

# Prevalence of Hypertension and Associated Factors Among Bank Workers in Harar Town, Eastern Ethiopia

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**Abstract:** *Background:* Hypertension is one of the leading causes of the global burden of disease. It is being the root cause of many of the body system and organs failure remains to be a major public health challenge globally. Epidemiological studies have shown that sedentary lifestyles and stress are important risk factors for hypertension. The job of bank Workers is both sedentary and involves a high level of stress and thus making banking a potential occupational risk group for hypertension. Though the problem is huge in both developed and developing countries. *Objective:* To assess the prevalence of hypertension and associated factors among bank Workers in Harar town, Eastern Ethiopia, 2017. *Methods:* An Institutional based cross-sectional descriptive study design was used. The target population was conducted on Bank Workers of Harar town by taking a total sample size of 149 and physical measurement-based. Self-Administered questioners were disseminated and recollected from the selected respondents and the physical measurement part was filled by the data collector. Prevalence was computed with a 95% confidence interval. Data has been analyzed in a database using SPSS version 21.0 software. Descriptive statistics were used to determine prevalence. Then the data was transferred to multivariate analysis to control confounding factors and to identify determinant factors of the outcome variable. P-value less than or equal to 0.05 was considered as a level of statistical significance. *Result:* A total of 149 participants were approached with a response rate of 143 (96.4%). The prevalence of Hypertension in the study was 27.5%. Aging, Sedentary lifestyle, and BMI (Obesity) in this study were positively associated with higher odds of having hypertension. *Conclusion and recommendation:* Hypertension are one of the most important health-related problems among men worldwide. Therefore, a well-planned health education program should be implemented to address the observed knowledge gaps.

**Keywords:** Prevalence, Hypertension, Eastern Harar, Ethiopia

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## 1. Introduction

Hypertension is defined as having a Systolic blood pressure of greater or equal 140mmHg and /or a Diastolic BP of 90 mmHg or reported use of anti-hypertensive medications for raised blood pressure. It is one of the leading causes of the global burden of disease. It is being the root cause of many of the body system and organs failure remains to be a major public health challenge globally [1].

The developing countries are experiencing an epidemiological transition from communicable to non-communicable diseases and hypertension has emerged as a

significant public health problem in both urban and rural areas. Cardiovascular diseases such as coronary heart disease and stroke are the most frequent causes of death in developing countries. Though the problem is huge in both developed and developing countries, published data are scarce in developing countries like Ethiopia. The prevalence of hypertension is also on the rise in developing countries and as there is a change in the lifestyle associated with urbanization including sedentary lifestyle, smoking, obesity, high fat, and energy diet. Because of the associated morbidity and mortality and the cost to society, hypertension is an important public health challenge. It is easily detectable and often leads to lethal complications if untreated [2].

Hypertension is the most important modifiable risk factor for coronary heart disease, stroke, congestive heart failure, end-stage renal disease, and peripheral vascular diseases. So, health care professionals must not only identify and treat patients with hypertension but also promote a healthy lifestyle and preventive strategies to decrease the prevalence of hypertension in the population [3]. Hypertension is a worldwide public-health challenge, a leading modifiable risk factor for cardiovascular disease & doubles the risk of CVD, including coronary heart disease (CHD), congestive heart failure (CHF), ischemic and hemorrhagic stroke, renal failure, and peripheral arterial disease [4]. It is the leading cause of mortality in the world and the third cause of disability [5].

According to the WHO Global Health Observers Report, globally, the overall prevalence of hypertension in adults aged 25 and over was around 40% and was estimated to cause 7.5 million deaths, about 12.8% of the total of all deaths worldwide. Globally the number of people with uncontrolled hypertension increased by 70% between 1980 and 2008.

The rising epidemic of hypertension is thought to be due to mechanization, population growth, and aging [6, 7]. By 2025 the number of hypertensive people is expected to increase by 60% and reach 1.56 billion people [4]. Hypertension is directly responsible for 42% of coronary heart disease deaths and 57% of all stroke deaths in India [8]. Modeled estimates of hypertension with an age-adjusted prevalence in Africa indicated the overall prevalence of hypertension has been increasing since 1990. In adults aged  $\geq 20$  years, in 1990 prevalence was 19.1%, in 2000 prevalence was estimated 24.3%, in 2010 with the prevalence of 25.9% and projected to 25.3% by 2030 [9].

The reported rate of hypertension is varied widely in Ethiopia, with the highest rate of 31.5% in males and the lowest rate of 0.8% in females. The prevalence in most of the studies was between 20% and 30% [10]. Another recent study conducted in the capital shows that approximately 30% of adults in Addis Ababa have hypertension [1]. Epidemiological studies have shown that sedentary lifestyles and stress are important risk factors for hypertension. The job of bank Workers is both sedentary and involves a high level of stress and thus making banking a potential occupational risk group for hypertension [11-15].

The control of hypertension will require modification of its risk factors and hence necessitates identifying the various associated factors of hypertension among bank Workers. Published Studies on the prevalence and associated factors of hypertension among bank Workers are sparse in Ethiopia, especially in the Eastern part and studies must be carried on to have an insight into the magnitude of the problem. Hence, this study undertook to estimate the prevalence of hypertension and identify its associated factors among bank Workers of Harar town, Eastern Ethiopia. Therefore, this study was aimed to determine the magnitude and associated factors of hypertension, and this paper was intended to provide compressive and up-to-date evidence on the

prevalence and investigate the associated factors of Hypertension among Bank Workers of Harar town, Eastern Ethiopia.

## 2. Methods and Materials

### 2.1. Study Design Study Period Study Area

An Institutional based cross-sectional descriptive study design was used with a quantitative method. The study was conducted from January 12- 18/2018. The study was conducted in Harar town, Harari regional state. Harari region is located in the eastern part of Ethiopia, 525 km away from A. A, the capital of Ethiopia. There are 9 woredas in the region of which 3 in rural and 6 woredas in urban. Based on the population census conducted in 2007, the region had an estimated total population of 183415 of whom, 92316 are males & 91099 females (1:1 ratio approximately). This region is the only one in Ethiopia where the majority of its population lives in an urban area; 99368 or 54.18% of the population are urban in habitat with an estimated area of 311.25km<sup>2</sup>, this region has an estimated density of 589.05 people per square kilometer [16]. Harar is a town found in the Harari region. There are 6 woreda and 19 Kebeles in the town. There are 6 governmental and 19 private bank branches with a total of 25 branches in the town. Totally the numbers of bank workers are 313, of which 142 are in governmental and 171 are in private banks.

### 2.2. Population, Sample Size Determination, and Sampling Procedure

After obtaining ethical clearance and permission we conducted a study on all Bank workers who work in Harar town that met the inclusion criteria. The sample size for this cross-sectional study was calculated according to the Cochran and William guidelines using the single proportion and correction formula by assuming a 5% marginal error, 95% confidence interval, and 19.1% (i.e.,  $P=0.191$ ) for maximum sample size. Based on a similar study previously conducted in Addis Ababa CBE [17]. Stratified Proportional allocation and a Simple random sampling technique were used to select the total sample population ( $n=149$ ).

### 2.3. Data Collection Technique and Instrument

A semi-structured questioner was developed by the principal investigators from different literature in the English version. The questionnaire was translated into the Amharic language and back to English to check its consistency. The questioner had 4 parts. Socio-demographic with 7 questions, Medical Hx with 4 questions, HTN risk assessment with 9 questions, and measurements part with 4 questions. The data collectors were 2 Bsc, holder nurses. The questioners were disseminated and recollected from the selected respondents by the data collector. Measurement was taken and recorded by data collectors. The questioners were self-administered.

## 2.4. Variables and Measurements

The dependent variables were the Prevalence of Hypertension. The independent variables in this study were Socio demography like (sex, age, marital status, educational level, Job description).

Medical history like - (Parental History of HTN or DM, Previous History of HTN& DM). Dietary and Behavioral Habit like Overweight, Obesity, High amount of Salt, Smoking, Excessive alcohol consumption). Work-related risk factors like sedentary lifestyle, Work schedule, Low physical activity.

## 2.5. Data Quality Management

A semi-structured questioner derived from different kinds of literature was used. The questionnaire was checked for its completeness and consistency. The data collection tool was pretested 5% among total sample size, 7 workers of CBE Aweday branch before the actual data collection on Bank workers in Harar town. Data collectors were trained before one week of the actual data collection. The data collection procedures were checked frequently through supervision and frequent checking of information collected for its consistency on the same day.

## 2.6. Data processing and Analysis

After data collection, data was cleaned, tabulated, rearranged, and checked for its completeness and consistency, and data were analyzed by using the SPSS version of 21.0. The descriptive statistics were used to determine prevalence such as percentage, frequency. Bivariate analysis was used first to determine the association

between dependent and independent variables. Then the data was transferred to multivariate analysis to control confounding factors and to identify determinant factors of the outcome variables. P-value less than or equal to 0.05 will be considered as a level of statistical significance.

# 3. Result

## 3.1. Socio-demographic Characteristics of the Study Participants

A total of 194 participants were approached with a response rate of 143 (96.4%) participated in the study and of which 90 (60.4%) were male and 59 (39.6%) were female. The male to female ratio was 1.53:1. Their mean ( $\pm$ SD) age was 33.48 (26.433) years. 96 (64.4%) of participants were married, Majority of them 115 (72.5%) were first-degree holders. Their job description was Managers 18 (12.1%), Customer officers 69 (46.3%), Auditor/Accountant 15 (10.1%), Relationship officers 11 (7.4%), cashers and others were 36 (24.2%). Their work experience was 69 (46.3%)<5 years, 65 (43.6%) 5-10 years, and the remaining 15 (10.1%) had>10 years work experience (Table 1).

## 3.2. Medical History of the Study Participants

Thirty-eight (25.5%) Biological parents of participants had a history of Hypertension. The participants who checked blood pressure previously were 95 (63.8%). There were 6 (4%) diagnosed HTN in previous and 3 (2%) of them started treatment and follow-up. Only 3 (2%) participants were diagnosed with DM previously (Table 2).

**Table 1.** Socio demographic characteristic of bank workers in Harar town, Eastern Ethiopia, January 12-18/2018.

Socio-demographic variable	Category	Frequency	Percent (%)
Sex	Male	90	60.4
	Female	59	39.6
Age	$\leq$ 24 years	13	8.7
	25-34years	96	64.4
	35-44years	31	20.8
	45-54years	7	4.7
	$\geq$ 55years	2	1.3
	Single	51	34.2
Marital status	Married	96	64.4
	Divorced	1	0.7
	Widowed	1	0.7
	Diploma/level IV	23	15.4
Educational level	First degree	115	77.2
	second degree and above	11	7.4
	Manager	18	12.1
Job description	Auditor/Accountant	15	10.1
	Relationship officer	11	7.4
	Casher	5	3.4
	Customer service officer	69	46.3
	Others	31	20.8
	Governmental	68	45.6
Working area	Non-governmental	81	54.4
	<5years	69	46.3
Service years	5-10 years	65	43.6
	11-15 years	7	4.7
	16-20 years	4	2.7
	>20 years	4	2.7

**Table 2.** Medical History of bank workers in Harar town, Eastern Ethiopia, January 12-18/2018.

Medical History Variables	Category	Frequency	Percent (%)
Biological parentless Dx HTN	Yes	38	25.5
	No	111	74.5
Participants Checked BP previously	Yes	95	63.8
	No	54	36.2
Participants Dx HTN previously	Yes	6	4.0
	No	143	96.0
Participants Dx DM previously	Yes	3	2.0
	No	146	98.0
Participants started HTN treatment	Yes	3	2.0
	No	146	98.0

### 3.3. Behavioral and Work-related Characteristics of the Participant of the Study

Forty-nine (32.9%) of participants drank alcohol and only 8 (5.4%) were a smoker. The majority of the participants 105 (70.5%) used /added salt to food without tying. Ninety (60.4%) of them had physical exercise. The frequency of physical activity which all days of the week, 4-6 days of the week, and 1-3 days of the week was 39 (26.2%), 16 (10.7%), and 35 (23.5%) respectively. Most bank workers who participated in study 92 (61.7%) had a sedentary lifestyle (Table 3).

### 3.4. Anthropometric Measurements of Study Participants

Among the study subject, 74 (49.7%) participants had BMI<25kg/m<sup>2</sup> and 49 (32.9%) were overweight while 26 (17.4%) were obese. The mean and SD of BMI was 25.41 (4.546). Eighty-three participants had ≤ 120 mmHg, 43 (28.9%) had 121-139mmHg and 23 (15.4%) had ≥ 140mmHg SBP. Their DBP ≤80mmHg for 86 (57.7%), 81-89mmHg for 29 (19.5%) participants and 34 (22.8%) were ≥140 mmHg. The mean and SD of DBP was 81.13 (11.231) (Table 4).

**Table 3.** Behavioral and work-related characteristics of participated bank workers of Harar town, Eastern Ethiopia, January 12-18/2018.

Variables	Category	Frequency	Percent (%)
Drink alcohol	Yes	49	32.9
	No	100	67.1
Smoking	Yes	8	5.4
	No	141	94.6
Add salt to food without tying	Yes	105	70.5
	No	44	29.5
Physical exercise	Ye	90	60.4
	No	59	39.6
Frequency of physical activities	all days of the week	39	26.2
	4-6 days of the week	16	10.7
	1-3 days of the week	35	23.5
	no physical exercise	59	39.6
	< 4hours	11	7.4
Daily working time	4-7 hours	15	10.1
	exactly 8 hours	37	24.8
	>8 hours	86	57.7

**Table 4.** Anthropometric measurements characteristics of study participated of bank workers of Hara town, Eastern Ethiopia, January 12-18/2018.

Anthropometric measurements Variables	Category	Frequency	Percent (%)
BMI	<18.5kg/m <sup>2</sup>	17	11.4
	18.5-24.9kg/m <sup>2</sup>	57	38.3
	25-29.9kg/m <sup>2</sup>	49	32.9
	>30kg/m <sup>2</sup>	26	17.4
SBP	≤120mmHg	83	55.7
	121-139mmHg	43	28.9
	≥140mmHg	23	15.4
DBP	≤80mmHg	86	57.7
	81-89mmHg	29	19.5
	≥90mmHg	34	22.8

### 3.5. The Study's Prevalence of Hypertension

In the study, the prevalence of Hypertension was 41 (27.5%) of which 6 (4%) were previously diagnosed with Hypertension and 35 (23.5%) were newly diagnosed with

Hypertension. Twenty-six (63.4%) of Hypertensive participant was male and 15 (36.6%) were female. The majority 15 (36.6%) of Hypertensive bank workers' age was 25-34 years and 31 (75.6%) Married participants had hypertension. In the study, participated governmental bank

workers diagnosed HTN was 22 (53.7%) while 19 (47.3%) were nongovernmental bank workers (Table 5).

### 3.6. Bivariate Analysis of Hypertension Associated Factors

In crude analysis with  $p$  value  $\leq 0.05$  and 95%CI, among socio-demographic age and service years of bank workers, was found to be associated with Hypertension. Bank workers aged 25-44 years were 12.8 times more at risk for hypertension than those whose age  $\leq 24$  years. [COR (95%CI) 12.8 (1.208-135.579)] and those whose age  $\geq 45$  years were 28.286 times more risk for hypertension than those their age was  $\leq 24$  years. [COR (95%CI) 28.286 (3.393-235.832)]. Bank workers who had service years greater than 10 years were 9.533 times more risk for hypertension than those whose service years were  $\leq 10$

years. [COR (95%CI) 9.533 (2.831-32.108)].

A sedentary lifestyle was strongly associated with hypertension in the study. Bank workers who said yes to a sedentary lifestyle were 2.844 times more at risk for hypertension than those who said no sedentary life. [COR (95%CI) 2.844 (1.239-6.531)]. BMI of bank workers was also associated with Hypertension according to this study. Bank workers whose BMI was obese were 10.227 times more at risk for hypertension than those whose BMI was underweight. [COR (95%CI) (10.227 (1.929-54.219))].

Sex, Marital status, educational level, Job description, Working in Aria, drinking alcohol, Smoking, Salt in food, Physical activity, and Working time was not associated with hypertension among bank workers in Harar town respectively as shown in (Table 5).

**Table 5.** Independent and Hypertension Bivariate Analysis within cross-tabulation characteristics of study participant of Bank workers of Harar town, Eastern Ethiopia, January 2018.

Variables	Categories	Hypertension status		p-value	Crude OR (95%)
		Yes	No		
Sex	Male	26/63.4%	64/59.3%	0.643	1.192 [0.567 -2.504]
	Female	15/36.6%	44/40.7%		1.00
Age	$\leq 24$ years	5/12.2%	8/7.4%	0.005	1.00
	25-44 years	28/68.3%	99/91.7%	0.034	12.800 [1.208-135.579] *
	$\geq 45$ years	8/19.5%	1/0.9%	0.002	28.286 [3.393-235.832] *
	Single	9/22.0%	42/38.9%	.139	1.00
Marital status	Married	31/75.6%	65/60.2%	.061	2.226 [0.963-5.142]
	Others	1/2.4%	1/0.9%	.292	4.667 [0.266-81.795]
	Diploma/level IV	7/17.1%	16/14.8%	0.751	1.00
Educational level	First degree	32/78.0%	83/76.9%	0.453	0.508 [0.086-2.985]
	second degree and above	2/4.9%	9/8.3%	0.496	0.576 [0.118-2.814]
	Manager	6/14.6%	12/11.1%	0.726	1.222 [0.398-3.757]
Job description	Customer service officer	17/41.5%	52/48.1%	0.571	0.799 [0.368-1.735]
	Others	18/43.9%	44/40.7	0.719	1.00
Working area	Governmental	22/53.7%	46/42.6%	.227	1.561 [0.758-3.215]
	Non-governmental	19/46.3%	62/57.4%		1.00
Service years	$\leq 10$ years	30/73.2%	104/96.3	.000	1.00
	$> 10$ years	11/26.8%	4/3.7%	.000	9.533 [2.831-32.108] *
Biological parents Dx HTN	Yes	12/29.3%	26/24.1%	0.517	1.305 [0.584-2.917]
	No	29/70.7%	82/75.9%		1.00
Checked BP Previously	Yes	29/70.7%	66/61.1%	0.277	1.538 [0.708-3.342]
	No	12/29.3%	42/38.9%		1.00
Previously Dx DM	Yes	3/7.3%	0		
	No	38/92.7%	108/100%		
Drink alcohol	Yes	13/31.7%	36/33.3%	0.850	0.929 [0.430-2.005]
	No	28/68.3%	72/66.7%		1.00
Smoking	Yes	4/9.8%	4/3.7%	0.158	2.811 [0.699-11.814]
	No	37/90.2%	104/96.3%		1.00
Add salt to food without tying	Yes	31/75.6%	74/68.5%	0.398	1.424 [0.627-3.235]
	No	10/24.4%	34/31.5%		1.00
Physical activity	Ye	22/53.7	68/63.0%	0.301	0.681 [0.329-1.410]
	No	19/46.3%	40/37.0%		1.00
Working time	$< 4$ hours	2/4.9%	9/8.3%	0.403	1.00
	4-7 hours	2/4.9%	13/12.0%	0.736	0.692 [0.082-5.863]
	exact 8 hrs.	13/31.7%	24/22.2%	0.297	2.437 [0.457-13.004]
	$> 8$ hours	24/58.5%	62/57.4%	0.497	1.742 [0.381-8.654]
Sedentary life style	Yes	32/78.0%	60/55.6%	0.014	2.844 [1.239-6.531] *
	No	9/22.0%	48/44.4%		1.00
	Underweight	2/4.9%	15/13.9%	0.002	1.00
BMI	Normal	10/24.4%	47/43.5%	0.573	1.596 [0.314-8.109]
	Overweight	14/34.1%	35/32.4%	0.178	3.000 [0.606-14.864] *
	Obesity	15/36.6%	11/10.2%	0.006	10.227 [1.929-54.219] *

### 3.7. Multivariate Analysis of Hypertension Associated Factors

According to the result of multivariate analysis, Age, Sedentary lifestyle, and BMI of bank workers had a significant association with hypertension as shown in table 6. Bank workers whose ages 25-44 years were 0.242 more likely to have hypertension than those their age were  $\leq 24$  years. [AOR (95%CI) 0.242 (0.065-0.904)]. Bank workers

who had sedentary life were 2.925 times at risk of hypertension than those who had no sedentary lifestyle. [AOR (95%CI) 2.925 (1.085-7.885)]. Obesities bank workers were 6.113 times more risked having hypertension than bank workers who were underweight. [AOR (95%CI) (6.113 (1.030-36.288))]. The work schedule of bank workers had no association with Hypertension in Multivariate analysis as shown in (Table 6).

**Table 6.** Multi regression Association of factors within Hypertension among bank workers of Harar town, Eastern Ethiopian, January 2018.

Characteristics	HTN		p-value	COR (95%)	p-value	AOR (95%)
	Yes No/%	No No/%				
Age in years						
< 44	28/68.3	99/91.7	0.034	12.800 [1.208-135] *	0.035	0.242 [0.065-0.904] **
$\geq 45$	8/19.5	1/0.9	1.00	1.00	1.00	1.00
Service in years						
$\leq 10$	30/73.2	104/96.35	.000	1.00		1.00
<10	11/26.8	4/3.7	.000	9.533 [2.831-32.1] *	0.060	4.100 [0.944-17.810]
Sedentary lifestyle						
Yes	32/78.0	60/55.6	0.014	2.844 [1.239-6.531] *	0.034	2.925 [1.085-7.885] **
No	9/22.0	48/44.4		1.00		1.00
BMI						
Under weight	2/4.9	15/13.9	0.002	1.00	0.023	1.00
Normal	10/24.4	47/43.5	0.573	1.596 [0.314-8.109]	0.954	1.052 [0.188-5.877]
Overweight	14/34.1	35/32.4	0.178	3.000 [0.606-14.864] *	0.361	2.213 [0.402-12.183]
Obesity	15/36.6	11/10.2	0.006	10.227 [1.929-54.219] *	0.046	6.113 [1.030-36.288] **

## 4. Discussion

In this study out of the total respondents who participated, 41 (27.5%) had hypertension. The figure is greater than the result of a study done in Owerri Nigeria in 2015 among 149 bank workers which were 12.4% [17]. This discrepancy may be due to the different age categories of participants. Their mean age was less than 30 while in our study; the participant's mean age was 33.48.

The prevalence of the study was also greater than the study outcome done among commercial bank workers in Addis Ababa which the prevalence was 19.1% [18]. The difference of results may be due to varies in BMI since there was only 5.8% obesity which is smaller than our study outcome (17.4%) and also it may be due to differences in the understanding of preventive methods. But the study outcome is less than the result of the study done among bank workers in Surratt city of India in 2012 which was 30.4% [19]. The difference occurred possibly due to differences in socio-demographic and socio-cultural as well as lifestyle. In a study done among bank workers of Ghana in Accra in 2014, the prevalence of hypertension was 38% [20]. Which is much greater than this study outcome even if the sample size of the study were almost similar. The variation is because of participants' BMI difference in which the mean BMI was 31.37 while 25.41 in this study and also the mean  $\pm$ SD age of participants in Ghana Accra was 46 /9 which older than our study outcome 33.48.

The study found that the age of bank workers who participated was significantly associated with Hypertension.

Those whose age  $\leq 24$  was 0.424 less likely to have hypertension than bank workers who's their age was 25-44 years. According to a study on the Prevalence of hypertension among federal ministry civil servants in Addis Ababa in 2014, Increased age was identified as a factor for hypertension. Study participants older than 48 years were more likely to be hypertensive than those younger than 27 years AOR 15.36 (7.29-32.35) [21]. The result of the study of bank employees of Surratt city in India also showed that age  $\geq 50$  years increases the risk of hypertension [19]. Even if age-associated to had hypertension there is a difference in the association of age categories. The variance may be due to participant characteristics since the majority of our study participants were in the age category of 25-44 years.

According to the study sedentary life of bank, workers had association factors for hypertension. Bank workers who said yes to a sedentary lifestyle were 2.925 times more at risk for hypertension than those who said no sedentary life. The study outcome among bank workers in Surratt city of India also showed that those who had 2 times risked for hypertension than those who were no sedentary life [19]. Similarly, a study was done among bank workers of Ghana Accra also show that sedentary lifestyles had a risk for hypertension [20]. This shows that sedentary life decreases energy expenditure and increases the cholesterol level in the blood vessel which is directly related to Cardiovascular disease i.e., Hypertension.

The result of the study shows that BMI of bank workers significant association with Hypertension. As shown in multivariate in the study obese bank workers were 6.113 more risked for hypertension than whom their BMI underweight. A study on bank employees of Sullia Taluk,

Karnataka showed that a significant association was found between BMI and hypertension. Those having BMI  $\geq 25$  kg/m<sup>2</sup> were at a higher risk of developing hypertension as compared with those who had BMI  $< 25$  kg/m<sup>2</sup>. BMI  $\geq 25$  kg/m<sup>2</sup> was taken as a cut-off point as a high-risk group as it is considered as an obese group according to Indian standards (according to WHO standards obese is BMI  $\geq 30$  kg/m<sup>2</sup>). It also found that obesity was found to be very strongly associated with hypertension [22]. According to study Prevalence of hypertension among federal ministry civil servants in Addis Ababa in 2014, civil servants who were overweight 0.812 (1.35-2.88)/obese 8.90 (5.90-13.44) were 7.36 times more likely to be hypertensive as compared to civil servants with normal BMI [21]. The difference in the result which is the strength of association is little greater in civil servants in Addis Ababa may be due to socio-demographic differences of participants.

Sex, Marital status, educational level, Job description, Drinking, Alcohol, Smoking, Salt in food, Physical activity, and Working schedule was not associated with hypertension among bank workers in this study.

## 5. Strength and Limitation of the Study

Since it is a cross-sectional study, it did not address the cause-and-effect relationship of the factors and the outcome variables. The observation was for a short period and could not identify frequently and consistency of practice. In addition, there was a risk that mothers may report what was expected of them but their usual and actual practices may be different.

## 6. Conclusion and Recommendation

The prevalence of Hypertension in the study was 27.5% which shows the high prevalence of hypertension in the study population. As in many other developing countries, hypertension is becoming a serious public health concern among working adults bankers in Harar town, Eastern Ethiopia. Age, Sedentary lifestyle, and BMI (Obesity) in this study were positively associated with higher odds of having hypertension. However, Sex, Marital status, educational level, Job description, Drinking, Alcohol, Smoking, Salt in food, Physical activity, and Working schedule was not associated with hypertension among bank workers in this study.

## Abbreviations

AH-Arterial hypertension BMI- Body Mass Index DBP-Diastolic Blood Pressure CBE – Commercial's bank of Ethiopia CBO – Cooperative bank of Oromia CHD-Coronary heart disease CHF-Congestive heart failure CVD-Cardiovascular disease ECCN- Emergency and Critical Care Nurse HHSC- Harar Health Science College HTN-Hypertension NCDs - non-communicable diseases NIAID-Non-Infectious Adult Diseases OR- Odd ratio SBP- Systolic Blood Pressure SPSS- Statics Package of Social Science SSA-Sub-Saharan Africa

## Author Contributions

All authors made significant contributions to the conception and design, data acquisition, or data analysis and interpretation; participated in the drafting of the article or critically revised it for important intellectual content; agreed on the journal to which the article would be submitted; gave final approval of the version to be published; and agreed to be responsible for all aspects of the work.

## Ethics Approval and Consent to Participate

Ethical clearance was obtained from the Harar Health science college's Ethical review committee. An official letter of cooperation was written to the 25 Bank branches from Harar Health Science College. The purpose of the study was to inform respondents so that they could provide accurate & honest responses. Informed verbal consent was obtained from respondent bank employers before answering the question. Confidentiality of information was maintained.

## Availability of Data and Material

The data are available from the corresponding author and will be provided upon reasonable request.

## Source of Funding

The cost of the study was covered by the research investigator.

## Consent for Publication

Not applicable.

## Disclosure

All the authors do not have any possible conflicts of interest.

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