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# Practice Toward Prevention Of Hypertension Among Non-Hypertensive Adults At Shashemene Town, West Arsi Zone, Ethiopia

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## Abstract

Hypertension prevention practices like physical exercise, healthy diet, avoid smoking and reducing alcohol intake play an important role in controlling hypertension. This study was assessed practice toward prevention of hypertension among non-hypertensive adults in Shashemene Town, West Arsi Zone, Ethiopia from August 2019 to September 2019.

**Methods:** A Community based cross-sectional study design was employed on adult age resident of Shashemene town and a multi stage sampling technique was used to select 634 participants. Data was collected using structured questioner and Data collection was conducted by trained college students. The data was edited and entered into Epi-info version 7 and analyzed using SPSS version 21 software. Descriptive and analytical statistics including Bivariate and multivariate analyses was conducted in-order to check the prediction of associations between dependent and independent variables. Ethical considerations were adhered to in protecting the rights of participants.

**Result:** The Overall practice toward prevention of hypertension was 56.52% out of 634 adults. Based on this study doing Physical exercise at least three times per week were 12.2 times (AOR=16.838, 95% CI: 4.769, 31.230); Participants who do not smoke cigarette were 3.1 times (AOR=3.116, 95 CI: 1.206, 8.054); Participants who do not use high amount of salt in their diet were 3.2 times (AOR=3.249, 95% CI 1.837, 5.746) more likely had practice toward prevention of hypertension as compared with others. It also indicated that there is a strong association between practice to prevent hypertension and age, educational status and Source of health information of the study participants Those age group greater than 36 years old were 2.6 times (AOR=2.617, 95% CI: 1.565, 4.375); Respondents with diploma, degree and more education level were 7.7 times (AOR=15.266, 95% CI: 2.643,22.389); Participants who read written material as source of health information were 3.4 times (AOR=3.364, 95% CI:1.718,6.585) more likely had practice toward prevention of hypertension

**Conclusion:** Generally More than half (56.52%) of the study participants had good practice to prevent hypertension in respects to answering the given practice question out of 634 respondents. Factors like education level, family history of hypertension and source of health information can positively affect the practice of hypertension prevention.

**Keywords:** Practice • Hypertension • Non-Hypertensive Adults • Shashemene town

## Introduction

Hypertension is defined as a systolic blood pressure (SBP) equal to or above 140 mmHg and/or diastolic blood pressure (DBP) equal to or above 90 mmHg. High blood pressure is categorized into four categories for adults of age greater than or equal to 18years. Normal blood pressure is systolic blood pressure (SBP) less than 120mmHg and diastolic blood pressure (DBP) less than 80 mmHg. Pre hypertension is for patients on the way of developing hypertension and defined as an SBP of 120-139 mmHg or a DBP of 80-89 mmHg. Stage I with the SBP 140-159 mmHg or DBP 80-99 mmHg and stage II with SBP ≥160 mmHg or DBP of ≥ 100 mmHg. So improving life style and periodic health examination is useful to prevent hypertension [1].

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure recommends lifestyle modification for Prevention of hypertension. Modifications include reducing dietary sodium to less than 2.4 g per day; increasing exercise to at least 30 minutes per day, four days per week; limiting alcohol consumption to two drinks or less per day for men and one drink or less per day for women; following the Dietary Approaches to Stop Hypertension eating plan (high in fruits, vegetables, potassium, calcium, and magnesium; low in fat and salt); and achieving a weight loss goal of 10 pounds 4.5 kg or more.Smoking cessation is also use full for hypertension prevention, becauseCigarette use causes a 4-mm Hg increase in systolic blood pressure and a 3-mm Hg increase in diastolic blood pressure compared with placebo [2].

The dietary approaches to stop hypertension (DASH) diet is more effective in substantially reducing systolic and diastolic blood pressures, both in people with hypertension and in those without hypertension. It involvefruits, vegetables and low- fat dairy products and included whole grains, poultry, fish and nuts while reducing the amounts of red meat, sweets and sugar containing beverages [3]. Lifestyle interventions such as sodium restriction, alcohol moderation, healthy eating, regular exercise, weight control and smoking cessation, all have health benefits beyond their impact on blood pressure [4].

Because of its high prevalence, managing by modification of life and screening programs should be established to ensure that BP is measured in all adults, at least every 5 years and more frequently in people with a high-normal BP. When hypertension is suspected because of an elevated screening BP, the diagnosis of hypertension should be confirmed either by repeated office BP measurements, over a number of visits, or by out-of-office BP measurement using 24-hours [5].

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Hypertension is a state of elevated systemic blood pressure that causes marked increment of cardiovascular risk. It can be preventable by modifying life-style like doing physical exercise, reducing salt in-take, reducing fat intake and avoiding drinking of alcohol, smoking and chewing chat. If it is not managed early it risks factors of coronary artery disease, hemorrhagic and ischemic stroke, heart failure and chronic kidney disease [6].

Hypertension is a risk factor for coronary heart disease and the single most important risk factor for stroke - it is responsible for at least 45% of deaths due to heart disease, and at least 51% of deaths due to stroke. Aside from contributing to the burden of heart disease and stroke, hypertension also contributes to the burden of kidney failure and premature mortality and morbidity. Over 40% of deaths in people with diabetes are caused by increased blood pressure. It is clear that hypertension is a global public health issue[7]. Elevated Blood Pressure (BP) is the leading global contributor to premature death, accounting for almost 10 million deaths in 2015, 4.9 million due to ischemic heart disease and 3.5 million due to stroke [5].

Systematic Reviews of Prevalence and Associated Factors of Hypertension in Ethiopia indicate as a high prevalence of hypertension in urban residents and different associated factors including overweight, family history of hypertension, age, sex, sleeping for less than 5 hours, Oral contraceptive use, alcohol intake, physical inactivity, eating vegetable three or fewer days per week, salt use, obesity, higher education and vigorous recreational activities were identified. Hypertension was considerably prevalent in Ethiopia. Health promotion strategy tailored to the education on modifiable risk factors and establishment of blood pressure screening in primary health care context would be of immense value both in urban and rural areas [8].

# Methods

## Study area and period

A community based cross sectional study was conducted from August to September, 2019 in Shashemene town administration. Shashemene town is located 250 Kilo-meters south Western of Addis Ababa, the Ethiopian capital and it is found in Oromia region, West Arsi zone. The town administration has 10 Kebeles (the smallest administrative unit in Ethiopia) having 272, 193 total populations and 154,605 adults. Out of these 1026 of adults is hypertensive according to DHIS2 data of 2018 from Shashemene town health office. There are differentHealth facilities which give health service in Shashemene town. Under Government facilities there are 2 hospitals and 4 Health centers. As well as under private facilities there are 1 Hospital, 16 specialty clinics, 23 medium clinics, 20 primary clinics and 60 pharmacies.

## Sample size determination

**For Objective 1-**Sample size for the population was determined using single population Proportion formula.

$$n = \frac{Z\frac{\alpha^2}{2}P(1-P)}{d^2}$$

The proportion of Hypertension prevention was: 50.1% (p= 0.501) which was taken from the study conducted in Desse [9].

Where n is the needed sample size; D, marginal error (d = 0.05); Z, the required degree of accuracy at 95% confidence level, which is 1.96; Design effect of 1.5 based on similar research done at Hosaina [10] and mostly used design effect (1-3) and 10% non-response rate.

Using the above formula, the sample size was calculated and we get total 384 respondents. Finally, as this is not as such sensitive issue considering 10% (38 individual) for probable non-respondent, the required final sample size was 423; due to design effect by multiplying it by 1.5 we get 634 samples of respondents for this study.

**For Objective 2-** For Objective two the sample size was calculated using Epi info Version 7 (using power 80% and 95 CI) and depend on associated factors related to hypertension Table 1.

The maximum calculated sample was 244 for objective two (but small sample size when compared to sample size of objective one). There for sample size used for this study was objective one. So, 634 samples were used for this study.

## Sampling techniques and sampling procedures

Multi-stage sampling with two-stage sampling approach was used to select study participants; due to time, cost and human power five kebeles were selected randomly from the total 10 kebeles of Shashemene town. Then, the total sample size was allocated to each of the randomly selected 5 kebeles based on probability proportional to size allocation.

Secondly, 634 individuals in households who were fulfilled the inclusion criteria and who was checkup for hypertension and confirmed by health institute as non-hypertensive after one year was selected. The first household was selected by systematic random sampling technique according to the residents of house number and then the respondents living in every 12 houses were recruited. When there is more than one eligible non-hypertensive adult in the house-hold, only one individual was selected using the lottery method. A resident who was not at home during the initial contact was re-visited on three other occasions before excluding them from the study Figure 1.

## Operational definition

Adult is a person older than 18 years of age unless national law delimits an earlier age [11].

Alcohol consumptions-Drinking greater than two drink for men and greater than one drink of ethanol per day [2].

Cigarettes smoker- Smoking any pack of cigarette per day (one or more cigarette per day) [12].

Hypertension- is defined as a systolic blood pressure (SBP) equal to or above 140 mmHg and/or diastolic blood pressure (DBP) equal to or above 90 mmHg [13].

Non-hypertensive-are normotensive individual with optimal (120/80 mmHg), normal (120-129/80-85 mmHg), or high-normal (130-139/85-89 mmHg) categories [14].

Obese – Body Mass Index >30 k g/m$^2$ [6].

One drink of alcohol-355 ml of beer or 148 ml of wine [6].

Overweight- Body mass index between 25 and 29.9 k g/m$^2$ [15].

Physical Activity – Is performing activities like Walking, jogging, swimming and cycling at least 30 minutes per day) [15].

Practice- is the skill for doing something regularly as a part of one normal behavior [9].

**Table 1.** Sample size associated factors related to hypertension.

| S. no | Factors | Power | CI | Ratio (Unexposed; exposed) | Out come in exposed group | OR | RR | n | References |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Doing physical exercise | 80 | 95% | 2:1 | 16.10% | 2.4 | 2 | 244 | (Eyasu Siyum Buda, 2017) |
| 2 | Drinking high amount of Alcohol | 80 | 95% | 2:1 | 23.39% | 2.8 | 2 | 146 | (Hirbo Shore Roba, 2019) |

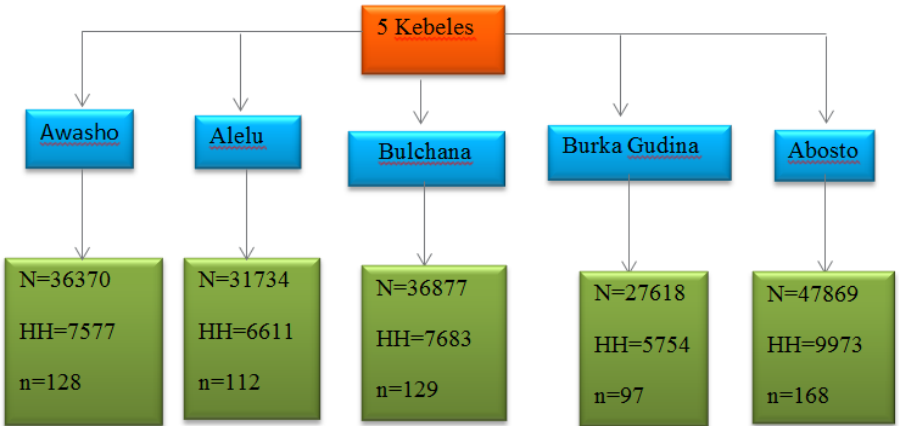


**Figure 1**. Schematic presentation of sampling techniques used to select study subjects from Shashemene town house hold.

Good Practice-those who correctly answered 50% or more of the practice questions wereconsidered as having good practice

Poor Practice - those who answered below 50% of the practice questions were considered as having poor practice

Saturated fat -it has been recommended that saturated fatty acid (SFA) intake be limited to less than 10% of total calories as a means of reducing risk for cardiovascular disease (CVD) like hypertension [16].

### Data collection tools and procedures

Standard questionnaire was adapted from other studies [9,17]. Interviewer administered structured questionnaire was used for data collection among selected house hold. The main themes of the questionnaire were demographic data, practice of the community toward prevention of hypertension and life style of the respondents. Data collection was conducted by trained four college students.

### Measurement

The English version questionnaire was translated to Afan Oromo and Amharic by language expert. To check its consistency, it was again translated back to English by experts of one Afan Oromo, one Amharic and English languages. Data collection tools were modified according to the pre-test findings. Before the actual data collection, the questionnaire was pre-tested on 10% of the study subjects in the neighboring Arsi Negele town on a total of 63 respondents due to shortage of time, budget and human power. The logical sequence of the questionnaire and the appropriateness of questions, the wording and clarity of language were checked.

### Data analysis

All questionnaires were first checked for accuracy, cleaned manually, coded and then data was edited and entered into Epi info7, then imported to SPSS version 21 software for analysis. The results of the descriptive statistics were expressed as percentage and frequency. An association between independent variables and dependent variables was analyzed using bivariate and multivariate analysis to identify factors which are significantly associated with practices toward hypertension prevention. Statistical association was checked by 95% CI and crude odd ratio (COR), after running bivariate logistic regression. To identify the independent factor that influences practice towards Prevention of Hypertension, multivariate logistic regression analysis was carried out and Variables those P-values of<0.05 was considered statistically significant.

### Ethical considerations

Ethical clearance was obtained from Madda Walabu University, from ethical clearance committee. The letter of collaboration was written from department of public health to Oromia health office research team. Then Oromia health office research team was written letter to Shashemene town health office for the main study and to Arsi Negele town health office for the pretest. The objectives of the study were briefed for concerned body. Each study participant was adequately informed about the purpose, benefits and risks of the study and their right to discontinue or refuse to participate in the study. Finally, written informed assent was obtained from the Shashemene town health office.

## Results

### Socio-demographic characteristics of respondents

Total of 634 Respondent of adult age group were participated in the study. From these 148(23.3%) of them were from age 19-25 and 39(48.7%) were age greater than 36 years old. Out of respondent, 361(56.9%) of them were male and 273(43.1%) of them were female. About 30(4.7%) of the respondents were illiterate and 100(15.8%) of them have diploma and more education level. Farmer account about 103(16.2) and Civil servants were 70(11.0%). Majority of the respondent 186(29.3%) were get health information from TV and 93(14.7%) of them were get from written materials. From total respondents 516(81.4%) of them do not have family history of hypertension while 118(18.6%) of the respondents were have family history of hypertension Table 2.

### Practice on the prevention of hypertension

From the total respondents 188(29.7%) were perform physical exercise and 446(70.3%) of the respondent were do not perform physical exercise. About 413(65.1%) of the individual were walk at least for 10 minute per day and but 221(34.9%) of them do not walk. About 354(55.8%) of the respondents were history of drinking alcohol in the in the past time, while 280(44.2%) were have no history of drinking alcohol. Out of these 254(40.1%) were drinking alcohol currently. About 200 (31.5%) of the respondents were smoke in their life time But 103(16.2%) of the respondents were smoke cigarette at current time. About 531(83.8%) of the respondents were not smoke cigarette at this time. About 466(73.5%) of the respondents were not use high amount of salt in their diet. Generally, almost Greater than half (56.52%) of the study participants have good practice in respects to answering the given practice question Table 3.

### Socio demographic factors influencing practice toward prevention of hypertension

Bivariate analysis showed significant associations between Practice toward prevention of hypertension and Age, educational status, monthly income, and source of health information, marital status, and family history of hypertension of the study participant.With multiple logistic analysis Except marital status andmonthly income others respondent's socio demographic characteristic like Age, educational status, source of health information and family history of hypertension of the respondents maintain their significant association with practice of hypertension prevention.

Those age group greater than 36 years old were 2.6 times (AOR=2.617, 95%

**Table 2.** Socio-demographic characteristics of the study subjects at Shashemene town, South-west Ethiopia. August to September, 2019. [n=634].

| Characteristics | | Number of study subject | Percentage of study subject |
|---|---|---|---|
| Age | 19-25 | 148 | 23.3 |
| | 26-35 | 177 | 27.9 |
| | >36 | 309 | 48.7 |
| Sex | Male | 361 | 56.9 |
| | Female | 273 | 43.1 |
| Education level | Illiterate | 30 | 4.7 |
| | Primary | 151 | 23.8 |
| | Secondary | 182 | 28.7 |
| | Certificate | 171 | 27.0 |
| | Diploma, degree or more | 100 | 15.8 |
| Occupation | Farmer | 103 | 16.2 |
| | House wife | 142 | 22.4 |
| | Private worker | 193 | 30.4 |
| | Merchant | 94 | 14.8 |
| | Civil servants | 70 | 11.0 |
| | Others | 32 | 5.0 |
| Monthly in come | 300-999 | 24 | 3.8 |
| | 1000-2999 | 217 | 34.2 |
| | > 3000 | 393 | 62.0 |
| Source of health information | Radio | 104 | 16.4 |
| | TV | 186 | 29.3 |
| | Health service | 176 | 27.8 |
| | Friends | 52 | 8.2 |
| | Written material | 93 | 14.7 |
| | Others | 23 | 3.6 |
| Religion | Muslim | 199 | 31.4 |
| | Orthodox | 182 | 28.7 |
| | Protestant | 191 | 30.1 |
| | Adventist | 35 | 5.5 |
| | Others | 27 | 4.3 |
| Marital status | Single | 226 | 35.6 |
| | Married | 385 | 60.7 |
| | Divorced | 8 | 1.3 |
| | Widowed | 15 | 2.4 |
| Family history of Hypertension | No | 516 | 81.4 |
| | Yes | 118 | 18.6 |

**Table 3.** Behavioral factors among study subjects at Shashemene town, South-West Ethiopia. -August to September, 2019. [n=634].

| Characteristics | | Number of study subject | Percentage of study subject |
|---|---|---|---|
| Do you perform physical exercise | no | 446 | 70.3 |
| | yes | 188 | 29.7 |
| Do you walk for at least 10 min per day | No | 221 | 34.9 |
| | Yes | 413 | 65.1 |
| Did you reduce your over weight and obesity | No | 406 | 64.0 |
| | Yes | 228 | 36.0 |
| Do you feel stress | No | 354 | 55.8 |
| | Yes | 280 | 44.2 |
| Have you ever used drinking alcohol | No | 280 | 44.2 |
| | Yes | 354 | 55.8 |
| Are you drinking alcohol currently | No | 380 | 59.9 |
| | Yes | 254 | 40.1 |
| Have you ever used tobacco | No | 434 | 68.5 |
| | Yes | 200 | 31.5 |
| Do you smoke cigarettes currently? | No | 531 | 83.8 |
| | Yes | 103 | 16.2 |
| Do you currently chew chat | No | 341 | 53.8 |
| | Yes | 293 | 46.2 |
| Have you use high amount of salt in your diet | No | 466 | 73.5 |
| | Yes | 168 | 26.5 |
| Have you used saturated oils for preparing food | No | 358 | 56.5 |
| | Yes | 276 | 43.5 |
| Have you used saturated animal fats | No | 326 | 51.4 |
| | Yes | 308 | 48.6 |
| Have you used fruits and vegetables in your diet most the times | No | 276 | 43.5 |
| | Yes | 358 | 56.5 |
| Practice | Poor | 276 | 43.48 |
| | Good | 358 | 56.52 |

**Table 4.** Bivariate and multivariate logistic regression analysis of Socio demographic factors of respondent toward prevention of Hypertension at Shashemene town, South-West Ethiopia August to September, 2019 [n=634].

| Characteristics | | Practice | | Practice toward hypertension | |
|---|---|---|---|---|---|
| | | Poor | Good | COR (95%CI) | AOR (95%CI) |
| Age | 19-25 | 62 | 86 | | 1.0 |
| | 26-35 | 64 | 113 | 0.704(0.470, 1.053) | 1.642(0.969,2.781) |
| | >36 | 104 | 205 | 0.896(0.608, 1.319) | 2.617(1.565,4.375) |
| Education level | Illiterate | 11 | 19 | | 1.0 |
| | Primary | 86 | 65 | 0.130(0.045,0.378) | 0.438 (0.195,0.983) |
| | Secondary | 84 | 98 | 0.057(0.025,0.131) | 0.675 (0.304,1.500) |
| | Certificate | 42 | 129 | 0.088(0.039,0.200) | 1.778 (0.783,4.038) |
| | Diploma, degree or more | 7 | 93 | 0.231(0.099,0.537) | 7.692 (2.643,22.389) |
| Monthly in come | 300-999 | 6 | 18 | 1.080(0.417,2.794) | 1.199(0.403,3.571) |
| | 1000-2999 | 120 | 97 | 0.291(0.205,0.412) | 0.365(0.249,0.533) |
| | > 3000 | 104 | 289 | | 1.0 |
| Source of health information | Radio | 41 | 63 | | 1.0 |
| | TV | 52 | 134 | 0.988(0.392, 2.491) | 2.191(1.243,3.863) |
| | Health service | 72 | 104 | 1.657(0.676, 4.060) | 1.239(0.706,2.174) |
| | Friends | 35 | 17 | 0.929(0.381, 2.260) | 0.430(0.198,0.935) |
| | Written material | 21 | 72 | 0.312(0.113, 0.864) | 3.364(1.718,6.585) |
| Marital status | Single | 72 | 154 | 0.153(0.020,1.184) | 0.124(0.015,1.000) |
| | Married | 156 | 229 | 0.105(0.014, 0.806) | 0.088(0.011,0.699) |
| | Divorced | 1 | 7 | 0.500(0.027, 9.238) | 0.359(0.017,7.500) |
| | Widowed | 1 | 14 | | 1.0 |
| Family history of Hypertension | No | 227 | 289 | | 1.0 |
| | Yes | 3 | 115 | 0.033(0.010, 0.106) | 13.145 (3.889,44.430) |

Respondents who do perform physical exercise were 12.2 times (AOR=16.838, 95% CI: 4.769, 31.230) more likely had practice toward prevention of hypertension as compared with respondents with no vagarious sport. Respondents those who drink seven or more alcohol per week were 5.4 times (AOR=29.12, 95% CI: 1.788, 16.386) less likely had practice toward prevention of hypertension as compared to only one drunker.

Participants who do not smoke cigarette were 3.1 times (AOR=3.116, 95 CI: 1.206, 8.054) more likely had practice toward prevention of hypertension as compared with smoker. Respondents who do not chewing chat were 1.9 times (AOR=3.116, 95% CI: 1.206, 8.054) more likely had practice toward prevention of hypertension as compared with chewing chat. Participants who do not use high amount of salt in their diet were 3.2 times (AOR=3.249, 95% CI 1.837, 5.746) more likely had practice toward prevention of hypertension as compared with individual who used high amount of salts. Participants who do not use saturated oil were 3.3 times (AOR=3.269, 95% CI: 2.107, 5.070) and participants who do not use saturated animal fat were also 3.2 times (AOR=3.160, 95% CI: 1.862, 5.361) more likely had practice toward prevention of hypertension as compared with participants who used saturated oil and fat. Participants who used vegetable and fruit more than three times per day were 5.9 times (AOR=5.870,95% CI:1.325, 26.014) more likely had practice toward prevention of hypertension as compared with those used only one times per day Table 5.

## Discussion

This study was conducted on assessing practice toward prevention of hypertension among adult living in Shashemene town. Data coming from this study indicated that 56.9 % of the participants were male and 43.1% of them were female and the mean age was 35. The study showed that out of 634 study participants about 358 (56.52%) of the participant had good practice toward prevention of hypertension. This was almost similar with study done at Dessetown which was 50.1%. This similarity may be due to almost identical socio-economic characteristic of two towns. But the study in Durame revealed that only 56(27.3%) of the participants were practiced recommended lifestyle modifications for hypertension prevention [18,19].

This study shows thatage group greater than 36 years old were 2.6 times more likely had practice toward prevention of hypertension. Increased Age was one of the risk factors for development of hypertension; as a result, peoples practice hypertension prevention, so this result was similar with study done at Addis Ababa were age was found to have statistically significant association with the odds of hypertension among 35-44 was about 6.3 times, for age group 45-54, about 7.1 times, and those ≥55, about 12.0 times more at risk of hypertension compared to the young age group 18-24 years**.** But as research done in Durame Participants aged greater than 65 years were 72% less likely to have good lifestyle modification than participantswith below 65 years [19,20].

In this study Respondents with diploma, degree and more education level were 7.7 times more likely had practice toward prevention of hypertension. As study done at Addis Ababaalso subjects who has primary education approximately three times less likely to have good practice as compared with those who has secondary and above [20]. As study done in Durame Participants without formal education were 2 times more likely practice good lifestyle modification as compared to those who had formal education. Being literate had significant association with hypertension than illiterate respondents, after adjusted for another variable [19]. This may be due to stress and increase their income levels which bring changing their way of life.

In study done at Durame, participants with income of 1000 ETB were 2.4 times more likely to practice good lifestyle modification as compared to participants with income of less than 500ETB [19]. Marital status and monthly in-come were independently associated with hypertension in many studies, but no such associations were found in this study.

As study done in Addis Ababa among workers of steel factories respondents with a positive family history were found to be almost 2.4 times at more likely to have hypertension prevention practice, than those without such a history [20] that is why in this study participants with family history of hypertension were 13.1times more likely had practice toward prevention of hypertension as compared with Respondents with no history of hypertension.

In this study Participants who were doing physical exercise were about 29.7%. This is high when we compare with Study done in Hosaina were only Fifty-seven (10.9%) of the study participants undertakephysical activities [10].

**Table 5**. Bivariate and multivariate logistic regression analysis of Behavioral practice of respondents toward prevention of Hypertension at Shashemene town, South-West Ethiopia August to September, 2019. [n=634].

| Characteristics | | Practice toward hypertension | |
|---|---|---|---|
| | | COR (95%CI) | AOR (95%CI) |
| Do you perform physical exercise | No | | 1.00 |
| | Yes | 0.051(0.026,0.103) | 12.204 (4.769,31.230) |
| How often do you usually drink alcohol(n=254) | Less than one drink per week | | 1.0 |
| | One to three drink a week | 0.658(0.223,1.942) | 0.850 (0.321,2.246) |
| | Four to six drink per week | 2.114(1.064,4.200) | 2.310 (1.007,5.299) |
| | Occasionally on holly day | 3.006(1.407,6.423) | 3.087 (1.250,7.626) |
| | Seven or more drink per week | 29.12(3.746,226.387) | 5.413 (1.788,16.386) |
| Have you ever used tobacco | No | 0.334(0.226,0.495) | 0.149 (0.059,0.372) |
| | Yes | | 1.0 |
| Do you smoke cigarettes currently? | No | 0.574(0.358,0.921) | 3.116(1.206,8.054) |
| | Yes | | 1.0 |
| What is your reason to decide to stop them | I get information as they are risk Factor for disease | 1.169(0.350,3.901) | 0.854(0.200,3.656) |
| | To save my money | 0.689(0.187,2.541) | 0.430(0.090,2.065) |
| | Forbidden by kuran or bible | 0.364(0.108,1.226) | 0.279(0.064,1.206) |
| | | | 1.0 |
| Do you currently chew chat | No | 0.602(0.433,0.837) | 1.899(1.174,3.070) |
| | Yes | | 1.0 |
| How often do you add salt on food without trying it | Never | 13.153(4.499,38.457) | 3.797(0.882,16.342) |
| | Some times | 4.792(1.674,13.712) | 1.873(0.464,7.556) |
| | Often | 1.142(0.379,3.442) | 0.960(0.237,3.877) |
| | Always | | 1.00 |
| Have you use high amount of salt in your diet | No | 7.167(4.846,10.598) | 3.249(1.837,5.746) |
| | Yes | | 1.00 |
| Have you used saturated oils for preparing food? | No | 5.493(3.860,7.817) | 3.269(2.107,5.070) |
| | Yes | | 1.00 |
| Have you used saturated animal fats | No | 5.844(4.068,8.394) | 3.160(1.862,5.361) |
| | Yes | | 1.00 |
| Frequency of vegetable used in your diet per day(n=358) | One per day | | 1.0 |
| | Two per day | 0.159(0.036,0.692) | 1.538(0.868, 2.726) |
| | Three per day | 0.267(0.060,1.191) | 2.026(0.782, 5.250) |
| | More than three per day | 0.400(0.075,2.129) | 5.870(1.325, 26.014) |

The study done in Debre Markosshows that about 68.6% were drink alcohol which is high as we compare with this study were only about 40.1% drink alcohol [21]. In this study number of participants drink alcohol were more as compared with study done In Kenya Only 13.5 % normotensive participants were reported current consumption of alcohol (in the last 30 day) [22].

In this study the participants who currently smoking was about 16.2% where this is almost similar with study done in Kenya Current smoking were 7.9% [22]. Research in Addis Ababa in Akaki steel factory shows that about 78.4%, are current smokers, which is very high when compared to this research [20].

About 46.2% of the study participants were chewing chat. This is too much high as compared with study done at DebreMarkos 1.3% were chat chewers [21]. The prevalence of hypertension was high among chat chewer than non-chewer as study at Butajira town [23]. That is why participants of this study those who do not chewing chat were 1.9 times more likely had practice toward prevention of hypertension.

As research done in Addis Ababa most of the participants 74% had habit of taking low salt [24]. This similar with this study were about 73.5% of the participants were not use high amount of salt and have good practice. As research done at Bahirdar respondents who added salt to food in addition to the normal amount that was added to the food during cooking were more than 3 times as likely to have hypertension compared to those who did not added additional salt to food [25].

In this study about 56.5% of the study participants were eats fruit and vegetable. This is reverse with study done inKenyaDietary habits were majority 98.8 % of the study participants consumed sufficient amount of fruit and vegetables. In a typical week, fruits were consumed on average 3 days. At least 965 (63.3%)participants consumed one serving of fruit daily [22].

## Conclusion

Generally, more than half (56.52%) of the study participants have good practice to prevent hypertension among 643 individuals. Factors like education level, family history of hypertension and source of health information can affect the practice of hypertension prevention.

About 29.7% of the participants were performing physical exercise and about 65.1% of the individual were walk at least for 10 minute per day. Sixty four Percent of the respondents were reducing their weight and obesity by doing physical exercise and other method. Greater than half (55.8%) of the respondents were not feel stress. Forty-point (40.1%) one percent were drinking alcohol currently. Majority (83.8%) of the respondents were not smoke cigarette at this time. Most (73.5%) of the respondents were not use high amount of salt in their diet. About 56.5%) and 51.4% of the respondents were not used saturated oil and saturated animal fat respectively. More than half (56.8%) of the respondents were used fruit and vegetable on their food at least once per day. Generally, almost Greater than half (56.52%) of the study participants have good practice in respects to answering the given practice question

## Competing Interests

The authors have declared that no competing interests.

## Data Availability

The data will be available upon request.

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This study had not specific fund.

## Authors Contributions

All authors had developed the concept and method, collects data and drafts the manuscript, analyzed and interprets the data.

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