ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

HYPERTENSION SCREENING PRACTICE AND ITS PREDICTORS AMONG EMPLOYEES OF COMMERCIAL BANK OF ETHIOPIA IN ADDIS ABABA, ETHIOPIA USING THE HEALTH BELIEF MODEL

BY:BOSONATILAHUN (BSc)

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MRS. BEZAWIT KETEMA (MPH,PhD FELLOW)

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES,ADDIS ABABA UNIVERSITY,SCHOOL OF PUBLIC HEALTH,IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTERS OF PUBLIC HEALTH IN HEALTH PROMOTION AND HEALTH EDUCATION

DECEMBER,2020

ADDIS ABABA,ETHIOPIA

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Acknowledgment

First of all I thank God for giving me this opportunity and helping me to get through a lot.My deepest gratitude goes to my advisors Dr.Adugnaw Berhane and Mrs.Bezawit Ketema for their continuous constructive advice and valuable comments.In addition to that I would like to say thank you to the human resource department of the Commercial Bank of Ethiopia and all employees for their willingness and co-operation in letting me collect data in this pandemic COVID-19 situation.Finally, my deepest gratitude goes to Debisa Eshetu and my Mother for their encouragement and help in conducting this thesis.

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Abbreviation and Acronyms

AOR	Adjusted Odds Ratio
COR	Crude Odds Ratio
CBE	Commercial Bank OfEthiopia
CI	Confidence interval
DBP	Diastolic Blood Pressure
FMOH	Federal ministry of health
HBM	Health Belief Model
HTN	Hypertension
MetS	Metabolic syndrome
NCD	Non Communicable Disease
NSAP	National Strategic Action Plan
SBP	Systolic Blood Pressure
SPSS	Statistical Packages for Social Sciences
WHO	World Health Organization

Abstract

Background: Hypertension is a chronic medical state and important public health problem worldwide.In Africa more than one-third of adults are hypertensive.Therefore, assessing practice and perception towards hypertension screening is important for the disease primary prevention and reducing long lasting health complication. Decreased physical activitiesare important contributors of hypertension, which commonly seen amongst employees of the profession where working is mostly sedentary like bank employees. That is why the present cross-sectional study will be carried out.

Objectives: The purpose of this study is to assess hypertension screening practice and its predictors among employees of Commercial Bank of Ethiopia in Addis Ababa, Ethiopia using the health belief model.

Methods: An institutional based cross-sectional study was conducted among 620employees of Commercial Bank of Ethiopia in Addis Ababa and self administered questionnaire were administered to collect data.Independent sample t-test was used to determine whether mean differences existed between perceptions of employees who had ever screened and never screened for hypertension. Crude odds ratios were considered to measure associations for each variable with the hypertension screening practice and multivariable logistic regression was run to identify predictors of hypertension screening practice.

Result:In this study hypertension screening practice among employees of Commercial Bank of Ethiopia was 29.19%.There was a mean score difference between the ever and never screened employees, which those who screened had higher perceived susceptibility,perceivedseverity,perceivedbenefit,perceivedthreat,self-efficacy,Net-benefit and cues to action at $P<0.05$.Perceived self-efficacy and Net-benefit were the predictors of hypertension screening practice with ($P<0.001$,AOR 1.106,95% CI 1.051,1.163) and ($P<0.001$,AOR 1.082,95% CI,1.041,1.125) respectively.

Conclusion and recommendation: This study high lights employees' perceptions towards hypertension screening influenced the uptake of HTN screening uptake.Therefore,educational interventions given to increase employees perception towards self-efficacy and Net-benefitimprovethehypertensionscreeningpractice.

1. Background

1.1 Introduction

Hypertension is a chronic medical condition in which the blood pressure in the arteries is raisedthan normal anditisalso amainpublic health problemworldwide because of its high prevalence andassociated with increase in risk of disease such as heart disease, stroke, kidneyfailure, disabilityanddeath(1).It is universally not known with acute symptoms that people could know the case and treated adequately,so it resultscomplication like extensive target organ damage (2).

Globally Hypertension is the primary risk factor for mortality and the third leading risk factor for disease burden(3,4).In Africa more than one-third of adults are hypertensive and the WHO's 2012 report also highlighted there are about 80 million adults with hypertension and projections based on current epidemiological data suggest that this figure will rise to 150 millionby2025(1).Differentreportsfrom Ethiopia indicated the prevalence of hypertension were as high as 31.5% and 28.9% among males and females respectively in Addis Ababa and 28.3% from Gondar(4).

The data from different National and regional study on HTN in developing country showed that,basic risk factors for hypertension can be genetic,behavioural ,environmental or medical disorder.Among these factorsbehavioural/lifestyle and environmental factor are more principal than the genetic one(5).Many studies have shown that physical inactivity is the major risk factor of NCD among behavioural/lifestyle factors(6,7).

WHOidentified the workplace as a key setting for control of non-communicable disease and Bankingis a profession characterized by sitting for most hours of the day and it is a sedentary occupation(3).From working hour schedule of CBE website employees spent their usual day sitting time for almost 8 hours/day that they start workingfrom 8:00 am to 5:30 pm.This suggests this segment of the population might be at high risk of hypertension and of other non communicable disease which share similar risk factors since many people with hypertension

unaware of their illness screening may help to identify individuals who have it.Therefore, it is essential to assessHTN screening practice and its predictors among bank employees.

1.2 Statement of the Problem

According to WHO factsheet of 2019,Hypertension (raised blood pressure) is a condition in which the blood vessels have persistently raised pressure,putting them under increased stress and also it can be defined as a systolic blood pressure(SBP) of 140mm Hg or more,or a diastolic blood pressure (DBP) of 90 mm Hg or more,or taking antihypertensivemedication.Globally,high blood pressure contributes to62% of cerebrovascular disease and 49% of ischemic heart diseasethat makes hypertensions a widespread problem ofenormous economic impact because of its highprevalence in urban areas, its silent killer before diagnosis and the severity of its complications(8).The Study showed that,researchers revealed their estimation towards HTNthatraisedbloodpressurecurrentlykills nine millionpeopleeveryyearsince it already affects one billion people worldwide, leading to heart disease and strokes(4).

Different studies also suggested that in Africa, the national occurrence of hypertension in the age group of 25–65 years ranges from 25% to 35% and it remains the most principal contributor to increased death from cardiovascular diseases(9).The study done in Nigeria among employees of the bank showed that non communicable diseases, mainly cardiovascular disease, are prevalent in the banking workplaces and assesesdthe prevalence of hypertension among bank employees which was 28.8% (10).

Although the above studies stated the importance of hypertension screening practice, there is still a gap in assessing individual knowledge towards HTN screening sincelack of knowledge about hypertension screening results substandard prevalence of hypertension screening behavior(12).Therefore, this study plan to assess the level of knowledge towards hypertension screening because it is essential for the practice.

Several study's findings have suggested that, various risk factors such as: age, obesity, physical inactivity, family history, alcohol, smoking and stress increase prevalence of

hypertension(6,7,13). Among these risk factors decreased physical activities together with increased mental tension are significant contributors of hypertension and usually seen amongst employees of the profession where working is mostly sedentary, for instance job of bank employees which both sedentary in nature and accompanies high mental stress. As a result, Screening for hypertension among adults helps in identifying asymptomatic individuals and thereby minimizing damage to vital organs and reducing complications and mortality (14,15).

However, hypertension screening practice is helpful to control hypertension progress these studies lack assessing the level of intention to adopt the practice among individuals. Since the motivation, perception of severity, acceptance or risk denial and unfavorable perception with negative attitudes focusing mainly on barriers make the overall lack of interest towards hypertension screening practice(16).As a resut this study will assess the perception of individuals towards hypertension screening since perception matters for the practice of hypertension screening.

As stated in the above paragraphs several studies were conducted on the prevalence and risk factors of hypertension that have suggested hypertension screening behavior. But they do have limitations on predictors for screening behavior with specific occupations, hence this study aims to assess the practice of hypertension screening with its perception among bank employees using the health belief Model.

1.3 Significance of the Study

This study will contribute to be evidence on Hypertension screening practice and its predictors among bank employees. The study will also help to provide information about theindividual perception towards HTN screening at work place since this study is new in revealing hypertension screening practice and its predictors among employees of Commercial Bank of employees.The results could also be used by policy makers and relevant stakeholders to develop health promotion and communication intervention to promote HTN screening practice among institutional based population segment.

2. Literature Review

2.1. Magnitude of Hypertension

Hypertension is a chronic medical conditionin which the blood pressure in the arteries is raised and it is significant public health problem worldwide. It also the prominent cause of death in the world and is the commonest contributor to the increasing worldwide pandemic of cardiovascular disease and stroke (1,17).

Globally hypertension is responsible for more than half of deaths from stroke,just less than half of deaths from coronary artery disease and for more than one-tenth of all global deaths which accounts 17%(12).According to data from different national and regional survey,almost three-quarters of people with hypertension (639 million people) live in developing countries where people have a very low awareness of hypertension and poor blood pressure control(18).In Africa more than one-third of adults are hypertensive and the WHO's 2012 report also emphasized there are about 80 million adults with hypertension and projections based on current epidemiological data suggest that this figure will rise to 150 million by 2025(1).

From the studies done in Tanzania and Botswana the reported prevalence of hypertension ranged from 23.7% in Tanzania to 32% in Botswana(4,13).The study done in Nigeria among bank employees also showed that non communicable diseases, mainly cardiovascular disease, are prevalent in the banking industry and assessed the prevalence of hypertension in bank employees which was 28.8% and banking industry is characterized by risk factors that predispose to overweight, obesity, and hypertension since it is associated with the employees high income, unhealthy eating, sedentary lifestyle, long working hours, and stress from work(10).

In Ethiopia the study conducted in Addis Ababa revealed that one in four adults aged 18 and above (30.2% in male, 21.2% in females) have hypertension where the population is young with a mean age of 36.9 years.The study conducted in Bedeletown also showed that the awareness towards hypertension and its control rates in the community were very low, however the prevalence of hypertension among the age group 25 to 64 was 26.7% (4,8).

2.2. Risk factors for Hypertension

According to the data from different National and regional survey on HTN in developing country fundamental risk factors for hypertension can be genetic,behavioural ,environmental or medical disorder.Among these factors,behavioural/lifestyle and environmental factors are mainly more related to hypertension than the genetic factor.The lifestyle or environmental factors are modifiable, such as sedentary occupation,Obesity,excess salt intake,unhealthy diet ,excess alcohol,reduced physical activitiy,stress,urban dwellers and smoking(5).In Ethiopia the study conducted on burden of non-communicable disease also showed that NCD causes 42% of deaths of which 27% are premature deaths before 70 years of age, which can be reduced by taking action on improving modifiable individual risky lifestyle/behavior mentioned before(19). Unhealthy diet and physical activity factors alone attributed to 1.6 million deaths annually(3).

On the other hand,several study findings showedthatthere are non modifiable risk factors for hypertension such as Age and family history.The study conducted among bank employees in District of Uttar Pradeshe,India showed prevalence of hypertension was significantly higher among age of 45 years, which was 79% compared to 46.8% among those less than 45 years of ages(15). Finding from the Study conducted in Addis Ababa under the age of 25 years had hypertension comparing to age 65 and above which was 23%(4).

There are several studies conducted which have shown the association between lifestyle/behavioral factor and prevalence of NCD or hypertension in particular.For instance, Study conducted in Russia among bank employees have shown that Lifestyle factors , especially physical activity and smoking were strongly associated with NCD such as hypertension (20). A study conducted in India showed the prevalence of hypertension among bank employees is due to lifestyle change and job stress(14,15,21,22). A study conducted in Durame town also revealed that among modifiable risk factors assessed; physical inactivity, and use of top added salt on the plate were significantly associated with hypertension(23). The finding from different study showed, older age, diet, occupational grade, lack of physical inactivity, alcohol and family history were associated with risk of hypertension(8,11).

The sedentary lifestyle also one of the most important risk factors in highly prevalent illness such as type 2 diabetes,cardiovasculardisease,osteoporosis,andcancers.WHO considers 30 minutes moderately-intense physical activity every day for adults who have sedentary life to enhance the gain of health benefits(24).There has been findings which indicated an association between sedentary behavior such as sitting, lying down,watching TV and using the computer for a long period time with mortality and cardiovascular disease(25).Studies have shown that adults spend approximately 8 to 9 hours of the day in sedentary behavior and much of this is gathered at their workplaces(26).

WHO as well identified the workplace as a key setting for control of non-communicable disease and banking is a profession characterized by sitting for long hours of the day which makes it sedentary occupation(3).Sitting for a long period of time is also a risk factor for cardiovascular disease and premature mortality within the office-based workplace since an estimated two-thirds of work hours are spent sitting(27).The study result showed that low levels of physical activity were noted even more frequently and pertained to 83% of workers aged up to 39 years and increased to almost 100% in subjects aged 50 years or more(28).The study showed that sedentary lifestyle were more strongly associated with the metabolic syndrome,worse quality of life and increased general mortality(29). Sedentary behavior has physiologic consequences such as high level of triglyceride levels,insulin insensitivity and glucose intolerance, which results health problem and increasing mortality rates (30).Studies have shown that significant relationship was observed between hypertension and lifestyle practices such as physical activity (12).

The study finding indicated that Obesity, diabetes and hypertension prevalence is higher in urban compared to rural dwellers in the populations. Physical activity is significantly lower and varies in pattern in urban population, compared to the rural.On the other hand ,physical inactivity has a significant association with the CVD, including hypertension,(31).Physical inactivity and obesity are the two important determinants of MetS that physically inactive persons have a 20%–30% increased risk of all-cause of mortality as compared with those who participate in 30 minutes of moderate intensity physical activity on most days of the week (24).

2.3. Hypertension Prevention and Control

Screening pursues to identify actually healthy individuals who have or are at high risk of cardiovascular disease, but do not sofar manifest symptoms (32).Sustainable and participatory community based interventions on hypertension awareness,prevention,treatment and control are essential to make the control of this epidemic effective(13).

Th study conducted in developing countries such as India showed that, however there isa high prevalence of Hypertension the proportion of adults with hypertension who knows their diagnosis, are treated, and aware of how to control the disease is low. Although antihypertensive medications are both inexpensive and efficient in India,only few numbers of adults with hypertension are diagnosed and use recommended treatment(33).In Ethiopia the study has shown that theprevalenceofhypertensionamongfederal ministry civil servants were found to be high; which indicates the necessity of institutional based hypertension-screening programs, particularly for those age group 28 years and above(1)**.**

The early HTN screening rates in most high-income countries vary from 32%–64% , while in many low-income countries, the reported screening rates are significantly lower and most of hypertension screening practice depends on the individual's awareness about the disease, perceptions about the disease, motivation to get themselves screened, and visiting a facility to get their blood pressure checked (16).The study showed that the community perceived hypertension to be a disease with symptoms and only people with symptoms should get tested for hypertension(14,15).

A study conducted among adults in Gondar showed 28.3% of the population were hypertensive of whom more than a third (37%) did not know they had hypertension(11).The Federal Ministry of Health of Ethiopia has committed to the prevention, detection and control of non-communicable diseases, of which hypertension is among the leading, and has produced a National Strategic Action Plan (NSAP) for Prevention and Control of Noncommunicable Disease in Ethiopia for the years 2014-2016 (4).

2.4 Theoretical frame work of Health belief model constructs

The HBM was developed originally in the 1950s by social psychologists in the U.S.Public Health Service to explain the extensive failure of people to participate inprograms to prevent and detect disease. In the meanwhile it has become the most broadly used conceptual frameworks and guideline in the health behavior research and interventions. Furthermore, the model encompasses some primary perceptions that predict why people will take action to prevent, to screen for, or to control illness situations; these include susceptibility,seriousness, benefits and barriers to a behavior, cues to action, and self-efficacy (34). For instance the initial HBM studies focused particularly on prediction of preventive health behaviors such as X-ray screening for TB,polio vaccination and Tay-Sachs trait(35). Regards to the modifying factor Socio-demographic characteristics such as gender, ethnicity, and age were known to be associated with preventive health-related behavior patterns and as well as shows differences in the given health services (35).The constructs(perceptions) of HBM are discussed as follows.

Perceived Susceptibility:Perceived susceptibility refers to beliefs about the chanceof getting a disease or condition(34).

Perceived Severity:An individual feeling towards seriousness of a disease if contracted or left untreated, such as pain,death,disability and the effects of the illness on in the long term.Thecombinationof susceptibility and severity have been termed as a perceived threat(34).

Perceived Benefits:Even if a person perceives personal susceptibility and seriousness about thehealth condition (perceived threat), whether this perception results behavioralchangewill be influenced by the person's beliefs regarding perceived benefits of the variousavailable actions for reducing the disease threat.Having perceptions towards susceptibility and severity of the condition alone doesn't make an individual to accept the recommended behavioral change unless they also perceive the action as actually helpful in reducing the threat(34).

Perceived Barriers: Thepossible negative aspects of a particular health action which may act as obstacles to undertaking recommended behaviors.A kind of unconscious, cost-benefit analysis occurs wherein individuals weigh theaction's expected benefits with perceived barriers—"It could help me, but it may beexpensive, have negative side effects, be unpleasant, inconvenient, or time-

consuming.”Thus, “combined levels of susceptibility and severity provide the energy or force to actand the perception of benefits (minus barriers) provide a preferred path of action”(Rosenstock, 1974)(34).

Cues to Action:There were many formulations of the HBM which included the idea of cues that can trigger the recommendedactions.Forexample,Hochbaum (1958) thought that having ready to take the recommended action(perceived susceptibility and perceived benefits) could only be initiated by other factors specifically by cues to initiate actions such as environmental events like media publicity(34).

Self-Efficacy: Self-efficacyis defined as “the conviction that one can successfully executethe behavior required to produce the outcomes” (Bandura, 1997). Bandura definedself-efficacy as a person’sestimate that a recommendedbehavior,for instance, screening or vaccination will lead to certain outcomes(34).

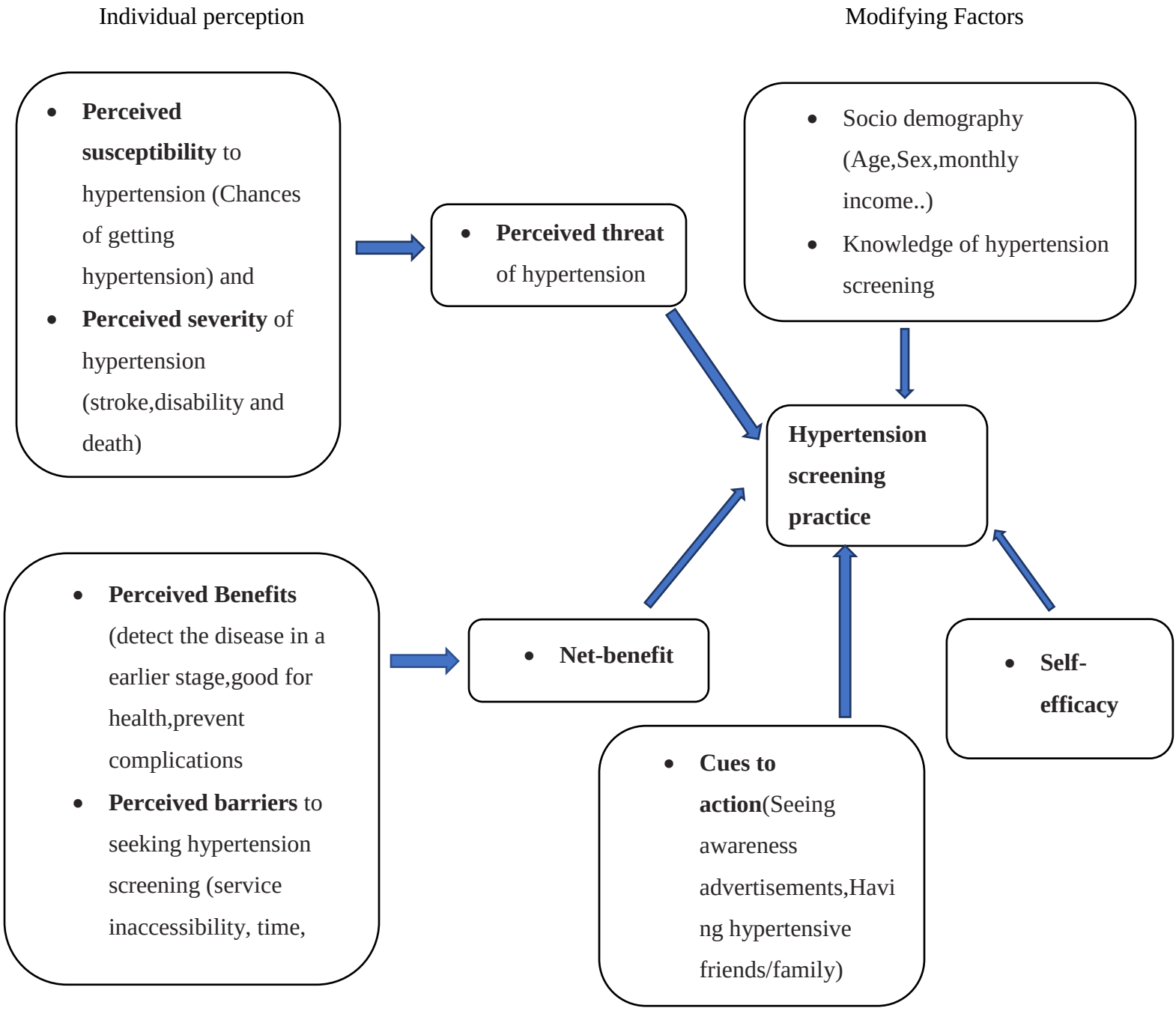

Figure 1: Conceptual framework for predictors of Hypertension screening practice adapted from CHBM(34) and modified accordingly.

3. Objectives

3.1. General Objective

- To assess hypertension screening practice and its predictors among employees of Commercial Bank of Ethiopia in Addis Ababa, Ethiopia using the health belief model,2020

3.2. Specific Objective

1) To assess hypertension screening practiceamong employees of Commercial Bank of EthiopiainAddis Ababa, Ethiopia.
2) To determine whether perception towards hypertension screening predict hypertension screening practices among employees of Commercial Bank of Ethiopia in Addis Ababa,Ethiopia.
3) To compare perceptions towards hypertension screening between employees who ever screened and never screened among employees of Commercial Bank of Ethiopia in Addis Ababa,Ethiopia.

4. Method and Materials

4.1. Study Area and Period

The study was conducted inAddis Ababa from June to August 2020.Addis Ababa is a city with a great diversity and homes of almost all ethnicities. The city contains 10 administrative sub cities, namely: Arada, Yeka, Gulele, Addis Ketema, AkakiKality, NefassilkLafto, Lideta, Bole, KolfeKeranio, and Kirkos.Commercial bank of Ethiopia branches are found in all over subcities in the city. According to Ethiopia country commercial Guide published in 10/30/2019, in Addis Ababa currently there are 18 banks, which comprised of a central state owned bank (The National Bank of Ethiopia), a government owned (Commercial bank) and 16 private banks. The study site, Commercial Bank of Ethiopia is the leading African bank,wich has 1456 branches in the country with four branches in south sudan and around 300 branches in Addis Ababa that makes it the largest of all banks. In Addis Ababa, Commercial bank of Ethiopia has four districts which are North,South,East and West districts.

4.2. Study Design

An institutional based cross-sectional study was conducted.

4.3. Population

4.3.1. Source Population

The source population for the study was all bank employees in Commercial Bank of Ethiopia,Addis Ababa who were working in the year of 2020.

4.3.2. Study Population

The study population included all employees in selected Commercial Bank of Ethiopia in Addis Ababa who were working in the bank in the year of 2020.

4.3.3. Inclusion Criteria

All employees in the selected banks who were working fulltime by sitting long hour in days were included.

4.3.4. Exclusion criteria

Employees who had been diagnosed with hypertension and on treatment were excluded.

4.4. Study Variables

Dependent Variables

- Hypertension screening practice

Independent Variables

- Sociodemographic characteristics such asAge,Sex,religion,ethnicity,monthly income, and job position
- Predictor variables of HBM constructs
- ✓ Perceived susceptibility
- ✓ Perceived severity
- ✓ Perceived barrier
- ✓ Perceived benefits
- ✓ Perceived self-efficacy
- ✓ Cues to action
- Knowledge towards hypertension screening

Operational definition

Hypertension screening: The detection of any forms of hypertension among healthy bank employees by means of available screening method conducted to identify those at an increased risk for the disease(16).

Hypertension screening practice: The action of ever use of available hypertension screening service by bank employees(16).

Knowledge: The responses of knowledge questions were summed up and a total score was computed .Higher scores indicate having high knowledge towards hypertension screening.

Perceived susceptibility: The responses of perceived susceptibility questions will be summed up and a total score will becomputed.The higher scores indicates having high perceived susceptibility towards hypertension.

Perceived severity: The responses of perceived severity questions will be summed up; a total score will be generated and a higher score indicates having a high perceived severity towards hypertension.

Perceived benefit: The responses of perceived benefit question will be summedup;a total score will be generated and a higher score indicates having the high perceived benefit towards hypertension screening.

Perceived barrier: The responses to perceived barrier questions will be summed up; a total score will be generated and the higher scores indicateshaving high perceived barrier towards hypertension screening.

Self-efficacy: The responses of self-efficacy questions will be summed up; a total score will be generated and a higher score indicates having high perceived self-efficacy towards hypertension screening.

Net-benefit: The sum score of perceived benefit minus perceived barrier.

Perceived threat: The sum score of perceived susceptibility plus perceived severity.

4.5. Sample size determination

In this study, sample size were determined by single population proportion formula with the assumption of the prevalence of hypertension screening practice P=50%,Since this study had never been done before on the bank employee context using HBM,95% confidence interval(CI),5% marginal error,design effect of 1.5 and 10% contingency for non -response

rate.The total population from the four districts of CBE(North,South,East and West) is 5286 employees.

$$\mathbf{n}=\frac{[(z \quad *\alpha/2)2*(p(1-p)]}{d^2}$$

n= minimum requirement of sample size,

z= confidence interval (CI) =1.96=95%

p= the prevalence of hypertension screening practice is P=50%

d =marginal error=5%=0.05

$$n = \frac{[(1.96)^2 * 0.5 * (1 - 0.5)]}{0.05^2} = 384$$

Considering design effect 1.5, nf= 384*1.5=**576** and by adding 10 % non-response rate, the final minimum sample size was**633**

4.6. Sampling Procedure

Multistage sampling techniques with simple random sampling were used to select the study subject.Therewere four districts of CBE (North,South,west and East districts) found in Addis Ababa.The sample size was proportionally allocated to these districts based on their branch offices.Each four districts have different number of branch offices that North district had 50 branch offices,South district had 59 branch offices,East district had 67 branch offices and 46 branch offices.By computer aided random selection 30% of branch offices had been selected from each district total branches. The expected total number of bank employees from the selected branch offices who were working in 2020 were 1730.Dividing the total number of employees in each selected branch by (N=1730) and multiply by the total sample size (633).Within this

proportionate to size technique, the participant bank employees were computed. Finally, using simple random sampling every bank employee who full fill the inclusion criteria in the study were selected.

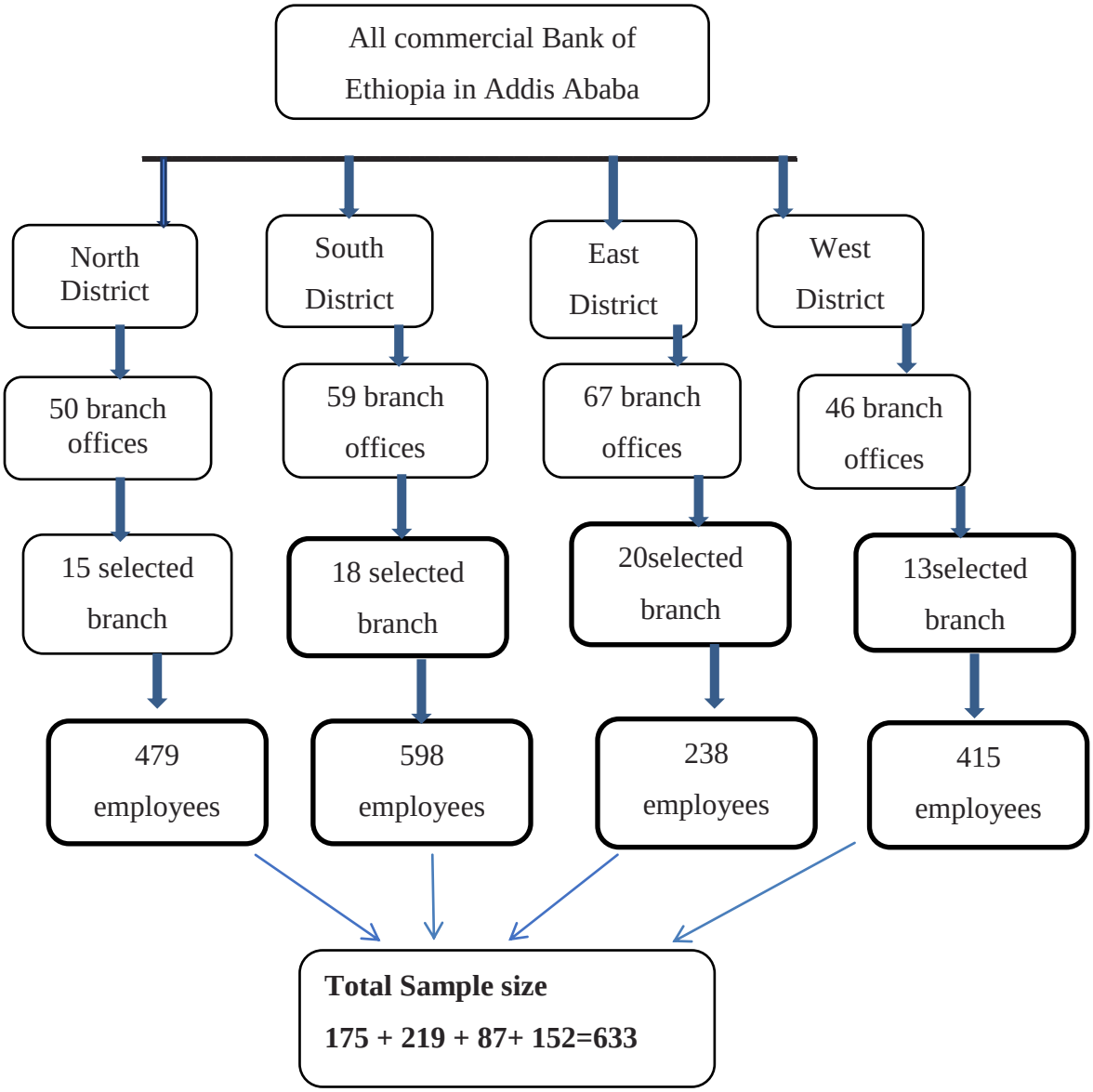

Figure 2: Schematic presentation of sampling procedure proportionally allocated by (p*n/N)

4.7. Data collection Procedures

4.7.1. Data Collection Instruments

Data was collected using a structured questionnaire designed by reviewing pertinent research findings on the issue under caption.The questionnaire was adapted fromprevious published similar studies which constitute information on socio-demographic, knowledge towards hypertension screening ,practice and health belief model domains,Perceivedsusceptibility, perceived severity,perceived benefits,perceived barriers,cues to action and self efficacy towards hypertensionscreening(12,16,33,32) by the principal investigator. Knowledge towards hypertension screening consisted of 4 items with yes or no questions given the1 point score for each correct response and 0 for not correct response. For each HBM construct questions 5 point Likert scale were used which the score ranging from strongly agree (5) to strongly disagree(1).

From the HBM constructs Perceived susceptibility consisted of 5 items,Perceived severity consisted of 4 items,Perceived barrier has 4 items,Perceived benefit consisted of 5 items,Cues to action consisted of 5 items and self-efficacy consisted of 4 items.To check whether the translation is consistent with the English version the questionnaire was back translated to English by another language expert.

Data Collection Process

The questionnaires were self administered by participants.Training was given to supervisors by the principal investigator.The data collection was self-administerd and supervised by the supervisors to follow the data collection procedures and checking the data collected. After data collection the supervisors submitted the questionnaires they collected to the principal investigator on time. Meanwhile, any doubts in the questionnaire was clarified.The four districts of Commercial Bank of Ethiopia were communicated and pre-test was done in the week before actual data collection. The actual data collection was conducted from June to August2020.

4.7.2. Data Quality Management

There were points at which the quality of data might be affected unless measures were taken at these points. These points were questionnaire designing, data collection and data entry. As this was one of the points to control the quality of data, due emphasis was given to questionnaire designing. Objective based, logically sequenced, free of scientific terms and non-leading structured questionnaire was prepared. The instrument was pretested in a bank which were not being selected for the study before the final administration of the questionnaire and theamendement was made accordingly.Data collection and supervision was another area of focus to keep the quality of the data. The collected data were checked by the investigator on daily basis for any incompleteness and/or consistency. Finally, timely correction of the completeness of the questionnaire was made.

4.7.3. Data Analysis Technique

The completeness of data was checked manually and after editing and clearing, data entry was done by using Epidata version 4.1. After checking the consistency and preparing for analysis, it was exported to statistical package for social science (SPSS) version 23.The data analysis was ranged from the basic description to the identification of potential predictors of HTN screening practice.The analysis was done by comparing employees who ever had hypertension screening with who never had hypertension screening practice.The reliability coefficient were calculated in which the reliability coefficient (Cronbach‟s ά) of all HBM constructs were found in acceptable range >0.7 that's 0.848 for susceptibility,0.797 for severity,0.759 for barrier,0.885 for benefits,0.852 for cues to action,0.831 for self-efficacy. Then the descriptive statistics were used to describe frequency distribution, proportion, measures of central tendency and dispersion.Odds ratios and confidence intervals had been generated from binary logistic regression as measures of associations for the aggregate score of health belief model constructs. In order to analyze associations the mean score was generated for each construct of HBM and knowledge variables.For all constructs of HBM higher mean scores indicated having high perception towards practicing HTN screening.Independent sample t-test was done to determine whether mean differences existed for perceived susceptibility, perceived severity and perceived threat towards hypertension and perceived barriers, perceived benefits, perceived self-efficacy, perceived net-benefit and cues to action towards hypertension screening, between employees who had ever screened for hypertension and who had never screened for hypertension.

To identify the independent predictors of HTN screening practice multivariate logistic regression was used after checking multicollinearity. Existence of Multicollinearty between each of the constructs of the health belief model was checked and there were no multicollinearty among them (VIF<10). Variables which reached a p-value of 0.2 on bivariate analysis were included in multiple logistic regression analysis. Statistical significance for the multiple logistic regression analysis were set at $p \leq 0.05$. The Hosmer-Lemeshow goodness of fit test was used to check whether the model fits the data in this study which was 0.58 and finally the result were presented using percentage, frequency tables, graphs and charts.

Ethical Considerations

Ethical clearance and permission was obtained from research Ethics Review Committee School of public health, College of Health Science, Addis Ababa University. Before the actual data collection starts, permissions were obtained from Commercial Bank of Ethiopia director's office. During the distribution of questionnaires informed verbal consent was obtained.

4.7.4. Dissemination of Results

The result of this study will be presented to the School of Public Health, Addis Ababa University, College of Health Sciences as partial fulfillment of a master's degree in public health. Furthermore, the result of this study will be shared with Commercial Bank of Ethiopia and attempts will be made to publish the information in reputable journals.

5. Result

From 633 samples a total of 620 bank employees was participated and completed the self-administered questionnaire giving a response rate of 97.9% response rate.

5.1 Socio-demographic characteristics among employees of Commercial Bank of Ethiopia

The age of the respondent's ranged from 22 to 51 years with the mean age and SD of (31.23 ± 4.6) years. Among all respondents 332(53.5%) of them were in the age groups of 22-31 years, followed by 266(42.9%) in the age group of 32-41 years. Out of all respondents 380 (61.3%) were male. More than half of the participants 400 (64.5) were Orthodox religion followers. Most of the participants, 290 (46.8%) were Amhara in ethnicity. Regards to marital status, 377 (54.4%) were single followed by 277(44.7%) married .388 (62.6%) of the respondents had first degree and 203(32.7%) had second degree and above. Regards to the job post of respondents 336(54.2%) were officers, 134(21.6%) cashier and 69(11.1%) manager. The mean monthly income of respondents was 13475 ETB. (Table: 1)

Table 1: Socio-demographic characteristics among employees of Commercial Bank of Ethiopia, Addis Ababa, Ethiopia, 2020

Variable	Frequency (n=620)	Percentage (%)
Age		
22-31	332	53.5
32-41	266	42.9
42-51	22	3.5
Sex		
Male	380	61.3
Female	240	38.7
Religion		
Orthodox	400	64.5
Protestant	113	18.2
Muslim	67	10.8
Catholic	20	3.2
I have no religion	6	1
Others	14	2.3
Ethnicity		
Amhara	290	46.8

Oromo	155	25
Tigre	54	8.7
Gurage	37	6
Wolaita	8	1.3
Others	76	12.3
Income		
2000-11680 ETB	304	49
11681-21361 ETB	258	41.6
21362-31042 ETB	43	6.9
31043-40000 ETB	15	2.4
Job post		
Officer	336	54.2
Cashier	134	21.6
Manager	69	11.1
Clerk	13	2.1
Others	68	11
Marital status		
Single	337	54.4
Married	277	44.7
Divorced	5	0.8
Widowed	1	0.2
Educational status		
High school	4	0.6
Diploma	19	3.1
First degree	388	62.6
Second degree and above	203	32.7
Others	6	1

5.2 Hypertension screening practice among employees of Commercial Bank of Ethiopia

The data show that among all 620 respondents 181(29.19%) have ever screened for hypertension and 439 (70.81%) were never screened (Figure: 3).

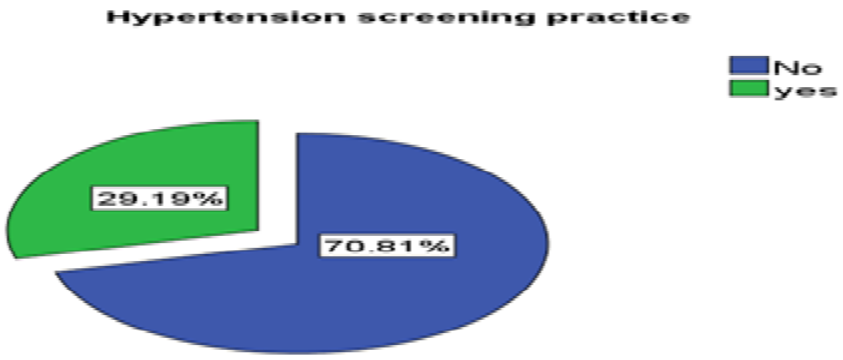

Figure 3:Hypertension screening practice among employees of Commercial Bank of Ethiopia, Addis Ababa,Ethiopia,2020

5.3 Patterns of hypertension screening practice among employees of Commercial Bank of Ethiopia

From the total 181(29.19%) respondents who ever screened,only 79(12.7%) screened for hypertension regularly.(Table: 2).

Table 2: Pattern of hypertension screening practice among employees of Commercial Bank of Ethiopia, Addis Ababa, Ethiopia, 2020

Variable	Frequency	Percentage
Hypertension screening regular		
Yes	79	12.7
No	541	87.3
How often screened for hypertension		
Monthly	22	27.8
Annually	27	34.2
Once in two month	17	21.5
Once in three month	7	8.9
Twice in a month	2	2.5
Others	4	5.1

5.4 Reason for hypertension screening practice amongCommercial Bank of Ethiopiaemployees who ever had screened.

Of the respondents who had ever screened 84(46.4%) of them the reason for their screening was health professional's advice followed by Relative/friend recommendation reason which was 48(26.5%) (Figure: 4).

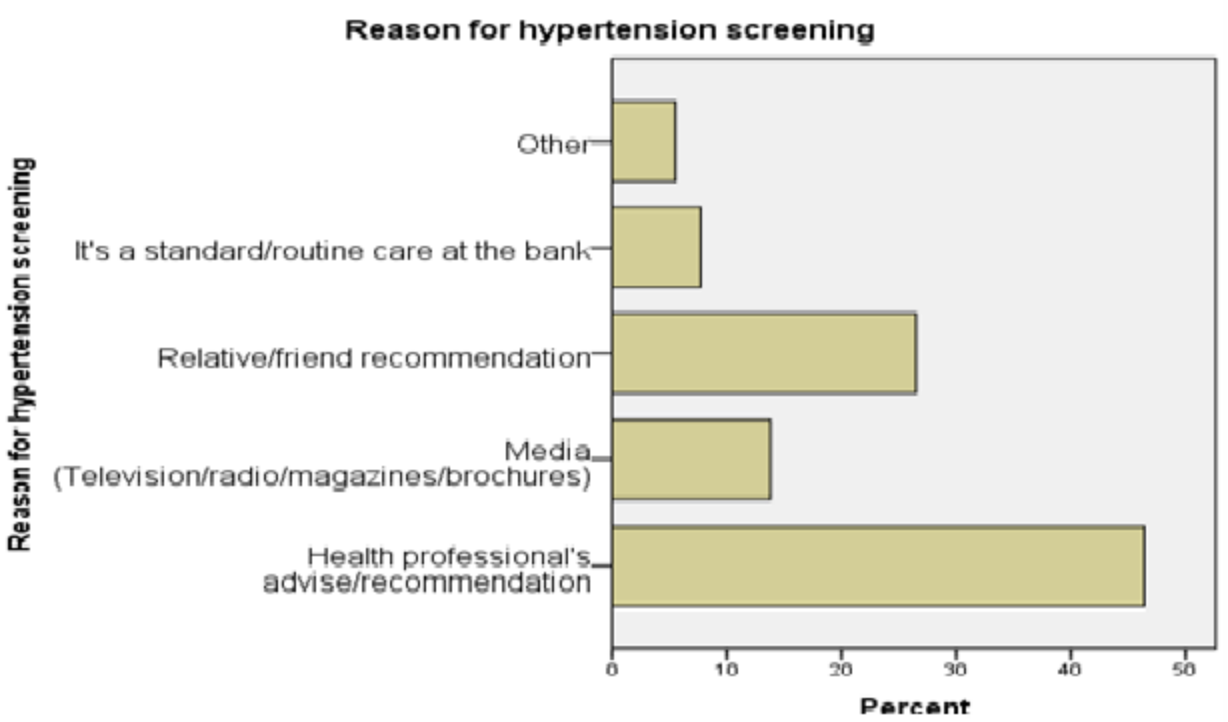

Figure 4:Reason for hypertension screening among employees of Commercial Bank of Ethiopia,Addis Ababa,Ethiopia,2020

5.5 Perceptions towards hypertension screening with the health belief model construct.

The descriptive results of health belief model constructs show that for susceptibility the mean score is 12.78(SD±4. 64) with the range value of 5 to 25.For severity the mean score is 11.87(SD±3.62) with the range value from 4 to 20.For benefits the mean score is 17.6(SD±4.57) with the range value from 5 to 25,for barrier the mean score is 10.2(SD±3.61) with the range value from 4 to 20,for self-efficacy the mean score is 11.4(SD±4.04) with the range value from 4 to 20 and for cues to action the mean score is 11.57(SD±4.48) with the range value from 5 to 25 (Table:3).

Table 3: Perceptions towards hypertensionscreening among employees of Commercial Bank of Ethiopia, Addis Ababa, 2020

Constructs	Scale range	Min. observed value	Max. observed value	Mean score	SD
Perceived Susceptibility	5-25	5	25	12.78	4.64
Perceived severity	4-20	4	20	11.78	3.62
Perceived benefits	5-25	5	25	17.6	4.57
Perceived barriers	4-20	4	20	10.2	3.61
Self-efficacy	4-20	4	20	11.4	4.04
Cues to action	5-25	5	25	11.57	4.48

The Perceived threat is the sum score of perceived susceptibility plus perceived severity witha mean score of 24.65(SD±7.22) and Net-benefit is the sum score of perceived benefit minus perceived barrier with a mean score of 7.39(SD±5.47) as follows.

The sum score of perceived susceptibility 12.78(SD±4.64) + the sum score of perceived severity 11.87(SD±3.62) =Perceived Threat 24.65 (SD±7.22).

The sum score of perceived benefit 17.6(SD±4.57) – the sum score of perceived barrier 10.2(SD±3.61)=Net-benefit 7.39(SD±5.47)

5.6 Comparison of employee's perceptions among ever screened and never screened for hypertension

Independent sample t-test was used to compare the difference in perceived susceptibility, perceived severity, perceived benefits, perceived barrier,self-efficacy,cues to action, net benefit and perceived threat among employees who had ever done and had never done hypertension screening practice. As a result, there was a significant difference between the two groups in mean scores of perceived susceptibility, perceived severity, perceived benefit, cues to action, self-efficacy, perceived threat, net-benefits and Knowledge at ($P<0.05$) (Table :4)

Table 4: Perceptions among ever screened and never screened for hypertension among employees of Commercial Bank of Ethiopia, Addis Ababa, 2020

Predictor variables	Ever screened		Never screened		t-value	P-value	95%CI
	Mean	SD	Mean	SD			
Perceived susceptibility	13.42	5.45	12.52	4.25	2.207	**0.028**	0.997,1.707
Perceived severity	12.56	4.21	11.58	3.30	3.088	**0.002**	0.357,1.605
Perceived benefit	19.69	3.94	16.74	4.53	7.629	**0.000**	2.189,3.708
Perceived barrier	9.97	3.31	10.30	3.73	-1.056	0.291	-0.964,0.290
Perceived self-efficacy	12.85	3.96	10.85	3.93	5.735	**0.000**	1.315,2.684
Cues to action	12.39	4.79	11.23	4.31	2.940	**0.003**	0.384,1.930
Perceived threat	25.66	8.36	23.83	6.56	2.907	**0.004**	0.594,3.070
Net benefit	9.72	5.18	6.43	5.30	7.061	**0.000**	2.372,4.20
Knowledge	3.39	0.67	2.27	1.35	10.664	**0.000**	0.919,1.334

5.7 Knowledge towards hypertension screening among employees

Of all respondents who ever heard about hypertension 526(93.4%) of them agreed that hypertension is a disease and 349(61.9%) of them agreed hypertension is preventable disease. Among respondents who ever heard about HTN screening 384(89.5%) of respondents correctly answered where to go for HTN screening and 353 (82.2%) correctly answered who can do HTN screening for them (Table:5). As a result, after analyzing knowledge as a continuous variable the mean knowledge score and SD of respondents was (2.6±1.3) with the range value from 0 to 4.

Table 5: Knowledge towards hypertension screening practice among employees ofCommercial Bank of Ethiopia, Addis Ababa, Ethiopia, 2020

Variable	Correct answer N (%)	Notcorrect answer N (%)
Is hypertension a disease?	**526(93.4%)**	**37(6.6%)**
Is hypertension preventable disease?	**349(61.9%)**	**214(38.1%)**
Do you know where to do HTN screening?	**384(89.5%)**	**45(10.5%)**
Who can do HTN screening for you?	**353(82.2%)**	**76(17.8%)**

5.8 Source of information towards hypertension and hypertension screening among employees

Among the total respondents 563(90.8%) of them ever heard about hypertension. For those who ever heard about hypertension 262 (42.3%) of them heard from media, 91(16.2%) from a health professional and 71(12.6%) from school (Table 6).

Table 6: Source of information towards hypertension and hypertension screening among employees of Commercial Bank of Ethiopia, Addis Ababa, Ethiopia, 2020

Variable	Frequency (n=620)	Percentage (%)
Ever heard of hypertension		
Yes	563	90.8
No	57	9.2
Source of information about HTN (n=563)		
Media(Television,Radio,magazine,brochures)	262	46.5
Health professional	91	16.2
School	71	12.6
Family	66	11.7
Friends	60	10.7
Others	13	2.3
Ever heard of hypertension screening		
Yes	429	69.2
No	191	30.8
Source of information about HTN screening(n=429)		
Media(Television,Radio,magazine,brochures)	222	51.7
Health professional	143	33.3
School	27	6.3
Family	28	6.5
Friends	9	2.1

Predictors of hypertension screening practice

5.9 Association between socio-demographic variables and Hypertension screening practice

A crude analysis was done using binary logistic regression to assess the relationship between the socio demographic variables and hypertension screening practice of employees. The results of bivariate analyses revealed that age, marital status, income, job post of employees were found to be significantly associated with hypertension screening practice at (P<0.05).However, sex, religion, ethnicity and educational background were not significantly associated with hypertension screening practice at (P> 0.005) (Table:7).The variables with p-value < 0.2 in bivariate analyses were a candidate for multivariable analysis.

Table 7 : Socio demographic factors associated with hypertension screening practice among employees of Commercial Bank of Ethiopia

Variables	Screened(181) N (%)	Non screened(439) N (%)	COR(95%CI)	P-value
Age in year				
22-31	81(44.8)	251(57.2)	1	
32-41	89(49.2)	177 (40.3)	1.558(1.090,2.227)	**0.015**
42-51	11(6.1)	11(2.5)	3.099(1.295,7.415)	**0.011**
Sex				
Male	110(60.8)	270(61.5)	1	
Female	71(39.2)	169(38.5)	1.031(0.723,1.471)	0.865
Religion				
Orthodox	124 (68.5)	276 (62.9)	1	
Muslim	17(9.4)	50(11.4)	0.757(0.420,1.365)	0.354
Protestant	29(16.0)	84(19.1)	0.768(0.479,1.232)	0.274
Catholic	7(3.9)	13(3.0)	1.199(0.467,3.077)	0.707
I have no religion	1(0.6)	5(1.1)	0.445(0.051,3.850)	0.462
Other	3 (1.7)	11(2.5)	0.607(0.166,2.214)	0.450
Ethnicity				
Oromo	43(23.8)	113(25.7)	1	
Amhara	94(51.9)	192(43.7)	1.287(0.838,1.976)	0.250
Tigre	18(9.9)	39(8.9)	1.213(0.627,2.346)	0.566
Wolaita	2(1.1)	6(1.4)	0.876(0.170,4.5098)	0.874
Gurage	9(5)	28(6.4)	0.845(0.369,1.935)	0.690
Others	15(8.3)	61(13.9)	0.646(0.332,1.257)	**0.198**
Income(monthly)				
2000-11680 ETB	87(48.1)	217(49.4)	1	

11681-21361 ETB	66(36.5)	192(43.7)	0.857(0.590,1.247)	0.420
21362-31042 ETB	19 (10.5)	24(5.5)	1.975(1.030,3.787)	**0.041**
31043-40000 ETB	9 (5)	6(1.4)	3.741(1.293,10.826)	**0.015**
Present job post				
Manager	34(18.8)	35(8)	1	
Officer	94(51.9)	242(55.1)	0.400(0.236,0.678)	**0.001**
Cashier	26(14.4)	108(24.6)	0.248(0.131,0.469)	**0.000**
Clerk	3(1.7)	10(2.3)	0.309(0.078,1.220)	0.094
Others	24(13.3)	44(10)	0.561(0.283,1.115)	0.099
Marital status				
Single	86(47.5)	251(57.2)	1	
Married	93(51.4)	184(41.9)	1.475(1.040,2.092)	**0.029**
Divorced	2(0.6)	4(0.9)	0.730(0.080,6.618)	0.779
Educational status				
High school	1(0.6)	3(0.7)	1	
Diploma	8(4.4)	11(2.5)	2.182(0.190,25.021)	0.531
First degree	104(57.5)	284(64.7)	1.099(0.113,10.679)	0.935
2nd degree and above	68(37.6)	135(30.8)	1.511(0.154,14.801)	0.723

5.10 Association between employee's perceptions and hypertension screening practice

Binary logistic regression was used to determine if HBM constructs perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy, perceived barriers, Perceived threat and net benefit predicted hypertension screening practice.

The other variables are perceived threat and Net-benefit which perceived threat is the sum score of perceived susceptibility and perceived severity and Net-benefit is the sum score of perceived benefit minus a perceived barrier. The bivariate analysis shows that Perceived susceptibility, Perceived severity, Perceived benefit, self-efficacy, cues to action, Perceived threat and Net-benefit had significant association with hypertension screening practice at $P<0.05$ (Table 8).

Table 8: Association of respondent's perceptions and hypertension screening practice among employees of Commercial Bank of Ethiopia in Addis Ababa, Ethiopia, 2020

Component	B	COR(95%CI)	P-value
Perceived susceptibility	0.042	1.043(1.005,1.083)	**0.028**
Perceived severity	0.077	1.080(1.028,1.135)	**0.002**
Perceived benefit	0.167	1.182(1.128,1.239)	**0.000**
Perceived barrier	-0.026	0.974(0.928,1.023)	0.291
Perceived self-efficacy	0.126	1.134(1.084,1.187)	**0.000**
Cues to action	0.057	1.058(1.019,1.099)	**0.003**
Perceived threat	0.036	1.037(1.012,1.063)	**0.004**
Net- benefit	0.122	1.130(1.090,1.172)	**0.000**
Knowledge	0.963	2.620(2.116,3.245)	**0.000**

5.11 Multiple logistic regression analysis of Predictors associated with hypertension screening practice

To identify predictors of hypertension screening practice, multiple logistic regression using adjusted odds ratio (AOR) and 95% confidence interval (CI) was used. From sociodemographic variables Age, Ethnicity, income, present job post and marital status,from HBM constructs perceived susceptibility, perceived severity, perceived benefits, self-efficacy, cues to action and knowledge score were the candidates for multivariate analysis with P< 0.2. However, by multivariable analysis, using backward logistic regression model, Only Age,Self-efficacy and Knowledge were found to be statistically significant at P< 0.05.

The study identified Perceived self-efficacy remained as significant predictors of hypertension screening practice that for one unit increase in perceived self-efficacy score, the odds of hypertension screening practice increases by 1.106 times with (P<0.001,AOR 1.106,95% CI 1.051,1.163).

Keeping all variables constant, employees whose age between 32 to 41 years were 1.665 times more likely to practice hypertension screening than those from 22 to 31 years (P=0.016,AOR 1.665, 95% CI 1.098, 2.526). Knowledge score was also significantly associated with hypertension screening practice in which for every unit increase in knowledge score the odds of hypertension screening practice increase by 2.425 times with (P<0.001,AOR 2.425,95% CI 1.945,3.023)(Table:9).

Table 9: Predictors of hypertension screening practice among employees of Commercial bank of Ethiopia in Addis Ababa, Ethiopia, 2020

Variables	COR(95%CI)	P-value	AOR(95%CI)	P-value
Age in year				
22-31	1		1	
32-41	1.558(1.090,2.227)	0.015	1.665(1.098,2.526)	**0.016***
42-51	3.099(1.295,7.415)	0.011	1.899(0.686,5.261)	0.217
Ethnicity				
Oromo	1		1	
Amhara	1.287(0.838,1.976)	0.250	1.339(0.808,2.220)	0.257
Tigre	1.213(0.627,2.346)	0.566	0.859(0.382,1.933)	0.714
Wolaita	0.876(0.170,4.509)	0.874	1.387(0.183,10.503)	0.751
Gurage	0.845(0.369,1.935)	0.690	0.609 (0.242,1.534)	0.293
Others	0.646(0.332,1.257)	0.198	0.660(0.305,1.425)	0.290
Income(monthly)				
2000-11680 ETB	1		1	
11681-21361 ETB	0.857(0.590,1.247)	0.420	0.858(0.549,1.340)	0.501
21362-31042 ETB	1.975(1.030,3.787)	0.041	0.373(0.128,1.091)	0.072
31043-40000 ETB	3.741(1.293,10.826)	0.015	0.800(0.172,3.715)	0.776
Present job post				
Manager	1		1	
Officer	0.400(0.236,0.678)	0.001	0.585(0.220,1.557)	0.283
Cashier	0.248(0.131,0.469)	0.000	0.367(0.129,1.042)	0.060
Clerk	0.309(0.078,1.220)	0.094	0.920 (0.160,5.269)	0.925
Others	0.561(0.283,1.115)	0.099	0.938 (0.310,2.839)	0.909
Marital status				
Single	1		1	
Married	1.475(1.040,2.092)	0.029	1.283(0.815,2.021)	0.312
Divorced	0.730(0.080,6.618)	0.779	1.306(0.104,16.368)	0.836
Knowledge score	2.442(2.001,2.979)	0.000	2.425(1.945,3.023)	**0.000***
Perceived susceptibility	1.043(1.005,1.083)	0.028	1.006(0.956,1.059)	0.815
Perceived severity	1.080(1.028,1.135)	0.002	0.988(0.929,1.052)	0.714
Perceived benefit	1.182(1.128,1.239)	0.000	1.018(0.936,1.108)	0.672
Self-efficacy	1.134(1.084,1.187)	0.000	1.106(1.051,1.163)	**0.000***
Cues to action	1.058(1.019,1.099)	0.003	1.026(0.975,1.080)	0.324

6. Discussion

In this institutional based study conducted among employees of Commercial Bank of Ethiopia in Addis ababa;29.19% of the respondents have ever screened for hypertension.This hypertension screening practice of the current study was higher compared to the Ethiopia STEPS survey report ,which was 23.4%(36).This variation might be explained due to the STEPS survey was a community based study with the larger sample size comparing to the current study.

On the other hand,the hypertension screening practice in this study was too lower than the study conducted among urban population in Karachi,India which showed the magnitude of ever screening for hypertension was 79.8%(12).This variation might be the current study was conducted at workplace only among bank employees .

The current study also showed that there was a difference between bank employees who had ever screened for hypertension and who had never screened in mean score of perceived susceptibility,perceived severity,perceived benefit,perceived self-efficacy and cues to action with $P<0.05$. Employees who had ever screened for hypertension had significantly higher perceived susceptibility,perceivedseverity,perceived benefit, perceived self-efficacy and cues to action than employees who had never screened for hypertension.This was consistent with the HBM hypothesis stated if individuals concern themselves as susceptible to a condition(perceived susceptibility),believe that condition would have serious consequences (Perceived severity), if they believe a recommended health action available to them would be beneficial in reducing either their susceptibility or severity of the condition (Perceived benefit), if they feel themselves as competent to overcome perceived barriers to take action(self-efficacy) and if they are potentiated by other factors, mostly by cues to trigger action (cues to action) they are likely to take recommended health action that they believe will reduce their risks(34).

On the other hand,there was no mean score difference for the perceived barrier between bank employees who had ever screened for hypertension and who had never screened.This finding is inconsistent with the HBM hypothesis which stated perceived barrier may inhibit to undertaking recommended health actions(34).This inconsistency may result due to for the bank employees, lack of health facility where they can go and do hypertension screening,time and cost for

screening could not be considered as a barrier to take up the screening practice since there are abundant health facilities in the city and they are an employee to afford the cost for screening.

The finding in this study shows that Perceived Self –efficacy,Knowledge and Age of the participant were found to be as predictors of hypertension screening practice among employees of Commercial Bank of Ethiopia.

For one unit increase in perceived self-efficacy score, the odds of hypertension screening practice increases by 1.106 times with (P<0.000,AOR 1.106,95% CI 1.051,1.163).This indicates the belief or confidence of an employee in his/her ability to effectivelyperform the required behavior(hypertension screening practice) to prevent his/her self from hypertension.This was supported by the health belief model which stated that perceived self-efficacy has the potential to increase the probability of utilizing the recommended behavior (34).In this study hypertension screening uptake was the recommended behavior and perceived self –efficacy is one of the predictor of hypertension screeningpractice that increasing employee's perceived self-efficacy has the potential to increase the likelihood that employees will utilize screening service.

In this current study,Perceived susceptibility and perceived severity towards hypertension and cues to action for hypertension screening were not identified as predictors of hypertension screening practice which is unlikely to HBM concept(34).

In this study it was found that the age of the participant was also one of the predictors of hypertension screening that the chance of hypertension screening among employees whose age between 32 to 41 years were 1.665 times more likely than those from 22 to 31 years (P=0.016,AOR 1.665, 95% CI 1.098, 2.526).This finding is comparable with Ethiopia Steps report of 2016 which revealed that screening for hypertension was higher 26.9% among age groups between 30 to 44 years(36).This might be due to increasing age led to increased the use of preventive behavior such as hypertension screening practice.

In this study Knowledge score was also identified as predictors for hypertension screening practice in which for every unit increase in knowledge score the odds of hypertension screening practice increase by 2.425 times with (P<0.001,AOR 2.425,95% CI 1.945,3.023).This is consistent with the current study finding shows the presence of mean knowledge score difference

between employees who had ever screened for hypertension and never screened for hypertension at ($P<0.05$);That the mean knowledge score among employees who had ever screened for hypertension was higher than those employees who never had hypertension screening.

7. Strength and limitation of the study

7.1. Strength

The study was conducted among employees at the institutional level who could understand the contents of the questionnaire by themselves since it was self-administered.The inclusion of all HBM constructs also the strength of this study.

7.2. Limitation

The study has certain limitation on there might be study participant recall bias while they were administering the questionnaire.Internal consistency for a questionnaire which assessed the knowledge towards hypertension screening practice was relatively low and Measurement inconsistency of the Health belief model

8. Conclusion and recommendation

8.1. Conclusion

The findings of the current study have an important implication for public health intervention which focus on hypertension and its screening practices among the work place population like bankers.The hypertension screening level in this study among employees of the commercial bank of Ethiopia needs to be improved through creating awareness among the employees about their susceptibility towards hypertension,the severity of HTN and the use of screening for early detection.On the other hand, since perceived self-efficacy and Net benefit are predictors for hypertension screening in this study, educational programs given towards increasing perceived self-efficacy and Net benefit to hypertension screening can significantly improve the uptake of hypertension screening practice.

8.2. Recommendation

The hypertension screening practice in this study indicated that much work needs to be done by responsible bodies such as Federal ministry of health,policymakers,governmental and non governmental organization working on prevention of hypertension,researchers and Institutions such as Banks.The following recommendations have been pointed out accordingly.

- Forthe Federal ministry of health we recommended to consider giving more emphasis on hypertension screening practice among the work place population at risk such as bankers for the prevention of Hypertension.Particularly working on enhancing employee's perceptions towards the use of screening and the potential of employees to get screened will improve hypertension screening uptake.
- For researchers We recommended further study to be conducted to explore the reasoning behind the contradicting findings of this study with the health belief model hypothesis related to perceived barrier that was not significantly associated with hypertension screening practice.We also recommend a further research to be conducted using other behavioral model.
- For work place institution like Banks we recommended to consider working with policy makers in developing strategies on hypertension screening based on improving employee's perceptions towards hypertension screening.

- For governmental and non governmental organization working on prevention of hypertension we recommended them to include employees' perceptions towards hypertension screeningin their health education intervention program.

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Annex One. Information Sheet

Name of the branch bank _____ Address of the branch bank _____

Greetings! My name is.....I am here on behalf of BosonaTilahunstudent of Masters of public health at Addis Ababa University. She is conducting a research on hypertension screening practice and its predictors among Commercial Bank Of Ethiopia employees in Addis Ababa for the partial fulfillment of second degree, because it is essential to identify what are the possible predictors for hypertension screening practice for implementing possible and important intervention to overcome the problem. You are chosen to participate in this study. The choice is made randomly. Before you decide whether to participate or not in this study, I would like to explain to you the objective of the study, any risks, benefits, procedure and what is expected from you.

Objective of the study: The study will assess predictors of hypertension screening practice among Commercial Bank Of Ethiopia employees.

Procedure: The data collection will be self-administerd and supervised by the supervisors to follow the data collection procedures and checking the data collected.

Benefit of the study: The result of the study will be disseminated to concerned bodies including Commercial Bank of Ethiopia, Addis Ababa University and others, Ministry of health in order to take action on the problem related with hypertension screening service utilization.

Risk (harm) of the study: There is no harm in participating in this study but part of your time (average of 30 minutes) will be consumed to answer the questions.

Rights of participants:completely free to take part or not in this study. If you decide that you do not want to be part of the study, this will not be held against you and you will not be disadvantaged in any way. You are also free to withdraw from the study at any time if you feel that you cannot proceed. You can ask any question which is not clear for you.

Confidentiality: All information you give me will be strictly confidential and will be kept safe and secure place. Your name should not appear anywhere on the questionnaire to ensure anonymity. Only the principal investigator will know the details and will discard it after completing analysis.

Would you want to take part in the study? 1- No (say thank you) 2- Yes (take informed consent)

Annex Two: Informed consent

The objective, benefits, harms, procedures and confidentially of the study has been read and explained to me in the language I comprehend. I further understand that, taking part in this study and withdraw from participating in any time without having reason is purely voluntary.

I agree to participate in this study.

Participant:

Sign (signature) .....Date.....

Annex Three:Questionnaire

Part I.Sociodemographic Characteristics among employees in Commercial bank of Ethiopia,Addis Ababa

Sr.No	Question	Responses	Code	Skip to
1.1	How old are you?	____ year		
1.2	Sex	1.Male 2.Female		
1.3	What is your religion?	1.Orthodox 2.Muslim 3.Protestant 4.Catholic 5. I have no religion 6 Others please specify		
1.4	What is your ethnicity?	1.Oromo 2.Amhara 3.Tigre 4.Wolaita 5.Gurage 6.Others		
1.5	What is your monthly income?	_____birr		
1.6	What is your present job post?	1.Manager 2.Officer 3.Cashier 4.Clerk 5.Others		
1.7	What is your marital status?	1.Single 2.Married 3.Divorced 4.Widowed		
1.8	What is your Educational back ground?	1.Highschool 2.Diploma 3.First degree 4.Second degree and above 3.Others		

Part II.Hypertension screening practice among employees of Commercial Bank of Ethiopia,Addis Ababa

2.1	Have you ever been screened for hypertension?	1.Yes 2.No	Code	**Skip to**
2.2	If the answer of Q(4.1) is 1 Why did you screen?	1. Health professional's advise/ recommendation 2. Media(Television/ radio/ magazines/ brochures) 3. Relative/ friend recommendation 4. It's a standard/routine care at the bank 5. Other, specify…….		
2.3	Do you screened for hypertension regularly?	1.Yes 2.No		
2.4	How often do you have hypertension screening?	1.Monthly 2.Annualy 3.Once in two month 4.Once in three month 5.Twice in a month 6.Others		

Part III.Knowledge and source of information towards Hypertension and hypertension screening among employees in Commercial Bank of Ethiopia,Addis Ababa

Sr.No	Question	Responses	Code	Skip to
3.1	Have you ever heard of Hypertension?	1.Yes 2.No		
3.2	If yes to Q 2.1,From where did you hear about hypertension for the last time?	1. Media (Television, Radio, Magazine, Brochures) 2. Health professional 3. School 4. Family 5. Friends 6. Other, specify…….		
3.3	Have you ever heard of hypertension screening?	1.Yes 2.No		
3.4	If yes to Q 2.5,what was your source of information about hypertension screening	1. Media (Television, Radio, Magazine, Brochures) 2. Health professional 3. School 4. Family 5. Friends 6. Other, specify…….		
3.5	Do you know where to do Hypertension screening?	1.Yes 2.No		
3.6	Who can do hypertension screening for you?	1.Health care professionals 2.by your self 3.Family 4.Friends 5.Others		
3.7	Is hypertension a disease?	1.Yes 2.No		
3.8	Is hypertension preventable disease?	1.Yes 2.No 3.I do not know		

NOTE: ***Strongly disagree:1 Disagree:2 I don't know:3 Agree:4 Strongly agree:5***

Part IV.Perception towards Hypertension screening among employees of Commercial Bank of Ethiopia,Addis Ababa

.	**1. Strongly disagree**	**2. Disagree**	**3. I don't know**	**4. Agree**	**5.Strongly agree**
Perceived Susceptibility					
1. My physical health makes it more likely that I will get hypertension					
2. My chances of getting hypertension are great					
3. Due to increased stress in my work, my chances of getting hypertension are great.					
4. As my parents are hypertensive my chances of getting hypertension are great					
5. Due to my high long sitting time at work, my chances of getting hypertension are high					
Perceived Severity					
6.If I am hypertensive, I have chances of getting heart attack or stroke.					
7. If I get hypertension my family will suffer a lot					
8. Problems I would experience from hypertension would last long.					
9. If I become hypertensive, I would end up spending more on medications.					

.	**1. Strongly disagree**	**2. Disagree**	**3. I don't know**	**4. Agree**	**5.Strongly agree**
Perceived barriers of hypertension screening					
10. As the clinic is far away from my work place, I don't take up hypertension screening.					
11. Going to hospital and getting screened is time consuming. I don't take up hypertension screening					
12. Checking up blood pressure in a clinic costs me some money, which I can use for other purposes					
13. Taking up screening alone does not prevent me from becoming hypertensive					
Perceived benefits of hypertension screening					
14.Doing blood pressure measurements regularly will help me detect the disease in a earlier stage.					
15.Doing blood pressure measurements regularly will help me prevent complications from hypertension.					
16.Doing blood pressure measurements regularly ensures good health and social security.					
17. Doing blood pressure measurements regularly will keep me updated about my health status.					

.	**1. Strongly disagree**	**2. Disagree**	**3. I don't know**	**4. Agree**	**5.Strongly agree**
18.Doing blood pressure measurements regularly will help me prevent the disease by life style modifications.					
Cues to action on HTN					
19.Ihaveseenafriendofminesufferheartattackbecauseofhypertension.					
20.Ihaveseenafriendofminesufferstrokebecauseofhypertension.					
21.Myfriendwhowasashealthyas Iam,wasrecentlydiagnosedofhypertension.					
22.Seeingawarenessadvertisementsinnewspapersandtelevisioninduces metotakeupscreening.					
23.Myworkplacerunsascreeningprogramonceayear.					
Self-efficacy					
24.I can do hypertension screening even if the clinic is far away from my work place					
25.I can go and screened my blood pressure regularly even if I am busy with work					
26.Starting from now I intend to screened my blood pressure because I don't want to suffer from stroke					
27.I go for hypertension screening even if my friends would not go with me					

አባሪዎች

አባሪ 1: - መጠይቅ

የባንኩቅርንጫፍስም _____

ቀን_____

ክፍል 1: በኢትዮጵያንግድባንክሠራተኞችመካከልያላዉየስነሕዝብአወቃቀርባህሪዎች (አዲስአበባ)

ተ. ቁ	ጥያቄ	መልሶች	ኮድ	ዝለል
1.1	ዕድሜዎስንትነው?	_____ አመት		
1.2	ጸታ	1. ወንድ 2. ሴት		
1.3	ሃይማኖትዎምንድነው?	1. ኦርቶዶክስ 2. ኢሳላም 3. ፕሮቴስታንት 4. ካቶሊክ 5. እኔሃይማኖትየለኝም 6. ሌሎችእባክዎንይጥቀሱ		
1.4	ብሄርዎምንድነው?	1. ኦሮሞ 2.አማራ 3. ትግሬ 4. ወላይታ 5. አፋር 6. ሌሎች		
1.5	ወርሃዊገቢዎስንትነው?	_____ብር		
1.6	አሁንያለውየእርስዎየሥራኃላፊነትምንድነው?	1. ማኔጀር 2. ኦፊሰር 3. ገንዘብተቀባይ		

		4. መዝገብቤት 5. ሌሎች		
1.7	የጋብቻሁኔታዎምንድነው?	1. ያላገባ 2. ያገባ 3. የፈታ 4. በሞትየተለያዩ		
1.8	የትምህርትደረጃዎምንድነው?	1. 12ኛክፍል 2. የመጀመሪያዲግር 3.የመጀመሪያዲግርናከዛበላይ 4. ሌላ		

ክፍል 2: የኢትዮጵያንግድባንክሰራተኞችየደምግፊትምርማራልምድ (አዲስአበባ)

2.1	የደምግፊትምርመራተደርገውያውቃሉ?	1. አዎ 2. አይደለም		
2.2	የጥያቄቁ(4.1) መልስአዎከሆነለምንድንነውየተመረመሩት?	1. በዶ/ሩአስተያየት 2.ቴሌቪዥን/ሬዲዮ/መጽሔት/በራሪወረቀቶች 3. በዘመዶች/በጓደኞችአስተያየት 4.በክሊኒኩበሚሰጠውስታንዳርድመሰረት 5. ሌላይገለፅ ……..		
2.3	በመደበኛነትየደምግፊትመጠንንይታያሉ?	1. አዎ 2. አይደለም		
2.4	የደምግፊትምርመራምንያህልጊዜነውየሚያደርጉት?	1. በወር 2. በዓመት 3. በሁለትወርአንዴ 4. በሶስትወርአንዴ 5. በወርሁላቴ 6. ሌላ		

ክፍል 3: የኢትዮጵያንግድባንክሠራተኞችለደምግፊትምርመራያላቸዉግንዛቤ (አዲስአበባ)

ተ.ቁ	ጥያቄ	መልሶች	ኮድ	ዝለል
3.1	ስለደምግፊትሰምተዋል?	1. አዎ 2. አይደለም		
3.2	ለ 2.1 ጥያቄ 1 ከመለሱስለደምግፊትለመጨረሻጊዜየሰሙትከየትነው?	1. ከመገናኛብዙሃን 2.ከጤናባለሙያዎች 3. ከትምህርትቤት 4.ከቤተሰብ 5. ከጓደኞች 6. ሌላይገለፅ ……		
3.3	ስለደምግፊትምርመራሰምተዉያውቃሉ?	1. አዎ 2. አይደለም		
3.4	ለጥያቄ 3.3 1 ከመለሱስለደምግፊትምርመራለመጨረሻጊዜየሰሙትከየትነው?	1. ከመገናኛብዙሃን 2.ከጤናባለሙያዎች 3. ከትምህርትቤት 4.ከቤተሰብ 5. ከጓደኞች		

		6. ሌላይገለፅ ……		
3.5	የደምግፊትምርመራንየትእንደሚያደርጉያውቃሉ?	1. አዎ 2. አይደለም		
3.6	የደምግፊትምርመራንየምያደርግሎትማነው?	1.የጤናእንክብካቤባለሙያዎች 2. በራሴ 3. ቤተሰብ 4. ጓደኞች 5. ሌሎች		
3.7	የደምግፊትበሽታነው?	1. አዎ 2. አይደለም		
3.8	የደምግፊትንመከላከልይቻላል?	1. አዎ 2. አይደለም		

ክፍል 4: በኢትዮጵያንግድባንክሠራተኞችየደምግፊትምርመራንበተመለከተያለውአመለካከት

	1.በጣም አልስማማም	2.አልስማማም	3.አልተወሰነም	4.እስማማለሁ	5. .በጣም እስማማለሁ
ስለ የ ደም ግፊት ተጋላጭነት ያለግንዛቤ					
1. የእኔአካላዊሁኔታለደምግፊትበጣምአጋላጭበመሆኑ					
2. የደምግፊትየመከሰትአጋጣሚሰፊስለሆነ					
3. በሥራዬቦታባለውየስራጫናየተነሳየደምግፊትየመከሰትእድሉሰፊስለሆነ					
4. ወላጆቼየደምግፊትስለነበረባቸዉየኔምየመያዝእድሉሰፊስለሆነ					
5. ሥራቦታለረዥምጊዜስለሚቀመጥበደምግፊትየመያዝእድሉሰፊስለሆነ					
ስለየደምግፊትከባድነትወይምየመዳንእድልላይያለግንዛቤ					
6. ከፍተኛየደምግፊትካላብኝየልብድካምወይምየደምመርጋትእድሎችሊኖሩኝስለሚችሉ					
7. የደምግፊትካለብኝቤተሰቤበጣምይሰቃያሉየጨነቃሉም					
8. ከደምግፊትጋርበተያያዘየሚያጋጥሙኝችግሮችረጅምጊዜስለምቆዩ					
9. የደምግፊትቢኖርብኝበመድኃኒቶችላይየበለጠወጭአወጣለሁ					
የደምግፊትመቆጣጠሪያመሰናክሎችንበተመለከተያለውግንዛቤ					
1. ክሊኒኩከስራቦታዬበጣምየራቀስለሆነ፣የደምግፊትምርመራንአልወስድም					

	1.በጣም አልስማማም	2.አልስማማም	3.አልተወሰነም	4.እስማማለሁ	5. .በጣም እስማማለሁ
2. ወደሆስፒታልመሄድእናምርመራማድረግጊዜይወስዳል።የደምግፊትምርመራንአልወስድም					
3. በክሊኒክውስጥየደምግፊትምርመራማድረግየተወሰነገንዘብያስከፍለኛል፣ይህንንገንዘብለሌሎችዓላማዎችቢጠቀምይሻላል					
4.ምርመራንለብቻዬመውሰድየደምግፊትእንዳይሰማኝአያደርገኝም					
በደምግፊትምርመራጥቅሞችላይያለዉግንዛቤ					
1. የደምግፊትንመለኪያዎችበመደበኛነትማድረጌቀደምባለውደረጃላይበሽታውእንድታወቅይረዳኛል					
2. የደምግፊትመለኪያንበመደበኛነትመውሰድየደምግፊትመዛባትንውስብስብችግሮችለመከላከልይረዳኛል					
3. የደምግፊትንመለካትበመደበኛነትጥሩጤናእናማህበራዊደህንነትያረጋግጣል					
4. የደምግፊትንመለኪያዎችአዘውትሮማድረጌለጤንቴጥሩነው					
5. የደምግፊትንመለኪያዎችበመደበኛነትማድረጌበአኗኗርዘይቤለውጦች አማካኝነትበሽታውንለመከላከልይረዳኛል					
6. የደምግፊትንበመደበኛነትመውሰድስለጤንነቴሁኔታወቅታዊእንዳደርግ ያደርገኛል					

	1.በጣም አልስማማም	2.አልስማማም	3.አልተወሰነም	4.እስማማለሁ	5. .በጣም እስማማለሁ
የደምግፊትምርመራለማድረግየሚገፋፉነገሮች					
1. አንድጓደኛዬበከፍተኛየደምግፊትምክንያትበልብህመምሲሰቃይአይቻለሁ					
2. አንድጓደኛዬበከፍተኛየደምግፊትምክንያትበደምመርጋትህመምሲሰቃይአይቻለሁ					
3. እንደኔምጤነኛየነበረጓደኛዬበቅርቡየደምግፊትምርመራአድርጓል					
4. በዜናወረቀቶችእናበቴሌቪዥኖችውስጥየግንዛቤማስታወቂያዎችንማየትመመርመርእንድጀምርገፋፋኝ					
5. የሥራቦታዬበዓመትአንድጊዜየደምምርመራፕሮግራምያካሂዳል።					
በራስውጤታማነት					
1. ክሊኒኩከስራቦታዬበጣምየራቀቢሆንምእንኳንየደምግፊትምርመራአደርጋለሁ					
2. ምንምእንኳንየሥራላይጫናቢኖርብኝምየደምግፊቴንበመደበኛነትእመረመራለሁ					
3. ከዛሬጀምሮየደምግፊቴንለመመርመርአስቤለሁምክንያቱምበደምመርጋትመታመምአልፈልግም					
4. ጓደኞቼከእኔጋርየማይሄዱቢሆኑምእንኳየደምግፊትምርመራንአካሄዳለሁ					

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

HYPERTENSION SCREENING PRACTICE AND ITS PREDICTORS AMONG EMPLOYEES OF COMMERCIAL BANK OF ETHIOPIA IN ADDIS ABABA,ETHIOPIA USING THE HEALTH BELIEF MODEL

BY: BOSONA TILAHUN (BSC)

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