol	86(74.7)	29(25.3)
Weight loss is important in management of hypertensive patient	100(87.0)	15(13.0)
Decrease in ethanol intake helps in the management of hypertension	80(69.4)	35(30.6)
Relaxation is a technique that aims to reduce tension or anxiety	104(90.3)	11(9.7)

### Knowledge scores distribution of the respondents

Table 3 showed the knowledge scores of the respondents. According to knowledge on hypertension, the participants had very good knowledge (74.8%). Regarding the knowledge on management of hypertensive patient, the respondents were found to have a very good knowledge (73%). However, based on knowledge regarding the nursing care of the hypertensive patients, the respondents had good level of knowledge (65.2%).

**Table 3: Knowledge Scores Distribution of the Respondents**

Score	Knowledge on hypertension N (%)	Nursing care for hypertensive patient N (%)	Management of hypertensive patient N (%)
Correct	85(73.8)	74(64.2)	85(73.0)
Incorrect	30(26.2)	41(35.8)	30(27.0)
Total	115(100.0)	115(100.0)	115(100.0)

**Table 4: Knowledge Scale Distribution**

Excellent	80-100%
Very Good	70-79%
Good	60-69%
Satisfactory	50-59%
Poor	0-49%

## DISCUSSION

In this study the total 115 nurses were participated and their responses were assessed. Educational attainment refers to the highest level of schooling that a person has reached. In our study based on educational qualification, more than half (53.0%) of the respondents had B.Sc. in nursing, followed diploma in nursing (33.9%) and the rest had masters level of education. Nursing is a profession within the health care sector focused on the care of individuals, families, and communities so they may attain, maintain, or recover optimal health and quality of life. Nurses may be differentiated from other health care providers by their approach to patient care, training, and scope of practice. According to attending training regarding hypertension, 70.4% of the respondents had attended a training regarding hypertension.

A nurse can give sufficient care and the results of reducing the patient's weight and changes in lifestyle (smoking cessation, reduction in alcohol intake, salt restriction, and increase in physical activity) are good.<sup>13</sup> especially for older patients with isolated systolic hypertension, it is wise to use non-pharmacological treatment.

More than nine-tenths (92.2%) of the participants knows about normal blood pressure measurement and 81.7% of them knows blood pressure level that indicate pre-hypertension. About 92.2% of the participants know the causes of hypertension and 67.0% knows the hypertension risk factors. About 62.6% of the respondents know about maintaining bed rest and elevating head of bed and 60% of the respondents know about monitoring and recording of BP while the patient is at rest. About 62.6% of the respondents can observe the sudden hypotension and 60% can monitor electrolytes, BUN and creatinine. Patients with controlled hypertension improved markedly when a nurse took part in the care.



In Western Australia patients with controlled hypertension improved from 70% to 87% in 3 years and in Israel the controlled hypertensive patients improved from 70% to 99%. The nurse took care of the contact with the patients, as she was presumed to be best at interacting with the patient and continuity of care.

More than seven-tenths (73%) of the respondents knows about observe skin color, moisture, temperature, and capillary refill time and 29.6% of the respondents knows about monitoring response to medications to control blood pressure. About 82.6% of the respondents mentioned that hypertension management aims to prevent morbidity and mortality and only 39.1% of them know the recommended diet for people with hypertension. About 66.1% of them know the moderate salt restriction of hypertensive patient and 87% mentioned that weight loss is important in management of hypertensive patient. 70.4% of the respondents said decrease in ethanol intake helps in the management of hypertension and 91.3% of them stated that relaxation is a technique that aims to reduce tension or anxiety. Nurses could give the patient more time, and their tasks in the programs were to measure blood pressure, provide information, educate in self-measurement, give advice about diet, control the intake of medicine, control laboratory tests, encourage the patient, and be an interpreter for the physician. Psychological problems and side effects were observed by the nurse and reported to the physician. Patients with complications were managed by the physician.

## CONCLUSION

The finding reported that the nurses' knowledge regarding the management of hypertensive patients and knowledge on hypertension were very good (73% Vs 75%). Nevertheless, the knowledge regarding nursing care for hypertensive patients was good (65%). Sincere and more sustained efforts are required to increase the knowledge of staff nurses regarding the nursing care and management of hypertensive patients.

## RECOMMENDATIONS

Establishment a protocol concerning nursing care and management for hypertensive patients, training the nursing staff on this particular issue. Creating awareness and developing knowledge among the nurses in relation to hypertension is the key factor to plan for comprehensive nursing care for better prognosis of the patient and to reduce some problems and improve the quality of life of hypertensive patients. Overall the nurse's education should be increased.

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