



## Knowledge, Attitude and Practice Regarding Lifestyle Modification of Hypertensive Patients at Jimma University Specialized Hospital, Ethiopia

Shibiru Tesema<sup>1\*</sup>, Bayeta Disasa<sup>1</sup>, Selamu Kebamo<sup>2</sup> and Eliyas Kadi<sup>1</sup>

<sup>1</sup>Department of Pharmacy, college of health sciences, Jimma University, Jimma, Ethiopia

<sup>2</sup>Department of pharmacy, college of medical and health sciences, Wollega University, Ethiopia

### Abstract

**Introduction:** Hypertension is an overwhelming global challenge. Appropriate lifestyle changes are the cornerstone for the prevention of hypertension. They are also important for its treatment; although they should never delay the initiation of drug therapy in patients at a high level of risk. The study was conducted to assess the knowledge, attitude and practices of hypertensive patients on life style modification to control hypertension at JUSH.

**Methods:** A prospective cross sectional descriptive study design was used to determine the knowledge, attitudes and practices of hypertensive patients with respect to importance of lifestyle modification in the management of hypertension. 130 patients with hypertension were identified and interviewed using questionnaire.

**Results:** Out of the 130 participants, majority (57.7%) were females. 80% of participants said they avoid salt in their diet and 15% Of them drink alcohol. 59.2% know the ideal BP and 67.7% believe the fact that exercise reduces BP. Only 1.5% of them were smoking and large majority (94.6%) were having salt restriction. Majority (90.7%) of them reported that health care provider taught them about danger of too much salt.

**Conclusion:** The results of this study indicates that although patients do receive advice on lifestyle modification, it was not enough and effective in changing patient behavior, knowledge and practice. Therefore, clinicians should give adequate time to provide relevant information on the value of life style modification in the control of their blood pressure.

**Keywords:** Attitude; Hypertension; Knowledge; Life style; Practice

### Introduction

Hypertension remains as one of the most important public health challenges world wide because of the associated morbidity, mortality, and the cost to the society [1]. It is one of the most significant risk factors for cardiovascular (CV) morbidity and mortality resulting from target-organ damage to blood vessels in the heart, brain, kidney, and eyes [2,3]. Hypertension causes 7.1 million premature deaths each year worldwide and accounts for 13% of all deaths, globally [4].

Analysis of the global burden of hypertension revealed that over 25% of the world's adult population had hypertension in 2000, and the proportion is expected to increase to 29% by 2025 [1,2]. According to some estimates, the larger proportion of the world's hypertensive population will be in economically developing countries by the year 2025 owing to their larger population proportion, a change in life style and sedentary life [5].

In Africa, 15% of the population has hypertension [2,3]. Although there is shortage of extensive data, 6% of the Ethiopian population has been estimated to have hypertension. Approximately 30% of adults in Addis Ababa have hypertension above 140/90 mmHg or reported use of anti-hypertensive medication [3]. Prevalence of hypertension was 13.2% in 2013 in Jimma [1].

Despite the availability of safe and effective antihypertensive medications and the existence of clear treatment guidelines, hypertension is still inadequately controlled in a large proportion of patients worldwide [6]. Unawareness of lifestyle modifications, and failure to apply these were one of the identified patient- related barriers to blood pressure control [7].

It is possible to prevent the development of hypertension and to lower blood pressure levels by simply adopting a healthy lifestyle. The recommended lifestyle measures that have been shown to be capable of reducing blood pressure include: (i) salt restriction, (ii) moderation of alcohol consumption, (iii) high consumption of vegetables and

fruits and low-fat and other types of diet, (iv) weight reduction and maintenance and (v) regular physical exercise. In addition, insistence on cessation of smoking should be part of any comprehensive lifestyle modification plan to reduce the risk of high blood pressure and cardiovascular disease [8,9]. Hypertensive patients irrespective of their stage or grade should be motivated to adopt these measures. Motivating patients to implement lifestyle changes is probably one of the most difficult aspects of managing hypertension.

Various studies have been conducted in different countries on awareness regarding hypertension, compliance with antihypertensive treatment, prevalence of hypertension, and awareness of hypertensive patients regarding lifestyle modifications[1-3,5,6,10-14]. However; there is no study that has comprehensively assessed hypertensive patient's knowledge, attitudes and practices on the importance of lifestyle modification in controlling hypertension at the study site. Therefore, this study was aimed to assess knowledge, attitude and practice and life style changes for blood pressure control among the patients with hypertension in JUSH.

### Methods and Material

A cross-sectional descriptive study design was used to assess hypertensive patients' knowledge, attitude and practice of lifestyle

**\*Corresponding author:** Shibiru Tesema, Department of Pharmacy, College of Health sciences, Jimma University, Jimma, Ethiopia, Tel: +251-937 147265; E-mail: [shibtesema007@yahoo.com](mailto:shibtesema007@yahoo.com)

**Received** February 12, 2016; **Accepted** March 08, 2016; **Published** March 15, 2016

**Citation:** Tesema S, Disasa B, Kebamo S, Kadi E (2016) Knowledge, Attitude and Practice Regarding Lifestyle Modification of Hypertensive Patients at Jimma University Specialized Hospital, Ethiopia. Primary Health Care 6: 218. doi:10.4172/2167-1079.1000218

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modifications in Jimma University specialized hospital (JUSH), from February 9 to 20, 2015. Currently, JUSH is the only teaching and referral Hospital in South-western Ethiopia. Geographically, it is located in Jimma town 346 km southwest of the capital city, Addis Ababa. There are currently 1694 hypertensive patients on follow-up at the chronic clinic of the Hospital.

Hypertensive patients who came to JUSH chronic clinic for follow up during the data collection time were included in the study. Hypertensive patients with mental illnesses, e.g. delirium, dementia, psychosis, schizophrenia etc, were prevented from participating in the study. A pretested structured questionnaire was administered through face-to-face interview to 130 patients who participated in the study. Data regarding knowledge, attitude and practices related to life style modification, and socio-demographic variables such as age, sex, marital status, education, occupation, ethnicity, duration of HTN, duration of treatment, co morbidity was collected.

### Ethical clearance

Ethical approval was obtained from ethical review board of college of health sciences, Jimma University. The reason why the data will be collected from the patient was explained to them by the data collector before the interview. Informed verbal consent was obtained from all patients included in the study in order to protect patient's rights of privacy and confidentiality.

### Result

From the total of 130 patients, the majority (57.7%) were females. The largest number, 73(56.2%), of respondents fell in the 45-60 years age group. On the basis of ethnic composition, the majority of the interviewed respondents belonged to Oromo ethnic group (63.8%), followed by SNNP (20%). A large majority, 26 (43.3%), of the respondents had schooling below high school level; with only 10% having received high school education and 28.3% had either Diploma or Degree while 18.3% were not educated (Table 1).

Assessment of the level of patient physical activity revealed that 10.2% of the patients reported to practice "little or no activity", 32.0% reported occasional activity, 41.8% walked briskly or run and only 14 percent claimed doing regular physical activity.

The participants daily activity distribution shows that most of the

Patient information		Frequency and percent (n=130)
Sex	Female	75(57.7)
	Male	55(42.3)
Age in years	<18	3(2.3)
	18-30	13(10)
	31-45	23(18)
	46-60	73(56.2)
	>60	18(13.8)
Ethnicity	Oromo	83(63.8)
	Amhara	15(11.6)
	Tigre	2(1.5)
	SNNP	26(20)
	Other	4(3.1)
Educational level	No education	49(37.7)
	Grade 1-8	42(32.3)
	Grade 9-12	25(19.2)
	Diploma	10(7.7)
	Degree or more	4(3.1)

Table 1: Socio-demographic characteristics of the patients.

participants involved in walking (43.1%), heavy labor (27%) and 18.5% pass most of their daily activity by sitting. (Table 2)

### Diet habit of the respondents

Majority (34%) of the respondents didn't eat diet like cheese and eggs at all, only 7% ate them rarely, and 3.3% regularly. A vast majority (95%) didn't get fish at all. Some (5.4%) of the participants ate cooked food with salt on a regular basis while 94.6% avoided adding salt to their food. The alcohol intake result indicated that 15% of respondents drank alcohol, with 20% having 1-2 drinks per day (Table 3).

As indicated in Table 3 below, most respondents had no co morbid condition (63.9%) and the duration since became hypertensive was less than five years (86.2%). Most (96.15%) of them know their BP readings.

The respondents were also asked about their weight, and current medications. Eighty six percent of the respondents were found to know their weight in Kg correctly, but about 93% don't know their current medication. ACE inhibitors (43%) and Hydrochlorothiazide (31%) were the most prescribed drugs. These drugs were prescribed either alone or in combination.

Out of the total participants, 59.2% of them knew the ideal BP and 67.7% of them believe the fact that exercise reduces BP (Table 4).

Patients	Daily activity primarily involves				Total
	Sitting N (%)	Standing N (%)	Walking or other exercise N (%)	Heavy labor N (%)	
Male	17(13.1)	11 (8.5)	37 (28.5)	23(17.7)	88(68)
Female	7(5.4)	4 (3)	19(14.6)	12 (9.3)	42 (32)
Total	24(18.5)	15(11.5)	56 (43.1)	35(27)	130 (100)

Table 2: Daily activities of the patients.

Questions	Frequency	Percent (n=130)	
Is there other chronic disease you suffer?	Yes	47	36.1
	No	83	63.9
Duration since hypertensive	0-5 year	112	86.2
	6-10 year	11	8.4
	>10 year	7	5.4
What's your current BP reading?	Pre-hypertensive	6	4.6
	Stage1	104	80
	Stage 2	13	10
	Urgency	2	1.55
	I don't know	5	3.85

Table 3: Co-morbid disease, duration since became hypertensive and current BP readings of the patients.

Questions	Frequency and % (n=130)	
What's your ideal BP?	Correct	77(59.2)
	Incorrect	35(26.91)
	I don't know	18(13.8)
Who advised on how to exercise?	No one	26(20)
	Doctor	96(73.8)
	Experience	8(6.2)
Believe whether exercise reduce BP	Yes	88(67.7)
	No	3(2.3)
	I don't know	39(30)
Time spent by HP to advice patient	None	20(15.4)
	<5 minute	93(71.5)
	5-10 minute	8(6.2)
	>10 minute	9(6.9)

Table 4: Knowledge and attitude of the patients about BP and exercises.

Questions	Frequency and percent (n=130)	
Do you think adding salt affects BP?	Yes	123(94.6)
	No	2(1.54)
	I don't know	4(3.07)
Did HP teach you about the dangers of too much salt?	Yes	118(90.7)
	No	12(9.3)
Do you think alcohol affect BP?	Yes	109(83.8)
	No	8(6.2)
	I don't know	14(10)
Did HP teach you about too much alcohol?	Yes	98(75.4)
	No	32(24.6)
Do you think smoking affect BP?	Yes	74(56.9)
	No	17(13.1)
	I don't know	39(30)
Did HP teach you about the dangers of smoking?	Yes	105(80.7)
	No	25(19.3)
Do you smoke?	Yes	2(1.5)
	No	128(98.5)

Table 5: KAP of the patients on salt, alcohol and smoking.

The participants' knowledge regarding balanced diet is that 39% of them knows benefits of balanced diet in the management of HTN and 65.4%, 56.2% of them haven't eaten balanced diet and didn't taught by health professionals respectively.

Only 1.5% of the participants were smokers, and 94.6% said they were avoiding salt in their food. HP had thought 90.7% of them about danger of too much salt (Table 5).

## Discussion

Good knowledge about salt, alcohol and smoking effect is an essential part of successful treatment of hypertension. Out of 130 of participants, 94.6%, 83.8%, and 59.9% participants had knowledge of the danger of salt, alcohol and smoking on hypertension management, respectively. Eighty percent, 85% and 98.5% of the participants avoid adding salt in their food, drinking alcohol and smoking, respectively. The number of participants with knowledge about salt restriction and avoiding smoking are more than the findings in a research done in Ghana, (60%) and (38%), respectively. Regarding the knowledge about the balanced diet, only 39.2% know the importance of balanced diet and this finding is low when compared with research done in Ghana (59%) [12].

The patient's knowledge on blood pressure and exercise was 59.2% and 67.7%, respectively. The attitude toward exercise is good when compared with the result of a research done in Ghana (60%) [12]. On the contrary, knowledge about hypertension is low when compared with a research done in Kinondoni Municipality, Dar es Salaam (66.8%) [14].

The attitude of the patients in avoiding salt intake and smoking cigarette was 94.6% and 98.5%. These findings are higher when compared with a study conducted last year at the same place, 45.2% and 95.5% avoided salt intake and smoking cigarette, respectively [10]. This may be due to the improvement of the knowledge of the patients towards these habits relative to last year. The common reasons given by respondents for not avoiding this practice completely were that they could not avoid salt intake and quit salt intake and some new participants do not know the danger of these practices.

Assessment of the level of patient physical activity revealed that 10.2% of the patients reported to practice "little or no activity", 32.0%

reported occasional activity, 41.8% walked briskly or run and only 14% claimed doing regular physical activity. The number of patients who did vigorous physical activity (regular physical activity) and walked briskly or run is low when compared with a study done in Nairobi, Kenya 75.7% and 77.4% respectively [11].

Furthermore, the number of patients who walk briskly is low when compared with the finding in Nigeria (99.3%) [13]. This may be due to poor knowledge on the importance of physical activity in management of hypertension. The patient's daily activity among study participants as measured in this study was, sitting 18.5%, standing 11.5%, walking 43.1% and heavy labour 27%. The number of patients whose daily activity include sitting was lower when compared with the study done in Nigeria (29%) [13]. The difference may be because of the fact that participants are engaged in different activity to get their daily food and most of them do not have care givers.

Generally, practice of the participants and their knowledge toward life style modification in management of hypertension is not as required. This may be because of the poor knowledge and poor adherence to the practices. In addition, health professional might not be counseling their clients by giving adequate time regarding the importance of the lifestyle in the management of hypertension and its cost effectiveness.

## Conclusion and Recommendation

The study found inadequate levels of knowledge and practice of non-drug control of hypertension. Furthermore, this study showed that the desired level of changes in the attitude of patients was not attained merely because of inadequate level of advice provided to them by the physicians. Patients should be educated on the components and application of life style modification for better control and prevention of their BP. The health care providers should motivate and enable the patients to control their BP by giving consistent advices on the life style modification. The public authority, NGOs and other interested bodies in health services should promote and where necessary enforce the implementation of life style modification to control patient's BP.

## Conflict of Interest

The authors declare that they have no conflict of interest.

## Acknowledgement

The authors are grateful to Jimma University for financial support provided to conduct the research.

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