

Assessment of Knowledge and Practice of Life Style Modification among Hypertensive Patients at Nekemte Specialized Hospital, Western Oromia, Ethiopia: A Cross-sectional Study Design

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Received: September 27, 2019; Accepted: December 20, 2019; Published: December 27, 2019

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Abstract

Background: Hypertension is an overwhelming global challenge. Appropriate lifestyle changes are the cornerstone for the prevention of hypertension. The study aimed to assess knowledge and practice of lifestyle modification among hypertensive patients in Nekemte Specialized Hospital, West Oromia, Ethiopia, 2018.

Methods: Institutional based cross-sectional study was conducted at the chronic adult Out Patient Department of Nekemte Specialized Hospital and Wollega university referral and teaching hospital from December 2018 to January 2019. A structured interviewer-administered questionnaire was used for data collection. Consecutive sampling was used to collect data and Questions are categorized to elicit participants' demographic characteristics, economic characteristics, knowledge, and the practice of various lifestyle-modification measures. The data could be analyzed by SPSS software version 20, and the result could be presented by statement, table, graph, and charts. The result could be disseminated to Wollega University, Nekemte specialized Hospital, Wollega University Referral hospital and other stakeholders.

Results: The study included 222 respondents with a 100% response rate; 112 (50.5%) were female, and the mean age of the respondents is 44.00 years. The general respondents' knowledge of lifestyle modifications was 79.28%, but only 68.92% of them have a good practice. Males have better knowledge and practice (80.9%, 36.4%), respectively. From respondents with comorbidity, 68.8% of them and 69% of those without comorbidity have good knowledge respectively.

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

Keywords: Hypertension; Knowledge; Practice; Lifestyle

Abbreviations: BP: Blood Pressure; DASH: Dietary Approach To Stop Hypertension; EBN: Evidence Based Nursing Practice; HP: Health Professionals; MI: Myocardial Infarction; OPD: Out Patient Department; RCTS: Randomized Controlled Trials; SEA: South East Asia; SPSS: Statistical Package Solution Service; WHO: World Health Organization

Introduction

Hypertension is a significant health problem in developed countries and now becoming an increasingly important cause of morbidity and mortality in developing countries. Today one in three adults has Hypertension. Hypertension is a global public health challenge due to its high prevalence and the associated risk of stroke and cardiovascular diseases in adults. It is estimated to cause 7.5 million deaths worldwide and about 12.8% of the total annual deaths in SSA [1-3]. Hypertension is a significant health problem throughout the world with high morbidity and mortality rate. Globally the disease affects over one billion people, seven million of them die each year as a consequence of severe complications and lack of adequate control [4]. The global

prevalence of Hypertension has been increasing. By 2030, 23 million cardiovascular deaths are projected, with 85% occurring in low- and middle-income countries [5]. Hypertension remains as one of the most critical public health challenges worldwide because of the associated morbidity, mortality, and the cost to society. Hypertension causes 7.1 million premature deaths each year worldwide and accounts for 13% of all deaths. Globally Hypertension is a severe warning sign [6].

The condition can be a silent killer, and it is essential for everybody to know their blood pressure reading. If Hypertension is detected early, it is possible to minimize the risk of heart attack, heart failure, and stroke and kidney failure. As with other non-communicable diseases, self-care can facilitate early detection of Hypertension, adherence to medication and healthy behavior's, better control and awareness of the importance of seeking medical advice when necessary [7].

Hypertension is one of the leading causes of disability and death in both developed and developing countries that need urgent strategies to implement interventions that control it. Appropriate lifestyle changes often called non-pharmacological approaches that often overlooked are the cornerstone of the prevention and control of hypertension [8]. The prevalence of HTN is also increasing in Sub-Saharan African

countries as well. The disease has been found to be more prevalent among people of urban residence. According to a recent finding, there were ~75 million adults living with HTN in sub-Saharan Africa. This study estimated that the figure would rise to 125.5 million in the coming 10–15 years [9]. Findings of studies conducted in Ethiopia show gradual increment in the total number of HTN cases. According to a recent study, HTN was found to be the most prevalent non-communicable disease with an overall prevalence of 19.1%. This increment is attributed to the rise of risk factors including smoking, obesity, harmful use of alcohol, and sedentary lifestyle. Lifestyle advice is recommended for all patients with or without Hypertension and regardless of drug therapy [10,11].

These approaches are known to have no adverse effects and are less expensive than pharmacological therapy. In spite of emerging empirical evidence of the efficacy of lifestyle modification in blood pressure control, little is known about knowledge, attitude, and awareness of patients with Hypertension to implement these lifestyle modifications in Ethiopia. Therefore, this study assessed knowledge, belief and practice of lifestyle modification for BP control among patients with Hypertension in Bishoftu General Hospital [12].

Hypertension already affects one billion people worldwide, leading to heart attacks and strokes. Researchers have estimated that raised blood pressure currently kills nine million people every year. Elevated blood pressure is the most potent modifiable risk factor for cardiovascular disease worldwide [13]. High blood pressure is globally the most potent modifiable risk factor for cardiovascular disease and related disability. Its prevalence and downstream detrimental impact on health are increasing because of longer life expectancy and increased exposure to risk in the population [13].

Lifestyle modification or non-pharmacological therapy which has to be given initially to all patients with Hypertension. It is especially useful for prevention of Hypertension, including for management of mild hypertensive subjects. If we can mildly lower the blood pressure of the general population, it seems to bring health benefits to public health as well [14]. Raised blood pressure is a serious warning sign that significant lifestyle changes are urgently needed. High-income countries have begun to reduce Hypertension in their populations through strong public health policies such as reduction of salt in processed food and widely available diagnosis and treatment that tackle Hypertension and other risk factors together [15].

In Ghana, efforts to treat or reduce Hypertension have been based mainly on pharmacological approaches with very little on the non-pharmacological approaches. Stress the need for a combination of two or more lifestyle modifications such as exercising, consumption of low sodium, high potassium foods and maintaining healthy weights etc. to reduce blood pressure among people living with Hypertension [16].

In Africa, 15% of the population has Hypertension. Although there is a shortage of extensive data, 6% of the Ethiopian people have been estimated to have Hypertension. The study considers that practice of lifestyles and related factors and their relationships will guide to facilitating for actions for the higher practice among the hypertensive patients. Therefore, finding from the study would alert health professionals, government and other stakeholders on lifestyles and factors associated with the method of these lifestyles to control Hypertension [17].

Approximately 30% of adults in Addis Ababa have Hypertension above 140/90 mmHg or reported use of antihypertensive medication. Prevalence of Hypertension was 13.2% in 2013 in Jimma. Unawareness

of lifestyle modifications, and failure to apply these were one of the identified patient-related barriers to blood pressure control.

Appropriate lifestyle changes may safely and effectively delay or prevent Hypertension in non-hypertensive subjects [12]. The findings could be useful to the governmental and non-governmental organizations working in lifestyle modification programs to design interventions to improve the knowledge and practice of lifestyle modification in these two hospitals and other similar circumstances. The findings could also be useful as a contribution to the ongoing research efforts on lifestyle modification practice of hypertensive patients.

Methods and Materials

Study area and period

This study was conducted at Nekemte Specialized Hospital and Wollega University Referral Hospital from December, 2018 to January 2019. Nekemte Specialized Hospital and Wollega University Referral Hospital is found at Western part of Ethiopia, East Wollega zone, in Nekemte town at a distance of 331 km from the capital city of Ethiopia (Finfine). Those hospitals were established in 1932 and 2009 E.C. respectively. Those hospitals are giving service for about 2 million populations and as well as that hospital have multi-disciplinary professionals. Nekemte town was established between the year 1873-1875 GC and currently the capital city of eastern Wollega Zone. The town is located 328km to west of Addis Ababa. The astronomical location of this town on the map is 9° 04'N latitude and 36°C, 30' N West latitude. Its altitude ranges from 1960-2170 above sea levels and its annual rain fall ranging from 1500 mm-2200 mm which covers the months from April to the beginning of December. The total surface area of the town is 32 km². The climatic condition of the town is "semi desert" with annual environmental T° which ranges from 14-26°C.

Study design

Institutional based cross sectional study design was employed.

Source population

All hypertensive patients who are on chronic follow up at Nekemte specialized Hospital and Wollega University Referral hospital.

Study population

Selected HTN patients who are on chronic follow up at Nekemte Referral Hospital Wollega University Referral hospital.

Sampling technique

Non-probability sampling technique was employed using consecutive sampling.

Eligibility Criteria

Inclusion criteria

The study was included all patients with age greater than or equal to 18 years included from chronic follow up.

Exclusion criteria

1. Patients with psychiatric problem.
2. Critically ill and cannot respond to the question was excluded.
3. Non-volunteers to participate to the study were excluded.
4. Those diagnosed <6 months was excluded from the study.

Data collection

An adapted pre-tested information interviewer administered structured questionnaire which contains background information of the study subjects, knowledge and practice variables was used as data Collection tool.

Data quality management

Pre-test was conducted at Wollega University Referral Hospital by taking individuals to help establish the reliability of the questionnaires. The Supervisor checked data for completeness, accuracy, clarity, and consistency. The structured questionnaire was translated to local language by the help of the professionals.

Data processing and analysis

Data was entered, cleared, analyzed using SPSS software version-25 was used to compile, calculate, and analyze the data. The results could be presented in text, table, charts, and graphs.

Ethical considerations

The study was approved and ethical clearance letters was obtained from institutional review board (IRB) of Wollega University and given to hospitals administrative office before data collection period. A consent sheet was prepared in English and then translated in to local language Afan Oromo and attached to the questionnaire in a separate page. In the consent sheet, the purpose of this study was stated and there was explanation that there is no way to cause any harm to the study subjects. Written consent was obtained from study participants to ensure confidentiality; the consent sheet indicates that there was no participant identifier to be written on the survey questionnaire and that no individual response was reported. Everybody was participated voluntarily.

Operational definitions

1. **Good knowledge** -- Respondents with response below mean (9.7) of the knowledge questions were considered as having poor knowledge.
2. **Poor knowledge** -- Those who answered above mean (9.7) of the knowledge questions were considered as having poor knowledge.
3. **Good Practice** -- Those who correctly answered above mean (10.95) practice questions were considered as having good practice.
4. **Poor Practice** -- Those who answered below mean (10.95) of the practice questions were considered as having poor practice.
5. **Adherence to lifestyle modifications** -- Respondents who adhere to diet, exercise, smoking, and alcohol consumption-related recommendations.
6. **Exercise-related adherence** -- Respondents who reported to have exercised for \$30 min per day; at least three times per week.

7. **Smoking-related adherence** -- Respondents who reported to have never smoked or stopped smoking.

8. **Alcohol consumption-related adherence** -- Respondents who reported to have never consumed alcohol.

Results

Socio-demographic characteristics of study variables

A total of 222 respondents were participated with response rate of 100%. According to our study the majority 112 (50.5%) participants were females. 63 (28.4%) of respondents fell in 30-39 years age group. The mean age of the respondents was 44 years. Most of the respondents 175 (78.8%) are living in Urban and majority of them were 105 (47.3%) protestant followers in religion. A large majority, 81 (36.5%) of the respondents had diploma and above level in education, majority of them 174 (78.4%) are married. Assessment of profession revealed that 70 (31.5%) reported as private employers while more of the respondents 191 (86%) belongs to Oromo in ethnicity, 93 (41.9%) of them responds that they have co morbid diseases (Table 1).

Variables	Character	Frequency	Percent
Age of the respondents	18-29	20	9
	30-39	63	28.4
	40-49	58	26.1
	50-59	42	18.9
	>=60	39	17.6
	Total	222	100
Educational status	cannot read and write	49	22.1
	can read and write	34	15.3
	1-8 education	27	12.2
	secondary school	31	14
	diploma and above	81	36.5
	Total	222	100
Marital status	Married	174	78.4
	Unmarried	22	9.9
	Divorced	7	3.2
	Widowed	19	8.6
	Total	222	100
Profession of the respondent	gov't employed	62	27.9
	private employed	70	31.5
	NGO	1	0.5
	Merchant	23	10.4
	Student	12	5.4
	house wife	38	17.1

	Retired	14	6.3
	Others	2	0.9
	Total	222	100
Religion	Protestant	105	47.3
	Orthodox	90	40.5
	Muslim	24	10.8
	Catholic	1	0.5
	Others	2	0.9
	Total	222	100
Ethnicity	Oromo	191	86
	Amhara	19	8.6
	Gurage	10	4.5
	Tigre	2	0.9
	Total	222	100
Average monthly income	0-600	47	21.2
	601-1650	45	20.3
	1651-3200	53	23.9
	3201-5250	54	24.3
	5251-7800	11	5
	7801-10900	8	3.6
	10901 and above	4	1.8
	Total	222	100

the health professionals and 194 (87.4%) of the respondents knows that obesity is risk factor for hypertension. The result of the survey indicates that 212 (95.5%), 208 (93.7%), and 204 (91.9%) knows the relation of salt, alcohol, smoking and hypertension respectively. One hundred ninety five of them know that exercise can reduce blood pressure, 202 of the respondents know that diet helps to control blood pressure.

From the total respondents 82.9% urban and 66% of rural residents have good knowledge about life style modification respectively. Respondents with co morbidity 68.8% and 69% of those without co morbidity have good knowledge. Generally, 79.3% of the respondents have good knowledge on lifestyle modification (Figure 1 and Table 2).

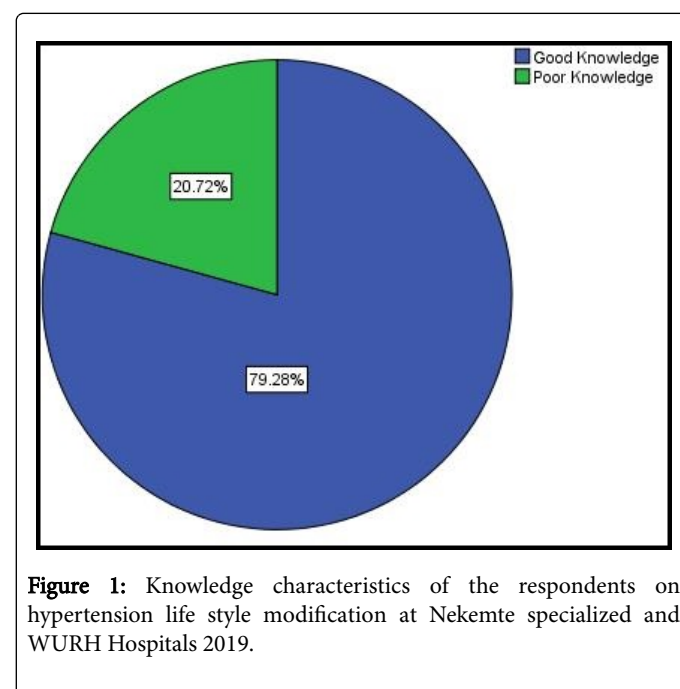


Figure 1: Knowledge characteristics of the respondents on hypertension life style modification at Nekemte specialized and WURH Hospitals 2019.

Table 1: Socio-demographic characteristics of the respondents on assessment of life style modification among hypertensive patients at Nekemte Specialized hospital and Wollega University Referral Hospital, 2019.

Knowledge characteristics of the respondents on lifestyle modification

According to our study 197 (88.7%) of them have information about life style modification. While 196 (88.3%) of them were informed by

Variables	Character	Knowledge level		Total
		Good knowledge	Poor knowledge	
Sex of the respondent	Male	89 (80.9%)	21 (19.1%)	110 (100.0%)
	Female	87 (77.7%)	25 (22.3%)	112 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Educational status	cannot read and write	33 (67.3%)	16 (32.7%)	49 (100.0%)
	can read and write	22 (64.7%)	12 (35.3%)	34 (100.0%)
	1-8 Education	19 (70.4%)	8 (29.6%)	27 (100.0%)

	secondary school	29 (93.5%)	2 (6.5%)	31 (100.0%)
	diploma and above	73 (90.1%)	8 (9.9%)	81 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Marital status	Married	133 (76.4%)	41 (23.6%)	174 (100.0%)
	Unmarried	22 (100.0%)	0 (0.0%)	22 (100.0%)
	Divorced	4 (57.1%)	3 (42.9%)	7 (100.0%)
	Widowed	17 (89.5%)	2 (10.5%)	19 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Profession of the respondent	gov't employed	56 (90.3%)	6 (9.7%)	62 (100.0%)
	private employed	52 (74.3%)	18 (25.7%)	70 (100.0%)
	NGO	1 (100.0%)	0 (0.0%)	1 (100.0%)
	Merchant	19 (82.6%)	4 (17.4%)	23 (100.0%)
	Student	12 (100.0%)	0 (0.0%)	12 (100.0%)
	house wife	26 (68.4%)	12 (31.6%)	38 (100.0%)
	Retired	8 (57.1%)	6 (42.9%)	14 (100.0%)
	Others	2 (100.0%)	0 (0.0%)	2 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Religion	Protestant	80 (76.2%)	25 (23.8%)	105 (100.0%)
	Orthodox	74 (82.2%)	16 (17.8%)	90 (100.0%)
	Muslim	20 (83.3%)	4 (16.7%)	24 (100.0%)
	Catholic	0 (0.0%)	1 (100.0%)	1 (100.0%)
	Others	2 (100.0%)	0 (0.0%)	2 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Place of residence	Urban	145 (82.9%)	30 (17.1%)	175 (100.0%)
	Rural	31 (66.0%)	16 (34.0%)	47 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Ethnicity	Oromo	152 (79.6%)	39 (20.4%)	191 (100.0%)
	Amhara	14 (73.7%)	5 (26.3%)	19 (100.0%)
	Gurage	8 (80.0%)	2 (20.0%)	10 (100.0%)
	Tigre	2 (100.0%)	0 (0.0%)	2 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)
Is there other chronic disease you suffer	Yes	73 (78.5%)	20 (21.5%)	93 (100.0%)
	No	103 (79.8%)	26 (20.2%)	129 (100.0%)
	Total	176 (79.3%)	46 (20.7%)	222 (100.0%)

Table 2: Knowledge characteristics of respondents on assessment of life style modification among hypertensive patients at Nekemte Specialized hospital and Wollega University Referral Hospital, 2019.

Practice characteristics of the respondents

According to our study, 47 (21.2%) of the total 222 respondents have ever smoked cigarettes in life time and 4 (1.8%) are current smokers, 41 (18.5%) are taking alcohol currently and the majority 21 (9.5%) of those taking alcohol currently uses alcohol some times, 116 (52.3%) of them are performing regular physical exercise of which the majority 57 (25.7%) are exercising walking at regular basis. 109 (49.1%) of the total respondents are consuming fats and oils daily, 168 (75.7%) are using fruits and vegetables, 203 (91.4%) of the respondents are using salt in their daily diet while 120 (54.15) do not measure their daily salt utilization. Regarding residence of the respondents 55.4% of urban residents have good practice and 13.5% of rural residents have good practice about life style modification. Respondents with co morbidity 28.8% and 40% of those without co morbidity have good practice. From the total respondents 68.9% of them have good practice on lifestyle modification (Figure 2, Tables 3 and 4).

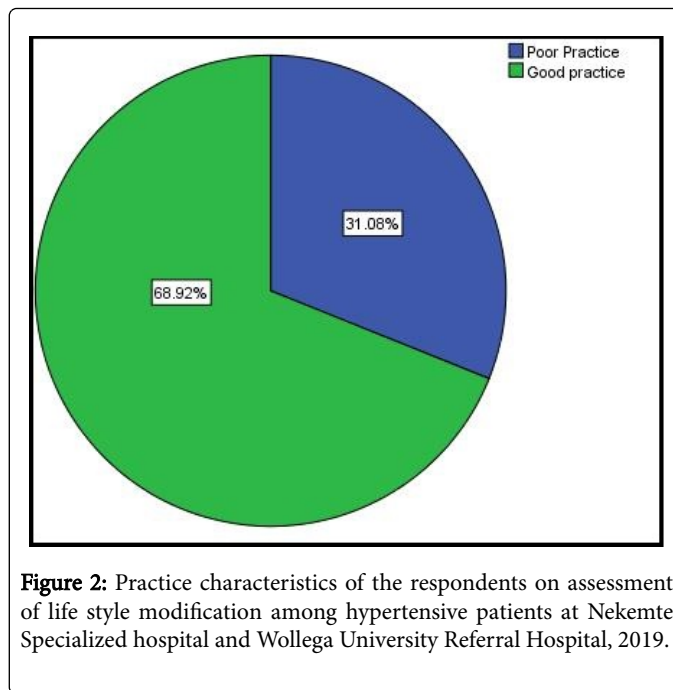


Figure 2: Practice characteristics of the respondents on assessment of life style modification among hypertensive patients at Nekemte Specialized hospital and Wollega University Referral Hospital, 2019.

Variables	Character	Practice level		Total
		Poor Practice	Good practice	
Place of residence	Urban	52 (29.7%)	123 (70.3%)	175 (100.0%)
	Rural	17 (36.2%)	30 (63.8%)	47 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Sex	Male	40 (36.4%)	70 (63.6%)	110 (100%)
	Female	29 (77.7%)	83 (74.1%)	112 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Educational Status	cannot read and write	16 (32.7%)	33 (67.3%)	49 (100.0%)
	can read and write	14 (41.2%)	20 (58.8%)	34 (100.0%)
	1-8 education	8 (29.6%)	19 (70.4%)	27 (100.0%)
	secondary school	13 (41.9%)	18 (58.1%)	31 (100.0%)
	diploma and above	18 (22.2%)	63 (77.8%)	81 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Marital status	Married	58 (33.3%)	116 (66.7%)	174 (100.0%)
	Unmarried	5 (22.7%)	17 (77.3%)	22 (100.0%)
	Divorced	5 (22.7%)	17 (77.3%)	22 (100.0%)
	Widowed	5 (26.3%)	14 (73.7%)	19 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Profession of the respondent	gov't employed	14 (22.6%)	48 (77.4%)	62 (100.0%)
	private employed	25 (35.7%)	45 (64.3%)	70 (100.0%)

	NGO	1 (100.0%)	0 (0.0%)	1 (100.0%)
	Merchant	9 (39.1%)	14 (60.9%)	23 (100.0%)
	Student	5 (41.7%)	7 (58.3%)	12 (100.0%)
	house wife	13 (34.2%)	25 (65.8%)	38 (100.0%)
	Retired	2 (14.3%)	12 (85.7%)	14 (100.0%)
	Others	0 (0.0%)	2 (100.0%)	2 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Religion	Protestant	28 (26.7%)	77 (73.3%)	105 (100.0%)
	Orthodox	34 (37.8%)	56 (62.2%)	90 (100.0%)
	Muslim	7 (29.2%)	17 (70.8%)	24 (100.0%)
	Catholic	0 (0.0%)	1 (100.0%)	1 (100.0%)
	Others	0 (0.0%)	2 (100.0%)	2 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Place of residence	Urban	52 (29.7%)	123 (70.3%)	175 (100.0%)
	Rural	17 (36.2%)	30 (63.8%)	47 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Ethnicity	Oromo	55 (28.8%)	136 (71.2%)	191 (100.0%)
	Amhara	5 (26.3%)	14 (73.7%)	19 (100.0%)
	Gurage	7 (70.0%)	3 (30.0%)	10 (100.0%)
	Tigre	2 (100.0%)	0 (0.0%)	2 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)
Is there other chronic disease you suffer	Yes	29 (31.2%)	64 (68.8%)	93 (100.0%)
	No	40 (31.0%)	89 (69.0%)	129 (100.0%)
	Total	69 (31.1%)	153 (68.9%)	222 (100.0%)

Table 3: Practice characteristics of respondents on assessment of life style modification among hypertensive patients at Nekemte Specialized hospital and Wollega University Referral Hospital, 2019.

Variables	Good Knowledge	Good Practice
Salt use	212 (95.5%)	102 (45.9)
Alcohol consumption	208 (93.7)	118 (81.5%)
Smoking	204 (91.9%)	218 (98.2%)
Regular exercise	195 (87.8%)	116 (52.5%)
Control BP with diet	202 (91%)	113 (50.9%)

Table 4: Table shows knowledge and practice level of respondents on life style modification among hypertensive patients at Nekemte Specialized hospital and Wollega University Referral Hospital, 2019 (n=222).

Discussion

According to our study, 79.3% and 68.9% of the respondents have good knowledge and good practice, respectively. The result of knowledge is relatively low when compared with the research done in Nigeria, which reports 87% and better than the result of good practice which is 56.7%. From the total 222 respondents, 95.5%, of them had good knowledge on the danger of salt, 8.6% of them avoid adding salt to their diet, and 37.4% of the users measure their daily use. This finding is almost the same as the study conducted at Jimma University Specialized Hospital, which reports 94.6% [11]. On the other hand, this result is higher than the study result at bishoftu, which reported 85% [7]. It is greater than the report in Nigeria, which is 81% of good knowledge and 14.5% of them, said having good practice. The difference may be due to that they used a small sample (104) or may show the difference between the two countries.

Among the respondents, 93.7% of participants had good knowledge, and 81.5% had a good practice on the danger of alcohol. The good knowledge finding is better than the results at Bishoftu and Adis Abeba hospitals, which indicates 73.7% and 74.8% respectively [7]. This finding is also higher than the research done at Jimma University, which shows only 83.8% of the respondents, have good knowledge of the relation of alcohol and hypertension [11]. It might be due to increment in access to the health facility and discrimination of information via social media.

From the total respondents, 91.1% of participants had good knowledge, and 98.2% of them had a good practice on the relation of smoking and hypertension. This finding is higher than the research results at Bishoftu and Jimma Specialized University (56.7%, 56.9) [7] and relatively in line with the finding at Adis Abeba Hospitals which shows 85.9%. This finding is higher than the result of good knowledge in Nigeria (51%).

Regarding balanced diet, 91% have good knowledge, and 52.5% have a good practice. This finding is low when compared with the research done in Adis Abeba Hospitals (69.1%). It might be because the respondent in Addis Abeba has access to information that leads to useful knowledge and adherence about use of diet. It is higher when compared with the research done in Nigeria, which reports 69% of proper knowledge and 20% of good practice.

On the assessment of the level of physical activity, 87.8% of the respondents have good knowledge, and 52.3% of them reported to practice physical activity, and most of them perform walking regularly (25.7%). In our study, the participant's physical activity is almost similar when compared with a survey conducted at Bishoftu (48.3%) [7] And better than the survey conducted at Jimma (41.8%) [11]. It might be due to the difference in living style difference between these three towns. It is much better when compared with the research done in India, which reports 43% of proper knowledge and 13% of those with good practice [11].

Even though the knowledge of the respondents on lifestyle modification is 79.28%, only 68.92% of them are practicing to control their blood pressure.

Conclusion and Recommendations

Generally, the practice of participants towards lifestyle modification and knowledge towards lifestyle modification on the management of hypertensive clients was not to standard. It might be because of inadequate knowledge and poor adherence to the practices. Besides, 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. Therefore, we kindly request a health institution for strengthening health education.

Ethical Approval and Consent to Participate

The study was approved and ethical clearance letters was obtained from institutional review board (IRB) of Wollega University and given to hospitals administrative office before data collection period. The consent sheet indicates that there was no participant identifier to be written on the survey questionnaire and that no individual response was reported. Everybody was participated voluntarily.

Consent for Publication

Not applicable

Availability of Data and Materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

There are no conflicts of interest for the present study.

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Citation: Fetensa G, Milkias N, Besho M, Hasen T, Teshoma M, et al. (2019) Assessment of Knowledge and Practice of Life Style Modification among Hypertensive Patients at Nekemte Specialized Hospital, Western Oromia, Ethiopia: A Cross-sectional Study Design. *J Cardiovasc Dis Diagn* 7: 389.

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