



# Assessment of Knowledge, Self-care Practice, and Associated Factors Among Hypertensive Patients the Public Hospital of Addis Ababa Ethiopia 2016 G.C.

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**Abstract:** Background: Patients with hypertension are a high risk of cardiovascular disease. An increase of 10 mmHg (more than normal) in diastolic blood pressure leads to a relatively increased risk of stroke and cardiovascular disease by 37%. Moreover, hypertension may impair vision. The symptoms range from blurred vision to blindness. A lack of knowledge about hypertension negatively influences patients' awareness and behaviors and is a major obstacle in controlling hypertension. The general objective of the study was to assess the overall level of knowledge, self-care practices, and its associated factors among hypertensive patients in adult cardiac and renal referral clinics in public hospitals Addis Ababa city Administration Addis Ababa Ethiopia. Methods: An institutional-based cross-sectional study was conducted in public health hospitals. The final sample size was 384, which was proportionally allocated to each of the institutions and systematic random sampling was used to select study units that were part of the study. Results: The results of the study showed that (43.6%) of the study participants had good knowledge about hypertensive self-care. A strong association was observed between knowledge about hypertension and educational status, family history of hypertension, place of residence; and occupational status of the study participants. About (51.5%) of the study participants had good self-care practices towards hypertension. However, there was a significant association between self-care practices, place of residence and educational status of the study participants. Study participants who had secondary and above educational status had good self-care practice than participants had no formal education. Conclusion: Despite the important role of knowledge and self-care practices in the management of hypertension is recognized to be useful and effective in achieving hypertension control and preventing its complication. The findings of this study confirms that self-care practices was accomplished as recommended by the majority of respondents, but knowledge was more problematic.

**Keywords:** Hypertension, Knowledge, Self-care Practice and Factors

## 1. Background

Hypertension is defined as an increase in blood pressure greater than or equal to 160/95 mmHg according to the World Health Organization [1]. It is categorized as "primary hypertension", which means high blood pressure with no obvious underlying medical cause and accounts about 90-95%. Or. The remaining 5-10% of cases (secondary hypertension) are caused by conditions that affect the kidneys, arteries, heart, or endocrine system [3]. A lack of

knowledge about hypertension adversely influences patients' awareness and behaviors, and is a major challenge in controlling hypertension [8]. People with hypertension can prevent the squeals of the disease and prevent the possible complications caused by raised in blood pressure by taking care of themselves. Self-care refers to learned, conscious, and purposeful practices, which people do for themselves, their children and their families to stay healthy and maintain their proper health, both mentally and physically, meet their social and psychological needs, and prevent illness or accident.

Self-care is not a substitute but a supplement, that determine how to apply professional and organizational care [10]. The self-care practices for prevention of complications of hypertension includes not taking salty foods. No smoking, abstained from drinking any alcohol, and being adherent to antihypertension medication [11]. Self-care practices introduced in healthy behavior are vital in both the prevention, and management of hypertension. But barriers to hypertension self-care, and control are well studied and exist at the patient, provider, and health institution levels. These barriers include lack of knowledge about the seriousness of untreated hypertension and the benefits of controlling hypertension, unemployment, alcohol, and illicit drug use, cost of care and medications, drug side effects and complexity of the regimen [12].

A recent report on the benefits of restoring normal blood pressure at the stage of prehypertension in a developed area. However, in a rural area, self-care intervention would be a more feasible strategy to prevent hypertension in persons at risk. In the rural community, the most prevalent risk behavior was smoking, followed by alcohol consumption [13]. Therefore, knowledge about the patients' condition and information with regard to their self-care ability is vital, as patients themselves reported that knowledge about their condition and its management will be important factors in their self-care behaviors. For those living with hypertension, self-management through self-care will facilitate well-being, decrease the effects of the disease, and limit disease progression [14]. Recent reports have revealed that BP education plays a significant role in increasing hypertension knowledge. Patients who were aware that hypertension led to reductions in life expectancy had a higher compliance level with medication use and follow-up visits than patients without this awareness [19].

Studies have investigated that hypertensive patients should have good knowledge and self-care practices regarding salt restriction, adherence to medication, engaging regular physical exercise, and refrain from smoking to control their blood pressure [12]. From the above it has been observed that knowledge and self-care practices, including inability to modify their diet, more salt intake, inadequate maintenance of a healthy weight, smoking, and lack of getting regular exercise, is very much common in hypertensive patients in the world especially in developing countries. Most people have inadequate knowledge and self-care about the seriousness of hypertension. Bearing in mind this situation and the lack of study on this area, it is necessary to assess the overall level of knowledge, self-care practices, and its associated factors with treatment among patients with hypertension. The general objective of this study was to assess the level of knowledge, self-care practices, and its associated factors among hypertensive patients the public hospital of Addis Ababa Ethiopia 2016 G.C.

#### Objectives

##### General objectives

To assess knowledge, self-care practices, and its associated factors among hypertensive patients the public hospital of

Addis Ababa Ethiopia 2016 G.C.

##### Specific objectives

To assess Knowledge, towards self-care practices, and its associated factors among hypertensive patients at public hospital of Addis Ababa Ethiopia 2016 G.C.

To assess self-care practices for hypertension and its associated factors among hypertensive patients at public hospital of Addis Ababa Ethiopia 2016 G.C.

## 2. Methods

### 2.1. Study Area and Design

An institutional-based cross-sectional study was conducted in the public hospitals of Addis Ababa. The sample size of study participants that was recruited in the research was calculated using the single population proportion formula. The final sample was 384.

### 2.2. Study Variables

#### 2.2.1. Independent Variables

Sociodemographic characteristics,  
Age at hypertensive onset,  
Duration of disease,  
Family history of hypertension,  
Complications,  
Source of information,  
Income,  
Risk factors for hypertension.

#### 2.2.2. Dependent Variable

Knowledge of hypertension.  
Self-care practices of the patients.

### 2.3. Operational Definitions

Knowledge: An idea by which hypertensive patients had about the definition, risk factors, signs and symptoms, effect, diagnostic methods, and treatment of hypertension.

Self-Care-Practice: An activity conducted by hypertensive patient towards their illness includes, diet, exercise, medication adherence, self-blood pressure measurement.

Good knowledge: Knowledge score that fell above mean of 32 knowledge questions.

Poor knowledge: Knowledge score below mean of 32 knowledge questions.

Physical activity: The minimum physical activity level was determined as 30 minutes, moderate activity for at least 3 days per week.

Good practice: Practice score above the mean of 21 practice questions.

Poor practice: Practice score below the mean of 21 practice questions.

### 2.4. Data Collection Tool and Procedures

Interviewer-administered structured questionnaires were employed to collect data. Knowledge was assessed by requesting thirty-one questions. The mean score was used to

categorize study subjects as having good knowledge or poor knowledge about hypertension. Self-care practice about hypertension was also assessed by requesting respondents to answer twenty questions. Accordingly, the sum value less than the mean was categorized as self-care practice and the value greater than or equal to the mean was categorized as good self-care practice.

### 2.5. Data Processing and Analysis

Data were checked, cleaned, and entered into Epidata, and imported to SPSS version 20.0 software for analysis. Incomplete and inconsistent data were excluded from the analysis. Descriptive statistics were used to describe the sample. The results of the descriptive statistics are expressed as percentages and frequencies. Associations between independent variables and dependent variables were analyzed first using bivariate analysis to identify factors that are significantly associated with the outcome variable. The magnitude of the association between the different independent variables in relation to dependent was measured using odds ratios and 95% confidence interval (CI), and P values below 0.05 were considered statistically significant.

### 2.6. Ethical Consideration

Ethical clearance and an official letter were obtained from the Research and Ethics Committee of AAU to the selected public health hospitals. Letter was written for respective hospitals, and permission was obtained from respective hospitals. Verbal and written consent was obtained for willingness of patients to participate.

## 3. Results

### 3.1. Socio-demographic Characteristics of Respondents

The mean age of respondents was  $57 \pm 13$ , most of the respondents 205 (55.6%) were within 41-60 age group. The majority of the respondents 195 (52.8%) were civil servants. A large proportion of the study subjects 188 (50.9%) had no family history of the disease. The majority 186 (50.4%) of the respondents get health information from a health professional (Table 1).

**Table 1.** Socio-demographic characteristics of respondents in public hospitals, of Addis Ababa city administration central Ethiopia, April 2016.

Variable	Frequency	Percent
Sex Male	186	50.4
Female	183	49.6
Occupation		
Farmer	29	7.9
House wife	48	13.0
Merchant	96	26.0
Civil servant	196	53.1
Age <40	30	8.1
41-60	205	55.6
61-80	121	32.8
81-99	13	3.5

Variable	Frequency	Percent
Place of residence		
Rural	239	64.8
Urban	129	35.2
Educational status		
Illiterate	58	15.7
Primary	118	32.0
Secondary and above	193	52.3
Marital status		
Single	31	8.4
Married	243	65.9
Divorced	33	8.9
Widowed	62	16.8
Income		
<500	69	18.7
500-1000	122	33.1
>1000	178	48.2
Habit		
Smoking	15	4.1
Alcohol	51	13.8
None	303	82.1
family history of hypertension		
Yes	181	49.1
No	188	50.9
Source of health info		
Family member	69	18.7
Mass media	114	30.9
Health professional	186	50.4

### 3.2. Knowledge of Hypertensive Patients with Hypertension

The total mean score for knowledge was  $(15.0325 \pm (SD 2.98))$ . One hundred sixty-one (43.6%) respondents scored above the mean on the 32 questions. The remaining two hundred eight (56.4%) of the study respondents scored below the mean. The maximum score 28 of 32 knowledge questions and the minimum score was 5 with a range of 23 of 32 questions. (Tables 2, 3, 5 and figure 1)

**Table 2.** Knowledge about the risk factors, signs and symptoms of hypertension and rest required for hypertensive patients among hypertensive patients in public hospitals of Addis Ababa city Administration Addis Ababa Ethiopia April 2016.

Variable	Response	Frequency	Percent
Risk factors for hypertension	Stress	268	43.2
	Age	181	29.1
	Heredity	172	27.7
Sign and symptom of hypertension			
Headache	Yes	339	92.1
	No	29	7.9
Dizziness	Yes	75	20.4
	No	293	79.6
Nausea	Yes	39	10.6
	No	329	89.4
Don't know	Yes	29	7.9
	No	340	92.1
	Complete bed rest	61	16.5
How often do you rest per day	Refrain from activity	137	36.9
	Restricted from activity	127	34.4
	No need of rest	19	5
	Don't known	22	5.7

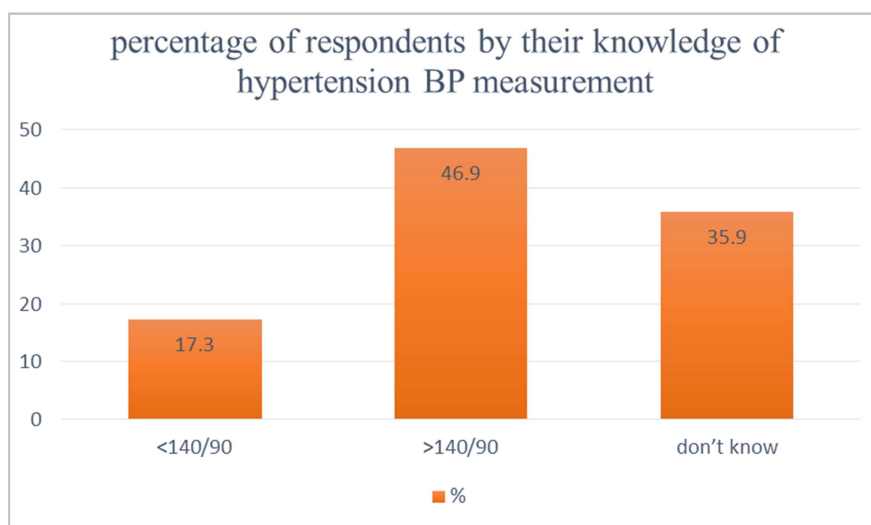
**Table 3.** Knowledge about prompt diagnostic test and lifestyle modification to control hypertension among hypertensive patients in public hospitals of Addis Ababa City Administration April 2016 Addis Ababa Ethiopia. {n=369}.

Variable	Response	Frequency	Percent
What is the prompt diagnostic study of hypertension?	Blood test	16	4.3
	Urine test	6	1.6
	Chest x-ray	8	2.2
	BP measurement	331	89.7
	Don't know	8	2.2
Nutritional therapy for hypertension	Water restriction	19	5.1
	Decrease salt intake	315	85.4
	Increase salt intake	6	1.6
	Decrease calories food	14	3.8
	Don't know	15	4.1
How can you maintain normal body weight?	Over eating	9	2.4
	Eating fatty foods	13	3.5
	Regular exercise and optimal calorie	319	86.4
	Calorie restriction	16	4.3
	Don't know	12	3.3
Best methods to control hypertension?	Drug therapy	304	32.1
	Diet therapy	337	35.6
	Regular exercise	309	32.3
	Salty and salt rich food	339	82.5
	Spice food	42	10.2
Foods to be avoid by hypertensive patients?	Pulses	17	4.1
	Vegetable	13	3.2
	under stress situation	21	5.7
	life long	309	83.7
	Activity required physical excretion	2	0.5
At what time, hypertensive medications should be taken?	When ever feel bad	25	6.8
	Don't know	12	3.3
	As information got from other hypertensive patient	2	.5
	As info got from book and journal	13	3.5
	As long term prescription for illness	23	6.2
How does hypertensive patient should take medication?	As current prescription	326	88.3
	Don't know	5	1.4
	Involving strenuous exercise	14	3.8
	Yoga and medication	186	50.4
	Sleep medication	59	16
Best measures to reduce stress?	Watching television	61	16.5
	Don't know	49	13.3
	Jogging and walking	335	90.8
	Weight lifting	8	2.2
	Driving	4	1.1
Exercise hypertension? for	Dancing	7	1.9
	Don't know	15	4.1

**Table 4.** Knowledge about prompt diagnostic test and lifestyle modification to control hypertension among hypertensive patients in public hospitals of Addis Ababa City Administration April 2016 Addis Ababa Ethiopia. {n=369}.

Variable	Response	Frequency	Percent
How can you maintain Normal body weight?	Eating too much	9	2.4
	Eating fatty foods	13	3.5
	Regular exercise	319	86.4
	Restrict calorie	16	4.3
	Don't know	12	3.3
How long should a person exercise daily	<30 minutes	218	59.1
	30-60 minutes	51	13.8
	>60 minutes	10	2.7
	Don't know	90	24.4
	Pickles	118	32
Salt rich food?	Milk	19	5.1
	Vegetables	7	1.9
	Rice	10	2.7
	Don't know	214	58

Variable	Response	Frequency	Percent
Do you think HPN occur genetically?	Yes	242	65.3
	No	127	34.7
Over all knowledge score	Poor knowledge	208	56.4
	Good knowledge	161	43.6



**Figure 1.** Knowledge of respondents about the definition of hypertension in public hospitals of Addis Ababa City Administration Addis Ababa Ethiopia 2016 G.C.

### 3.3. Self-care Practices of Hypertensive Patients with Hypertension

The overall self-care practice is described using the mean score of self-care. A total of 21 questions were asked to assess the overall self-care practices of the study subjects. About 190 (51.5%) of study participants scored above 8.6070 with a standard deviation of 2.6146. The maximum score was 14 and the minimum score of 3, and the range was 11. (Tables 5 and 6).

**Table 5.** Self-care practice of study participants in public hospitals of Addis Ababa City Administration April 2016 Addis Ababa Ethiopia.

Variables	Response	Frequency	Percent
Ever checked your BP?	Yes	351	95.1
	No	18	4.9
If yes when?	In this month	234	66.7
	last six month	95	27.1
	six months ago	22	6.3
Do you drink?	Yes	105	28.5
	No	264	71.5
If yes, how much?	<1 drink/week	336	33.6
	1-3 drink/week	55	51.4
	4-6 drink/week	15	14
	>=7 drink/week	1	.9
	Never	174	47.2
How often do you add salt to your food?	Rarely	127	34.4
	Sometimes	39	10.6
	Often	17	4.6
	Always	12	3.3
	Medication and exercise	140	37.
Which practice do you carry out to control your BP?	Less stress	77	20.
	Quit smoking	84	22.8
	Reduce salt	29	7.9
	DASH	21	5.7
	Losing weight	18	4.9
Do you check your cholesterol?	Yes	133	36
	No	236	64
If yes, how often?	Once in life	45	33.8
	Monthly	10	7.5
	Every 3 month	22	16.5
	Every six month	35	26.3
	More than never	21	15.8

Variables	Response	Frequency	Percent
Do you care about the food you take?	Yes	323	87.5
	No	46	12.5
Do you perform the physical exercise?	Yes	204	55.7
	No	165	44.3
If yes, how often do you exercise?	3 times/week	40	19.5
	<3 times per/we	156	76.1
	>3 times/we	9	4.4
	< 15 minutes	33	16
	15-30 minutes	74	35.9
For how long do you exercise?	30-60 minutes	80	38.8
	>60 minutes	17	9.2

**Table 6.** Self-care practice of study participants in public hospitals of Addis Ababa City Administration April 2016 Addis Ababa Ethiopia.

Variables	Response	Frequency	Percent
Ever used tobacco?	Yes	66	17.9
	No	303	82.1
Still smoking?	Yes	21	31.8
	No	45	68.2
Tries to quit smoking?	Yes	53	80.3
	No	13	19.7
Forget to take medication?	Yes	150	40.7
	No	219	59.3
If you Feel better do you stop medication?	Yes	46	12.5
	No	223	87.5
Carless at time of taking medication?	Yes	297	80.5
	No	72	19.5
If you feel worse while you take medication do you stop it?	Yes	62	16.8
	No	307	83.2
Over all self-care practice	Good practice	190	51.5
	Poor practice	179	48.5

### 3.4. Factors Influencing Knowledge About Hypertension

Bivariate analysis showed significant associations between knowledge and educational status, monthly income, habits, sex, marital status, place of residence, the source of health information, family history of hypertension, self-care practices, and age of the respondents. In multiple logistic analyses, the only family history of hypertension, educational status, occupation, and place of residence of the respondents maintained a significant association with knowledge of hypertension. The majority of hypertensive patients who had a family history had good knowledge about hypertension definition, risk factors, signs, and symptoms of hypertension, methods to control hypertension, diet, and drug therapy. In this study, knowledge about hypertension was significantly associated with family history of hypertension, place of residence, educational status, and occupational status of the

study participants.

Study participants who had no family history of hypertension two times less likely to have good knowledge compared with those who had a history of hypertension. {(p=0.004, AOR (95%CI), 2.052 (1.254-3.360))}. In addition, those who live in rural 73% less likely to have good knowledge compared with those living in urban. {(p=0.035, AOR (95%CI) 0.271 (0.080-0.911))}. Respondents who had no formal education and primary education educational level four and three times less likely to have good knowledge as compared with those with secondary and above education {(p=0.002, 0.021, AOR (95%CI) 3.924 (1.636-9.412)) and 2.848 (1.173-6.914)}. There was a significant association between being a merchant and knowledge about hypertension. Statically merchants three times less likely to have good knowledge compared with civil servants {(p=0.021, AOR, (95%CI) 2.848 (1.173-6.914). table 7

**Table 7.** Factors affecting knowledge about hypertension among hypertensive patients in public hospitals of Addis Ababa City administration April 2016 Addis Ababa Ethiopia.

Variable	Response	Knowledge		COR (95% CI)	AOR (95%CI)	P value
		Good	Poor			
Family Hx of HPN	Yes	112 (61.9%)	76 (40.4%)	0.418 (0.275-0.635)	2.052 (1.254- 3.360) *	.004
	No	69 (38.1%)	12 (59.6%)	1	1	
Residency	Rural	151 (63.2%)	88 (36.8%)	4.1262 (0.598-6.555)	0.271 (.080-.911) *	.035
	Urban	126 (29.4%)	89 (70.6%)	1	1	<=0.001
Education	No formal	10 (5.3%)	48 (26.5%)	0.294 (0.154-.558)	3.924 (1.636-9.412) *	.002
	Primary	65 (34.6%)	53 (29.3%)	0.442 (0.276-0.707)	2.848 (1.173- 6.914) *	.021
	Secondary +	113 (60.1%)	80 (44.2%)	1	1	.004

Variable	Response	Knowledge		COR (95% CI)	AOR (95%CI)	P value
		Good	Poor			
Occupation	Farmer	4 (2.5%)	25 (13.8%)	0.226 (0.083-0.617)	0.271 (.080-0.911) *	.035
	House wife	16 (8.5%)	32 (17.7%)	0.775 (0.409-1.468)	0.775 (.345-1.740)	.536
	Merchant	63 (33.5%)	33 (18.2%)	1.131 (0.694-1.844)	2.848 (1.173-6.914) *	.021
	Civil servant	105 (55.9%)	91 (50.3%)	1	1	.001

### 3.5. Factors Influencing Self-care Practice Regarding Hypertension

Bivariate analysis showed significant associations between self-care practice and educational status, habits, place of residence, source of health information, and family history of hypertension, knowledge, and occupation of the respondents. With multiple logistic analyses, only place of residency and educational status of the respondents maintained a significant association with self-care practices of hypertension. Multivariate analysis revealed that there was a statical

association between self-care practices and educational status. Study subjects who had primary education approximately three times less likely to have good self-care practice as compared with those who have secondary and above. {(p=0.013, AOR (95%CI)=2.352 (1.196-4.625)}. But there was no statical association between self-care practices and no formal education's {(P=0.580, AOR (95%CI) 1.223 (.600-2.493)}. Study subjects who living in rural three times less likely to have good self-care practices as compared with subjects who live in urban areas {(P=0.000, AOR (95%CI)=2.879 (1.757-4.717)}. Table 8

**Table 8.** Factors affecting self-care practices among hypertensive patients in public hospitals of Addis Ababa City Administration April 2016 Addis Ababa Ethiopia.

Variable	Self-care Practice		COR (95%CI)	AOR (95%CI)	P value
	Poor	Good			
residency					
Rural	108 (53.7%)	133 (79.2%)	3.272 (2.057-5.205)	2.879 (1.757-4.717) ***	.001
Urban	93 (46.3%)	35 (20.8%)	1	1	<=0.001
Educational status					
No formal education	42 (20.9%)	16 (9.5%)	0.294 (0.154-0.558)	(1.223 (.600-2.493)	0.580
Primary	75 (37.3%)	43 (25.6%)	0.442 (0.276- 0.707)	2.352 (1.196-4.625) *	0.013
Secondary and above	84 (41.8%)	109 (64.9%)	1	1	0.005

\*p<0.05 \*\*p< 0.01 \*\*\*p<0.001.

## 4. Discussion

This study was conducted with the intention to assessing level knowledge, self-care practices and associated factors among hypertensive patients in public hospitals of Addis Ababa City administration. The study showed that the mean ( $\pm$ SD) knowledge score of the study participants was 15.0325 ( $\pm$ 2.98). In this study out Of the 369 study participants, 181 (49.1%) and 201 (54.5%) had poor knowledge and poor self-care practices towards hypertension, respectively. This is low when compared to studies in West Indies and Malaysia. (18, 27, 32), but high compared with study in another part of Pakistan.[20] The low score of knowledge and self-care practice was mainly due to illiteracy and low socioeconomic class of the patients. Participants with poor practice scores had poor control on blood pressure. The common reasons for poor practice were mainly poor compliance, lack of regular follow-up, poor diet control, and lack of physical exercise of the 181 study subjects who had a family history of hypertension about 112 (59.6%) had good knowledge. from those who had good knowledge about hypertension 80 (44.2%) of the study subjects attended at least secondary school. This is inlined with a study conducted in Ghana in which subjects with master's degree and above have good knowledge as compared to less educated. (36). In fact, 186 (50.4%) of

hypertensive respondents acknowledged that they received knowledge from their health professionals. This is similar to the study conducted in China [30].

This study ascertained that the majority of the study participants had good knowledge about hypertension definition, risk factors, exercise, diet, and signs and symptoms, but poor knowledge about the particular exercise, duration of exercise, food contents to avoid, stress reduction techniques, diagnostic techniques, and evidence of target organ damage. This approximately Similar to studies done in Nepal, sub-Sahara Nigeria, and India.]. A study done in Pakistan revealed that a large number of participants considered salt intake as a risk factor to be associated with high BP. This is different from our study in the great majority of the respondents responded that age is the major risk factor for high blood pressure. This may be due to differences in educational status [41].

Alarmingly, very high numbers of 173 (46.95) study subjects defined hypertension as blood pressure greater than or equal to 140/90 mmHg, whereas the rest 132 (35.8%) and 64 (17.8%) of the respondents responded that I do not know and call numbers that are less than 140/90 mmHg, respectively. This is high compared with a study conducted in Pakistan in which only (8%) were aware of the correct definition of HTN, and the majority of the patients (82%) did not know anything about this term (42). For the signs

and symptoms of hypertension, it was observed that the majority of the participants ( $n=369$ ; 92.1% mentioned that hypertension had several signs and symptoms. Some of the signs and symptoms identified included headache, dizziness, and nausea. This is high compared to other studies in other areas. This may be due to the difference in the educational status of the participants [42]. This study revealed that almost half (49.1%) of the study participants had a family history of hypertension. Respondents who had no family history of hypertension two times less likely to have good knowledge about hypertension compared with those who had a family history of the disease ( $p=0.004$ , AOR (95%CI) 2.052 (1.254-3.360). This finding is in agreement with the study in Botswana, that revealed the level of knowledge related to hypertension was high in participants who had a family history of hypertension (28). This study ascertained that there is statistical association between self-care practices and educational status and place of residence on multivariate logistic regression. Study subjects who had primary educational level approximately three times less likely to have good self-care practice as compared with those who had secondary and above educational level. ( $p=0.013$ , AOR (95%CI)=2.352 (1.196-4.625)). But there was no statistical association between self-care practice and no formal education's ( $P=0.580$ , AOR (95%CI) 1.223 (.600-2.493)). These findings are in agreement with other studies that demonstrated education is regarded as an essential prerequisite for self-care practices of a chronic disease [39].

In this study, 351 (95.1%) claimed to check their blood pressure regularly with most of them checking monthly, 234 (66.7%), this is high compared with the study done in Saudi Arabia. This may be due to differences in the educational status of the respondents [41].

Study participants who live in rural three times less likely to have good self-care practice as compared with participants who live in urban area. ( $P=0.000$ , AOR (95%CI)=2.879 (1.757-4.717)). this is an inconsistency with the study in Saudi Arabia. This may be due to different social, educational, and economic status [41].

About 204 (55.7%) participants were involved in regular exercise for at least three times a week. This is low compared to study in Saudi Arabia. This may be due to educational status [39].

#### Limitations

1. Social desirability bias due to a sensitive and personal question related to knowledge and self-care especially, regarding financial issues.
2. Because the data are cross-sectional, the direction of the causal relationship between variables can't always be determined.

## 5. Conclusion and Recommendations

### 5.1. Conclusion

Despite the important role of knowledge and self-care

practices in the management of hypertension were recognized to be useful and effective in achieving hypertension control and preventing its complication, the findings of this study confirmed previous findings concerning self-care among people with self-care practice was accomplished as recommended by majority respondents but knowledge was more problematic. The self-care practice diet management practices, exercise, blood pressure checkup, away from habit especially, warrants. However, regular checkups of blood pressure and diet management practice are said to be the cornerstone of self-care practices and a hypertension control. Generally, self-care practices were suboptimal among hypertensive patients in public hospitals of Addis Ababa City administration.

### 5.2. Recommendation

Family members should be informed about their important roles in encouraging patients to undergo a hypertension control or self-care practices.

Healthcare personnel must increase patient's awareness of the importance of all types of self-care practices domains and strongly promote the practice among hypertensive patients via strengthening the IEC program, and the hypertension association.

Staff members of the rental units and department of internal medicine need to participate in strengthening the overall awareness of the patients toward their self-care practice.

Nursing research should be carried out to investigate knowledge and self-care in a broader social context and larger sample size.

All nurses' workings on hypertension should give strict advice on the importance of self-care practices for hypertensive patients during their follow-up schedule and develop educational programs and activities to educate patients on the prevention and treatment of hypertension, and should not rely on medical intervention only.

#### Ethical Approval and Consent to Participate

This study was carried out after getting ethical clearance from the Addis Ababa University research ethics review committee. Data collection was carried out after receiving an ethical clearance letter from the town administrative health bureau. Informed written consent was obtained from each respondents prior to data collection.

## List Acronyms and Abbreviations

AAU	Addis Ababa University
BP	Blood Pressure
CHD	Coronary Heart Disease
CHF	Congestive Heart Failure
CI	Confidence Interval
CVD	Cardio Vascular disease
DBP	Diastolic Blood Pressure
HPN	Hypertension
SD	Standard Deviation
SBP	Systolic Blood Pressure

SMBP	self-monitoring blood pressure
SPSS	Statistical Package for Social Science Research
TV	Television
UN	United Nations
WHO	World Health Organization

## Consent for Publication

Not applicable

## Availability of Data

The datasets used and/or analyzed during the current study available from the corresponding authors on reasonable request.

## Author's Contribution

Sindew Mahmud: contributions to the study protocol design development, data collection, data quality monitoring, data analysis, and preparation of the manuscript.

Melaku Belay Tefri: contributions to the study protocol design development, data collection, data quality monitoring, data analysis, and preparation of the manuscript.

## Conflict of Interest

The authors declare that we do not have any financial or non-financial competing interests in reference to this article for its publication.

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