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DEPARTMENT OF NURSING

HEALTH-SEEKING BEHAVIOR AND ASSOCIATED FACTORS AMONG FIRST DIAGNOSED PATIENTS FOR HYPERTENSION ATTENDING AT OUTPATIENT DEPARTMENT OF SELECTED GOVERNMENT HOSPITALS, ADDIS ABABA ETHIOPIA

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I, the undersigned MSc student, declares that I have submitted my original work "Health-seeking Behavior and Associated Factors among First Diagnosed Patients for Hypertension Attending at the Outpatient Department of Selected Government Hospitals, Addis Ababa, Ethiopia" prepared by Momina Siraj, which satisfies the university's regulations and adheres to the accepted standards of originality and quality required for the degree of master of sciences in cardiovascular nursing.

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ABBREVIATIONS AND ACRONYMS

AF	Atrial Fibrillation
AMI	Atypical Myocardial Infarction
BMI	Body Mass Index
BP	Blood Pressure
CHS	College of Health Sciences
CKD	Chronic Kidney Disease
CV	Cardiovascular
CVD	Cardiovascular Disease
DBP	Diastolic Blood Pressure
DC	Data Collection
DM	Diabetes Mellitus
HDL	High-density Lipoprotein
HF	Heart Failure
HIV	Human Immunodeficiency Virus
HTN	Hypertension
HSB	Health-seeking Behavior
LDL	Low-density Lipoprotein
LMICs	Low- and Middle-Income Countries
LV	Left Ventricular
MET	Meter
NHANES	National Health and Nutrition Examination Survey
OPD	Outpatient Department
SBP	Systolic Blood Pressure
SNS	Sympathetic Nervous System
SPHMMC	St. Paul's Hospital Millennium Medical College
SPSH	St. Peter Specialized Hospital
SPSS	Statistical Package for the Social Sciences
TASH	Tikur Anbessa Specialized Hospital
TB	Tuberculosis
WHO	World Health Organization

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ABSTRACT

Background: In Ethiopia, hypertension is a major public health concern, with a growing number of patients first diagnosed with hypertension. Many individuals first diagnosed with hypertension may not engage in appropriate health-seeking behaviors. Health-seeking behavior (HSB) is any action or inaction undertaken by individuals who perceive themselves to have a health problem or illness to find an appropriate remedy.. Understanding the underlying reasons for and barriers to seeking healthcare is essential for developing effective interventions and improving the overall management of hypertension.

Objective: To assess the health-seeking behavior and associated factors among patients first diagnosed with hypertension at selected government hospitals in Addis Ababa, Ethiopia.

Method: An institution-based mixed study was conducted from March 1 to April 30, 2024, in four public hospitals in Addis Ababa, Ethiopia. For convenience sampling, 214 participants were selected for quantitative analysis, proportionate to their hypertensive patient population, and additional patients were selected for qualitative analysis until data saturation. The data were entered into the Statistical Package for the Social Sciences (SPSS) for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations were used to summarize the socio-demographic characteristics, and logistic regression was used to identify factors associated with the outcome variable. The level of significance was set at a p value < 0.05. A thematic analysis approach was used for the qualitative data.

Results: The overall health-seeking behavior of the study participants was 47.6%. Age was a significant factor for health-seeking behavior among young adults (20-40 years), with an adjusted odds ratio (AOR) of 1.14 (95% CI: 0.34-3.88, p=0.047), indicating a borderline significant association. Educational status also had notable findings, with individuals with a degree or higher showing a significantly greater likelihood of good health-seeking behavior (AOR: 6.25, 95% CI: 1.38-28.29, p=0.017). The presence of coronary artery disease was a significant predictor (AOR: 2.70, 95% CI: 2.38-3.24, p=0.008). Monthly income was also a significant factor, with low income (1000-4999 ETB) associated with health-seeking behavior (AOR: 1.13, 95% CI: 0.26-4.94, p=0.025). Qualitative interviews with first-diagnosed hypertensive patients revealed significant challenges in their health-seeking journeys, such as long waiting times, high costs of tests and medications, and the complexity of navigating the healthcare system. Participants described stress and uncertainty when ill, the process of seeking medical help and obtaining medication, and mixed feelings about the quality of healthcare. Additionally, habits such as alcohol consumption and smoking affect people's willingness and timeliness in seeking medical help.

Conclusion & Recommendation: In this study, small amount of the participants reported overall health-seeking behavior. Age, educational status, monthly income, and the presence of coronary artery disease were significantly associated with the health-seeking behavior of the study participants. These insights emphasize the need for more accessible and affordable healthcare services and targeted health education to address the specific barriers faced by hypertensive patients. Hence health care workers and policy developers should give attention and work intensively up on the issue.

KEYWORDS: Health-seeking behavior, hypertension, public hospitals, Addis Ababa, Ethiopia

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Hypertension, or high blood pressure, is a prevalent non-communicable disease that poses a significant health burden worldwide (11). In Ethiopia, hypertension is a major public health concern, with a growing number of patients first diagnosed with hypertension (12). Understanding the HSB of patients first diagnosed with hypertension is crucial for the development of effective preventive and management strategies (9). Therefore, this study aimed to investigate the HSB patterns among patients who were first diagnosed with hypertension and sought care at government hospital outpatient departments (OPDs).

Health-seeking behavior (HSB) is defined as any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill in finding an appropriate remedy (1). In response to a medical condition, the prospective HSB is seeking care from a licensed physician at a recognized healthcare facility (2). It has long been known that symptom manifestation affects HSB. However, many people with hypertension might not know they have the condition or have any symptoms that would force them to get help. Even among those who are aware that they have hypertension and are exhibiting symptoms, their HSB is not at ideal levels. Inappropriate HSB has been linked to worse health outcomes, increased morbidity and mortality, and poorer health statistics (3).

One concept that is vital to understanding the condition of a country's economy and health is the HSB. People's decision on which healthcare provider to see during an illness episode is a crucial component of the HSB. It helps to determine the population's health objectives and needs, which directs the development of policies appropriate for satisfying those needs and stopping the spread of their illness (4). According to research on HSB in low- and middle-income countries (LMICs), several factors affect population HSB, and some population segments are more likely than others to use suitable HSB (5). The consequences of inappropriate HSB vary among various population

segments (6). These characteristics can be categorized as cultural views, socio-demographic status, autonomy, economic situation, physical and financial accessibility, disease patterns, and health service concerns, according to a review of the global literature (7). Because HSB is dependent on both cognitive and non-cognitive factors, its nature is not uniform, necessitating a contextual examination of HSB. Economic, societal, and cognitive factors can all play a role in context. The degree to which a person believes a health action is successful in lowering the probability of a poor health outcome and the degree to which they view the sickness (or other negative event) as threatening (3).

The act of seeking medical attention has a significant role in influencing the acceptance of treatment and its results, particularly in the case of chronic illnesses. A contextual analysis of HSB is necessary since the nature of HSB is not uniform and depends on both cognitive and non-cognitive elements. Economic, societal, and cognitive factors can all play a role in context (8). The desired HSB is responding to illness by seeking help from a trained physician in a recognized healthcare center. Medical care for hypertension is often delayed or is sought only for complications such as stroke, heart attack, heart failure, and kidney failure (9,10).

1.2 Statement of the problem

Hypertension is a significant public health concern globally, with a high burden in low- and middle-income countries such as Ethiopia. Despite the availability of healthcare services, many individuals first diagnosed with hypertension may not engage in appropriate health-seeking behaviors to prevent or manage the condition (13). Understanding the factors influencing health-seeking behavior among first-diagnosed patients with hypertension attending outpatient departments of selected government hospitals in Addis Ababa, Ethiopia, is crucial for developing effective interventions to improve health outcomes and reduce the burden of hypertension-related complications (14). Therefore, this study aimed to investigate health-seeking behavior and associated factors among this vulnerable population to address gaps in hypertension prevention and management strategies.

The ideal approach to obtaining medical attention is to become ill and go to a reputable healthcare facility to consult with a qualified doctor. Patients frequently consider all of their

alternatives when making decisions about their care, including using home remedies, self-medication, and attending public or private healthcare facilities. These decisions are influenced by a range of social, personal, and experiential factors (15). Low levels of hypertension management are frequently the outcome of inadequate health-seeking behavior, even in symptomatic and knowledgeable patients. It has long been known that symptom manifestation affects HSB. However, many people with hypertension might not know they have the condition or have any symptoms that would force them to get help (16).

Healthcare-seeking behavior is known to be poor for individuals with chronic and asymptomatic diseases such as hypertension in most countries (29). However, in a study performed in southeastern Europe, called Albania, the prevalence of HSB among patients with chronic disease was greater. On the other hand, in a study performed in Nigeria, HSB was negatively correlated with blood pressure levels in which the respondents had low health-seeking behaviors (30). For different reasons, the prevalence of HSB among hypertensive patients found in Uganda is low; according to a certain study conducted there in Uganda, regular monitoring of blood pressure was not common (9). A community-based cross-sectional survey conducted in Jimma, Ethiopia, also revealed that the majority of the community was poor at seeking health for hypertension (31).

The issue of health-seeking behavior and its associated factors among patients first diagnosed with hypertension attending the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia, is of crucial importance. This research aimed to investigate the patterns and determinants of health-seeking behavior among this specific group of patients.

Despite the existence of numerous healthcare facilities and services in Ethiopia, there is limited knowledge about the factors that influence patients' behaviors in seeking healthcare, particularly among patients first diagnosed with hypertension. Understanding the underlying reasons for and barriers to seeking healthcare is essential for developing effective interventions and improving the overall management of hypertension.

There is a major lack of comprehensive studies on this topic, hindering the development of evidence-based strategies to address hypertension and its associated complications. Furthermore,

the unique context of Addis Ababa, with its diverse population, cultural practices, and healthcare infrastructure, adds to the statement of the problem of this study.

1.3 Rational and significance

The present study revealed that the study has the following significance:

1. Public Health Impact: This study is significant because it addresses a critical public health issue by focusing on health-seeking behavior among patients first diagnosed with hypertension in Ethiopia. Understanding the factors influencing health-seeking behavior can lead to the development of targeted interventions to improve hypertension prevention and management strategies, ultimately reducing the burden of hypertension-related complications on individuals and the healthcare system.

2. Policy Implications: The findings of this study can inform policymakers and healthcare providers in Addis Ababa, Ethiopia, about the factors influencing health-seeking behavior among patients first diagnosed with hypertension. This knowledge can guide the development of policies and programs aimed at promoting early detection, effective management, and improved health outcomes for individuals with hypertension.

3. Healthcare delivery improvement: By identifying the barriers to and facilitators of health-seeking behavior among patients first diagnosed with hypertension, this study can contribute to improving healthcare delivery in outpatient departments of government hospitals in Addis Ababa. The insights gained from this research can help healthcare providers tailor their services to better meet the needs of patients first diagnosed with hypertension, leading to more effective care and better health outcomes.

5. Community Empowerment: Ultimately, this study has the potential to empower individuals who were first diagnosed with hypertension by shedding light on the factors that influence their health-seeking behaviors. By raising awareness and providing insights into effective strategies for managing hypertension, this research can empower patients to take control of their health and make informed decisions about seeking healthcare services, leading to improved quality of life and well-being.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

This section provides an overview of hypertension, its risk factors and magnitude, and its health-seeking behavior. Finally, a conceptual framework is provided.

2.2. Overview of hypertension

A persistent systolic blood pressure reading (SBP) of 140 mm Hg or higher and/or a diastolic blood pressure measurement (DBP) of 90 mm Hg or higher are considered hypertension. When SBP is ≥140 mm Hg and/or DBP is ≥90 mm Hg in the general hypertensive population or when SBP is ≥130 mm Hg and/or DBP is ≥80 mm Hg in patients with chronic kidney disease (CKD) or established diabetes mellitus (DM), it is considered uncontrolled. This classification was based on the average of two or more measurements made during two or more doctor visits (21).

Hypertension rarely causes symptoms, and many people are undiagnosed for years until a serious medical problem occurs. Early detection of hypertension is a critical first step in hypertension care toward increasing hypertension care, preventing the disease's complications, and saving a life (22). Individuals with hypertension diagnosed early will benefit from a healthier lifestyle, better treatment, effective blood pressure control, and a lower risk of coronary heart disease and stroke (23).

The primary preventable cause of cardiovascular disorders such as atherosclerosis, acute myocardial infarction, and cardiomyopathy is hypertension, which is also the world's largest risk factor for death and morbidity (24). Blood pressure is written as two numbers. The first (systolic) number represents the pressure in blood vessels when the heart contracts or beats. The second (diastolic) number represents the pressure in the vessels when the heart rests between beats(25). It is a major cause of premature death worldwide. High blood pressure occurs when the force of blood pushing against the artery walls is consistently too high. This damage to the arteries over

time can lead to serious complications such as heart attack and stroke (26). Globally, the rates of blood pressure (BP) regulation are still low. It continues to be the leading cause of avoidable cardiovascular disease (CVD) and all-cause mortality worldwide. A direct correlation exists between hypertension and CVD, including ischemic heart disease and stroke. Globally, sex disparities in the early stages of heart failure and kidney dysfunction are caused by hypertension (11). The National Health and Nutrition Examination Survey (NHANES) indicated that younger people have made more progress in understanding and managing their hypertension and that their rate of blood pressure control has decreased, particularly for young men. The majority of hypertensive individuals experience no symptoms. In addition to other symptoms, extremely high blood pressure can induce headaches, impaired vision, and chest pain (27).

The best method to determine whether an individual has high blood pressure is to measure blood pressure. If left untreated, hypertension can lead to other illnesses, such as heart disease, stroke, and renal damage (28). The symptoms of extremely high blood pressure, which is typically 180/120 or above, might include intense headaches, chest discomfort, dizziness, breathing difficulties, nausea, vomiting, blurred or altered vision, anxiety, disorientation, buzzing in the ears, nosebleeds, and irregular heartbeats (29).

2.3. Health-seeking behavior

Healthcare-seeking behavior (HSB) is defined as "any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill to find an appropriate remedy" (3). Illness behavior or sick-term behavior are other terms for seeking health. The idea of health behavior, which includes actions taken to prevent illness, preserve good health, and cope with any deviation from a good state of health, places health-seeking behavior within a larger framework (17).

A person's commitment to promoting their optimal level of well-being, recovery, and rehabilitation can occur in the presence or absence of health issues and within a range of potential to actual health issues. This definition, which is consistent with the idea of universal health coverage, is provided by Chinn and Kramer and includes methods for maintaining optimal well-being, preventing illnesses, and correcting any deviation from excellent health. Healthcare-

seeking behavior is known to be poor for *individuals with* chronic and asymptomatic diseases such as hypertension in most countries (18). However, in a study performed in southeastern Europe, called Albania, the prevalence of HSB among patients with chronic disease was greater. On the other hand, in a study performed in Nigeria, HSB was negatively correlated with blood pressure levels in which the respondents had low health-seeking behaviors (19). For different reasons, the HSB among hypertensive patients found in Uganda is low; according to a certain study conducted there in Uganda, regular monitoring of blood pressure was not a common practice (9). A community-based cross-sectional survey conducted in Jimma, Ethiopia, also revealed that the majority of the community was poor at seeking health for hypertension (20).

2.4. Determinants of Health-seeking Behavior

The World Health Organization (WHO) has declared universal health coverage its top priority. To reach this aim, countries must invest in high-quality, easily accessible primary healthcare. The population's general well-being will increase, and the disease load will decrease through the successful implementation of basic healthcare services through universal health coverage. Consequently, this will lessen the nation's financial burden (30). In Uganda, one of the factors affecting hypertensive patients' HSB is the health system. Therefore, the main health system issues were related to the availability and attitudes of staff and the shortage of supplies and medicines (9), which are held as a top priority of the WHO, as mentioned above.

The presence of chronic disease and having a negative impression of one's health were need factors that influenced health-seeking behaviors. The encouraging variables were education, money, insurance status, and the capacity to pay for oneself. These results demonstrate the need for additional national research and support particular tactics aimed at lowering socioeconomic disparities in healthcare utilization (31).

2.4.1. The effect of sociodemographic characteristics

Sociodemographic factors can have a significant impact on the health-seeking behavior of hypertensive patients. Hypertensive patients with higher levels of education are more likely to seek and adhere to medical treatment for their condition(32). They may have a better

understanding of the risks associated with hypertension and the importance of managing it effectively. Patients with lower income levels may face barriers to accessing healthcare services, such as high out-of-pocket costs for medications and doctor visits. This can lead to delays in seeking treatment and poorer health outcomes. Patients with strong social support networks are more likely to seek medical care for their hypertension, as they may receive encouragement and assistance in managing their condition. Conversely, patients lacking social support may be less motivated to seek treatment (33).

Cultural beliefs about health and illness can influence health-seeking behavior. Some cultural groups may prefer traditional remedies over Western medicine, which can impact adherence to prescribed treatments for hypertension. Older patients may be more likely to seek medical care for hypertension due to a higher prevalence of chronic conditions and a greater awareness of the importance of managing their health(34). Gender differences may also play a role, with some studies suggesting that women are more proactive in seeking healthcare than men are. Overall, understanding the sociodemographic factors that influence health-seeking behavior among hypertensive patients is essential for developing targeted interventions to improve outcomes and reduce disparities in healthcare access and outcomes(35).

2.4.2. The effect of behavioral factors

Several behavioral factors can affect health-seeking behavior for patients who are first diagnosed with hypertension. A lack of awareness or understanding about the risks and consequences of hypertension can hinder health-seeking behavior. Patients who are unaware of the importance of regular blood pressure monitoring or the long-term implications of uncontrolled hypertension may be less likely to seek necessary healthcare. Patients' beliefs and perceptions about hypertension can also influence their health-seeking behavior. For instance, if individuals believe that hypertension is a normal part of aging or that it can be managed without medical intervention, they may be hesitant to seek medical advice (9).

Unhealthy lifestyle choices such as poor diet, sedentary behavior, smoking, and excessive alcohol consumption can contribute to the development and progression of hypertension. Patients who engage in these behaviors may be less motivated to seek healthcare or make necessary changes to their lifestyle. Social and cultural factors can play a significant role in health-seeking

behavior. Cultural beliefs, family influences, social norms, and economic factors can all impact an individual's motivation to seek healthcare for hypertension. Overall, addressing these behavioral factors is crucial for improving health-seeking behavior for patients first diagnosed with hypertension. Education and awareness campaigns, community-based interventions, and tailored healthcare services can all help to overcome these barriers and promote proactive healthcare seeking(36).

2.5. The effect of comorbidity

2.5.1. Diabetes mellitus

Diabetes is a chronic, metabolic disease characterized by elevated blood glucose levels that leads to severe damage to the heart, blood vessels, eyes, kidneys, and nerves over time (37). Globally, 55% of people with diabetes know they have diabetes. Twenty-four million adults are living with diabetes in Africa, which is estimated to be 55 million by 2045 (38). A higher incidence of diabetes mellitus was observed in Addis Ababa public health institutions, in which the overall prevalence of diabetes mellitus was 14.8%. Factors such as age, alcohol consumption, HDL, triglycerides, and vagarious physical activity were associated with diabetes mellitus (39).

Hypertension and diabetes commonly coexist due to shared pathophysiological factors such as obesity and hyperinsulinemia. Ambulatory BP measurements are recommended to identify masked and nocturnal hypertension occurring in 30% of patients with diabetes associated with frequent cardiovascular (CV) events. According to a study conducted in Indonesia, diabetes mellitus affects the health-seeking behavior of clients, but most of the respondents were known to exhibit improved health-seeking behavior (40).

2.5.2. The presence of cardiovascular disease

2.5.2.1. Coronary artery disease

Hypertension harms health by elevating the risk of cardiovascular disease and its complications, including heart attack and stroke, and among older adults, hypertension may also contribute to cognitive and functional decline (41). A chronic hypertensive state causes cardiac hypertrophy,

which is an independent risk factor for myocardial infarction. Left ventricular hypertrophy is associated with increased oxygen demand, leading to the development of new arterial vessels (collaterals) to supply the myocardium. High blood pressure forces the heart to work harder to pump blood to the rest of the body (42). The excess strain and resulting damage from high blood pressure cause the coronary arteries serving the heart to slowly narrow from the plaque, resulting in the buildup of fat, cholesterol, and other substances. This slow process is called atherosclerosis (43). According to a study performed in Australia and North America, treatment-seeking behavior occurred in patients from 2 continents who had symptoms of evolving atypical myocardial infarction (AMI) and who went to the hospital relatively promptly (44).

2.5.2.2. Chronic heart failure

Hypertension is among the most important risk factors for heart failure (HF) (45). The incremental risk of incident HF was twofold greater at an office BP ≥160/100 than at <140/90 mmHg. Hypertension initiates concentric left ventricular hypertrophy with subsequent diastolic dysfunction (46). Although the left ventricular ejection fraction is typically preserved (heart failure with preserved ejection fraction), it represents a precursor of left ventricular systolic dysfunction with eccentric hypertrophy. Health-seeking behavior is an important factor determining the acceptance of health care and outcomes, especially in chronic conditions such as heart failure (47). According to a study performed in Jimma, Ethiopia, health-seeking behavior among adult heart failure patients revealed that most of these patients exhibit poor health-seeking behavior (48).

2.5.2.3. Atrial fibrillation (AF)

Hypertension is the most important independent risk factor for stroke in patients with AF(49). Uncontrolled hypertension is associated with an increased risk of intracerebral bleeding with therapeutic anticoagulation. Hypertension is associated with left ventricular hypertrophy, impaired ventricular filling, left atrial enlargement, and slowing of the atrial conduction velocity. These changes in cardiac structure and physiology favor the development of atrial fibrillation, and they increase the risk of thromboembolic complications (50). Elevated BP causes left ventricular (LV) hypertrophy, myocardial fibrosis, and diastolic dysfunction, resulting in atrial stretching and structural remodeling (51).

2.5.3. Previous stroke

Stroke is the leading cause of long-term adult disability (52). The population-attributable risk for a patient-reported history of hypertension was 35% for all stroke types (53). Despite the declining incidence of stroke, the absolute number of people affected by stroke has increased globally among men and women of all ages, demonstrating the need for stroke prevention (54). Hypertension predicts stroke recurrence, and BP reduction reduces the risk of recurrent stroke. Secondary prevention is important, as the mortality rate at 30 days increases from 22% after an initial stroke to 41% after a recurrent stroke (55).

2.6. Conceptual framework

The diagram below is a conceptual framework of the HSB and associated factors among adult hypertensive patients who that was designed by the principal investigator. The diagram shows that independent variables such as clinical factors and behavioral and sociodemographic variables affect the dependent variable, health-seeking behavior. There are several clinical factors, such as diabetes mellitus, cardiovascular disease, and previous history of stroke. In addition, the behavioral factors included alcohol consumption, cigarette smoking, sedentary lifestyle, and diet (56).

One model that could fit well with this study on health-seeking behavior among patients first diagnosed with hypertension in Addis Ababa, Ethiopia, is the health belief model (HBM). The health belief model is a widely used theoretical framework in public health research that seeks to understand individuals' perceptions and beliefs about health-related behaviors (57).

In the context of this study, the Health Belief Model could be used to explore how patients first diagnosed with hypertension perceive their susceptibility to developing hypertension, their understanding of the severity of the condition, their beliefs about the benefits of seeking healthcare for hypertension prevention and management, and the barriers they face in accessing healthcare services. Additionally, the model can help identify potential cues to action that may motivate individuals to seek medical care for hypertension (59).

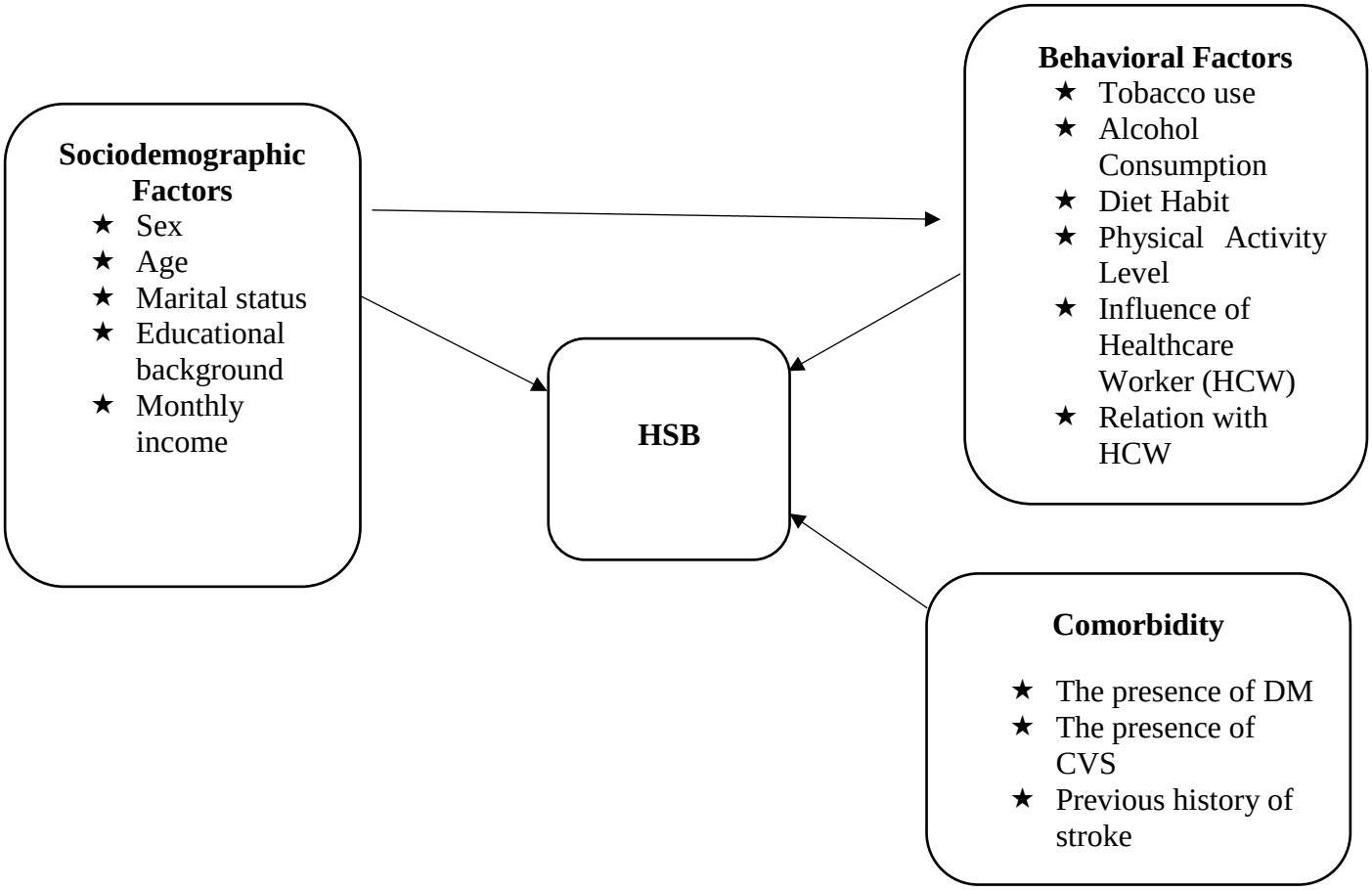

Figure 1: Conceptual framework of health-seeking behavior and associated factors among adult clients with hypertension

CHAPTER THREE

3. OBJECTIVE OF THE STUDY

3.1.1 General objective

- To assess health-seeking behavior and associated factors among patients first diagnosed with hypertension at selected government hospitals in Addis Ababa, Ethiopia.

3.1.2 Specific objective

- To determine health-seeking behavior among patients first diagnosed with hypertension at selected government hospitals.
- To identify factors affecting health-seeking behavior among patients first diagnosed with hypertension at selected government hospitals.
- To explore health-seeking behavior among patients first diagnosed with hypertension at selected government hospitals

CHAPTER FOUR
MATERIALS AND METHODS

4.1 Study Setting

The current study was conducted in four public hospitals located in Addis Ababa, Ethiopia. Addis Ababa is the capital city of Ethiopia and serves as the political, cultural, and economic hub of the country. The four public hospitals were St. Paul's Hospital Millennium Medical College (SPHMMC), St. Peter Specialized Hospital (SPSH), Zeweditu Memorial Hospital (ZMH), and Yekatit 12 Hospital (Y12H).

The lottery sampling method was utilized to select the four hospitals (SPHMMC, SPSH, ZMH, and Y12H). Since the four selected hospitals are chosen randomly and are representative of the overall population of hospitals in terms of relevant characteristics, such as patient demographics or healthcare practices, the findings from these four hospitals can be generalized to the larger population.

St. Paul's Millennium Medical College, as is known today, was established through a decree of the Council of Ministers in 2010, although the medical school opened in 2007 and the hospital was established in 1968 by the late Emperor Haile Selassie. It is governed by a board under the Federal Ministry of Health. The College initiated Ethiopia's first integrated modular and hybrid problem-based curriculum for its undergraduate medical education and is currently expanding to postgraduate programs and diversifying its undergraduate program offerings. The college has more than 2800 clinical, academic, administrative, and support staff that provide medical specialty services to patients who are referred from all over the country, teaching medicine and nursing students and doing basic and applied research. While the inpatient capacity is more than 700 beds, the College sees an average of 1200 emergency and outpatient clients daily. The hospital provides diagnostic and treatment services to more than 400,000 patients per year (outpatient department; OPD; 366265, emergency department; 36187, inpatients; 18814).

St. Peter Specialized Hospital (SPSH) was founded in 1963 as a center for treating tuberculosis (TB) patients in the country. The hospital currently employs a total of 500 staff members, 250 of which are healthcare professionals. Its primary focus is on the management of tuberculosis (TB) and TB/human immunodeficiency virus (HIV) patients. Additionally, the hospital offers internal medicine, dermatology, ophthalmology, pediatrics, maternal and child health, mental health, and dental medicine services. Currently, the hospital has a functioning cardiac catheterization laboratory, echocardiography, critical care unit for cardiac patients with emergency care, OPD, and cardiac ward services, which are being provided in collaboration with SPHMMC (61,62).

Zewditu Memorial Hospital is another prominent medical facility located in Addis Ababa, Ethiopia. The hospital is named in honor of Empress Zewditu, who was the Empress of Ethiopia from 1916 to 1930. Zewditu Memorial Hospital is a well-established healthcare institution that provides a range of medical services to the local community. The hospital offers specialized medical care in various departments, including internal medicine, surgery, pediatrics, obstetrics and gynecology, orthopedics, and ophthalmology. Zewditu Memorial Hospital is known for its skilled medical professionals, modern facilities, and commitment to delivering quality healthcare services to its patients (63).

In addition to providing clinical services, Zewditu Memorial Hospital also serves as a teaching hospital affiliated with medical schools and training programs in Ethiopia. This allows medical students and healthcare professionals to gain practical experience and training in a real-world healthcare setting. Overall, Zewditu Memorial Hospital plays a vital role in the healthcare system of Ethiopia, offering comprehensive medical care, training future healthcare professionals, and contributing to the well-being of the local community (63).

Yekatit 12 Hospital is a prominent medical facility located in Addis Ababa, the capital city of Ethiopia. The hospital also has facilities for diagnostic services such as radiology, laboratory testing, and imaging. As a major healthcare institution in Ethiopia, Yekatit 12 Hospital plays a crucial role in providing medical care to a large number of patients, including those from underserved communities. The hospital is known for its experienced medical staff, modern equipment, and commitment to delivering quality healthcare services to its patients. Overall, Yekatit 12 Hospital serves as an important healthcare provider in Ethiopia, contributing to the

improvement of public health and well-being in the region (65). The study participants were selected from the clinics using a convenience sampling technique.

4.2 Study Design and Period

An institution-based parallel mixed approach was used from March 01 to April 30, 2024. This approach involves gathering comprehensive data from study participants through a combination of qualitative and quantitative research methods.

4.3 Population

4.3.1 Source population

The source population consisted of all patients who visited the chronic disease outpatient departments and health care professionals working in four selected hospitals (SPHMMC, SPSH, ZMH, and Y12H) for both method.

4.3.2 Study Population

The study population included all adult first-diagnosed adult patients with hypertension who visited the chronic disease outpatient departments of the SPHMMC, SPSH, ZMH, and Y12H during the data collection period and head nurse and physicians working in the unit who were also involved.

4.4 Eligibility criteria

During the data collection period, all patients who were first diagnosed with hypertension and aged over 18 years and who visited the chronic disease outpatient departments of the SPHMMC, SPSH, ZMH, and Y12H were considered for inclusion in the study. Patients who were not willing to participate were included, while those who had already suffered a stroke (resulting in communication difficulties), who were critically ill, who had severe underlying mental illness, who were unable to provide necessary information independently or who were pediatric patients were excluded.

4.5 Study variables

4.5.1 Dependent variable

★ Health seeking behavior

4.5.2 Independent variables

Sociodemographic factors:

- ★ sex
- ★ Age
- ★ Marital status
- ★ Educational background
- ★ Monthly income

Comorbid Factors:

- ★ The presence of DM
- ★ The presence of CVD
- ★ Previous history of stroke

Behavioral Factors:

- ★ Tobacco use
- ★ Alcohol consumption
- ★ Diet Habits
- ★ Physical Activity Level
- ★ Influence of Healthcare Worker (HCW)
- ★ Relation with HCW

4.6 Operational definition

Health-seeking behavior: In this thesis, "health-seeking behavior" refers to actions taken by people who believe they have a health issue or are ill at diagnosing hypertension and preventing or delaying its complications, as well as finding the best course of treatment or learning more about their blood pressure status (9).

Good Health Seeking Behavior: If a first diagnosed hypertensive patient scores greater than or equal to the mean of the overall health seeking behavior questions (9,18).

Poor Health Seeking Behavior: If a first diagnosed hypertensive patient scores below the mean of overall health seeking behavior questions (9,18).

Hypertension/increased blood pressure was defined as a systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg or the use of medication to lower blood pressure (66).

Alcohol consumption was defined as those who had consumed alcohol in the past 12 days or currently (for the last 30 days) (67).

Physical activity levels: For the calculation of a categorical indicator, the total time spent in physical activity during a typical week, the number of days, and the intensity of the physical activity are considered (68).

1) **High: –** Seven or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 3,000 MET minutes per week.
2) **Moderate:** 5 or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of at least 600 MET-minutes per week.
3) **Low:** A person not meeting any of the abovementioned criteria falls into this category.

The following cigarette smoking classification criteria were used:

1) **Current Smoker –** someone who currently smokes one or more manufactured or hand rolled tobacco cigarettes per day.
2) **Never smoked regularly –** someone who has never smoked manufactured or hand rolled tobacco cigarettes at all or smoked less than one per day (69).

4.7 Sample Size Determination

The sample size for the study was determined by using the single population proportion formula. According to a community study performed in Jimma (70), Ethiopia, the health-seeking behavior of respondents was 17.5%; accordingly, the sample size was calculated to be 233

$$n = \frac{(Za_{/2})^2 \; p(1-p)}{d^2}$$

$$= \frac{(1.96)^2 \, (0.175)(1-0.175)}{(0.05)^2} = \frac{0.5544}{0.0025} \quad = 221.76 \sim 222$$

where

n - Estimated sample size

p - the proportion of patients

d - Is the margin of error

By adding a 5% nonresponse rate, the final sample size was 233

For the qualitative analysis by purposive sampling method, 10 patients participated in which an in-depth interview was conducted until idea redundancies were occurred.

4.8 Sampling Techniques

To efficiently gather data within a limited timeframe, a convenience sampling technique was employed to select 233 study participants from four designated hospitals. The estimated sample size may not be met due to extended appointment waiting times exceeding one month. This method was chosen to accommodate the time constraints and ensure timely data collection. The estimated total population of hypertensive patients attending the selected hospitals was 7363—2645 from SPHMMC, 1463 from SPSH, 1575 from Yekatit 12 Hospital and 1680 from Zewditu Memorial Hospital—which is estimated to be a yearly report that was reported in 2015 as part of the Ethiopian calendar. The report was provided by the staff head nurses of the chronic outpatient department of each hospital. The proportional allocation of the sample to each hospital was calculated based on the total number of hypertensive patients who underwent follow-up at the respective clinic.

The proportional value will be calculated with the following formula:

$$= \frac{\text{Total sample x total population of specific area}}{\text{Total population}}$$

- SPHMMC= 84
- SPSH=46
- Y12H=50
- ZMH=53

The following was the general study population in the study period. Eighty-four patients from SPHMMC Hospital, 46 from St. Peter Specialized Hospital, 50 from Yekatit 12 Hospital and 53 from Zewditu Memorial Hospital were proportionally assigned to obtain a total sample size of 233. Participants will be proportionally allocated based on the total patient flow in the four hospitals. Then, study subjects were selected by a convenience sampling technique from the study population. And for the qualitative study participants from the health care professionals were selected purposively based on their responsibility in the unit.

4.9 Data collection technique, tool, and quality control

A semi structured data collection instrument was used to gather information from participants. The instrument was used and modified from previously conducted studies (54,55). Additionally, the interview guide questions were developed from different works in the literature. The data collection tool contains four sections; the first section contains sociodemographic variables, the second section contains health-seeking behavior, and the third section contains the factors affecting the health-seeking behavior of the participants. The fourth section addresses behavioral risk factors. The instrument was prepared in English and was translated to the local language, "**Amharic**", by language experts. Then, the questionnaire was back-translated to the English language to maintain consistency.

Two data collector nurses and one supervisor participated in the data collection. Before beginning the data collection, the data collectors received one day of training to improve their comprehension of the relevant data collection tool components. The instrument was pretested among 5% of the total sample in a hospital other than the study hospital before the actual data collection period. The principal investigator (PI) oversaw and directed the data collection (DC) procedure, which involved conducting in-person interviews with participants to obtain relevant data. Participants received a detailed explanation of the study's objectives and their rights before the start of the data collection process. Primary data were used for data extraction. The DC team maintained the confidentiality of the participant data, and personal identifiers were considered during data interpretation. A pretest was conducted on 5% of the samples at Minilik II Hospital. Finally, the data were checked for completeness before entry into computer software for analysis. The data were checked for completeness on every data collection day, and if there were any incomplete data, the data were replaced.

To gather qualitative data, first-diagnosed patients with hypertension at the chronic disease OPD clinic were interviewed using a semi structured interview guide until saturation was reached. Data saturation typically occurs when no new information or themes emerge from the collected data. The interview guide was designed by a team of researchers and validated through expert reviews and pilot testing to ensure reliability and validity. The guide was translated into Amharic and back-translated into English to maintain consistency. The interviews were conducted in Amharic and recorded with consent, and key points were noted. In-depth interviews were conducted with study participants to collect data, and key informants, including head nurses and department physicians, were also interviewed.

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4.10 Statistical analysis

The data were exported to SPSS version 26.0 for cleaning and analysis. Descriptive and inferential statistics were calculated for the quantitative study design, and a thematic analysis approach was used to analyze the qualitative data. Data analysis was based on the identification of keys. Both the unrecorded (noted) and recorded interviews were transcribed verbatim, and the raw data were assigned to different themes. The participating patients were assigned code numbers from P1 to Pn. These codes were used to describe each participant's outcomes when necessary. In the descriptive statistical analysis, the data are summarized as percentages, frequencies, and/or means and standard deviations. For inferential statistics, regression was performed to determine the associations between the dependent variables and the independent variables. An inferential statistical analysis using ordinal regression analysis was performed. Significant variables were identified via multivariate binary logistic regression analysis. Then, the results were described and presented using frequency tables, figures, and charts.

In the qualitative part, thematic analysis was employed as the primary method of data analysis. Thematic analysis is a systematic approach to identifying, analyzing, and reporting patterns (themes) within the data. This method allows for a detailed exploration of the experiences, perspectives, and opinions of the study participants. Through in-depth interviews with participants, rich qualitative data were collected. The data were then transcribed, coded, and analyzed to identify recurring themes and patterns that emerged from the narratives shared by the participants.

4.11 Ethical Considerations

Ethical approval for the study and study protocol was obtained from the AAU CHS ethical review board. Before data collection, a written support letter was sent by the Dean's Office of the School of Nursing to obtain permission from the SPHMMC and SPSH for conducting the study. Then, ethical clearance was obtained from the Addis Ababa Health Bureau to conduct a study at the stated Addis Ababa city administration hospitals. The information was collected after obtaining written informed consent from each participant. For obscurity, the participant's name was not used at the time of data collection, all other personnel information was kept entirely obscure, and confidentiality was assured throughout the study period.

4.12 Results

The results of this study are shared with the AAU and the School of Nursing for those four hospitals, and they are also shared with the Addis Ababa Health Bureau. The results will be presented at relevant seminars, conferences, and workshops. To disseminate the information widely, it will be published in a reputable scientific journal

CHAPTER FIVE

RESULTS

5.1 Sociodemographic information of the study participants

Overall, 102 (47.6%) of the first-diagnosed patients who were diagnosed with hypertension and admitted to the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia, were seeking healthcare.

Table 1 provides a detailed overview of the sociodemographic variables, revealing key patterns. The gender distribution was nearly equal, with females accounting for 52.8% and males accounting for 47.2%. The most represented age group was 41-50 years (33.6%), followed by 51-60 years (22.4%). The youngest (20-30 years) and oldest (81-90 years) groups each accounted for less than 5% of the sample. For marital status, 70.1% were married, 10.7% were widowed, 10.3% were single, and 8.9% were divorced. Educational attainment varies: 39.3% are literate, 13.6% are illiterate, 12.6% hold a degree or higher, and 9.3% have completed preparatory education (10 & 11). These trends highlight the distribution of sociodemographic attributes in the surveyed population (Table 1).

Table 1: Sociodemographic characteristics of patients who were first diagnosed with hypertension at the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia

Variables	Category	f (n)	%
Gender	Male	101	47.2
	Female	113	52.8
Age	18-30	10	4.7
	31-40	31	14.5
	41-50	72	33.6
	51-60	48	22.4
	61-70	32	15.0
	71-80	20	9.3
	81-90	1	.5
Monthly Income	<3000	42	19.63
	3001-6000	70	32.71
	6001-9000	52	24.30
	9001-12000	18	8.41
	>12000	32	14.95
Marital status	Divorced	19	8.9
	Married	150	70.1
	Single	22	10.3
	Widowed	23	10.7
Educational status	Able to read and write	84	39.3
	Degree and more	27	12.6
	Diploma	21	9.8
	Illiterate	29	13.6
	Preparatory (10 &11)	20	9.3
	Primary school (from 1 -8)	17	7.9
	Secondary school (9 & 10)	16	7.5

5.2 Overall health-seeking behavior among first-generation hypertensive patients

The pie chart presents data on the health-seeking behavior of a population, categorized into two groups: "poor" and "good." Of the 214 respondents surveyed, 112 individuals, constituting 52.3% of the sample, exhibited "poor" health-seeking behavior, while 102 individuals, making up 47.7% of the sample, demonstrated "good" health-seeking behavior.

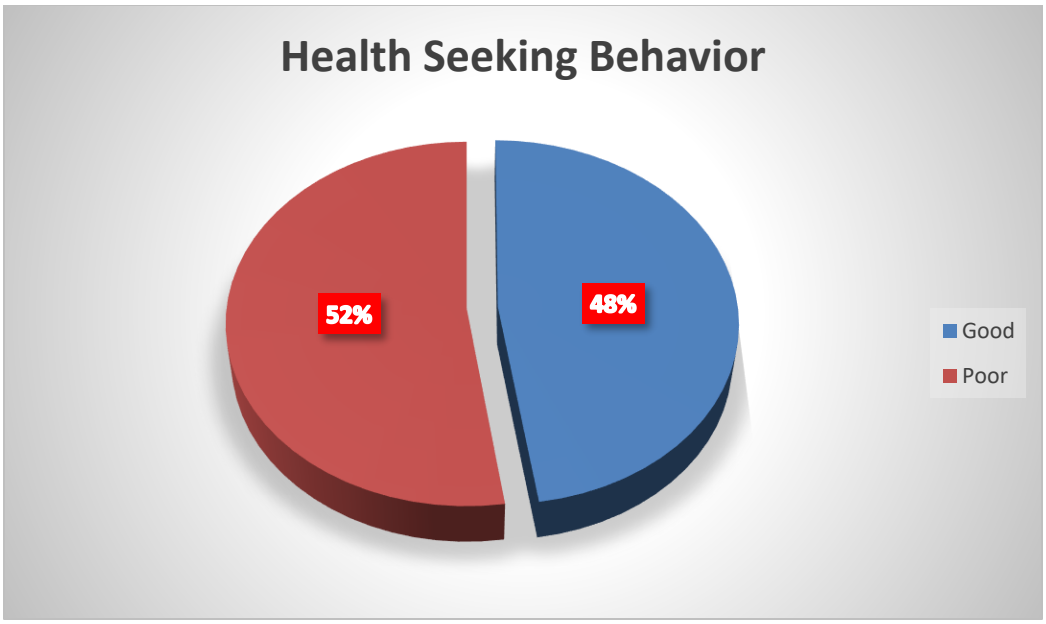

Figure 2: Health-seeking behavior of patients who were first diagnosed with hypertension at the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia

5.3 Comorbidity characteristics of the study participants

Table 2 provides key insights into health conditions among the surveyed population. Diabetes mellitus was reported by 26.2% of the respondents, while 73.8% did not have this condition. Cardiovascular disease was acknowledged by 15.4% of individuals, with 84.6% indicating no history of the disease. Regarding previous stroke occurrence, 8.4% of respondents reported experiencing a stroke, compared to 91.6% who did not.

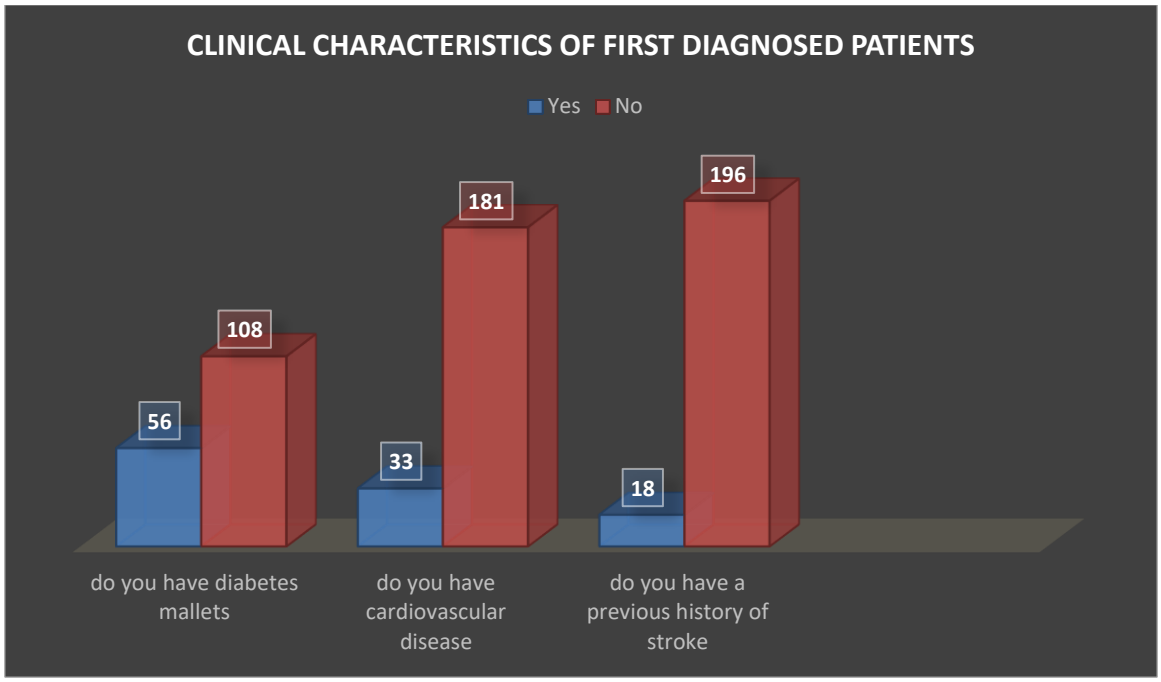

Figure 3: Clinical characteristics of patients who were first diagnosed with hypertension at the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia

5.4 Health-seeking behaviors of the study participants

The table below highlights various health-related behaviors and experiences within the surveyed population, providing key insights into healthcare utilization and practices. Most respondents (51.4%) relied on regular medication prescribed by physicians, 16.4% took random drugs without a prescription, and 32.2% ignored feelings of sickness. Hypertension was the most reported illness leading to hospital visits in the past two months (65.9%), followed by atrial fibrillation (1.4%) and chronic heart failure (1.9%). Additionally, 24.3% reported other illnesses. Regarding hospital visits, 57.0% visited once when sick, 29.4% visited twice, 6.1% visited thrice, and 7.5% reported no visits. The primary reason for hospital visits was sickness (65.0%), with 22.4% undergoing routine check-ups. Weight and blood pressure monitoring were mainly performed when the patients were sick in the hospital (41.6% and 64.0%, respectively). The preferred treatment locations were hospitals (69.2%), followed by pharmacies (19.2%), with smaller proportions opting for traditional alternatives. This analysis highlights areas for potential intervention and education to promote proactive health management and informed healthcare decisions among the surveyed population.

Table 2: Health-seeking behavior of patients who were first diagnosed with hypertension at the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia

Variables	Categories	f (n)	%
What is your health-protective measures	By ignoring any feeling of sickness	69	32.2
	By Taking random drugs which is not prescribed by physician	35	16.4
	Taking regular medication prescribed by the physician	110	51.4
Self-reported illnesses that took respondents to hospital in the last two months	Atrial fibrillation	3	1.4
	Chronic Heart failure	4	1.9
	Chronic kidney disease	1	.5
	Diabetes	5	2.3
	Hypertension	141	65.9
	Obesity and diabetes	3	1.4
Number of times visited the hospital in the last 2 months	Once only when sick	122	57.0
	Twice	63	29.4
	Thrice	13	6.1
	None	16	7.5
Reasons for going to the hospital	I was sick	139	65.0
	Went for check-up	48	22.4
	Advised to do so by family/friends	22	10.3
	Other	5	2.3
Weight monitoring frequency	Monthly	34	15.9
	Only when I am sick in the hospital	91	42.5
	I do not check	89	41.6
Blood pressure monitoring frequency	Daily	1	.5
	Weekly	5	2.3
	Monthly	46	21.5
	Only when I am sick in the hospital	137	64.0
	I do not check	25	11.7
Preferred place of treatment	Use herbs and traditional alternatives	12	5.6
	Go to a prayer house	12	5.6
	Buy drugs from a chemist/Pharmacy	41	19.2
	Go to the hospitals	148	69.2
	Multiple responses	1	.5

5.5 Factors affecting the health-seeking behavior of study participants

Ten variables (sex, age, marital status, educational status, monthly income, previous history of stroke, presence of diabetes mellitus, presence of coronary artery disease, presence of chronic heart failure, and presence of atrial fibrillation) were entered into the univariate binary logistic regression analysis. Among these, eight variables (age, marital status, educational status, monthly income, previous history of stroke, presence of diabetes mellitus, presence of coronary artery disease, and presence of atrial fibrillation) were associated with the health-seeking behavior of the study participants.

Among the eight variables (age, marital status, educational status, monthly income, previous history of stroke, presence of diabetes mellitus, presence of coronary artery disease, and presence of atrial fibrillation) analyzed using multivariate binary logistic regression, four variables were significantly associated with the health-seeking behavior of the study participants.

Age was a significant factor, with young adults (20-40 years) showing an AOR of 1.14 (95% CI: 0.34-3.88, p=0.047), indicating a borderline significant association with health-seeking behavior. Educational status revealed notable findings, where individuals with a degree or above had a significantly greater likelihood of good health-seeking behavior (AOR: 6.25, 95% CI: 1.38-28.29, p=0.017), and those in preparatory school (grades 10 & 11) showed an even greater association (AOR: 7.65, 95% CI: 1.57-37.32, p=0.012). Conversely, illiteracy was associated with poorer health-seeking behavior (AOR: 0.041, 95% CI: 0.003-0.564, p=0.017). The presence of coronary artery disease was also a significant predictor (AOR: 2.70, 95% CI: 2.38-3.24, p=0.008). Monthly income (1000-4999 ETB) was significantly associated with health-seeking behavior (AOR: 1.13, 95% CI: 0.26-4.94, p=0.025) (Table 3).

Table 3: Factors affecting the health-seeking behavior of patients first diagnosed with hypertension in the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia

Variables	**Categories**	**Health Seeking Behavior**		**COR of 95% CI**	**AOR of 95% CI**	**p value**
		Good	**Poor**			
Marital status	Divorced	9	10	3.240	1.526	.603
	Married	73	77	3.413	1.884	.348
	Single	15	7	7.714	2.845	.217
	Widowed	5	18	1	1	
Age (in Years)	Young Adults | 20-40 |	24	17	2.33 (1.01-5.36)	1.14 (0.34-3.88)	0.047
	Middle-Aged | 41-60 |	58	62	1.54 (0.80-2.99)	0.85 (0.35-2.10)	0.123
	Seniors | 61-90 |	20	33	1	1	
Educational status	Able to read and write	33	51	.83 (0.28-2.45)	1.180 (.36-3.88)	.786
	Degree and more	21	6	4.50 (1.18-17.2)	6.254 (1.38-28.29)	.017
	Diploma	15	6	3.21 (0.82-12.63)	3.881 (.89-16.94)	.071
	Illiterate	2	27	.1 (0.02-0.54)	.041 (.003-.564)	.017
	Preparatory (10 &11)	16	4	5.14 (1.18-22.48)	7.646 (1.57-37.32)	.012
	Primary school (from 1 -8)	8	9	1.14 (0.29-4.51)	1.18 (.267-5.28)	.821
	Secondary school (9 & 10)	7	9	1	1	
The presence of coronary artery disease	Yes	10	2	5.97 (1.28-6.79)	2.70 (2.38-3.24)	.008
	No	92	110	1	1	
The presence of diabetes mallets	Yes	32	24	1.676	1.903	.097
	No	70	88	1	1	
previous history of stroke	Yes	12	6	.531	.520	.382
	No	100	96	1	1	
Presence of atrial fibrillation	Yes	1	7	8.179	5.527	.108
	No	111	95	1	1	
Monthly Income (in ETB)	Low Income (1000 – 4999)	48	61	0.30 (0.10-0.91)	1.13 (0.26-4.94)	.025
	Middle Income (5000 - 9999)	41	46	0.34 (0.11-1.04)	0.82 (0.19-4.94)	.074
	High Income (≥10000)	13	5	1	1	

5.6 Themes identified

This section presents the findings from qualitative interviews conducted with first-diagnosed hypertensive patients attending the outpatient departments of selected government hospitals in Addis Ababa, Ethiopia. The interviews explored various aspects of health-seeking behavior, including personal experiences with illness, the process of seeking medical help, and perceptions of healthcare received. Additionally, the influence of alcohol consumption and smoking on health-seeking behavior was examined.

Participants S.N.	**Variables**	**Personal Behaviors**
P2	Personal Experiences with Illness	I felt helpless when I first noticed the symptoms. I did not know if it was serious enough to go to the hospital or if I should wait and see if it got better
P4	Seeking Medical Help	The waiting time was very long, and I had to undergo several tests, which were quite expensive. The complexity of the process was overwhelming, especially for someone not familiar with the medical system
P6		I went to the nearest health center by taxi because it was too far to walk, and I was feeling very weak
P3	Obtaining Medication	After the diagnosis, I had to buy the prescribed medicines from a pharmacy. It was challenging because some of the medicines were not available in the hospital pharmacy, and I had to visit multiple places to find them
P4		The cost of the medicines was a burden. Sometimes, I had to choose which medication to buy based on what I could afford at the time

P3	Perception of Healthcare Quality	The waiting times were too long, but the doctors were very professional and thorough in their examinations
P7		I was satisfied with the treatment I received, but the long waiting times and the high cost of tests and medications were major drawbacks
P4	Participants diet habit	I eat whatever I find as I want; I have no food to forbid
P6		I try to change my diet and health habits as much as possible, but without salt, I add salt because it doesn't taste good
P1	Relation with health care worker	I have developed a good thrust with the health care worker. Especially for the reason that they got answers for each health related concerns while asking them and health education that is given for the first dragonized hypertensive patients
P5	Influence of Alcohol Consumption on Health-Seeking Behavior	Drinking alcohol made me less likely to seek medical help immediately because I often underestimated the seriousness of my symptoms
P10		Some of my friends who drink regularly tend to ignore their health issues until they become severe, which delays their treatment
P8	Influence of Smoking on Health-Seeking Behavior	Smoking made me reluctant to go to the hospital because I was afraid the doctors would blame my condition entirely on smoking
P9		I noticed that smokers in my community are less proactive about their health, often waiting until they experience significant health problems before seeking medical attention.

Personal Experiences with Illness

Participants shared their experiences when they or their family members fell ill. One participant reported,

"c." (P1)

Another participant mentioned,

"I felt helpless when I first noticed the symptoms. I did not know if it was serious enough to go to the hospital or if I should wait and see if it got better." (P2)

Seeking Medical Help

Participants described various steps they took to seek medical help. Most reported visiting nearby clinics or hospitals.

One interviewee stated, "I went to the nearest health center by taxi because it was too far to walk, and I was feeling very weak." (P6)

Regarding the examinations and costs involved, another participant shared, "The waiting time was very long, and I had to undergo several tests, which were quite expensive. The complexity of the process was overwhelming, especially for someone not familiar with the medical system." (P4)

Obtaining Medication

The process of obtaining medication was also discussed.

One participant noted, "After the diagnosis, I had to buy the prescribed medicines from a pharmacy. It was challenging because some of the medicines were not available in the hospital pharmacy, and I had to visit multiple places to find them." (P3)

Another participant added, "The cost of the medicines was a burden. Sometimes, I had to choose which medication to buy based on what I could afford at the time." (P4)

Perception of Healthcare Quality

Participants generally expressed mixed feelings about the quality of healthcare received. One participant said, "The waiting times were too long, but the doctors were very professional and thorough in their examinations." (P3)

Another participant commented, "I was satisfied with the treatment I received, but the long waiting times and the high cost of tests and medications were major drawbacks." (P7).

Participants diet habit

Most of participants have been mentioning the effect of diet habit on hypertension but the majority were not involved in the intervention and the reason that was raised by most participants were difficulties of adjustment with salt content.

A participant has mentioned that “I eat whatever I find as I want; I have no food to forbid” (P4).

And another participant (P6) stated “I try to change my diet and health habits as much as possible, but without salt, I add salt because it doesn't taste good.

Relation with health care worker

Participants about relation with healthcare worker were mixed: in which some participants with the health care worker were not feeling okay because of their waiting time and limited health care access like medication and so on. But some of them have developed a good thrust with the health care worker. Especially for the reason that they got answers for each health related concerns while asking them and health education that is given for the first dragonized hypertensive patients.

Influence of Alcohol Consumption on Health-Seeking Behavior

Participants provided varied insights into the impact of alcohol consumption on health-seeking behavior. One participant stated, "Drinking alcohol made me less likely to seek medical help immediately because I often underestimated the seriousness of my symptoms." Another participant observed, "Some of my friends who drink regularly tend to ignore their health issues until they become severe, which delays their treatment." (P10)

Influence of Smoking on Health-Seeking Behavior

Participants also discussed the effect of smoking on health-seeking behavior. One participant remarked, "Smoking made me reluctant to go to the hospital because I was afraid the doctors would blame my condition entirely on smoking." (P8)

Another interviewee mentioned, "I noticed that smokers in my community are less proactive about their health, often waiting until they experience significant health problems before seeking medical attention." (P9).

Health care workers perspective

The health care workers mentioned that patients with hypertension especially who visit their clinic for the first time faces different struggles while visiting the clinic for the first time. Even the challenge of getting the clinic and pharmacy is not as such an easy thing for them.

The case team coordinator of outpatient department (nurse) has mentioned that “most hypertensive patients who visit this outpatient department struggle with the system to get the physician from activating their patient identification card. Then majority of the patients resists their prevention measurement like improving their diet habit but most of them have a good adherence with the medication that is prescribed.

The qualitative interviews revealed that first-diagnosed hypertensive patients face several challenges in their health-seeking journeys, including long waiting times, high costs of tests and medications, and the complexity of navigating the healthcare system. Personal habits such as alcohol consumption and smoking further influence people’s willingness and timeliness in seeking medical help. These insights underscore the need for more accessible and affordable healthcare services and targeted health education to address the specific barriers faced by hypertensive patients in Addis Ababa.

CHAPTER SIX

DISCUSSION

The overall health-seeking behavior of first-diagnosed patients with hypertension admitted to the outpatient department of selected government hospitals in Addis Ababa, Ethiopia, was 102 (47.6%) in this study (72). This percentage is lower than the 60% reported in a study conducted in southern Ethiopia, indicating better health-seeking behavior in the southern region, which could be attributed to variations in healthcare access and patient education. Additionally, another study in northern Ethiopia Gondar reported a 55% rate of health-seeking behavior among newly diagnosed hypertensive patients. As per a participant thought the waiting time was very long, and had to undergo several expensive tests. The complexity of the process was overwhelming, especially for someone not familiar with the medical system also The qualitative interviews revealed that first-diagnosed hypertensive patients face several challenges in their health-seeking journeys, including long waiting times, high costs of tests and medications, and the complexity of navigating the healthcare system, In addition to this some participants with the health care worker were not feeling okay because of their waiting time and limited health care access like medication and so on. But some of them have developed a good thrust with the health care worker. This contrasts with studies from Ethiopia with one in the south reported health-seeking behavior exceeding 60%, suggesting better access and education, while another in the north found a 55% health-seeking rate among newly diagnosed hypertensive patients. The slightly greater percentage compared to our study might be due to different sociodemographic factors and healthcare infrastructure in the northern region.

The analysis of sociodemographic data from hypertensive patients' first hospital visits revealed significant trends. The sex distribution revealed that a majority of women (52.8%) were female, which is consistent with the global pattern of increased hypertension among women (66). Marital status indicated a predominance of married individuals (70.1%), emphasizing family support in managing hypertension. Educational attainment varies, with a notable portion able to read and write (39.3%), impacting health literacy. The income distribution suggests socioeconomic influences, with a substantial proportion earning 3100-6000 monthly (32.71%) (62). Comparisons with global studies show similar trends in gender and age demographics but may

diverge in marital status and educational attainment, reflecting regional sociocultural differences (66).

The analysis of clinical characteristics among hypertensive patients during their first hospital visit revealed significant findings regarding prevalent health conditions and awareness levels within the surveyed population. After the diagnosis, obtaining prescribed medicines was challenging as some were unavailable at the hospital pharmacy, necessitating visits to multiple locations. This situation mirrors findings from an analysis of clinical characteristics among hypertensive patients during their initial hospital visits, highlighting significant health conditions and awareness levels within the surveyed population. Diabetes mellitus is a notable concern, with 26.2% of respondents affirming its presence, suggesting a considerable burden of comorbidity. This finding aligns with global trends indicating a high prevalence of diabetes among hypertensive individuals, emphasizing the importance of integrated management strategies (70). Similarly, the acknowledgment of cardiovascular disease by 15.4% of respondents underscores the complex nature of coexisting conditions among hypertensive patients, necessitating comprehensive healthcare approaches to address multifactorial risk factors. Notably, the relatively low awareness of hypertension, reported by only 52.3% of respondents, signals a critical gap in health literacy and preventive measures. Comparisons with global studies may reveal variations in awareness levels and health condition prevalence, influenced by sociocultural factors and healthcare infrastructure. While similar trends may be observed in Europe and Asia regarding the prevalence of comorbidities among hypertensive patients, sub-Saharan African and South African studies may highlight disparities in healthcare access and awareness, potentially impacting disease management outcomes (43).

The comprehensive analysis of health-seeking behavior among hypertensive patients during their first hospital visit provides critical insights into healthcare utilization and practices within the surveyed population. When they fell ill, it was a very stressful time. Initially, they considered home remedies before eventually deciding to visit the clinic. This scenario reflects insights from a comprehensive analysis of health-seeking behavior among hypertensive patients during their initial hospital visit, shedding light on healthcare utilization and practices among the surveyed population. One notable finding is the prevalence of reliance on regular medication prescribed by physicians (51.4%), indicating a proactive approach to health management among a significant

portion of respondents. However, the proportion of individuals (16.4%) who resorted to taking random drugs without medical consultation underscores the potential risks associated with self-medication practices, including adverse drug interactions and ineffective treatment outcomes. Moreover, the high frequency of hospital visits primarily driven by sickness (65.0%) highlights the significant burden of chronic conditions such as hypertension on healthcare systems and the importance of timely medical intervention. Comparisons with similar studies conducted globally may reveal variations in health-seeking behaviors influenced by cultural norms, healthcare infrastructure, and socioeconomic factors. While studies in Europe and Asia have emphasized patient adherence to physician-prescribed treatments (43,64), research in sub-Saharan countries and South Africa may underscore challenges in accessing healthcare services and low health literacy levels among hypertensive populations (55,26). Discrepancies with previous studies could arise from differences in sample demographics, methodologies, or healthcare systems, warranting further investigation to inform tailored interventions and address gaps in healthcare delivery.

The data highlight the relatively high prevalence of diabetes mellitus within the population, affecting 23.8% of individuals. Conversely, coronary artery disease, chronic heart failure, atrial fibrillation, and previous history of stroke exhibited lower prevalence rates, ranging from 3.7% to 11.2%. These findings underscore the complex interplay between hypertension and other comorbidities, suggesting the need for comprehensive management strategies to address multiple health conditions simultaneously. Comparisons with similar studies conducted globally revealed varying prevalence rates of comorbidities among hypertensive populations. Studies in Europe and Asia may report higher rates of coronary artery disease and atrial fibrillation due to aging populations and lifestyle factors (31). In contrast, research in sub-Saharan Africa and South Africa may highlight a greater burden of diabetes mellitus and chronic heart failure, reflecting the epidemiological transition and increasing rates of noncommunicable diseases in these regions. The difference between this and previous studies could stem from differences in sample characteristics, diagnostic criteria, or healthcare infrastructure, emphasizing the importance of context-specific approaches to disease management.

The findings regarding age and health-seeking behavior underscore the complexity of factors influencing healthcare decisions among different age groups. Young adults aged 20-40 years

exhibited a borderline significant association with health-seeking behavior, suggesting a need for targeted interventions to understand and address the unique healthcare needs of this demographic group. Educational status emerged as a significant predictor of health-seeking behavior, with individuals holding a degree or higher education level demonstrating a significantly greater likelihood of good health-seeking behavior. Moreover, the notable association observed among individuals in preparatory schools (grades 10 and 11) highlights the potential impact of education on healthcare engagement. Conversely, the association between illiteracy and poorer health-seeking behavior emphasizes the critical role of literacy and health education in promoting proactive healthcare-seeking habits.

The presence of coronary artery disease emerged as a significant predictor of health-seeking behavior, indicating that individuals with existing cardiovascular health concerns are more inclined to seek medical attention. This finding underscores the importance of targeted healthcare interventions for populations at greater risk of specific health conditions. Additionally, the association between low income and health-seeking behavior suggests potential economic barriers to accessing healthcare services. Addressing these socioeconomic factors is crucial for promoting equitable healthcare access and improving overall health outcomes. These findings collectively contribute to a deeper understanding of the multifaceted determinants of health-seeking behavior among hypertensive patients, emphasizing the need for holistic healthcare strategies that consider demographic, educational, economic, and health-related factors.

CHAPTER SEVEN

6 Conclusion

The overall health-seeking behavior of the study participants was low 47.6%. Age, educational status, monthly income, and the presence of coronary artery disease were significantly associated with the health-seeking behavior of the study participants. The qualitative interviews with first-diagnosed hypertensive patients in Addis Ababa, Ethiopia, revealed significant challenges in their health-seeking journeys, including long waiting times, high costs of tests and medications, and the complexity of navigating the healthcare system. Participants shared personal experiences of stress and uncertainty when ill, described the process of seeking medical help and obtaining medication, and expressed mixed feelings about the quality of healthcare received. Additionally, personal habits such as alcohol consumption and smoking were found to influence people's willingness and timeliness in seeking medical help. These insights highlight the need for more accessible and affordable healthcare services and targeted health education to address the specific barriers faced by hypertensive patients.

Recommendations

The following are the recommendations based on the study findings for different stakeholders:

1. Government and Policy Makers

It is imperative for government bodies and policy makers to develop and implement comprehensive policies that prioritize educational initiatives aimed at raising awareness about hypertension and the importance of medication adherence. These initiatives should also focus on promoting regular health monitoring practices, including weight checks, as part of preventive healthcare measures. Additionally, policies should be designed to integrate social support systems into healthcare services to enhance medication adherence among hypertensive individuals.

2. Policy development

The findings from this study suggest the need for policy development that emphasizes the importance of regular health monitoring, particularly weight monitoring, as a key component of managing chronic conditions such as hypertension. Policies should also address cultural variations in health behaviors and incorporate social support systems into health promotion efforts to improve medication adherence rates among affected individuals.

3. Clinicians and Healthcare Providers

Clinicians and healthcare providers play a crucial role in promoting medication adherence among hypertensive patients. Patients should prioritize education on the significance of regular medication intake, weight monitoring, and preventive healthcare visits. Clinicians should also be trained to recognize and address cultural factors that may influence health behaviors and to integrate social support mechanisms into their patient care strategies.

4. Stakeholders and Researchers

Stakeholders and researchers should collaborate to further investigate and address the discrepancies identified in this study, such as the null association of advice from family or friends with medication adherence. Research efforts should focus on understanding cultural variations in health behaviors and developing interventions that integrate social support systems to improve medication adherence among hypertensive individuals.

5. Study Participants

Study participants can benefit from increased awareness about the importance of regular health monitoring, medication adherence, and preventive healthcare visits. They should actively engage in self-monitoring practices, including weight checks, and seek support from healthcare providers and social networks to effectively manage their hypertension and improve health outcomes.

6. Study Setting (Public Hospitals)

Public hospitals should implement strategies to enhance patient education and support systems for hypertensive individuals. This includes providing regular educational sessions on medication adherence, weight monitoring, and preventive healthcare practices. Public hospitals can also

collaborate with community organizations to integrate social support services into their healthcare delivery model, improving overall patient outcomes and medication adherence rates.

References

1. Olenja J. Editorial Health seeking behaviour in context. East Afr Med J [Internet]. 2003 [cited 2024 Jan 14];80(2):61–2. Available from: https://www.ajol.info/index.php/eamj/article/view/8689/1927

2. Fatma N. Analysis of Healthcare Seeking Behavior Among Patients Visiting Public Primary and Secondary Healthcare Facilities in an Urban Indian District.

3. Latunji OO, Akinyemi OO. FACTORS INFLUENCING HEALTH-SEEKING BEHAVIOUR AMONG CIVIL SERVANTS IN IBADAN, NIGERIA. Ann Ib Postgrad Med [Internet]. 2018 Jun [cited 2023 Nov 20];16(1):52. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6143883/

4. Self-Reported Morbidity and Health-Seeking Behavior and its Predictors Among a Geriatric Population in Western Ethiopia: Community-Based Cross-Sectional Study - PMC [Internet]. [cited 2024 Jan 12]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7732166/

5. Mou TJ, Afroz KA, Haq MdA, Jahan D, Ahmad R, Islam T, et al. The Effect of Socio-Demographic Factors in Health-Seeking Behaviors among Bangladeshi Residents during the First Wave of COVID-19. Healthcare. 2022 Mar 4;10(3):483.

6. Onyemaechi S, Ezenwaka U. Influence of sub-national social health insurance scheme on enrollees' health seeking behaviour in Anambra state, Nigeria: a pre and post study. BMC Public Health. 2022 Jun 11;22(1):1171.

7. Lyimo EJ, Msangi M, Zangira AJ, Msaki RV, Lekey A, Rwenyagira M, et al. Healthcare-seeking behaviours among mother's having under-five children with severe wasting in Dodoma and Mbeya regions of Tanzania-A qualitative study. PLOS Glob Public Health [Internet]. 2024 Jan 8 [cited 2024 Jan 12];4(1):e0001943. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10773934/

8. Oberoi S, Chaudhary N, Patnaik S, Singh A. Understanding health seeking behavior. J Fam Med Prim Care [Internet]. 2016 Jun [cited 2023 Nov 20];5(2):463. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5084583/

9. Musinguzi G, Anthierens S, Nuwaha F, Van Geertruyden JP, Wanyenze RK, Bastiaens H. Factors Influencing Compliance and Health Seeking Behaviour for Hypertension in Mukono and Buikwe in Uganda: A Qualitative Study. Int J Hypertens [Internet]. 2018 Apr 26 [cited 2023 Dec 28];2018:e8307591. Available from: https://www.hindawi.com/journals/ijhy/2018/8307591/

10. Holman HR. The Relation of the Chronic Disease Epidemic to the Health Care Crisis. ACR Open Rheumatol. 2020 Mar;2(3):167.

11. Mills KT, Stefanescu A, He J. The global epidemiology of hypertension. Nat Rev Nephrol [Internet]. 2020 Apr [cited 2023 Dec 23];16(4):223–37. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7998524/

12. Mekonene M, Baye K, Gebremedhin S. Epidemiology of hypertension among adults in Addis Ababa, Ethiopia. Prev Med Rep. 2023 Apr 1;32:102159.

13. Feyisa BR, Tamiru A, Debelo S, Feyisa I, Tola EK, Tolesa EJ, et al. Magnitude of hypertension and its association with obesity among employees of Wallaga University, Ethiopia: a cross-sectional study. BMJ Open. 2023 Jul 12;13(7):e070656.

14. Prevalence and Associated Factors of Hypertension Among Adults in Gurage Zone, Southwest Ethiopia, 2022 - Mamo Solomon, Bisrat Zeleke Shiferaw, Tadesse Tsehay Tarekegn, Fisha Alebel GebreEyesus, Shegaw Tesfa Mengist, Mitiku Mammo, Agerie Aynalem Mewahegn, Bethelihem Tadesse Mengiste, Tamene Fetene Terefe, 2023 [Internet]. [cited 2024 Feb 8]. Available from: https://journals.sagepub.com/doi/full/10.1177/23779608231153473

15. National Academies of Sciences E, Division H and M, Services B on HC, Disabilities C on HCU and A with. Factors That Affect Health-Care Utilization. In: Health-Care Utilization as a Proxy in Disability Determination [Internet]. National Academies Press (US); 2018 [cited 2024 Jan 12]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK500097/

16. Vedanthan R, Tuikong N, Kofler C, Blank E, Kamano JH, Naanyu V, et al. Barriers and Facilitators to Nurse Management of Hypertension: A Qualitative Analysis from Western Kenya. Ethn Amp Dis [Internet]. 2016 [cited 2024 Jan 12];26(3):315. Available from: https://www.academia.edu/53834876/Barriers_and_Facilitators_to_Nurse_Management_of_Hypertension_A_Qualitative_Analysis_from_Western_Kenya

17. Zhang Y, Lee EWJ, Teo WP. Health-Seeking Behavior and Its Associated Technology Use: Interview Study Among Community-Dwelling Older Adults. JMIR Aging [Internet]. 2023 May 4 [cited 2023 Dec 22];6:e43709. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10196894/

18. Gupta S, Virk A, Mittal A, Agarwal BK. Patterns and determinants of healthcare-seeking behavior among hypertensive patients in a rural population of north India: A mixed-method study. J Fam Med Prim Care [Internet]. 2020 Jun [cited 2023 Dec 28];9(6):2830. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7491806/

19. Prevalence of hypertension and health-seeking behaviours of market women in Abia State Nigeria | Journal of Dietitians Association of Nigeria. [cited 2023 Dec 28]; Available from: https://www.ajol.info/index.php/jdan/article/view/231234

20. health seeking behavior among hypertension patients in ethiopia - Google Search [Internet]. [cited 2023 Dec 28]. Available from: https://www.google.com/search?client=firefox-b-d&q=health+seeking+behavior+among+hypertension+patients+in+ethiopia

21. Iqbal AM, Jamal SF. Essential Hypertension. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 [cited 2023 Dec 22]. Available from: http://www.ncbi.nlm.nih.gov/books/NBK539859/

22. Gelassa FR, Birhanu A, Shibiru A, Nagari SL, Jabena DE. Undiagnosed status and associated factors of hypertension among adults living in rural of central, Ethiopia, 2020: Uncovering the hidden magnitude of hypertension. PLOS ONE [Internet]. 2022 Dec 15 [cited 2023 Dec 22];17(12):e0277709. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9754235/

23. Robert M. Carey, Paul Muntner, Hayden B. Bosworth, Paul K. Whelton. Prevention and Control of Hypertension: JACC Health Promotion Series - PMC [Internet]. 2018 [cited 2023 Nov 20]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6481176/

24. Cardiovascular diseases (CVDs) [Internet]. [cited 2023 Dec 22]. Available from: https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)

25. Measuring Blood Pressure: MedlinePlus Medical Test [Internet]. [cited 2023 Dec 23]. Available from: https://medlineplus.gov/lab-tests/measuring-blood-pressure/

26. Hypertension [Internet]. [cited 2023 Dec 23]. Available from: https://www.who.int/health-topics/hypertension

27. National Health and Nutrition Examination Survey 2020.

28. Health Threats from High Blood Pressure | American Heart Association [Internet]. [cited 2023 Dec 23]. Available from: https://www.heart.org/en/health-topics/high-blood-pressure/health-threats-from-high-blood-pressure

29. High blood pressure symptoms: When to seek medical help [Internet]. [cited 2023 Dec 23]. Available from: https://www.medicalnewstoday.com/articles/327320

30. Universal health coverage (UHC) [Internet]. [cited 2023 Dec 22]. Available from: https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)

31. vision(1).lN_0DA7d.pdf.part.

32. Dey S, Mukherjee A, Pati MK, Kar A, Ramanaik S, Pujar A, et al. Socio-demographic, behavioural and clinical factors influencing control of diabetes and hypertension in urban Mysore, South India: a mixed-method study conducted in 2018. Arch Public Health. 2022 Nov 15;80(1):234.

33. Malih Radhi M, Niazy SM, Naser Abed S. Individual-related factors associated with treatment adherence among hypertensive patients. J Public Health Afr. 2023 May 24;14(6):2466.

34. Abdul Wahab NA, Makmor Bakry M, Ahmad M, Mohamad Noor Z, Mhd Ali A. Exploring Culture, Religiosity and Spirituality Influence on Antihypertensive Medication Adherence Among Specialised Population: A Qualitative Ethnographic Approach. Patient Prefer Adherence. 2021 Oct 5;15:2249–65.

35. Kumar K, Greenfield S, Raza K, Gill P, Stack R. Understanding adherence-related beliefs about medicine amongst patients of South Asian origin with diabetes and cardiovascular disease patients: a qualitative synthesis. BMC Endocr Disord. 2016 May 26;16:24.

36. Rajkumar E, Romate J. Behavioural Risk Factors, Hypertension Knowledge, and Hypertension in Rural India. Int J Hypertens. 2020 Mar 9;2020:8108202.

37. Diabetes [Internet]. [cited 2023 Dec 30]. Available from: https://www.who.int/health-topics/diabetes#tab=tab_1

38. WHO | Regional Office for Africa [Internet]. 2023 [cited 2023 Dec 30]. African region tops world in undiagnosed diabetes: WHO analysis. Available from: https://www.afro.who.int/news/african-region-tops-world-undiagnosed-diabetes-who-analysis

39. Sahile AT, Bekele GE. Prevalence of Diabetes Mellitus and Associated Factors in Addis Ababa Public Health Facilities, Addis Ababa, Ethiopia, 2016. Diabetes Metab Syndr Obes Targets Ther [Internet]. 2020 Feb 25 [cited 2023 Dec 30];13:501–8. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7049281/

40. Rizqillah AF, Ma'rifah AR. Factors Influencing Health Seeking Behavior Among Type 2 Diabetes Mellitus Patients. In: Proceedings of the 1st International Conference on Community Health (ICCH 2019) [Internet]. Purwokerto, Indonesia: Atlantis Press; 2020 [cited 2024 Jan 1]. Available from: https://www.atlantis-press.com/article/125933962

41. Zacher M, Wang J, Short SE. The Contributions of Hypertension Diagnosis and Blood Pressure Control to Subjective Life Expectancy in a Representative Sample of Older U.S. Adults. J Gerontol B Psychol Sci Soc Sci [Internet]. 2021 Feb 2 [cited 2024 Jan 1];77(2):378–88. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8824611/

42. High blood pressure dangers: Hypertension's effects on your body - Mayo Clinic [Internet]. [cited 2024 Jan 1]. Available from: https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/art-20045868

43. www.heart.org [Internet]. [cited 2024 Jan 1]. How High Blood Pressure Can Lead to a Heart Attack. Available from: https://www.heart.org/en/health-topics/high-blood-pressure/health-threats-from-high-blood-pressure/how-high-blood-pressure-can-lead-to-a-heart-attack

44. McKinley S, Moser DK, Dracup K. Treatment-seeking behavior for acute myocardial infarction symptoms in North America and Australia. Heart Lung [Internet]. 2000 Jul 1 [cited 2024 Jan 1];29(4):237–47. Available from: https://www.sciencedirect.com/science/article/pii/S0147956300112877

45. Masenga SK, Kirabo A. Hypertensive heart disease: risk factors, complications and mechanisms. Front Cardiovasc Med [Internet]. 2023 Jun 5 [cited 2024 Jan 2];10:1205475. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10277698/

46. Lauder L, Mahfoud F, Azizi M, Bhatt DL, Ewen S, Kario K, et al. Hypertension management in patients with cardiovascular comorbidities. Eur Heart J [Internet]. 2023 Jun 20 [cited 2024 Jan 2];44(23):2066–77. Available from: https://academic.oup.com/eurheartj/article/44/23/2066/6808663

47. ElGuindy A, Yacoub MH. Heart failure with preserved ejection fraction. Glob Cardiol Sci Pract [Internet]. 2012 [cited 2024 Jan 2];2012(1). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4239812/

48. Fetensa G. Health Seeking Behavior and Associated Factors among Chronic Heart Failure Adult Clients, Jimma University Specialized Hospital, South West Ethiopia. 2018 Sep 18;

49. Gorcan A, Argan O, Avci E, Kiris T, Safak O, Yildirim ST, et al. A new risk factor for predicting stroke in patients with atrial fibrillation: morning blood pressure surge. Blood Press Monit. 2023 Apr 1;28(2):73–8.

50. Verdecchia P, Angeli F, Reboldi G. Hypertension and Atrial Fibrillation. Circ Res [Internet]. 2018 Jan 19 [cited 2024 Jan 2];122(2):352–68. Available from: https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.117.311402

51. Nemtsova V, Vischer AS, Burkard T. Hypertensive Heart Disease: A Narrative Review Series—Part 1: Pathophysiology and Microstructural Changes. J Clin Med [Internet]. 2023 Mar 30 [cited 2024 Jan 2];12(7):2606. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10094934/

52. Boehme AK, Esenwa C, Elkind MSV. Stroke Risk Factors, Genetics, and Prevention. Circ Res [Internet]. 2017 Feb 3 [cited 2024 Jan 2];120(3):472–95. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5321635/

53. Dong S, Fang J, Li Y, Ma M, Hong Y, He L. The population attributable risk and clustering of stroke risk factors in different economical regions of China. Medicine (Baltimore) [Internet]. 2020 Apr 17 [cited 2024 Jan 2];99(16):e19689. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7220510/

54. Yahya T, Jilani MH, Khan SU, Mszar R, Hassan SZ, Blaha MJ, et al. Stroke in young adults: Current trends, opportunities for prevention and pathways forward. Am J Prev Cardiol [Internet]. 2020 Sep 9 [cited 2024 Jan 2];3:100085. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8315351/

55. Stroke | AHA/ASA Journals [Internet]. [cited 2024 Jan 2]. Available from: https://www.ahajournals.org/journal/str

56. Yimam W, Prem K, Anteneh S, Wolie H. Health-seeking behaviors and determinants among herpes zoster patients in South Wollo public hospitals, Ethiopia, 2022. Heliyon. 2024 Feb 15;10(3):e25205.

57. Teshome DF, Balcha SA, Ayele TA, Atnafu A, Gelaye KA. Development and Psychometric Validation of the Hypertension Beliefs Assessment Tool Among Adult Population in Northwest Ethiopia. Patient Prefer Adherence. 2021 Nov 25;15:2659–71.

58. Orji R, Vassileva J, Mandryk R. Towards an Effective Health Interventions Design: An Extension of the Health Belief Model. Online J Public Health Inform. 2012 Dec 19;4(3):ojphi.v4i3.4321.

59. Joho AA. Using the Health Belief Model to Explain the Patient's Compliance to Anti-hypertensive Treatment in Three District Hospitals - Dar Es Salaam, Tanzania: A Cross Section Study. East Afr Health Res J. 2021;5(1):50–8.

60. Wubneh M. Addis Ababa, Ethiopia – Africa's diplomatic capital. Cities. 2013 Dec 1;35:255–69.

61. Abate D, Taye B, Abseno M, Biadgilign S. Epidemiology of anti-tuberculosis drug resistance patterns and trends in tuberculosis referral hospital in Addis Ababa, Ethiopia. BMC Res Notes. 2012 Aug 28;5:462.

62. Muluneh MA, Zeru AB, Derseh BT, Molla Kebede A. Survival Status and Predictors of Mortality among Multidrug-Resistant Tuberculosis Patients in Saint Peter's Specialized Hospital, Addis Ababa, Ethiopia. Can J Infect Dis Med Microbiol J Can Mal Infect Microbiol Medicale. 2021;2021:6696199.

63. Solomon N, Molla M, Ketema B. "I want to perform and succeed more than those who are HIV-seronegative" Lived experiences of youth who acquired HIV perinetally and attend Zewditu Memorial Hospital ART clinic, Addis Ababa, Ethiopia. PLoS ONE. 2021 May 27;16(5):e0251848.

64. Abebe W, Worku A, Moges T, Tekle N, Amogne W, Haile T, et al. Trends of follow-up clinic visits and admissions three-months before and during COVID-19 pandemic at Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia: an interrupted time series analysis. BMC Health Serv Res. 2021 Dec;21(1):1–10.

65. Assefa T, Haile Mariam D, Mekonnen W, Derbew M, Enbiale W. Physician distribution and attrition in the public health sector of Ethiopia. Risk Manag Healthc Policy. 2016 Dec 7;9:285–95.

66. Anota A, Nedi T. Blood Pressure Control and Associated Factors Among Hypertensive Patients Attending Shashemene Referral Hospital, Oromia, Ethiopia. Hosp Pharm. 2022 Aug;57(4):555–63.

67. Shibiru T, Arulandhu A, Belete A, Etana J, Amanu W. Prevalence and Factors Associated with Alcohol Consumption Among Secondary School Students in Nekemte, Ethiopia: A Cross-Sectional Study. Subst Abuse Rehabil. 2023 May 12;14:35–47.

68. Msambichaka B, Abdul R, Abdulla S, Klatser P, Tanner M, Kaushik R, et al. A Cross-Sectional Examination of Physical Activity Levels and Their Socio-Demographic Determinants in Southern Tanzania. Int J Environ Res Public Health. 2018 Jun;15(6):1054.

69. Mengesha SD, Teklu KT, Weldetinsae A, Serte MG, Kenea MA, Dinssa DA, et al. Tobacco use prevalence and its determinate factor in Ethiopia- finding of the 2016 Ethiopian GATS. BMC Public Health. 2022 Mar 21;22(1):555.

70. Kifle A. ASSESSMENT OF HEALTH SEEKING BEHAVIOUR ON HYPERTENSION AND ASSOCIATED FACTORS AT GILGEL GIBE FIELD RESEARCH CENTER, SOUTHWEST ETHIOPIA.

71. ajol-file-journals_573_articles_231234_submission_proof_231234-6735-561071-1-10-20220905(1).pdf.

72. Bonsa F, Gudina EK, Hajito KW. Prevalence of Hypertension and Associated Factors in Bedele Town, Southwest Ethiopia. Ethiop J Health Sci. 2014 Jan;24(1):21–6.

ANNEXES

APPENDIX-A: Information sheet and informed consent (English version)

Participant information sheet and informed voluntary consent form for the study participants to assess "Health seeking behavior and associated factors among first diagnosed patients for hypertension attending the outpatient departments of selected government hospitals in Ababa, Ethiopia."

My name is _____. I am working as a data collector for the study being conducted by Momina Siraj, an MSc student at Addis Ababa University, College of Health Science, School of Nursing and Midwifery, for the partial fulfillment of a Master's degree in Cardiovascular Nursing. I kindly request that you lend your attention to explaining to you about the study and being selected as the study participant.

1. The research title:

Health seeking behavior and associated factors among first diagnosed patients for hypertension attending at outpatient Department of selected government hospitals, Ababa Ethiopia.

2. Purpose of the study

This study aimed to assess health-seeking behavior and associated factors among patients first diagnosed with hypertension at selected government hospitals in Ababa, Ethiopia.

3. Participation

If you agree to join the study, you will be kindly requested to answer all the questions that will be asked by the data collector.

4. Confidentiality

Information obtained from you will be treated confidentially and will NEVER be used for any purpose other than this study.

5. Risk

No harm is expected to happen to anyone participating in this study.

After reading and understanding the information explained above, if you agree to participate in this study, choose YES by placing a mark in the box provided.

• YES • NO

APPENDIX-B: የመረጃወረቀትእናበመረጃላይየተመሰረተስምምነት (የአማርኛቅጂ)

ለጥናቱ ተሳታፊ የተሣታፊ መረጃ ወረቀት እና በፈቃደኝነት ላይ የተመሰረተ የፍቃድ ቅጽ ለጥናቱ ተሳታፊ በተመረጡ የመንግስት ሆስፒታሎች ውስጥ የደም ግፊት ባለባቸው ጎልማሳ ተገልጋዮች የጤና አጠባበቅ ባህሪ እና ተያያዥ ምክንያቶች አበባ ኢትዮጵያ

፣ አዲስ አበባ ኢትዮጵያ፣ ሰፊ ጥናት

የኔ ስም _____. በአዲስ አበባ ዩኒቨርሲቲ፣ ጤና ሳይንስ ኮሌጅ፣ ነርሲንግ እና አዋላጅ ትምህርት ቤት የእምእስሲ ተማሪ በሆነው በሞሚና እየተካሄደ ላለው ጥናት መረጃ ሰብሳቢ ሆኜ እየሰራሁ ነው፣ በካዲዮቫስኩላር ነርሲንግ ሁለተኛ ዲግሪዬን በከፊል ለመጨረስ። ስለ ጥናቱ እና የጥናቱ ተካፋይ ሆኖ መመረጡን ለእርስዎ ለማስረዳት ትኩረትዎን እንዲሰጡኝ በአክብሮት እጠይቃለሁ።

1. የምርምር ርዕስ፡-

በተመረጡ የመንግስት ሆስፒታሎች ውስጥ የደም ግፊት ባለባቸው ጎልማሳ ተገልጋዮች የጤና አጠባበቅ ባህሪ እና ተያያዥ ምክንያቶች አበባ ኢትዮጵያ

2. የጥናቱ ዓላማ፡-

ይህ ጥናት የታካሚዎችን የበተመረጡ የመንግስት ሆስፒታሎች ውስጥ የደም ግፊት ባለባቸው ጎልማሳ ተገልጋዮች የጤና አጠባበቅ ባህሪ እና ተያያዥ ምክንያቶች አበባ ኢትዮጵያ

3. ተሳትፎ

ጥናቱን ለመቀላቀል ከተስማሙ በመረጃ ሰብሳቢው የሚጠየቁትን ጥያቄዎች በሙሉ እንዲመልሱ በአክብሮት ይጠየቃሉ።

4. ምስጢራዊነት

ከእርስዎ የተገኘ መረጃ በሚስጥር ይያዛል እናም ከዚህ ጥናት ውጭ ለማንኛውም ዓላማ ፈጽሞ ጥቅም ላይ አይውልም.

5. ስጋት

በዚህ ጥናት ውስጥ በሚሳተፍ ማንኛውም ሰው ላይ ምንም አይነት ጉዳት አይደርስም ተብሎ ይጠበቃል። ከላይ የተገለፀውን መረጃ ካነበቡ እና ከተረዱ በኋላ; በዚህ ጥናት ለመሳተፍ ከተስማሙ፣ በተዘጋጀው ሳጥን ውስጥ ምልክት በማድረግ አዎ የሚለውን ይምረጡ።

አዎ አይ

APPENDIX-C: Sociodemographic Characteristics

1. Sex

Male

Female

2. Age of respondents
3. Marital status

Married

Single

Widow

Divorced

4. Highest educational level

No formal education

Primary education only

Secondary education

Tertiary education

5. Average monthly income
6. Educational status

Illiterate

Able to read and write

Primary school (from grade 1 -8)

Secondary school (9 & 10)

Preparatory (10 &11)

Deploma

Degree and more

APPENDIX-D: Clinical characteristics related questions

1, do you have cardio vascular disease

A. Yes B. No

2, do you have previous history of stroke?

A. Yes B. No

APPENDIX-E: Health-Seeking Behaviors of the Respondents

1. Respondents health-protective measures
   a) By ignoring any feeling of sickness
   b) Taking random drug which is not prescribed by physician
   c) Taking regular medication prescribed by the physician
2. Self-reported illnesses that took respondents to hospital in the last two months

A. Hypertension
B. Diabetes
C. Chronic kidney disease
D. Chronic Heart failure
E. Atrial fibrillation
F. Hypertension and diabetes
G. Obesity and diabetes
H. Others

3. No of times visited the hospital in the last 2 months

a) None
b) Once only when sick
c) Twice
d) Thrice

4. Reasons for going to the hospital

a) I was sick

b) Advised to do so by family/friends
c) Went for check-up
d) Other
5. Weight monitoring frequency
a) I do not check
b) Only when I am sick in hospital
c) Monthly
d) Weekly
e) Daily

6. Blood pressure monitoring frequency
A. I do not check
B. Only when I am sick in hospital
C. Monthly
D. Weekly
E. Daily
7. Preferred place of treatment
a) Hospital
b) Non-hospital

APPENDIX F: Factors associated with health seeking behavior

1) The presence of diabetes mellitus

Yes

No

2) The presence of coronary artery disease

Yes

No

3) The presence of chronic heart failure

Yes

No

4) The presence of atrial fibrillation

Yes

No

5) Previous history of stroke

Yes

No

APPENDIX G: Interview guide

1. Imagine a situation where you got sick (or a family member, your children), how was it? What did you do?
2. Regarding the previous situation, where did you search for help? How did you go to the place (transport)? Which exams did you do and how was it (cost, waiting time, complexity)? How did you get the medicines?
3. How would you qualify the healthcare you received? (Waiting times, satisfaction…)
4. How do you see the effect of drinking alcohol on the health-seeking behavior of hypertensive patients?
5. How do you see the effect of smoking gigas on the health-seeking behavior of hypertensive patients?
6. How do you see the effect of diet habits on the health-seeking behavior of hypertensive patients?
7. What does your health care practice look like?
8. How do you see your relationship with the health care professionals?
9. How do you see the influence of your health care professional on your health-seeking behavior?

APPENDIX H፡የሶሺዮዲሞግራፊእናየተሳታፊዎችክሊኒካዊባህሪያት

ጾታ

ወንድ

ሴት

2. ዕድሜ_____

3. የጋብቻ ሁኔታ

ያገባ

ባል የሞተባት

ተለያይቷል።

ነጠላ

4. ሃይማኖት

ኦርቶዶክስ

ፕሮቴስታንት

ሙስሊም

ካቶሊክ

ሌሎች

5. የትምህርት ደረጃ

መሃይም
ማንበብ እና መጻፍ የሚችል

የመጀመሪያ ደረጃ ትምህርት ቤት (ከ1-8ኛ ክፍል)

ሁለተኛ ደረጃ ትምህርት ቤት (9 እና 10)

መሰናዶ (10 እና 11)

ኮሌጅ እና ከዚያ በላይ

APPENDIX-I: ጤና ፈላጊ ባህሪዎች

1, ምላሽ ሰጪዎች የጤና-መከላከያ እርምጃዎች
ማንኛውንም የሕመም ስሜት ችላ በማለት
በሐኪም ያልተደነገገውን በዘፈቀደ መድሃኒት መውሰድ
በሐኪሙ የታዘዘውን መደበኛ መድሃኒት መውሰድ

2, ባለፉት ሁለት ወራት ውስጥ ምላሽ ሰጪዎችን ወደ ሆስፒታል የወሰዱ ራስን የሚጠቁሙ በሽታዎች
የደም ግፊት
የስኳር በሽታ
ሥር የሰደደ የኩላሊት በሽታ
ሥር የሰደደ የልብ ድካም
ኤትሪያል ፊብሪሌሽን
የደም ግፊት እና የስኳር በሽታ
ከመጠን በላይ ውፍረት እና የስኳር በሽታ
ሌሎች

3, ለፉት 2 ወራት ውስጥ ሆስፒታሉን የጎበኙበት ጊዜ የለም።
ምንም
አንድ ጊዜ ስመም ብቻ
ሁለት ግዜ

4, ወደ ሆስፒታል የሚሄዱበት ምክንያቶች
ታምሜ ነበር
በቤተሰብ/ጓደኞች ምክር
ለምርመራ ሄዷል
ሌላ

5, የክብደት ክትትል ልምድ
ክትትል አላደርግም
ሆስፒታል ውስጥ ስታመም ብቻ ነው
በየወሩ
በየሳምንቱ
በየቀኑ

6, የደም ስኳር ክትትል ልምድ
አልከታተልም
ሆስፒታል ውስጥ ስታመም ብቻ ነው
በየሩ
በየሳምንቱ
በየቀኑ

7, ተመራጭ የሕክምና ቦታዎ
ጸሎት ቤት መሄድ
ዕፅዋትን እና ባህላዊ አማራጮች
ከ ፋርማሲ የሚገዙ መድሃኒቶች
ወደ ሆስፒታል መሄድ

ሌሎች ምላሾች

APPENDIX J: ከጤና ፍለጋ ባህሪ ጋር የተያያዙ ምክንያቶች

1, የልብ በሽታ መኖር

አዎ

እይ

2, የደም ቅዳ ቧንቧ በሽታ መኖሩ

አዎ

እይ

3, ሥር የሰደደ የልብ ድካም መኖር

አዎ

እይ

4, የአትሪያል ፋይብሪሌሽን መኖር

አዎ

አይ

5, የስትሮክ ታሪክ

አዎ

አይ

APPENDIX I፡ የስነ ባህሪ ጥያቄዎች

1, የታመምክበትን ሁኔታ አስብ ወይም አስታውስ (ወይም የቤተሰብ አባል፣ ልጆችህ) እንዴት ነበር? ምን አረግክ?

2,ያለፈውን ሁኔታ በተመለከተ, እርዳታ የት ፈልገዋል? ወደ ቦታው (ትራንስፖርት) እንዴት ሄዱ? የትኞቹን ሁኔታዎች ፈተና ሆኖቦት? መድሃኒቶቹን እንዴት አገኛችሁት?

3, ያገኙትን የጤና እንክብካቤ እንዴት ነበር?

4, የአልኮል መጠጦችን መጠጣት የደም ግፊት በሽተኞችን ጤና ፈላጊ ባህሪ ላይ ያለውን ተጽእኖ እንዴት ያዩታል።

5, ሲጋራ ማጨስ በከፍተኛ የደም ግፊት ህመምተኞች ጤና ፍለጋ ባህሪ ላይ ያለውን ተጽእኖ እንዴት ያዩታል።

6, የአመጋገብ ልማድ በደም ግፊት በሽተኞች ጤና ፍለጋ ባህሪ ላይ ያለውን ተጽእኖ እንዴት ያዩታል።

7. □□□ □□□□□ □□□□□ □□ □□□□□?

8. □□□ □□□□□ □□□□□□ □□ □□□□□ □□□□□ □□□□ □□□□?

9. □□□ □□□□□□ □□□□□ □□□ □□□ □□□□ □□ □□□□ □□□□ □□□□ □□□□?