

**ASSESSMENT OF SOCIOCULTURAL DETERMINANT OF SELF-CARE PRACTICES
AMONG PATIENTS WITH HYPERTENSION ATTENDING UNIVERSITY OF BENIN
TEACHING HOSPITAL, BENIN CITY, EDO STATE.**

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BENIN CITY, EDO STATE.**

OCTOBER, 2025.

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**IN PARTIAL FUFILLMENT OF THE REQUIREMENT FOR THE AWARD OF
BACHELOR OF SCIENCE IN NURSING**

OCTOBER, 2025

CERTIFICATION

This is to certify that this research project by **IROH LOUINTA ETINOSA** with matriculation number..... has been examined and approved for the award of **“Bachelor of Science in Nursing”**

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(Chief examiner)

DATE

DECLARATION

This is to declare that this research project titled” **ASSESSMENT OF SOCIOCULTURAL DETERMINANT OF SELF-CARE PRACTICES AMONG PATIENTS WITH HYPERTENSION ATTENDING UNIVERSITY OF BENIN TEACHING HOSPITAL, BENIN CITY, EDO STATE.**” was carried out by **IROH LOUINTA ETINOSA** with matriculation number....., in the department of Nursing Science.

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ABSTRACT

Hypertension is a leading cause of morbidity and mortality globally. In Nigeria, poor self-care practices remain a challenge, often influenced by sociocultural beliefs and determinants. As such, this study assessed the sociocultural determinants of self-care practices among patients with hypertension attending the University of Benin Teaching Hospital (UBTH), Benin City, Edo State. A Descriptive cross-sectional study was used in this study, of which data were collected from 230 hypertensive patients through structured questionnaires. The result showed that majority of participants were female (53%) with a mean age of 49 years. With a high prevalence of senior secondary education (24%), majority were either retired or employed in the private sector, with an average monthly income of ₦83,258.24. In addition, adherence to medication ($\bar{x}$ = 3.18) was high, whereas practices such as home blood pressure monitoring ($\bar{x}$ = 2.46) and dietary management ($\bar{x}$ = 2.45) showed moderate adherence. Furthermore, common socio-cultural factors sinfluencing self-care practices included high medication costs ($\bar{x}$ = 3.45), family support ($\bar{x}$ = 3.43), religious beliefs ($\bar{x}$ = 3.25), spiritual beliefs ($\bar{x}$ = 3.11), and pressure to adhere to cultural food customs which could affect dietary adherence ($\bar{x}$ = 3.10). Multivariate logistic regression further indicated that longer duration of hypertension significantly increased adherence odds (OR=8.606, 95% CI: 1.914–38.693, $p=0.005$) with rural residents (OR=2.164, 95% CI: 1.068–4.385, $p=0.032$) being more adherent. More so, perceived stigma increased the likelihood of adherence (OR=2.595, 95% CI: 1.065–148.987, $p=0.044$). Hence, the study recommended developing culturally sensitive programs to destigmatize hypertension and dispel misconceptions about traditional/spiritual practices in relation to treatment.

Keywords: Hypertension, self-care practices, sociocultural determinants, Nigeria, UBTH.

DEDICATION

This research project work is dedicated to Almighty God for his grace through the period of this research and to my dear parents, Mr. & Mrs. Iroh for their continuous support and encouragement throughout this journey.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Hypertension is defined as the persistent elevation of the systolic and or diastolic blood pressure that is equal to or more than 140 and 90 mmHg respectively in adults aged 18 years and above (World Health Organisation [WHO], 2024). It is commonly known as high blood pressure, it is a major public health concern and a leading cause of cardiovascular diseases, stroke, and kidney failure worldwide. It is also a major contributor to premature death and illness caused by non-communicable diseases. It is responsible for approximately 8.5 million deaths globally, primarily due to stroke, ischemic heart disease, and chronic kidney disease (Zhou et al., 2021). The World Health Organization (WHO) estimates that hypertension affects over 1.28 billion adults worldwide, with a significant proportion living in low- and middle-income countries including Nigeria where access to healthcare services is limited. In Nigeria, hypertension is a growing public health concern due to urbanization, changes in lifestyle, dietary habits, and increasing stress levels. Despite being a manageable condition, many individuals fail to adhere to recommended self-care practices, such as regular medication use, healthy eating, physical activity, stress management, and routine blood pressure monitoring. Poor self-care behaviors contribute to uncontrolled hypertension, leading to severe complications and increased mortality rates. In pre-industrial societies, blood pressure (BP) levels showed minimal variation, with average readings of approximately 115/75 mmHg, and remained relatively constant across different age groups. This level is considered to represent the normal or optimal BP for humans. In contrast, in most modern societies, systolic BP tends to increase progressively with age in both males and females. This trend is largely attributed to prolonged exposure to environmental

and lifestyle factors that contribute to gradual BP elevation over time, including high sodium intake, low dietary potassium, excess body weight, obesity, alcohol consumption, and physical inactivity. Hypertension has become a leading global cause of premature mortality, primarily due to its association with multiple comorbid conditions and the risk of damage to vital organs such as the brain, heart, and kidneys. Consequently, Lee et al. (2002) identified hypertension as one of the most widespread chronic health conditions in contemporary society.

The World Health Organization (WHO) defines self-care as the capacity of individuals, families, and communities to promote health, prevent disease, maintain well-being, and manage illness or disability, with or without the assistance of healthcare professionals. This definition emphasizes the active involvement of individuals in maintaining and managing their own health and overall well-being (WHO, 2023). Individuals diagnosed with hypertension are required to engage in a range of self-care practices that encompass both medication adherence and lifestyle modifications. These include abstinence from smoking and alcohol consumption, maintaining a healthy body weight, adopting a low-sodium diet, engaging in regular physical activity, consistent self-monitoring of blood pressure, and managing stress effectively, all of which contribute to optimal home-based management of the condition. Managing hypertension poses a significant challenge to patients, as they are responsible for implementing and maintaining these self-care strategies within their home environment to ensure effective disease control. According to Salim et al. (2019), individuals with hypertension engage in a variety of actions that constitute essential self-care behaviors necessary for successful disease management. Furthermore, Tan et al. (2021) emphasize that home-based interventions play a crucial role in minimizing complications and enhancing overall health outcomes among hypertensive patients. Self-care adherence among adults living with hypertension has been reported to be generally low (Zare et

al., 2019). This is largely due to patients' reluctance to adopt recommended lifestyle and behavioral modifications (Lu et al., 2019), particularly in contexts where the level of health literacy is relatively limited. Although self-care and management adherence constitute a vital component in achieving optimal hypertension control, studies indicate that self-care practices remain suboptimal within African populations (Konlan et al., 2020).

It is, therefore, essential to identify the determinants influencing self-care and management behaviors among individuals with hypertension. Similar to other chronic illnesses, hypertension self-care management necessitates a series of behavioral adaptations, including consistent medication adherence, enhanced self-efficacy, and proactive prevention of complications (Konlan et al., 2022). Recent systematic reviews on hypertension self-care have highlighted several focal areas, such as the integration of electronic and digital technologies in care delivery (Ma et al., 2019), the role of self-efficacy in improving self-care outcomes (Tan et al., 2021), and health promotion interventions aimed at hypertension prevention (Ma et al., 2019). Overall, the effective management of hypertension and the prevention of related complications are highly dependent on consistent and effective self-care practices. These involve consistent use of prescribed medications, adopting a nutritionally balanced diet, participating in routine physical exercise, achieving and sustaining a healthy body weight, and minimizing stress, quitting smoking, and monitoring blood pressure regularly. In Nigeria, where traditional and religious beliefs significantly shape healthcare decisions, many people turn to alternative remedies, often postponing necessary medical treatment. Individuals with hypertension who exhibit poor self-care behaviors (SCBs) and experience disease-related complications are likely to face multiple adverse outcomes, including a decline in quality of life, impaired sleep patterns, and increased

psychological stress. Self-care encompasses the deliberate efforts people make to preserve their overall well-being, avoid illnesses, and effectively cope with ongoing health issues like hypertension. The World Health Organization (WHO, 2023) reports that only approximately one in five individuals living with hypertension successfully achieve adequate control of their condition. In the self-care management of hypertension, emphasis should be placed on two fundamental components: adherence to prescribed medications and implementation of lifestyle modifications. Integrating self-care education and awareness into hypertension management enables individuals to acquire the knowledge and practical skills necessary for effective blood pressure control. This proactive strategy empowers patients to recognize the critical role of self-care practices, including abstinence from smoking, moderation or avoidance of alcohol consumption, adoption of a low-sodium diet, attainment and maintenance of a healthy body weight, regular engagement in physical exercise, and consistent self-monitoring of blood pressure levels to ensure effective management of hypertension.

Social determinants of health (SDOH) refer to a comprehensive set of factors related to the conditions in which people are born, grow, live, work, and engage in daily activities, all of which profoundly influence health outcomes, including the risk of hypertension and cardiovascular disease (CVD). These determinants encompass a wide range of socioeconomic and environmental conditions that affect health at both the individual and community levels. Key elements include housing quality and living conditions, neighborhood-level poverty, food security, availability of green spaces, access to transportation, racial or other minority segregation, systemic racism, and various psychosocial stressors. Collectively, these factors shape health behaviors, often promoting unhealthy lifestyle practices that increase stress levels, activate sympathetic nervous system responses, elevate inflammatory markers, and enhance

susceptibility to hypertension and CVD. Additionally, these influences may contribute to epigenetic modifications, potentially affecting the health of future generations (Lurbe & Ingelfinger, 2021). Cultural determinants like diet, physical activity, beliefs, and health perceptions, are believed to have a significant influence on the risk of hypertension. In developing countries, cultural factors often become important determinants of community behavior and lifestyle (Ojogbane et al., 2022), previous research has shown that culturally tailored interventions are more effective in managing hypertension compared to conventional interventions. However, the influence of cultural factors on patients with hypertension in developing countries is still not fully understood (Gee et al., 2019). Given the high cultural diversity in developing countries, a better understanding of how cultural factors contribute to hypertension risk is needed. This is important for developing more effective hypertension prevention and control strategies that are appropriate to the local cultural context (Poulter et al., 2022). Despite the availability of effective treatment options and increasing public awareness campaigns, the burden of uncontrolled hypertension remains a significant challenge in Nigeria. Poor adherence to self-care practices—such as medication compliance, dietary modifications, physical activity, and regular monitoring of blood pressure—has been identified as a major contributor to the persistence of hypertension-related complications. Moreover, sociocultural factors such as beliefs about illness, social support systems, economic constraints, and traditional health practices play a crucial role in shaping patients' health behaviors and responses to hypertension management.

In the context of Benin City, where diverse cultural norms and socioeconomic realities intersect, understanding the interplay between these sociocultural determinants and patients' self-care behaviors is essential for the design of culturally appropriate and effective intervention strategies.

The University of Benin Teaching Hospital (UBTH), being a major tertiary healthcare facility in the region, provides a unique setting for examining these dynamics among hypertensive patients. This study, therefore, seeks to assess the self-care practices of hypertensive patients attending UBTH and to explore the sociocultural factors influencing their disease management behaviors. The findings from this study will help inform policy and practice aimed at improving hypertension outcomes through patient-centered and culturally sensitive care approaches.

1.2 Statement of the problem

Hypertension remains a significant public health concern in Nigeria, contributing substantially to the burden of cardiovascular diseases, morbidity, and premature mortality. Despite the availability of effective treatment options and lifestyle modification strategies, the control rate of hypertension in many parts of Nigeria, including Benin City, remains unacceptably low. One of the critical factors influencing hypertension management is patients' adherence to self-care practices, which include medication compliance, dietary modifications, regular physical activity, avoidance of tobacco and excessive alcohol use, and regular blood pressure monitoring. However, self-care behaviors are often influenced by a variety of sociocultural factors such as beliefs about the causes of hypertension, traditional health practices, health literacy, family support systems, and socioeconomic status. In many Nigerian settings, cultural beliefs and practices may either support or hinder recommended self-care actions. For instance, some patients may prefer traditional remedies over prescribed medications or may have misconceptions about the chronic nature of hypertension, leading to poor adherence to treatment regimens. At the University of Benin Teaching Hospital (UBTH), a tertiary health facility that caters to a diverse population, there is a noticeable gap in understanding the extent to which patients with hypertension engage in appropriate self-care practices and the sociocultural factors

influencing these behaviors. Without this critical knowledge, healthcare providers may struggle to implement effective, culturally sensitive interventions aimed at improving hypertension management and patient outcomes. Therefore, this study seeks to assess the self-care practices among hypertensive patients attending UBTH and explore the sociocultural determinants that may influence these practices. The findings will provide valuable insights for designing targeted health education and intervention programs that are culturally appropriate and effective in promoting optimal hypertension control.

1.3 Objectives of the study

The main objective of this study was to assess sociocultural determinants influencing self-care practices among patients with hypertension attending the University of Benin Teaching Hospital, Benin City, Edo State.

However, the specific objective of this study included:

- 1.To evaluate the level of self-care practices (e.g., medication adherence, diet, exercise, and blood pressure monitoring) among hypertensive patients in at university of Benin teaching hospital.
- 2.To identify the social factors that affect hypertension management among patients.
- 3.To identify the cultural factors that affect hypertension management among patients.

1.4 Research questions

1. What are the self-care practices (e.g., medication adherence, dietary habits, physical activity, and blood pressure monitoring) adopted by hypertensive patients attending UBTH.
2. What social determinants influence the self-care behaviors of hypertensive patients.
3. What cultural determinants influence the self-care behaviors of hypertensive patients.

1.5 Research hypothesis

The following null hypothesis were tested in the study:

- 1.There is no significant relationship between self-care practices and sociodemographic characteristics among hypertensive patients attending the University of Benin Teaching Hospital.
- 2.There is no significant relationship between patients' social beliefs and their adherence to hypertension management practices.
- 3.There is no significant relationship between patients' cultural beliefs and their adherence to hypertension management practices.

1.6 Significance of the study

The study on assessment of sociocultural determinant of self-care practices among patients with hypertension attending university of Benin teaching hospital will be of great relevance to the patients, healthcare providers, public health policy makers, future researchers, academic community. The result of this study will contribute valuable insights that can influence patient care, policy formulation, and health education programs. This study will seek to identify whether health literacy initiatives need to be tailored based on patients' educational backgrounds to improve adherence to self-care routines. It will also help health professionals understand how cultural perceptions impact health behaviors for this can guide the development of culturally sensitive health promotion interventions. It will also inform health policymakers about potential financial or social barriers that affect patient compliance. Overall, the findings from this research will be useful for healthcare providers, public health officials, and researchers in designing targeted interventions that promote effective self-care among hypertensive patients within the sociocultural context of Benin City.

1.7 Scope of the study

This study is limited to the assessment of sociocultural determinants of self-care practices among patients diagnosed with hypertension. This study specifically focused on adult hypertensive patients receiving outpatient care at UBTH, assess various dimensions of self-care practices including medication adherence, dietary management, physical activity, weight control, and stress management, examine selected sociocultural factors such as educational level, cultural beliefs, socioeconomic status, and gender, and how these influence self-care behaviors, exclude patients with comorbid conditions that may significantly influence self-care practices (e.g., severe cognitive impairments or psychiatric illnesses). The dependent variables in this study

include the self-care practices (this includes medication adherence, diet management, physical activity, weight control, smoking/alcohol cessation, stress management, and regular clinic visits) while the independent variables included the educational level, cultural beliefs and practices, socioeconomic status (e.g., income level, occupation), gender, age, marital status, religion, family support and social influence. The selected population in this study comprised of patients in the university of Benin teaching hospital, Benin City, Edo State.

1.8 Operational definition of terms

Self-care practices: Refer to the daily activities and lifestyle behaviors hypertensive patients engage in to manage their condition. These include medication adherence, dietary modifications, regular physical activity, weight management, stress control, and routine blood pressure monitoring.

Social determinants : Encompasses the non-medical factors influencing hypertension prevalence, awareness, treatment, and control, including socioeconomic status, education, income, occupation, material circumstances, health behaviors, and psychological stressors.

Cultural determinants: This can be defined as the specific cultural beliefs, practices, and social norms that influence an individual's lifestyle, behaviors, and healthcare-seeking behaviors, ultimately impacting their risk and management of hypertension.

Hypertension: A chronic medical condition in which the blood pressure in the arteries is persistently elevated, typically defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg.

Patients with Hypertension: Individuals diagnosed with hypertension and currently receiving care or admitted in the University of Benin Teaching Hospital during the study period.

University of Benin Teaching Hospital (UBTH): A tertiary healthcare institution located in Benin City, Edo State, serving as the setting for the study and where the target hypertensive patients are recruited.

CHAPTER TWO

LITERATURE REVIEW

This chapter focused on assessment, self-care practices, sociocultural determinants among patients with hypertension. It also discusses the literature review about research variables in the following subheading: Conceptual Review, Theoretical Framework and Empirical Review.

2.1 Conceptual Review

Hypertension

Hypertension, commonly referred to as high blood pressure, is a long-term medical condition characterized by a persistent increase in the pressure of blood against the arterial walls. According to the World Health Organization (2021), it is diagnosed when an individual's systolic blood pressure is 140 mmHg or higher and/or diastolic blood pressure is 90 mmHg or higher on multiple readings. Blood pressure represents the force of circulating blood acting on the arteries and serves as an essential indicator of cardiovascular health. It is measured in millimeters of mercury (mmHg) and recorded as two readings: systolic pressure over diastolic pressure.

. Systolic Pressure: The higher value, representing the pressure in the arteries when the heart contracts and pumps blood.

. Diastolic Pressure: The lower value, representing the pressure when the heart is at rest between beats.

The classification of adults aged 18 years or older has been as follows;

Normal systolic lower than 120mmHg, diastolic lower than 80mmHg

Pre-Hypertension: Systolic 120-139mmHg, diastolic 80-89mmHg

Stage1: Systolic 140-159mmHg, diastolic 90-99mmHg

Stage 2: Systolic 160mmHg, diastolic 100mmHg or greater

Hypertension affects the structure and function of small muscular arteries, arterioles, and other blood vessels and can cause damage at variable rate to various target organs including kidney, brain, and eye, related with the end stage of renal disease and to be the cause of stroke.

2.1.1 Types of Hypertensions

Primary (Essential) Hypertension: Primary (Essential) Hypertension is the most prevalent type of high blood pressure, representing approximately 90–95% of all cases. It develops progressively over several years and is not associated with any specific underlying medical condition. Although the exact cause remains unclear, primary hypertension is thought to result from a complex interplay of genetic, environmental, and lifestyle factors. The condition often has a familial tendency and is more common in men than in women. The risk of developing hypertension increases with age, particularly after the age of 40. It is also more prevalent among individuals of African descent, although this difference tends to narrow around age 44; however, after 65 years of age, Black women exhibit the highest incidence of hypertension. Dietary and lifestyle factors significantly contribute to the development of essential hypertension. A strong relationship has been observed between salt (sodium) intake and elevated blood pressure. For instance, populations in the northern islands of Japan, who consume the highest amounts of salt globally, also have the highest rates of essential hypertension. Conversely, communities that consume little or no added salt show minimal evidence of high blood pressure. The majority of individuals with hypertension are salt-sensitive, meaning that even small amounts of excess

sodium intake can raise their blood pressure levels. Additional risk factors include a sedentary lifestyle, tobacco use, excessive alcohol consumption, obesity, psychological stress, and inadequate intake of essential minerals such as potassium, calcium, and magnesium, along with insufficient physical activity. Primary hypertension is often referred to as a “silent condition” because it typically presents no noticeable symptoms and is usually identified during routine health examinations or after the occurrence of complications such as stroke, heart attack, or heart failure. Effective management of primary hypertension involves lifestyle modification, long-term pharmacological treatment, regular blood pressure monitoring, and comprehensive patient education to promote adherence and prevent complications.

Secondary Hypertension: Secondary Hypertension refers to elevated blood pressure that results from an identifiable underlying medical condition. It is relatively uncommon, accounting for approximately 5–10% of all hypertension cases. Among the recognized causes, kidney-related disorders represent the most frequent contributors to secondary hypertension. The condition may also arise from tumors or structural abnormalities that lead the adrenal glands—small glands located above the kidneys—to produce excessive amounts of hormones that increase blood pressure. Additionally, certain medications and substances can induce secondary hypertension. These include oral contraceptives containing estrogen, pregnancy, and drugs or agents that constrict blood vessels. The use of alcohol, cocaine, and specific herbal preparations has also been linked to elevated blood pressure levels. Overall, secondary hypertension differs from primary hypertension in that it is symptomatic of another health disorder, and its management often requires identifying and treating the root cause to achieve optimal blood pressure control. Develops suddenly, especially in younger patients, may be more severe and resistant to standard treatment, also, blood pressure may remain high despite lifestyle changes. It could be managed

by Identifying and treating the underlying cause, medication to control BP in the interim, possible surgery (e.g., for adrenal tumors or vascular abnormalities).

Other Specific Types of Hypertensions: Isolated systolic, Malignant, and Resistant

Though they fall under primary or secondary types, some forms of hypertension deserve separate mention due to their clinical significance:

Isolated systolic hypertension: Isolated systolic hypertension (ISH) is a specific type of hypertension characterized by an elevated systolic blood pressure (SBP) of 140 mmHg or more, while the diastolic blood pressure (DBP) remains below 90 mmHg. It is the most common form of hypertension in older adults of age 65, often associated with aging and changes in the arterial walls. The systolic pressure is much more important than the diastolic pressure when it comes to the risk of cardiovascular disease for an older person.

Malignant/Accelerated Hypertension: A severe form marked by a sudden, rapid rise in blood pressure with evidence of organ damage. This is considered a medical emergency that demands immediate medical intervention. This form of hypertension is rare, occurring in approximately 1% of individuals diagnosed with high blood pressure. It is observed more frequently among younger adults, African American men, and women experiencing pregnancy-related toxemia (preeclampsia). Clinical manifestations of malignant hypertension may include numbness or tingling in the arms and legs, blurred or impaired vision, mental confusion, chest pain, and severe headache. Prompt diagnosis and urgent treatment are essential to prevent life-threatening complications such as organ damage, stroke, or heart failure.

Resistant Hypertension: Resistant Hypertension is defined as blood pressure that remains above the desired target level despite the concurrent use of three or more antihypertensive

medications at optimal doses. This condition is frequently associated with poor treatment adherence or the presence of underlying secondary causes of hypertension. Resistant hypertension is estimated to affect approximately 20–30% of individuals with high blood pressure. It may have a genetic predisposition and is observed more commonly in older adults, individuals with obesity, women, African Americans, and those with coexisting medical conditions such as diabetes mellitus or chronic kidney disease. Effective management typically involves identifying contributing factors, optimizing medication regimens, and implementing lifestyle interventions to achieve better blood pressure control.

2.1.2 Causes of High Blood Pressure

High blood pressure can result from a variety of factors, ranging from lifestyle choices and genetic predispositions to underlying medical conditions. The precise causes of high blood pressure are not fully understood; however, several factors and underlying conditions are believed to contribute to its development, including:

- Genetic factors
- Aging
- Obesity and overweight
- Inactivity
- Smoking
- Too much salt in diet
- Too much alcohol consumption
- Stress
- Family history of high blood pressure

- Chronic kidney disease
- Adrenal and thyroid disorders
- Sleep apnea

2.1.3 Pathophysiology of Hypertension

Hypertension is a chronic elevation of arterial blood pressure that, over time, leads to damage of target organs and contributes to increased morbidity and mortality. Blood pressure is determined by the product of cardiac output and systemic vascular resistance. Therefore, individuals with arterial hypertension may exhibit either an increase in cardiac output, an increase in systemic vascular resistance, or a combination of both. In younger individuals, elevated cardiac output is the predominant mechanism, whereas in older adults, hypertension is mainly associated with increased systemic vascular resistance and vascular stiffness. The elevation in vascular tone may result from enhanced α -adrenoceptor activity or increased release of vasoactive peptides such as angiotensin and endothelins. Ultimately, these factors lead to an increase in intracellular calcium within vascular smooth muscle cells, causing vasoconstriction. Moreover, growth factors like angiotensin and endothelins stimulate the proliferation of vascular smooth muscle, resulting in vascular remodeling—an increase in the thickness and mass of the arterial wall. Both elevated systemic vascular resistance and vascular stiffness increase the hemodynamic load on the left ventricle, promoting left ventricular hypertrophy and diastolic dysfunction. In younger individuals, the pulse pressure generated by the left ventricle tends to be relatively low, and the reflected waves from peripheral arteries return mainly after systole, which helps increase pressure during early diastole and enhances coronary perfusion. However, with advancing age, the aorta and elastic arteries lose elasticity, leading to increased pulse pressure. The reflected waves then return earlier, during late systole, which raises the left ventricular afterload and

contributes further to left ventricular hypertrophy. The age-related widening of pulse pressure is recognized as a strong predictor of coronary artery disease. The autonomic nervous system also plays a vital role in blood pressure regulation. In individuals with hypertension, both increased secretion of norepinephrine and heightened peripheral sensitivity to this neurotransmitter are observed. These patients also exhibit an exaggerated response to stress and a resetting of baroreceptor reflexes, leading to reduced baroreceptor sensitivity. The renin–angiotensin–aldosterone system (RAAS) is involved in the pathogenesis of several forms of hypertension, such as renovascular hypertension, but is often suppressed in conditions like primary hyperaldosteronism. Elderly and Black patients frequently present with low-renin hypertension, while high-renin hypertension is more common in other populations and is associated with an increased risk of myocardial infarction and other cardiovascular complications. In essential (primary) hypertension, as well as in experimental models, abnormalities in body fluid regulation and the pressure–natriuresis relationship (the relationship between blood pressure and sodium excretion) have been identified. Substantial evidence indicates that altered pressure–natriuresis mechanisms play a central role in the development of hypertension. In patients with essential hypertension, this resetting of pressure–natriuresis may manifest as either a parallel shift toward higher blood pressure levels, resulting in salt-insensitive hypertension, or as a reduced slope of the pressure–natriuresis curve, leading to salt-sensitive hypertension.

2.1.4 Signs and Symptoms of Hypertension

Hypertension is often referred to as a “silent condition” because it is rarely accompanied by noticeable symptoms. In most cases, it is identified incidentally during routine screening or when an individual seeks medical attention for an unrelated health issue. Some individuals with

elevated blood pressure may report headaches—particularly occurring at the back of the head and in the morning—as well as symptoms such as lightheadedness, vertigo, tinnitus (a ringing or hissing sound in the ears), visual disturbances, or episodes of fainting. However, these manifestations are often attributed to psychological stress or anxiety rather than the elevated blood pressure itself (Wikipedia Contributors, 2025). During physical examination, certain clinical findings may be observed that are consistent with hypertension. One of the key diagnostic indicators is hypertensive retinopathy, identified through ophthalmoscopic examination of the optic fundus. The severity of hypertensive retinopathy is typically graded on a scale from I to IV, where Grades I and II are often difficult to distinguish (Mitchell, 2021). The extent of retinal damage is generally correlated with the duration and severity of hypertension, indicating that long-standing or poorly controlled high blood pressure is more likely to result in advanced retinal changes (Williams et al., 2021).

2.1.5 Diagnostic Evaluation of Hypertension

Tabе 2.1: Typical diagnostic tests of hypertension performed

System	Tests
Kidney	Microscopic urinalysis,protein in the urine,BUN and/or creatinine
Endocrine	Serum sodium,potassium,calcium,TSH
Metabolic	Fasting blood glucose,HDL,LDL,and total cholesterol,triglycerides.
Other	Hematocrit,electrocardiogram,and chest radiograph.

Source: Harrison’s principle of internal medicine (2023)

Additional diagnostic evaluations for hypertension include the use of an electrocardiogram (ECG or EKG), which helps detect evidence of cardiac strain resulting from sustained high blood pressure. This test can also identify left ventricular hypertrophy—a thickening of the heart muscle—or indicate whether the patient has experienced a previous silent myocardial infarction (minor heart attack) that may have gone unnoticed. Furthermore, a chest X-ray or an echocardiogram may be conducted to assess for cardiac enlargement or other forms of structural and functional heart damage associated with long-term hypertension (Cain, 2021).

2..1.6 Classification of Blood Pressure for Adults

Table 2.2 Classification of blood pressure in adults

Categories	Systolic(mmHg)	Diastolic (mmHg)
Normal	90-119	60-79
High normal (prehypertension)	120-139	80-89
Stage 1 Hypertension	140-159	90-99
Stage 2 Hypertension	160-179	100-109
Stage 3 Hypertension (hypertensive emergency)	≥ 180	≥ 110
Isolated systolic Hypertension	≥ 140	< 90

Source: National clinical guidance Centre (2021)

2.1.7 Hypertension Therapeutic Regimen

Approach Considerations

According to the 2020 American Diabetes Association (ADA) Standards of Medical Care in Diabetes, the majority of individuals with diabetes mellitus also present with hypertension. In patients with Type 1 diabetes, hypertension most commonly arises as a consequence of diabetic nephropathy (kidney disease resulting from diabetes). In contrast, among those with Type 2 diabetes, hypertension is typically part of a cluster of interrelated cardiometabolic abnormalities, which collectively increase cardiovascular risk (Sklyarova et al., 2025). Hypertension continues to be recognized as one of the leading causes of congestive heart failure (CHF). Evidence from clinical studies demonstrates that antihypertensive treatment significantly reduces mortality associated with stroke and coronary artery disease. Furthermore, reductions in blood pressure have been shown to improve renal function in many patients. Early identification of hypertensive nephrosclerosis—through diagnostic tools such as microalbuminuria testing—and the initiation of aggressive therapeutic management, particularly using angiotensin-converting enzyme (ACE) inhibitors, can delay or prevent the progression to end-stage renal disease (Cutrell et al., 2023).

Lifestyle modifications: Lifestyle modifications are a fundamental component in the prevention and management of hypertension and are generally considered the first-line approach in controlling elevated blood pressure. When evaluating cardiovascular risk factors in individuals with hypertension, it is important to focus on lifestyle behaviors that positively influence blood pressure and reduce overall cardiovascular disease risk. Even modest reductions in blood pressure can significantly impact the incidence of cardiovascular events at a population level (Cutrell et al., 2023). For example, a decrease of 2 mmHg in blood pressure is associated with a 15% reduction in stroke risk and a 6% reduction in the risk of coronary artery disease in a population. Additionally, a prospective study demonstrated that a 5 mmHg reduction in nocturnal mean blood pressure, achieved by administering at least one antihypertensive medication at

bedtime, could potentially reduce the risk of future adverse cardiovascular events by approximately 17%. In research aimed at developing a predictive model for prehypertension and hypertension risk, investigators assessed the expected benefits of population-based lifestyle interventions. They found that the majority of modifiable risk factors play a more significant role in prehypertension and stage 1 hypertension compared with stage 2 hypertension (Kota et al., 2023). The study utilized multistep composite risk scores, evaluating key risk factors in both the progression from prehypertension to hypertension and the regression of prehypertension to normotension. The findings indicated that as the number of risk factors addressed in intervention programs increases, the average predicted risk score decreases. Specifically, in men, the 5-year cumulative predicted risk for developing stage 2 hypertension declined from 23.6% without an intervention to 14% with a six-component lifestyle intervention; similar reductions were observed in women.(Mohammadian Khonsari et al., 2021).

Surgical intervention: Aorto-renal bypass, utilizing either a saphenous vein graft or a hypogastric artery, is a surgical revascularization procedure historically employed for the management of renovascular hypertension. However, this technique has become much less frequently performed since the introduction of renal artery angioplasty with stenting, which is less invasive and associated with shorter recovery times. For pheochromocytoma and unilateral solitary aldosterone-producing adenomas, surgical resection remains the treatment of choice, as removal of the tumor typically cures hypertension. In certain cases of benign aldosterone-producing adenomas, medical management with spironolactone may serve as an alternative to surgical intervention. In patients with fibromuscular renal artery disease, angioplasty demonstrates a success rate of 60–80% in improving blood pressure control or achieving hypertension cure. Another intervention that initially showed potential for the management of

resistant hypertension was renal artery denervation. However, recent controlled trials have indicated limited blood pressure–lowering benefits from percutaneous renal denervation therapy. Ongoing research is evaluating this approach using newer and potentially more effective techniques (Silverwatch et al., 2021).

Non-pharmacologic Therapy

Dietary changes: Numerous studies have established a relationship between sodium chloride intake and blood pressure. The impact of sodium chloride is especially pronounced in middle-aged and elderly individuals with a family history of hypertension. Even a moderate reduction in dietary sodium can produce a modest decrease in blood pressure. The American Heart Association (AHA) recommends that average daily sodium intake should not exceed 6 g, which may reduce blood pressure by 2–8 mmHg (Pereira et al., 2023). One randomized controlled trial demonstrated that a moderate reduction in dietary sodium (approximately 2,500 mg Na⁺ or 6 g NaCl per day) combined with angiotensin-converting enzyme (ACE) inhibitor therapy was more effective than dual blockade (ACE inhibitor plus angiotensin receptor blocker [ARB]) in reducing both proteinuria and blood pressure in non-diabetic patients with mild chronic kidney disease. Additionally, the combination of a low-sodium diet with dual therapy provided further reductions in blood pressure and proteinuria, highlighting the beneficial role of sodium restriction in hypertensive patients with renal impairment. The DASH (Dietary Approaches to Stop Hypertension) eating plan emphasizes a diet rich in fruits, vegetables, and low-fat dairy products, which can reduce blood pressure by 8–14 mmHg. The 2021 ADA Standards of Care endorse the DASH diet, noting, however, that high-quality studies evaluating diet and exercise to lower blood pressure in individuals with diabetes are limited (American Diabetes Association, 2021). Dietary intake of potassium, calcium, and magnesium is inversely associated with blood

pressure, meaning low intake of these minerals enhances the hypertensive effect of sodium. Oral potassium supplementation can reduce both systolic and diastolic blood pressure (Pickering et al., 2021), while calcium and magnesium supplementation has shown modest reductions in blood pressure. Alcohol consumption exhibits a dose-dependent effect on blood pressure. Low alcohol intake has been associated with a modest reduction in blood pressure (2–4 mmHg). In contrast, consuming three or more drinks per day can elevate blood pressure. Guidelines recommend limiting daily alcohol intake to less than 1% ethanol in men and 0.5% in women, with the 2021 ADA Standards supporting restricted alcohol use in patients with diabetes and hypertension (Richard et al., 2021). Emerging evidence from small randomized controlled trials suggests that dark chocolate may reduce blood pressure by enhancing vascular endothelial function and increasing nitric oxide production. A meta-analysis of 13 randomized trials comparing dark chocolate with placebo demonstrated a mean reduction in systolic blood pressure of 3.2 mmHg and diastolic blood pressure of 2 mmHg in both hypertensive and pre-hypertensive populations (Luma, 2020). Nevertheless, further research is required before dark chocolate can be recommended as a standard lifestyle intervention. Although a high-fructose diet has been implicated in the development of metabolic syndrome and hypertension, a 2022 Cochrane review questioned the strength of this association (Bakris, 2022).

Weight loss and exercise: Approximately 60% of individuals with hypertension are more than 20% overweight, and central (abdominal) fat distribution is strongly associated with both insulin resistance and elevated blood pressure. Even modest weight loss—around 5% of total body weight—can significantly reduce blood pressure and enhance insulin sensitivity. Studies indicate that a reduction of 10 kg in body weight may lower blood pressure by 5–20 mmHg in individuals whose weight exceeds 10% of their ideal body weight. Engaging in regular aerobic physical

activity promotes weight loss, lowers blood pressure, and reduces the overall risk of cardiovascular disease. Moderate-intensity physical exercise can decrease blood pressure by 4–9 mmHg (Weber, 2021). Recommended activities include brisk walking for 30 minutes daily, at least five days per week. More vigorous exercise sessions, lasting 20–30 minutes, three to four times per week, may yield additional cardiovascular and metabolic benefits. In a study conducted by Blumenthal et al., overweight or obese individuals with hypertension who combined exercise and weight reduction with the DASH dietary plan experienced greater reductions in blood pressure and improvement in cardiovascular risk biomarkers (Mancia, 2020). The 2020 American Diabetes Association (ADA) Standards of Medical Care also emphasize the importance of increasing physical activity. Exercise is recognized as a key component of diabetes management, as it contributes to weight control, reduces cardiovascular risk factors, and enhances overall health and well-being (Aronow et al., 2021). Moreover, patients with diabetes and severe hypertension—defined as systolic blood pressure (SBP) greater than 140 mmHg or diastolic blood pressure (DBP) greater than 90 mmHg—should receive pharmacological therapy in combination with lifestyle modifications to achieve optimal blood pressure control and prevent complications (Aronow et al, 2021).

Pharmacologic Therapy

When lifestyle modifications alone are insufficient to achieve the target blood pressure (BP), the use of antihypertensive medications becomes necessary for effective management. According to the Seventh Report of the Joint National Committee (JNC 7) on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, as well as the 2020 Institute for Clinical Systems Improvement (ICSI) guidelines, thiazide diuretics were initially recommended as the first-line therapy in patients without compelling comorbid indications (Weber et al., 2021).

However, the updated JNC 8 guidelines revised this recommendation, indicating that thiazide-type diuretics, angiotensin-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), and calcium channel blockers (CCBs) are all equally effective first-line agents for treating hypertension in non-Black populations. In contrast, CCBs and thiazide diuretics are preferred as initial therapy for Black patients with hypertension (James et al., 2022). The choice of antihypertensive therapy may also depend on the presence of compelling indications, which refer to high-risk clinical conditions either caused by hypertension (such as heart failure, ischemic heart disease, chronic kidney disease, or recurrent stroke) or commonly associated with it (such as diabetes mellitus or coronary artery disease). In these cases, the selection of medication should target both blood pressure control and the underlying comorbidity.

Appropriate options include ACE inhibitors, ARBs, and CCBs, each of which provides specific cardiovascular and renal protective effects. Beta-blockers are no longer considered first-line agents for the routine management of hypertension; however, they remain appropriate in patients with compelling indications, such as systolic heart failure or post-myocardial infarction. Clinical evidence from multiple trials supports the use of drug class-specific recommendations for patients with comorbid conditions (Weber et al., 2021):

Heart failure: Preferred agents include a diuretic, beta-blocker, ACE inhibitor or ARB, and aldosterone antagonist.

Following myocardial infarction: Beta-blockers and ACE inhibitors are prioritized, with additional agents tailored based on patient-specific factors. These recommendations emphasize an individualized approach to hypertension management, ensuring that treatment is both evidence-based and patient-centered.

2.1.8 Prevention of Hypertension

A significant proportion of the global disease burden associated with elevated blood pressure occurs among individuals who are not formally diagnosed with hypertension (Lancet, 2020). This highlights the need for broad population-based strategies aimed at reducing the health consequences of high blood pressure and minimizing the reliance on antihypertensive drug therapy.

Lifestyle modification remains the first-line approach recommended for lowering blood pressure prior to the initiation of pharmacological treatment. The 2004 British Hypertension Society guidelines advocate for lifestyle interventions that align with the recommendations established by the U.S. National High Blood Pressure Education Program (NHBPEP) in 2002, which emphasize the primary prevention of hypertension through healthy behavioral changes (Lancet, 2020).

1. Maintain a healthy body weight: Adults should aim to keep their body mass index (BMI) within the normal range of 20–25 kg/m² to reduce the risk of developing hypertension and related cardiovascular conditions.
2. Reduce dietary sodium intake: Limit daily sodium consumption to less than 100 mmol, which is equivalent to under 6 g of sodium chloride (table salt) or less than 2.4 g of sodium per day, to help lower blood pressure levels.
3. Engage in regular aerobic physical activity: Participate in moderate-intensity exercises, such as brisk walking for approximately 30 minutes per day on most days of the week, to promote cardiovascular health and assist in maintaining optimal blood pressure.

4. Limit alcohol consumption: Restrict alcohol intake to no more than three units per day for men and no more than two units per day for women. Additionally, adopt a diet rich in fruits and vegetables, aiming for at least five servings daily, to support overall cardiovascular and metabolic health.

Effective lifestyle modification has been shown to lower blood pressure to a degree comparable to that achieved with single antihypertensive medications. Moreover, the combined implementation of two or more lifestyle interventions can result in even greater reductions in blood pressure (Brown, 2022). Extensive evidence supports the conclusion that reducing dietary salt intake effectively decreases blood pressure. However, it remains uncertain whether this directly leads to lower mortality or reduced incidence of cardiovascular disease (Lancet, 2020). Research findings indicate that both high sodium intake (≥ 6 g/day) and very low intake (< 3 g/day) are associated with an increased risk of death or major cardiovascular events. Notably, the adverse effects of high sodium consumption are most evident among individuals with pre-existing hypertension (Mente et al., 2020). As a result, and in the absence of conclusive evidence from randomized controlled trials, the benefit and safety of reducing dietary sodium intake below 3 g per day remain subjects of ongoing debate (Lancet, 2020).

2.1.9 Complications of Hypertension

Hypertension is recognized as the leading preventable contributor to premature mortality across the globe (WHO, 2022). It significantly elevates the likelihood of developing ischemic heart disease, stroke, peripheral vascular disease, and a range of other cardiovascular conditions such as heart failure, aortic aneurysm, diffuse atherosclerosis, chronic kidney disease, and pulmonary

embolism. Moreover, hypertension serves as a contributing factor to cognitive decline and dementia, with additional complications including hypertensive nephropathy.

2.1.10 Social Determinants of Hypertension

Hypertension, a major global contributor to cardiovascular illness and death, is influenced not only by biological mechanisms but also by the broader social determinants of health (SDH). As defined by the World Health Organization, social determinants encompass the circumstances in which individuals are born, grow, live, work, and age—conditions that are fundamentally shaped by the equitable or inequitable distribution of resources and power. Recent literature has increasingly focused on how these social and structural factors play a role in the onset and persistence of hypertension.

1. Socioeconomic Status (SES)

Low socioeconomic status, including income and educational attainment, has been consistently associated with higher rates of hypertension and poorer blood pressure control. Social determinant of hypertension, with lower SES often associated with higher prevalence and poorer control of hypertension. Factors like income, education, and occupation, which define SES, can influence various aspects of life, including access to healthcare, lifestyle choices, and exposure to stress, all of which impact blood pressure. For instance, a cross-sectional study done by Qin et al., (2022) revealed that lower education, unemployment/retirement, and low income were linked to higher odds of hypertension and poorer blood pressure control.

2. Neighborhood and Area Deprivation

Neighborhood deprivation denotes a condition of relative disadvantage within a specific geographic area, characterized by lower levels of income, employment, education, and living standards. This deprivation has been associated with an increased incidence of hypertension, with both social and built environmental factors exerting a significant influence on blood pressure regulation. Epidemiological evidence suggests multiple pathways through which neighborhood deprivation may affect blood pressure (Baker-Smith et al., 2023). These mechanisms include restricted access to health-enhancing resources—such as nutritious food options and recreational facilities—heightened exposure to environmental stressors like noise and air pollution, and the psychosocial strain of residing in economically disadvantaged settings. Additionally, neighborhood deprivation frequently intersects with other determinants, such as race and ethnicity, thereby compounding the risk of hypertension among specific population groups (Sims et al., 2023).

3. Access to Healthcare Services

Another determinant is the ease of access to and provision of healthcare services.. Access to healthcare services for hypertension is significantly shaped by social determinants of health, encompassing the circumstances into which individuals are born and in which they grow, live, work, and age. These factors can create barriers to both prevention and management of hypertension, impacting health equity. Patients reported that the primary barriers to accessing healthcare services included the long distance to hospitals, extended waiting times, and frequent shortages of medication in government health facilities. Consequently, many individuals sought care from private practitioners and incurred out-of-pocket expenses when experiencing acute symptoms related to hypertension (Parera et al., 2019).

4. Social Support and Psychosocial Stress

According to the World Health Organization (2021), stress—particularly that associated with the workplace—is the second most common health issue affecting employed individuals within the European Union. Social integration refers to the extent to which a person feels connected and engaged with their community or social network. Low levels of social integration have been linked to a higher likelihood of developing hypertension. Furthermore, medication adherence among individuals with hypertension remains suboptimal. Both health literacy and social support exert direct and indirect influences on adherence; therefore, these elements should be prioritized as key strategies for enhancing treatment compliance (Guo et al., 2023).

5. Behavioral and Lifestyle Mediators

Social determinants play a crucial role in shaping health behaviors, which serve as key risk factors for hypertension. Elements such as access to nutritious food, opportunities for physical activity, and exposure to stress are all influenced by an individual's social and economic conditions. Lifestyle and behavioral factors act as important mediators in the relationship between social determinants and hypertension, indicating that social and environmental contexts can affect the likelihood of developing elevated blood pressure through their influence on personal health behaviors. A study conducted in Ghana by Modey et al. (2020) found that lifestyle modifications—such as engaging in regular physical activity, avoiding alcohol and tobacco use, increasing the consumption of fruits and vegetables, and reducing the intake of carbohydrates, meat, and fats—positively contribute to effective blood pressure management.

2.1.11 Cultural Determinants of Hypertension

Culturalism emphasizes the role of cultural values, traditions, and norms in shaping individuals' perceptions and management of health and illness. In relation to lifestyle modification, these beliefs and practices vary across cultural groups, highlighting the importance of culturally tailored interventions for effective hypertension management (Latif et al., 2020).

Dietary customs & nutrition transition

Globalization and urbanization have contributed to a dietary shift from traditional, fiber-rich foods to processed items high in fat and sodium. This ongoing “nutrition transition” has heightened the risk of hypertension, particularly in low- and middle-income countries. Unhealthy dietary behaviors—characterized by excessive consumption of salt, processed foods (including processed meats), and insufficient intake of vegetables, fruits, dietary fiber, and essential nutrients such as potassium and omega-3 fatty acids—are estimated to account for approximately 9% to 17% of hypertension cases worldwide (Batubo et al., 2023). In West Africa, findings from the SIREN study conducted in Nigeria and Ghana demonstrated that diets rich in whole grains and fruit-based beverages were associated with a reduced risk of hypertension, whereas higher consumption of processed foods increased susceptibility (Akpa et al., 2022). Similarly, large-scale studies such as the Framingham and INTERHEART projects incorporate dietary patterns and specific foods alongside major health and lifestyle variables—including age, diabetes status, smoking, and body mass index (BMI). However, these models do not sufficiently account for variations in food types or preparation methods that can modify nutritional composition, caloric value, and ultimately, their influence on hypertension risk. Consequently, their predictive effectiveness may be limited in populations with distinct dietary customs and culinary traditions, such as those in Nigeria (Batubo et al., 2023). For instance, the SPICES multi-country study,

which involved 9,309 participants across England, France, Belgium, South Africa, and Uganda, revealed substantial regional differences in how INTERHEART study factors—such as diet, age, and smoking—affect hypertension risk ($p < 0.001$). In sub-Saharan Africa, including Nigeria, dietary factors were found to be nearly three times more predictive of hypertension risk compared to European populations (Hassan et al., 2023). These findings underscore the importance of developing a culturally specific dietary risk assessment tool for Nigeria, which could enhance diagnostic precision and equip healthcare professionals with more effective strategies for managing and reducing hypertension prevalence.

Ethnic and regional dietary patterns

In Nigeria, for instance, northern groups like the Hausa/Fulani consume more milk and less cooking oil, while southern groups like the Igbo and Yoruba have higher fatty food intake—patterns linked to differing hypertension prevalence . highlights the importance of evaluating comprehensive dietary habits, not just isolated food groups, in understanding hypertension risk. Diets abundant in whole grains and traditional fruit-based beverages—reflective of indigenous culinary practices—may significantly contribute to lowering hypertension risk within these populations. Regional dietary variations exist, with the Hausa population in northern Nigeria typically consuming greater amounts of milk and legumes while using less cooking oil, whereas the Yoruba and Igbo populations in the south tend to consume more palm oil, fried foods, and processed meats. According to Okekunle et al. (2024), dietary patterns emphasizing whole grains and fruit-based drinks are associated with improved blood pressure outcomes (more common in certain groups) reduce hypertension risk. In Nigeria, encouraging traditional whole grain porridges or natural fruit drinks over processed snacks. Ethnic and regional dietary patterns are vital cultural determinants of hypertension. Their influence goes beyond nutrition—they reflect

deeply rooted values, habits, and social realities. Addressing hypertension in multicultural populations requires a contextual, culturally sensitive approach that integrates traditional knowledge with modern prevention strategies. In Nigeria, Igbo individuals more frequently sought orthodox healthcare following diagnosis, while some Yoruba preferred chemists or did nothing—highlighting cultural dynamics in treatment behaviors

Urbanization effects

Migration to urban centers brings increased stress, sedentary lifestyles, and consumption of unhealthy foods—all elevating hypertension rates. Urban dwellers in West Africa generally exhibit higher blood pressure levels than rural counterparts .

Cultural beliefs, perceptions & health-seeking behaviors

Beliefs about hypertension—such as its perceived curability—can influence adherence to treatment. Among Jamaican men, the belief that hypertension can be cured led many to discontinue medication prematurely . Among African Americans, reliance on home remedies (e.g., pickle juice) often resulted in poor management .

Acculturation, racism & psychosocial stress

Studies among Native Hawaiians show that higher perceived racism and identification with mainstream American culture correlate independently with increased hypertension risk .

Traditional medicine & herbal practices

In rural South Africa, while communities recognize the value of medication and healthy diets, they also strongly rely on traditional herbs like *Momordica balsamina* (“Nkaka”) for managing

blood pressure—emphasizing the integration of traditional cultural practices with modern medical interventions.

Overall, hypertension control in West African settings is impeded by low awareness, poverty, poor infrastructure, and urban stressors. Also, cultural norms—like favoring traditional remedies over clinical care—and limited public health outreach remain major hurdles in hypertension prevention and awareness. Cultural determinants deeply influence how hypertension is perpetrated, perceived, and managed. From diet and spiritual beliefs to stress and healthcare behaviors, these dimensions vary across societies—and even within countries. Crafting effective hypertension strategies demands cultural competence: understanding beliefs, integrating preferences, and empowering communities with culturally sensitive interventions.

2.1.12 Implications for Intervention

Culturally tailored education: Adjust lifestyle advice considering ethnic dietary norms and communal roles.

Addressing stigma: Normalizing hypertension, particularly among youth or unmarried people, through community outreach.

Stress reduction strategies: Incorporate psychosocial support during urban migration and cultural transitions.

Urban environment modifications: Mitigate noise exposure from cultural sites; foster stress-resilient community planning.

By highlighting these cultural dimensions, public health programs can better design interventions that resonate with community values, thereby improving hypertension prevention and management across diverse settings.

2.2 Empirical Review

2.2.1 Level of Self-care Practice Among Hypertensive Patients

An empirical review by Akiniran et al. (2023) examined the effectiveness of a structured self-care education intervention among adults with uncontrolled hypertension in Ibadan, Nigeria. The study involved 274 participants aged 40 years and above, divided into an intervention group—receiving tailored self-care guidance—and a control group—receiving routine clinical advice. After three months, 89.1% of participants in the intervention group achieved controlled blood pressure compared to 62.0% in the control group. Moreover, the intervention group demonstrated enhanced awareness and improved performance in hypertension self-care activities. The study concluded that short-term, focused self-care education programs can significantly improve blood pressure control and self-management behaviors among adults with uncontrolled hypertension, emphasizing their value in community health settings in Nigeria.

Ukoha-Kalu, Adibe, Isah, and Ukwe investigated hypertension self-care behaviors among patients attending a secondary healthcare facility in Kogi State, Nigeria. Their findings revealed that although 61.4% adhered to prescribed medications, adherence to lifestyle-related practices—such as low-salt diets and physical activity—was extremely low, at 0.9% and 0% respectively. Additionally, 87% of participants were non-smokers, 63.1% poorly managed their weight, and

approximately 75% failed to abstain from alcohol. The study concluded that overall adherence to self-care practices was inadequate, posing increased risks for hypertension-related complications.

Worku Kassahun et al. (2020) evaluated knowledge and self-care behaviors related to hypertension among adults attending the University of Gondar Comprehensive Specialized Hospital in Ethiopia. While 63.3% of participants exhibited good knowledge of hypertension and its risk factors, fewer than half (46.4%) practiced effective self-care behaviors such as medication adherence, dietary control, regular exercise, and blood pressure monitoring. The authors identified a significant gap between patients' knowledge and their actual self-care practices, underscoring the need for targeted health education and support initiatives to enhance self-management and improve hypertension outcomes.

Melaku et al. (2022) conducted a study among 422 adult hypertensive patients at a tertiary teaching hospital in Ethiopia and found that more than half (53.1%) exhibited poor self-care behaviors. Adherence to recommended lifestyle modifications was particularly low, including the DASH diet (15.4%), regular physical activity (16.8%), and weight management (18.7%). Factors associated with poor self-care included lack of formal education, uncontrolled blood pressure, comorbid chronic diseases, negative attitudes toward hypertension, and limited social support. The study emphasized the importance of improving patient education and social support systems to strengthen hypertension management.

Hailu et al. (2025) employed a mixed-methods design to evaluate self-care practices and associated factors among 422 adult hypertensive patients attending follow-up clinics in public hospitals in Bahir-Dar City, Northwest Ethiopia. Only 39.3% of participants demonstrated good self-care practices, while most exhibited poor adherence to medication, physical activity, dietary management, and weight control. Positive predictors of good self-care included higher education, better hypertension knowledge, stronger social support, longer disease duration, presence of comorbidities, and improved access to health information. The study concluded that enhancing patient education, expanding social support, and strengthening healthcare systems are vital for promoting effective self-care and improving hypertension outcomes.

Gebresilase et al. (2024) conducted a multicenter cross-sectional study involving 413 hypertensive adults attending follow-up clinics in four tertiary hospitals in Addis Ababa, Ethiopia. Using structured interviews and questionnaires, the study found that 46.0% of participants had poor knowledge and 40.9% had poor self-care practices. Factors positively associated with knowledge included being married, attaining at least secondary education, having a family history of hypertension, and receiving health information from professionals. In terms of self-care, ownership of a sphygmomanometer was linked to better practice, while female gender was associated with lower odds of good self-care. The authors concluded that both hypertension knowledge and self-care practices were suboptimal and recommended improved patient education, better provider communication, and increased access to home monitoring tools.

Abdisa et al. (2022) carried out a multicenter cross-sectional study among 415 adult hypertensive patients attending public hospitals in Harari Regional State and Dire Dawa City Administration. Using the H-SCALE tool, the study found that 52% (95% CI: 48.2–58%) of participants demonstrated good self-care practices. Factors significantly associated with better self-care included formal education (AOR = 3.45), good hypertension knowledge (AOR = 1.50), abstaining from khat use (AOR = 2.01), strong social support (AOR = 1.90), and absence of depression (AOR = 2.03). The authors concluded that roughly half of participants maintained good self-care practices, emphasizing the need for public health programs focusing on education, lifestyle modification, mental health, and chronic disease control.

Sahile and Nurhussien (2023) assessed self-care behaviors among 370 hypertensive patients attending health centers in Bole Sub-city, Addis Ababa. The study found that 53.0% of participants demonstrated good self-care practices, with 61.4% adhering to medication. However, adherence to a low-salt diet (14.9%) and regular physical activity (18.1%) remained low. Non-smoking rates were high (92.7%), and weight management (63.8%) and alcohol abstinence (82.7%) were relatively better. Interestingly, illiterate participants practiced better self-care than those with secondary or higher education, while merchants, civil servants, and retirees had higher adherence levels than unemployed individuals. The study recommended tailored educational and occupational interventions to improve self-care practices.

Gebreyohannes and Wake (2024) conducted a cross-sectional study among 120 hypertensive patients at Asella Referral and Teaching Hospital in Ethiopia. The findings showed that 60% of

participants had good knowledge, 52.5% held a favorable attitude, and 50.8% practiced good self-care. Higher educational attainment and receipt of self-care information from healthcare providers were significantly linked to better knowledge. Furthermore, good knowledge was associated with positive attitudes, and both knowledge and attitude predicted better self-care behaviors. The authors concluded that overall levels of knowledge, attitude, and practice were below optimal, calling for strengthened health education initiatives to improve hypertension management and outcomes.

2.2.2 Level of Social determinants Affecting Hypertension Management

Metlock et al. (2024) carried out a systematic review investigating the influence of social determinants of health (SDOH) on hypertension outcomes. The review consolidated existing evidence on how factors such as socioeconomic status, education, neighborhood environment, healthcare accessibility, and psychosocial stress affect hypertension prevalence, treatment adherence, blood pressure control, and related cardiovascular complications. The findings revealed that unfavorable social conditions are consistently associated with poorer hypertension management and a higher likelihood of adverse outcomes. The authors underscored the necessity of incorporating SDOH considerations into both clinical care and public health initiatives to mitigate disparities and enhance hypertension outcomes. They advocated for integrated, multidimensional approaches—encompassing community participation, policy reform, and individualized patient support—to improve blood pressure regulation and reduce health inequities.

Memon et al. (2025) conducted a cross-sectional study involving 260 hypertensive patients at Civil Hospital Thatta, Pakistan, identified key sociocultural barriers to effective hypertension

management—including high intake of traditional salty foods (47.3%), preference for traditional remedies (11%), social gatherings disrupting treatment (30%), and restrictive gender norms limiting women’s physical activity (6%)—with findings showing that low education levels and lack of social support further worsened adherence, leading researchers to conclude that community-based, culturally sensitive interventions are critical for improving hypertension control in rural Pakistani populations. Cultural and social factors such as eating habits, dependence on traditional healing, gender-related challenges, and low levels of education play a significant role in hypertension management in Thatta. To improve patient outcomes and reduce the burden of hypertension in similar rural communities, it is essential to design and implement interventions that are culturally sensitive and contextually appropriate.

Sekome et al. (2024) explored the sociocultural perceptions surrounding physical activity and dietary behaviors among adults with hypertension in a rural sub-district of South Africa. The study highlighted how local beliefs, social norms, and contextual barriers influence health-related behaviors. Findings indicated that participants possessed limited knowledge of normal blood pressure levels and the potential risks associated with uncontrolled hypertension, with many relying on informal knowledge rather than formal health education. Emotional and psychosocial stress—especially related to family and financial pressures—was commonly cited as a major contributor to elevated blood pressure. Gender roles strongly influenced physical activity patterns, where daily labor like farming or housework was considered exercise, but cultural expectations often restricted women and older adults from engaging in structured or recreational physical activity. Dietary habits were shaped by economic hardship, food access, and cultural beliefs, with some healthy foods being stigmatized or perceived as associated with

illness. Traditional health practices and herbal remedies were frequently used, sometimes delaying biomedical treatment. The study concludes that hypertension interventions must be context-specific, considering social, cultural, and economic factors, and should be designed to align with people's everyday activities and values for more effective and lasting impact.

Oku et al. (2024) conducted a study at the Irrua Specialist Teaching Hospital (ISTH) in Southern Nigeria to examine the barriers and facilitators influencing dietary salt reduction among hypertensive patients attending the family medicine clinic. Using focus group discussions, the study sought to gain in-depth insights into patients' perceptions, challenges, and motivating factors related to salt intake and dietary modification for effective hypertension management discussions with 74 participants—mostly women, average age ~52 years, and predominantly with uncontrolled blood pressure—and identified five major themes. Participants generally considered their health good but were concerned about poor BP control. They understood that excess salt was harmful, yet struggled to quantify excess or know safe amounts, often seasoning food by taste. Key barriers included family pressure to use more salt, ignorance about salt content in foods, the cheap and ubiquitous availability of salt, lack of affordable alternatives, reliance on processed foods high in sodium, and conflicting messages such as iodised salt being promoted for goitre prevention. Facilitators of salt reduction included practical strategies like measuring table salt used in cooking, eliminating salt from the dining area, and adopting alternative salt substitutes, public education through media, clear labeling of salt content on processed foods, and personalized counseling. Many participants were willing to reduce salt when supported by these facilitators. The study concludes that raising awareness about safe salt levels and offering accessible alternatives are essential to enable dietary salt reduction among hypertensive Nigerians.

Zhang et al. (2021) conducted a study to examine the interrelationships among health literacy, self-management behaviors, self-efficacy, social support, and health-related quality of life (HRQoL) among Kazakh patients with hypertension residing in low-income rural areas of China. Using a structural equation modeling (SEM) approach, data were collected from 516 participants. The results demonstrated that higher levels of health literacy were positively associated with improved self-management behaviors and self-efficacy, both of which contributed to enhanced HRQoL. Social support exerted a direct positive influence on HRQoL and an indirect effect mediated through increased self-efficacy. Data analysis was performed using SPSS 18.0 and AMOS 18.0 software. Among the participants, 94.4% exhibited relatively low hypertension-related health literacy (HBP-HL) scores. The mean standardized scores for HRQoL, self-management, and therapeutic adherence were 63.5, 66.2, and 64.4, respectively, indicating generally poor outcomes in these domains. However, 96.1% and 98.3% of participants demonstrated high levels of self-efficacy and social support, respectively. The SEM analysis showed a good overall model fit, with health literacy having the strongest correlation with HRQoL, followed by self-management behaviors, social support, and self-efficacy. The study concluded that low health literacy is a major determinant of poor HRQoL among Kazakh patients with hypertension. The authors recommended that future intervention programs prioritize improving hypertension-specific health literacy as a strategic entry point for enhancing patient outcomes.

Bhattarai et al. (2024) conducted a community-based cross-sectional survey in urban Nepal to assess the role of perceived social support in adherence to antihypertensive medication and hypertension control. The study included adult participants diagnosed with hypertension, with data collected through structured interviews and clinical assessments of blood pressure. The

findings revealed that individuals reporting higher levels of perceived social support were significantly more likely to adhere to prescribed antihypertensive medications and maintain controlled blood pressure levels. This association remained robust after adjusting for sociodemographic and clinical characteristics. Nonetheless, the study acknowledged limitations, including limited differentiation between types of social support (emotional versus practical), potential recall bias in self-reported adherence data, and the absence of longitudinal analysis to establish causality. The authors concluded that perceived social support plays a critical role in effective hypertension management and recommended integrating structured social support interventions into hypertension control programs within urban Nepalese contexts to improve adherence and clinical outcomes.

Egbi et al. (2021) conducted a descriptive cross-sectional study in Ayua, a rural agrarian community in Edo North, Nigeria, to determine the prevalence and determinants of hypertension. The study involved 219 participants aged 15 years and above, with a mean age of 54.03 years, and a majority being female (72.6%). Data were collected using structured questionnaires alongside measurements of body mass index (BMI), blood pressure, and blood glucose levels. The prevalence of hypertension was found to be 27.9%. A substantial proportion of participants were classified as obese (26.5%) or pre-obese (32.4%). Age and BMI emerged as the primary determinants of hypertension: individuals aged 40–65 years had 1.9 times the odds of developing hypertension compared to those under 40, while participants aged over 65 had 4.2 times the odds. Similarly, obese individuals had 2.3 times higher odds of hypertension compared to non-obese participants. The study concluded that hypertension is highly prevalent in this rural Nigerian population and emphasized the need for community-based health education, early screening, and

targeted intervention programs, particularly for older adults and individuals with elevated BMI, to reduce hypertension risk and related complications.

Adeke et al. (2024) conducted a nationally representative cross-sectional study to examine the socio-demographic and lifestyle determinants of hypertension among adults in Nigeria. The study sample comprised 3,782 individuals aged 18 years and above, drawn from both urban and rural communities across the six geopolitical zones of the country. Data collection was carried out using a modified World Health Organization (WHO) STEPwise questionnaire, and blood pressure measurements were obtained as the average of five readings per participant. The results indicated that factors such as marital status, level of education, physical activity, alcohol consumption, and employment status were significantly associated with hypertension prevalence among Nigerian adults significantly associated with hypertension. Specifically, married individuals had 88% higher odds ($OR = 1.88$) and widowed individuals had 57% higher odds ($OR = 1.57$) of being hypertensive compared to those who were never married. Higher educational levels were unexpectedly linked with greater hypertension risk, with tertiary education associated with more than double the odds ($OR = 2.02$) relative to those with no formal education. In terms of lifestyle factors, individuals engaging in low physical activity levels (less than 600 MET-minutes per week) exhibited increased odds of hypertension ($OR = 1.23$), and current alcohol users also showed a higher risk ($OR = 1.18$). Additionally, those who were unemployed or in unpaid jobs had significantly greater odds of hypertension ($OR = 1.42$) compared to employed individuals. The study's results suggest that socio-economic stressors, urban sedentary lifestyles, and behavioral risk factors are major contributors to hypertension in Nigeria. These findings challenge traditional assumptions about the protective role of education and employment in health outcomes, especially within low- and

middle-income contexts. The authors emphasize the need for context-specific interventions such as promoting physical activity, regulating alcohol consumption, addressing social determinants like unemployment, and involving community health workers in hypertension awareness and prevention programs. While the study benefits from national coverage and standardized blood pressure measurements, the cross-sectional nature of the study restricts the ability to establish causal relationships, and the use of self-reported data may have introduced recall bias. Despite these limitations, the study provides important empirical insights to inform public health policies and interventions aimed at addressing hypertension in Nigeria.

Mgbahurike, Oduogu, and Bagbi (2021) conducted a cross sectional survey to assess the impact of socioeconomic status on hypertension management among patients receiving care at community pharmacies in the South-South region of Nigeria. The descriptive survey, carried out between July and December 2018, involved thirty-nine community pharmacies and sought to determine the association between blood pressure control and patients' socioeconomic characteristics in Rivers State. A total of 195 respondents participated, comprising 105 males (53.8%) and 90 females (46.2%). Among them, 75 (38.5%) were below 40 years of age, 105 (53.8%) were aged 41–50 years, and 15 (7.7%) were 60 years and above. The results showed that females were more likely to have controlled blood pressure compared to males (OR = 1.89; 95% CI: 1.16–3.0; $p = 0.009$). Participants aged 41–59 years demonstrated better blood pressure control than those aged 60 years and above (OR = 1.48; 95% CI: 0.84–2.42; $p = 0.18$). Uncontrolled blood pressure was more prevalent among employed individuals and those with higher monthly income (OR = 1.05; 95% CI: 0.58–2.00; OR = 1.16; 95% CI: 0.49–2.78; $p = 0.36$, respectively). Regular exercise was significantly associated with improved blood pressure control, whereas alcohol consumption was linked to poorer outcomes. No significant relationship

was observed between monthly medication expenditure and blood pressure control. The study concluded that male gender, employment, and higher income levels negatively affected blood pressure regulation, while engagement in physical exercise was beneficial for maintaining optimal control.

Pan et al. (2021) conducted a cross-sectional study involving 453 patients diagnosed with primary hypertension at a tertiary hospital in Xi'an, China, to explore the relationship between social support and treatment adherence. Adherence to antihypertensive therapy was measured using the modified Chinese Hill-Bone Compliance Scale, while social support was evaluated through the Chinese Family Support Scale, encompassing three domains: nuclear family, kinship, and broader social resources such as professional agencies and community organizations. The findings revealed that only 31.1% of participants adhered to their prescribed treatment regimens. Multivariate logistic regression analysis indicated that male gender, shorter treatment duration, fewer prescribed medications, and lower levels of social support were significantly associated with non-adherence. Among various sources of support, community and professional social resources exhibited the strongest positive correlation with treatment adherence, followed by kinship and nuclear family. Although spouses and children were primary sources of family support, their influence on adherence was weaker compared to professional and community-based support systems. The study underscored the critical role of broader social networks in fostering adherence to hypertension management and recommended strengthening community and professional support structures to improve treatment outcomes. However, the study acknowledged several limitations, including its reliance on self-reported data, which may introduce recall bias, and limited generalizability beyond the Chinese cultural context.

Additionally, the research did not differentiate between types of social support—such as emotional versus instrumental—which could have provided more nuanced insights into adherence behavior.

2.2.3 Level of Cultural Beliefs Affecting Hypertension Management

In 2024, Dennis Miezah and Laura L. Hayman conducted a narrative review titled “Culturally Tailored Lifestyle Modification Strategies for Hypertension Management” sought to examine how cultural beliefs shape lifestyle adjustments in the management of hypertension. Utilizing a narrative review design, the researchers analyzed existing scholarly literature to assess the influence of cultural practices on hypertension care. The findings demonstrated that cultural beliefs and traditions significantly affect dietary habits, levels of physical activity, knowledge, and perceptions regarding hypertension, all of which impact treatment adherence and the reliance on traditional herbal remedies. The review concluded that incorporating culturally sensitive lifestyle modification strategies and adopting patient-centered approaches are essential for enhancing long-term health outcomes in hypertension management.

Abdul Wahab et al. (2021) employed a qualitative ethnographic approach to investigate the influence of culture, religiosity, and spirituality on adherence to antihypertensive medication among adults residing in both urban and rural communities of Perak State, Malaysia. The study included 23 participants, predominantly Malay Muslims aged 18 years and older, who took part in semi-structured, face-to-face interviews conducted primarily in Malay, with occasional use of English. Data were analyzed thematically through inductive coding, with transcripts reviewed collaboratively by co-investigators and structured into a three-tier analytical framework encompassing organizing, classifying, and overarching themes. The results revealed that cultural

factors adversely affected medication adherence. Societal norms—such as a strong reliance on non-expert opinions and the widespread belief that “natural remedies are safer”—fostered skepticism toward conventional medical treatments. Furthermore, communication patterns characterized by superficial engagement, indirect expression, and a non-confrontational style hindered open dialogue between patients and healthcare providers, contributing to poor adherence. Overall, the study emphasized the need for culturally responsive health education and communication strategies to address misconceptions and enhance adherence to antihypertensive therapy within culturally diverse populations. Interactions further impeded understanding and acceptance of medical advice. With respect to religiosity, organized religious activities (ORA) fostered adherence by motivating participants to stay well for religious participation. Conversely, misinterpretations of religious teachings and reliance on religious-based healing (such as viewing divine intervention as superior to medicine) discouraged adherence to prescribed medications. The concept of spirituality, separate from religion, was not distinctly recognized by participants; it was mostly perceived through the lens of religiosity, rendering its independent influence unclear. The study concludes that cultural and religious factors profoundly shape health beliefs and behaviors related to medication adherence. Understanding these mechanisms can aid in designing more culturally sensitive adherence assessments and interventions, especially within similarly homogenous religious and cultural populations.

Ataklte et al. (2022) conducted a multinational cross-sectional study across 12 Sub-Saharan African countries to examine the prevalence of traditional medicine (TM) use and its association with hypertension control. The study involved 2,128 adults diagnosed with hypertension and found that the use of TM was relatively common and associated with poorer blood pressure control and higher complication rates. The overall prevalence of TM use was approximately 24%,

with notable variation across countries—ranging from below 15% in Congo, Gabon, and Togo, to over 35% in Cameroon and Guinea.

TM users were typically older (mean age 59 vs. 58 years), more often male (47.7% vs. 37%), resided in rural areas, and showed lower adherence to conventional treatment, often citing financial constraints as a barrier. After adjusting for sociodemographic and clinical variables, TM use was associated with higher odds of severe hypertension (OR 1.34; 95% CI 1.04–1.74) and renal complications (OR 1.57; 95% CI 1.07–2.29), though the association with uncontrolled hypertension was marginally non-significant (OR 1.30; $p = 0.06$). Linear regression analyses indicated that TM users had, on average, 3.87 mm Hg higher systolic and 1.75 mm Hg higher diastolic blood pressure than non-users. The authors concluded that reliance on traditional medicine was widespread and linked to poorer hypertension outcomes, possibly due to reduced adherence or substitution of biomedical treatment, underscoring the need for integrated culturally aware hypertension management approaches in Africa.

Olufemi Odusola and Adedokun (2021) implemented a culturally adapted cardiovascular health education intervention among 149 hypertensive primary care patients in rural Nigeria. The intervention integrated local language, indigenous beliefs, and community practices into the education program. The results revealed significant improvements in hypertension knowledge, medication adherence, lifestyle behaviors, and blood pressure control, demonstrating that culturally sensitive strategies can effectively enhance hypertension management in underserved populations.

Sima et al. (2024) conducted a systematic review examining the influence of cultural factors on hypertension incidence and management in developing countries. The review followed PRISMA guidelines as adapted by the Joanna Briggs Institute, sourcing literature from PubMed, Scopus, ProQuest, ScienceDirect, and Garuda databases. The findings revealed that culture-based approaches significantly improve hypertension control, particularly through interactive, image-based educational methods effective for patients with low health literacy, and through family involvement in disease management. The study emphasized that incorporating local cultural contexts is essential in designing and implementing effective hypertension prevention and management programs in developing countries.

In a related mixed-methods study, Odusola and Adedokun (2021) culturally adapted a cardiovascular health education program for hypertensive patients in rural Nigeria. Their intervention enhanced patients' knowledge of hypertension, improved medication adherence, and promoted healthier lifestyle choices. The researchers highlighted that integrating cultural beliefs, native languages, and community participation into educational interventions greatly improves their effectiveness and acceptability, particularly in low-resource settings.

Geremew et al. (2023) conducted an institution-based cross-sectional study to assess adherence to lifestyle modification practices among 410 hypertensive patients attending public hospitals in Bahir Dar City, Northwest Ethiopia. Data were collected using structured, interviewer-administered questionnaires and analyzed via logistic regression. Only 32.4% of participants adhered to recommended lifestyle modifications—such as healthy diet, regular physical activity, weight control, smoking cessation, and moderation of alcohol use. Factors associated with better adherence included higher education, greater knowledge of hypertension, strong self-efficacy, robust social support, and a positive patient–physician relationship. The study emphasized the

need for targeted behavioral and psychosocial interventions to enhance self-management and lifestyle adherence, especially in resource-constrained settings.

Uchechukwu et al. (2024) carried out a cross-sectional study involving 332 adults in Enugu South Local Government Area, Nigeria, to identify socio-cultural factors influencing knowledge and attitudes toward hypertension and diabetes. Using a multistage sampling technique, data were collected through self-administered and interviewer-assisted questionnaires and analyzed with SPSS version 26 at a 95% significance level. The results showed high awareness levels—with 80.5% understanding hypertension and 81.3% understanding diabetes—and positive attitudes toward disease management. The prevalence rates were 30.1% for hypertension and 23.8% for diabetes. The study concluded that residents possessed good knowledge and positive attitudes, with sociocultural factors showing statistically significant associations with both diseases.

An integrative literature review was also conducted using PubMed, CINAHL, Anthropology Plus, and IBSS databases to explore how culture influences self-care behaviors in cardiovascular disease (CVD). Articles were included if they involved adult participants, focused on cultural aspects of health behaviors or self-care, and were peer-reviewed. Fourteen studies met inclusion criteria. The review found that cultural beliefs and social structures profoundly influence self-care maintenance behaviors, particularly in African American and South Asian populations, where fatalism, collectivism, and traditional gender roles often conflicted with dietary and medication adherence. Additionally, cultural norms and kinship ties shaped interpretations of symptoms and decisions to use complementary or alternative medicine. The review underscored that understanding cultural determinants of self-care is essential for developing tailored, culturally competent interventions that enhance cardiovascular health outcomes.

2.3 Theoretical Framework

This study is underpinned by the Health Belief Model (HBM) and the Socioecological Model (SEM). These two frameworks offer a comprehensive lens for understanding how sociocultural factors influence self-care practices among hypertensive patients.

2.3.1 Health Belief Model (HBM)

The Health Belief Model (HBM) was formulated in the early 1950s by social psychologists Godfrey Hochbaum, Irwin Rosenstock, and Stephen Kegels under the U.S. Public Health Service. It was originally designed to explain why individuals often failed to engage in preventive health measures or participate in disease screening programs, such as tuberculosis screening (Hochbaum, 1958; Rosenstock, 1974). Over time, the HBM has evolved into a widely utilized theoretical framework for predicting and explaining health-related behaviors, especially within the context of chronic disease prevention and management, including hypertension (Jones et al., 2015). The model posits that an individual's engagement in health behavior is determined by their perceived susceptibility and severity of a health condition, as well as their evaluation of the potential benefits and barriers associated with taking preventive or corrective action. Given that hypertension is a chronic illness requiring sustained self-management, the HBM provides a robust framework for examining how sociocultural factors influence patients' perceptions, motivation, and adherence to self-care practices. Thus, it serves as an appropriate model for assessing the interplay between beliefs, perceptions, and behaviors among hypertensive patients at the University of Benin Teaching Hospital, Benin City.

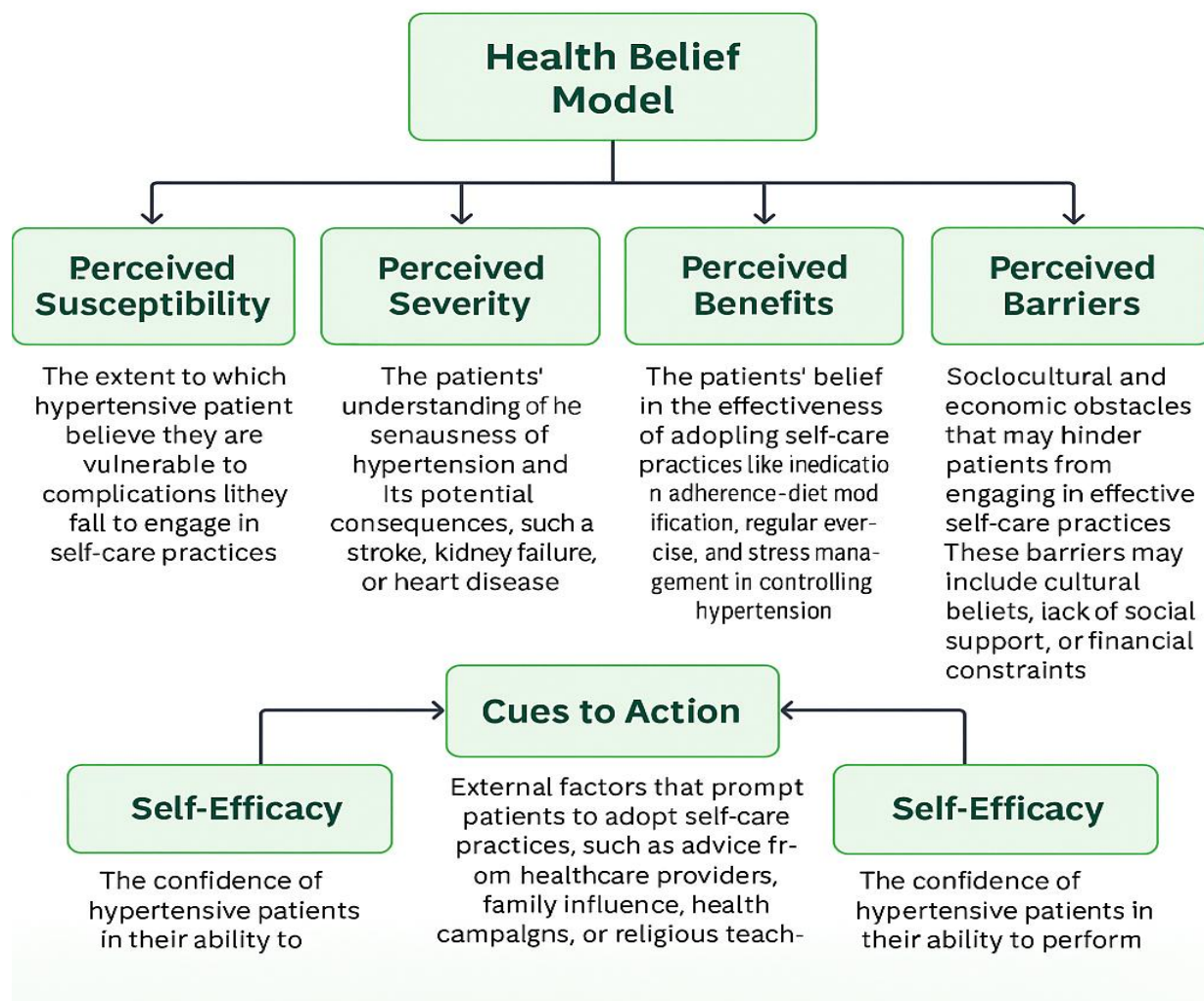


Figure 2.1 Diagram of the Health Belief Model

Source: Hochbaum (1958), Rosenstock (1974), and Jones et al. (2015).

2.3.2 Components of Health Belief Model (HBM)

1. Perceived Susceptibility: This is said to refer to a person's understanding about their risk of developing complications related to hypertension if self-care is neglected. Patients who perceive themselves at higher risk are more likely to engage in preventive actions. This means how much a person believes they are susceptible of developing hypertension or suffering serious

consequences from poorly managed blood pressure. If a person does not believe they are at risk of serious illness from high blood pressure, they are less likely to engage in self-care behaviors such as taking medication consistently, reducing salt or processed foods, monitoring blood pressure regularly and so on. Perceived susceptibility is a critical motivator for self-care in hypertension. If patients understand and accept that they are at real risk of complications like stroke, kidney failure, or heart disease, they are more likely to engage in proactive health behaviors.

2. Perceived Severity: This dimension reflects an individual's belief regarding the seriousness of hypertension and its potential consequences. It encompasses both medical impacts (such as stroke or heart attack) and social implications (such as loss of productivity or increased family burden). Hypertension is often referred to as a “silent killer” because it typically presents no symptoms until severe complications occur. If patients underestimate its seriousness, they may fail to adopt appropriate self-care behaviors. The level of perceived severity directly influences how urgently individuals take preventive or corrective actions—such as adhering to medication, limiting salt intake, engaging in regular physical activity, and monitoring blood pressure.

3. Perceived Benefits: This component reflects the belief in the effectiveness of engaging in healthy behaviors to prevent or manage hypertension-related complications. It represents the patient's understanding that actions such as medication adherence, dietary modification, regular exercise, and routine blood pressure monitoring contribute to improved health outcomes. For instance, hypertensive individuals who believe that reducing salt intake can help lower blood pressure are more likely to follow prescribed dietary recommendations.

4. Perceived Barriers: These are the factors that hinder or discourage individuals from practicing effective self-care. These obstacles may be sociocultural (e.g., reliance on traditional or herbal medicine), economic (e.g., cost of medication or healthcare access), or social (e.g., influence of family or peers). In the Nigerian context, some hypertensive patients may prefer traditional or herbal remedies due to cultural beliefs or mistrust of biomedical treatments, thereby reducing adherence to clinical management.

5. Cues to Action: This refers to stimuli or triggers that motivate individuals to initiate or maintain self-care behaviors. These can include healthcare advice, family encouragement, media campaigns, or personal experiences of illness. For example, health education programs at the University of Benin Teaching Hospital (UBTH) or witnessing a friend suffer a stroke as a result of uncontrolled hypertension can prompt individuals to adopt positive health behaviors and adhere to treatment regimens.

6. Self-Efficacy: Self-efficacy denotes an individual's confidence in their ability to successfully carry out behaviors that promote health and control hypertension. Patients with strong self-efficacy are more capable of overcoming challenges—such as lifestyle changes, medication costs, or social pressures—and are therefore more likely to maintain consistent medication use and engage in healthy lifestyle modifications. This underscores that self-efficacy plays a critical role in sustaining long-term adherence to hypertension management practices.

Application of the Health Belief Model to the study

The Health Belief Model (HBM) serves as a crucial framework for this study, offering insight into how sociocultural factors shape self-care behaviors among hypertensive patients at the University of Benin Teaching Hospital. The model underscores the importance of individual

perceptions, beliefs, and contextual influences in determining health-related actions. In this research, each construct of the HBM is utilized to analyze how patients perceive their illness, interpret health risks, and engage with prescribed management practices, thereby providing a structured understanding of the interplay between sociocultural dynamics and self-care adherence in hypertension management.

Perceived susceptibility and **perceived severity** are critical in determining whether patients view hypertension as a serious health threat. In many sociocultural settings, especially where asymptomatic conditions are misunderstood or minimized, patients may not feel personally at risk, thus reducing motivation for consistent self-care. This perception often stems from cultural attitudes toward chronic illnesses and influences how patients engage with diagnosis and treatment.

Perceived benefits and **perceived barriers** each construct of the model holds equal importance in shaping health behavior. Patients are more likely to adhere to recommended self-care practices when they believe such actions will produce favorable health outcomes. Conversely, cultural norms, religious beliefs, and reliance on traditional or herbal medicine may act as perceived barriers, leading some individuals to neglect or replace clinically advised routines. Additionally, financial constraints, time limitations, and low health literacy further exacerbate these barriers, hindering consistent engagement in hypertension management practices.

Cues to action—including family encouragement, community-based health education campaigns, or personal experiences of illness symptoms—serve as critical triggers that can either motivate or discourage positive health behaviors. The influence of social networks and

community norms significantly determines how patients interpret, prioritize, and respond to hypertension care recommendations.

Self-efficacy, defined as an individual's confidence in their ability to perform specific health behaviors, is shaped by educational attainment, access to accurate health information, and the availability of supportive social structures. Patients with stronger self-efficacy are more likely to consistently monitor their blood pressure, adhere to prescribed medication, maintain a balanced diet, and incorporate regular physical activity into their daily routines.

Overall, the Health Belief Model offers a comprehensive theoretical foundation for examining how cultural and social contexts influence patients' understanding, motivation, and capacity to effectively manage hypertension. Its application within this study facilitates the identification of key beliefs, perceptions, and contextual barriers, thereby guiding the development of targeted, culturally responsive interventions aimed at improving self-care adherence among hypertensive patients in the study population.

2.3.3 Social Ecological Model (SEM)

To complement the psychological insights of the HBM, the Social Ecological Model adds a broader, sociological lens by recognizing that behavior is shaped by a web of interacting systems. Developed by Bronfenbrenner (1977) and adapted for health behavior by McLeroy et al. (1988), SEM examines five interconnected levels: individual, interpersonal, community, organizational, and societal (Golden & Earp, 2012).

At the **individual level**, personal knowledge, attitudes, and health literacy influence how patients understand hypertension and their role in managing it.

The **interpersonal level** includes the influence of family, friends, and social networks, which can either support or hinder self-care behaviors. For example, individuals with robust family support tend to demonstrate greater adherence to prescribed treatment regimens.

The **community level** captures cultural beliefs, norms, and collective experiences, such as reliance on traditional medicine or stigmatization of chronic illness.

Institutional factors like the quality of medical care services, patient–provider communication, and organizational support directly affect patient experiences and continuity of care.

Finally, **societal factors**, including healthcare policy, socioeconomic status, and broader cultural beliefs, frame the environment in which individuals make decisions. For instance, structural poverty, limited health insurance coverage, and systemic barriers in Nigeria may constrain patients' ability to maintain regular self-care routines (WHO, 2023).

By integrating SEM, this study recognizes that self-care is not just a personal decision but is embedded in complex societal frameworks that must be understood to design effective interventions.

Combining the HBM and SEM allows this study to holistically explore how both personal beliefs and environmental factors affect hypertension management. While the HBM explains the internal motivations and perceptions that drive health behavior, the SEM contextualizes those motivations within wider social and cultural contexts. Collectively, these theoretical frameworks inform the evaluation of self-care behaviors and the impact of sociocultural factors among patients receiving care at the University of Benin Teaching Hospital. This integrated approach offers a comprehensive foundation for understanding and enhancing hypertension management outcomes within this population.

CHAPTER THREE

RESEARCH METHODOLOGY

Research Methodology encompasses the structured plan outlining the specific procedures undertaken in a study. This chapter presents the research design, study setting, target population, sample size determination, sampling technique, data collection instruments, validity and reliability of the instruments, methods of data collection and analysis, as well as ethical considerations.

3.1 Research Design

This study employed a descriptive cross-sectional design, which was utilized to assess the sociocultural influences and self-care practices among hypertensive patients receiving care at the University of Benin Teaching Hospital (UBTH), Benin City, Edo State. The hospital serves as a major tertiary healthcare institution catering to a wide population within the region. Data collection was conducted between February and March 2025. This design was particularly suitable as it allowed for a comprehensive assessment of the current situation within a defined timeframe, providing valuable insights without the need for prolonged follow-up.

3.2 Research Setting

The research was conducted at the University of Benin Teaching Hospital (UBTH), located in Benin City, Edo State. Established in 1973, the hospital is a leading tertiary healthcare and training institution occupying approximately 150 acres of land along the Benin–Lagos Expressway, Ugbowo, situated between Egor and Ovia North-East Local Government Areas. It

shares boundaries with the University of Benin on one side and the Federal Government Girls' College Road on the other.

UBTH is composed of several specialized departments and units, including the Medical Unit, Surgical Unit, Obstetrics and Gynecology Unit, Oncology Unit, Accident and Emergency Complex, Theatre Complex (which houses Accident and Emergency, Labour Ward, Ophthalmic, and Main Theatres), General Outpatient Department, Family Medicine, Pediatrics, Ophthalmic Complex, Radiology Department, Health Information Department, Catering, Engineering, and the Central Sterile Supply Department, among others. The institution employs a wide range of medical, paramedical, and non-medical personnel, including permanent, pensionable, and contract staff. Its core mandate is to teach, provide medical care, and conduct research in diverse areas of health. UBTH also houses several affiliated academic institutions, including the School of Basic Nursing (specializing in Preoperative, Ophthalmic, Pediatric, and Accident & Emergency Nursing), School of Midwifery, School of Anesthetic Technicians, School of Community Health Nursing, School of Health Information Management, Fellowship of the Nigerian Medical College (Residency Programme), and the School of Health Technology. These institutions align with UBTH's objective of delivering tertiary healthcare education and have consistently fulfilled their mandate of training healthcare professionals from all regions of the country. Consequently, UBTH is widely recognized as a "Center for Education", functioning as a hub for research, education, referral services, and healthcare delivery.

3.3 Target Population

The target population for this study comprised hypertensive patients attending both the outpatient clinics and wards of the University of Benin Teaching Hospital (UBTH), Benin City. Records

obtained from the hospital's outpatient department indicated that a total of 412 hypertensive patients were attended to in February, and 468 patients in March, giving a cumulative figure of 880 patients over the two-month period. This translates to an average monthly attendance of approximately 440 hypertensive patients, forming the basis for determining the study population.

3.4 Sample Size determination

The sample size was determined by using Yamen's formula which is

$$n = N / (1 + N(e)^2)$$

Where:

n= sample size

N= population size

e = level of precision (margin of error, usually 0.05 for 95% confidence level)

1= Unite (constant value)

Therefore:

$$n = 440 / (1 + 440(0.05)^2)$$

$$n = 440 / (1 + 440(0.0025))$$

$$n = 440 / (1 + 1.1)$$

$$n = 440 / 2.1$$

$$n \approx 209$$

Attrition rate of 10% of 209 was added to the sample size.

$$n = 209 + 20.9 = 230$$

3.5 Sampling Technique

The sampling technique describes how a representative subset of the population was chosen for the study. This research employed a non-probability sampling approach, with selection based on availability at the time of data collection. Although described as “random selection” in practice, the method relied on the researcher’s judgment rather than calculable selection probabilities; therefore, the probability of any individual being selected could not be determined.

3.6 Data Collection Instrument

Data were gathered using a structured questionnaire developed to address the study objectives. The questionnaire comprised four sections: Section A — sociodemographic information; Section B — self-care practices; Section C — social determinants of hypertension; and Section D — cultural determinants of hypertension.

3.7 Validity of the Instrument

Validity denotes the extent to which an instrument accurately measures the construct it is intended to assess (Polit & Beck, 2008). Face and content validity were established through expert review by the project supervisor and two additional specialists from the University of Benin, Benin City. The questionnaire was revised according to their recommendations prior to final use.

3.8 Reliability of the Instrument

Reliability refers to the consistency of an instrument in producing stable results over repeated measurements (Colin & Julie, 2006). The questionnaire and study procedures were considered reliable because the researcher maintained consistent measurement conditions and did not manipulate responses. The instrument was designed to yield reproducible results if the same behaviours were re-measured using the structured interview- administered questionnaire to obtain data from the hospital records. Pilot testing was conducted to assess its reliability by administering it to a sample comprising 10% of the intended study population in a tertiary healthcare facility. A pilot study was conducted among respondents who shared characteristics with the main study population. Following the pilot, the questionnaire's internal consistency was evaluated using Cronbach's alpha. A coefficient of 0.70 or greater was deemed acceptable, indicating satisfactory reliability and consistency of the instrument for use in the principal study.

3.9 Method of Data Collection

Data were collected using a structured, interviewer-administered questionnaire that was adapted from the literature to align with the sociocultural context of the study population. Recruitment targeted hypertensive patients attending the hospital's outpatient clinics. Data collection occurred over a four-week period. The researcher engaged and trained a hospital staff nurse as a research assistant to administer the questionnaires. Interviews were conducted on patients' clinic days (the UBTH clinic operates on Mondays), during morning clinic hours between 09:00 and 12:00, while patients waited to see their doctors. Questionnaires were administered after obtaining informed consent. Literate and willing patients filled out the questionnaires themselves, while

those who were not literate were interviewed, and their responses were recorded on the questionnaires by the research assistant. The questionnaires were retrieved immediately after completion, ensuring no disruption of the patients' consultations, as the research team patiently waited for them to finish.

3.10 Method of Data Analysis

The data collected was analysed to ascertain the sociocultural determinants of self-care practices of hypertension using descriptive statistics such as frequency, percentage, and mean deviation. Also, inferential statistics such as the chi-square test was used to give answers to the research questions, noting their P values and level of significance, and also, logistic regression statistics to analyze the stated hypothesis in the study. The data was encoded in to Statistical Package for Social Sciences (SPSS) version 25.0 and data gathered was organized, analyzed and described to give meaning to the research findings.

3.11 Ethical Considerations

The researcher obtained a letter of identification from the Department of Nursing Science to the selected hospital. The researcher applied for ethical approval with a proposal to the Health Research Ethics Committee, University of Benin Teaching Hospital, Benin City, Edo State. The principle of anonymity and confidentiality was maintained throughout the study. The researcher ensured that information gotten was treated with utmost confidentiality, hence, no name or address was sort for. Records were sorted in private enclosure without being taken from the records department. All information's obtained were strictly used for academic purposes. Plagiarism was avoided, all authors used in the study were appropriately cited both in the body of the work and at the reference page.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

This chapter presents the results and interpretation of data collected from the questionnaires administered to hypertensive patients at UBTH, Benin City, aimed at assessing the sociocultural determinants influencing the patients' level of adherence to self-care behaviors, examining how this related to their demographic profiles, self-care routines specific to hypertension management, as well as the social influences and cultural factors that shaped their health-related behaviors.

4.1 Demographic Characteristics of Hypertensive Patients attending UBTH

Table 4.1: Distribution of respondents by their demographic characteristics (n= 230)

Variables	Frequency	Percentage	Mean±SD
Age			
30 - 40	29	12.6	49±3years
41 - 50	68	29.6	
51 - 60	75	32.6	
> 60	58	25.2	
Gender			
Male	96	41.7	
Female	134	58.3	
Marital Status			
Single	59	25.7	
Married	171	74.3	
Religion			
Christianity	154	67.0	
Islam	76	33.0	
Educational status			
No formal education	15	6.5	
Read and write	23	10.0	
Primary	25	10.9	
Junior secondary	42	18.3	
Senior secondary	55	23.9	
Intermediate	18	7.8	
University	52	22.6	
Occupation			
Government employed	55	23.9	
Private employed	58	25.2	
Retired	58	25.2	
Housewife	33	14.3	
Farmer	26	11.3	
Residential status			
Rural	92	40.0	
Urban	138	60.0	
Smokes			
Yes	28	12.2	
No	202	87.8	

Duration of hypertension			
< 5yrs	52	22.6	8±2years
6 - 10 yrs	76	33.0	
11 -15 yrs	46	20.0	
16 - 20 yrs	37	16.1	
> 21 yrs	19	8.3	
Monthly income category			
< ₦100,000	132	57.4	₦83,258.24
> ₦100,000	98	42.6	

Source: Field survey, 2025

As shown in Table 4.1, findings on the demographic profile of hypertensive patients attending UBTH revealed that the majority were middle-aged adults, primarily within the 41–60 years age range. Specifically, 29.6% were aged 41–50 years, while 32.6% were aged 51–60 years. This indicates that hypertension is most prevalent among middle-aged individuals, highlighting the need for targeted health interventions focused on this age group populations. The mean age of respondents is approximately 49 years, reflecting an aging demographic susceptible to chronic conditions such as hypertension. Gender distribution revealed a higher proportion of females (58.3%) compared to males (41.7%), suggesting that women attending the hospital are more represented among hypertensive patients, which could imply gender differences in health-seeking behavior or prevalence rates; this highlights the need for gender-sensitive health education and intervention programs. More so, majority (74.3%) were married, indicating that marital status may influence health behaviors or access to care, and support systems associated with marriage might positively impact self-care practices. Regarding religion, Christianity is predominant (67.0%), which may influence cultural beliefs and practices related to health and self-care, suggesting that culturally tailored interventions could enhance effectiveness.

Furthermore, respondents' distribution as regards respective educational status showed that a significant portion of patients have attained at least secondary education, with 23.9% having senior secondary education and 22.6% holding university qualifications. This relatively high

educational level is encouraging for health literacy and self-care practices, although ongoing educational efforts are still essential. In terms of occupation, the most common categories were retired (25.2%) and private employed (25.2%) respondents, indicating that a substantial proportion of patients are either retired or employed in private sectors, which may influence their ability to adhere to self-care routines based on income and work-related factors. Residential status revealed that 60% of respondents reside in urban areas, aligning with greater access to healthcare facilities and information, which can positively influence self-care behaviors; however, rural residents (40%) may face barriers, emphasizing the need for outreach programs. On the other hand, smoking prevalence was relatively low, with only 12.2% reporting smoking, which is beneficial as smoking is a risk factor for hypertension and related complications. The majority (87.8%) do not smoke, suggesting that smoking cessation programs could further improve self-care and overall health outcomes. Nevertheless, the duration of hypertension varied, with most patients having had the condition for 6–10 years (33.0%) and less than a quarter (22.6%) having it for less than 5 years. Longer duration of illness may influence self-care practices, with those having longer histories potentially more experienced but also possibly more fatigued or non-adherent, indicating that ongoing support is necessary regardless of disease duration. However, monthly income showed that majority (57.4%) earned less than ₦100,000, with an average income of ₦83,258.24, pointing to financial constraints that could impact access to medications and healthy lifestyle options; therefore, socioeconomic support and affordable care are crucial.

4.2 Level of Self-care Practices Adherence Among Hypertensive Patients Attending UBTH

Table 4.2. Distribution of respondents on their level of adherence to self-care practices (n = 230)

Self-care practices	Always F (%)	Often F (%)	Sometimes F (%)	Rarely F (%)	Never F (%)	Mean	Standard deviation	Remarks
I take my hypertension medication as prescribed.	118(51.3)	67(29.1)	22(9.6)	14(6.1)	9(3.9)	3.18	1.09	Adherent
I regularly monitor my blood pressure at home	62(27.0)	53(23.0)	56(24.3)	47(20.4)	12(5.2)	2.46	1.23	Adherent
I follow a special diet to manage my blood pressure	51(22.2)	56(24.3)	82(35.7)	28(12.2)	13(5.7)	2.45	1.13	Adherent
I avoid alcohol and tobacco due to my condition.	98(42.6)	61(26.5)	53(23.0)	14(6.1)	4(1.7)	3.02	1.03	Adherent
I engage in physical activity to control my blood pressure	70(30.4)	74(32.2)	54(23.5)	21(9.1)	11(4.8)	2.74	1.13	Adherent
I seek information on how to manage my hypertension	72(31.3)	64(27.8)	56(25.2)	28(12.2)	8(3.5)	2.71	1.14	Adherent
I feel confident in my ability to manage my hypertension.	85(37.0)	83(36.1)	33(14.3)	24(10.4)	5(2.2)	2.95	1.06	Adherent

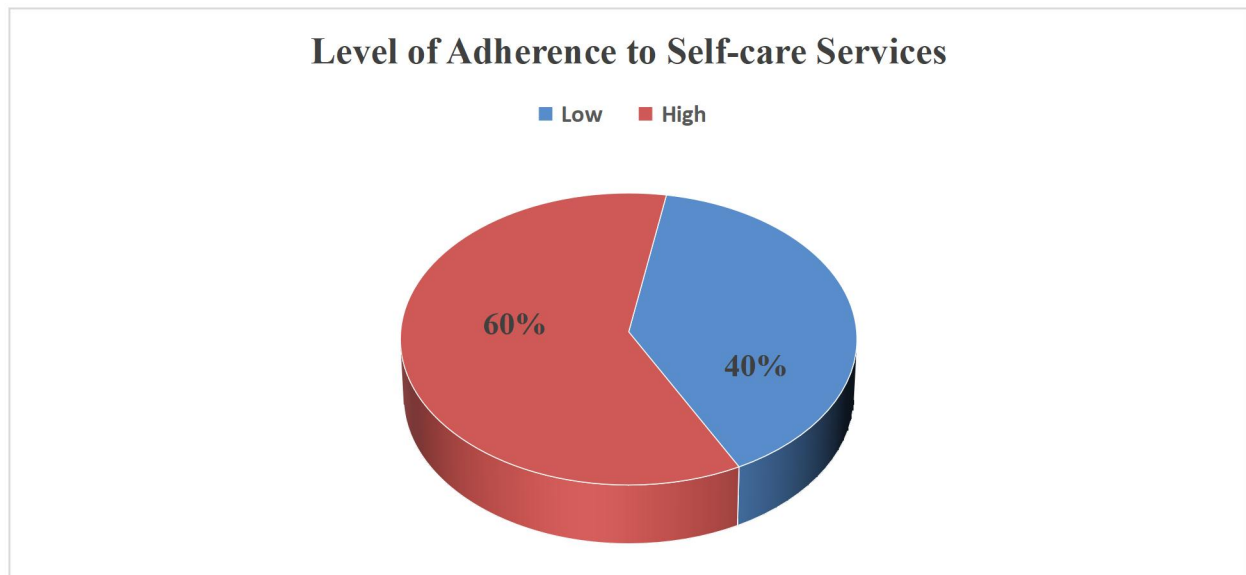
Source: Field survey, 2025

The analysis of self-care practice adherence among hypertensive patients attending UBTH (as presented in Table 4.2) showed that the majority of respondents exhibited a high level of adherence to several key self-care behaviors, although there were areas requiring improvement. Specifically, majority (51.3%) reported always taking their hypertension medication as prescribed, with an additional 29.1% often adhering, resulting in a combined adherence rate of approximately 80.4%, which indicates a generally strong commitment to medication compliance; this is critical because consistent medication use is fundamental in controlling blood pressure and preventing complications. The mean adherence score for medication intake is 3.18 with a standard deviation of 1.09, further confirming that most patients tend to follow prescribed medication regimens regularly.

In contrast, blood pressure monitoring at home showed a more variable adherence pattern, with only 27.0% always monitoring and 23.0% often doing so, totaling about 50% adherence, but a notable 20.4% sometimes monitor, and 5.2% never monitor their blood pressure, highlighting a potential gap in self-monitoring practices which are essential for timely management; the mean score of 2.46, accompanied by a relatively high standard deviation of 1.23, indicates considerable variability in respondents' behavior. To address this, focused educational interventions on the importance of regular blood pressure monitoring are recommended. could be beneficial. Regarding dietary management, only 22.2% always follow a special diet, and 24.3% often do so, totaling roughly 46.5% adherence, while 35.7% sometimes follow dietary recommendations, with small percentages rarely or never doing so. The mean score of 2.45 indicates moderate adherence, implying that dietary modifications remain a challenge, possibly due to cultural preferences, economic factors, or lack of awareness; interventions focusing on culturally appropriate dietary counseling could enhance compliance.

More so, avoidance of alcohol and tobacco, which is vital for hypertension control, showed promising adherence, with 42.6% always avoiding these substances and 26.5% often avoiding them, totaling approximately 69.1% adherence, and only a small fraction (1.7%) never avoiding alcohol and tobacco. The mean score of 3.02 suggests good adherence, emphasizing the effectiveness of health messaging against these risk behaviors. Continued reinforcement and community-based programs can sustain and improve these behaviors. Nonetheless, engagement in physical activity as a self-care practice exhibited moderate adherence, with 30.4% always engaging in physical activity and 32.2% often doing so, summing to about 62.6%. However, 23.5% sometimes engage in physical activity, and a small proportion (4.8%) never engage, indicating room for improvement. The mean score of 2.74 reflects moderate compliance, and targeted interventions promoting accessible, culturally acceptable physical activities could further enhance adherence.

In addition, the result showed that seeking information on hypertension management was also fairly well adhered to, with 31.3% always seeking information and 27.8% often doing so, totaling roughly 59.1%, but a notable 12.2% sometimes seek information, suggesting that some patients may lack motivation or access. The mean score of 2.71 indicates moderate engagement, and health education campaigns could improve patients' proactive information-seeking behaviors. Also, confidence in managing hypertension was relatively high, with 37.0% always feeling confident and 36.1% often feeling confident, totaling approximately 73.1%, and only a small percentage (2.2%) never feeling confident. The mean score of 2.95 supports this overall confidence, which is a positive indicator for self-care success. Healthcare providers should reinforce this confidence through continuous education and support.



N.B: Low = (13.0 - 19.52); High = (19.53 - 26.00)

Fig 4.1 Pie chart distribution of respondents on their level of adherence to self-care practices

Furthermore, the pie chart illustrating respondents' levels of adherence to self-care practices revealed that approximately 60% of the participants, representing the majority, exhibited a high level of adherence, while the remaining 40% of hypertensive patients demonstrated a low level of adherence. This suggests that the respondents in this area are much more concerned with a promising positive behaviours towards practices that will enhance their recovery and aid their health status.

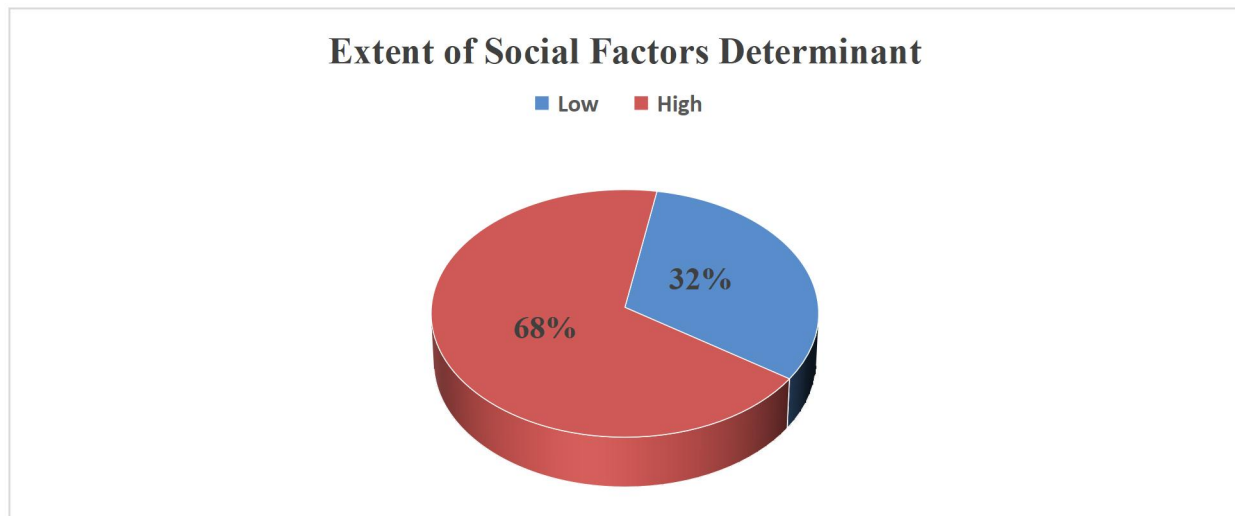
4.3 Social Factors Influencing Self-care Practices Among Hypertensive Patients Attending UBTH

Table 4.3: Distribution of respondents on the social determinants influencing their self-care behaviours (n=230)

Parameters	Strongly agree F (%)	Agree F (%)	Neutral F (%)	Disagree F (%)	Strongly disagree F (%)	Mean	Standard deviation	Remarks
High cost of medication affects my ability to manage hypertension.	56(24.3)	62(27.0)	61(26.5)	31(13.5)	20(8.7)	3.45	1.24	Factor
Nobody helps me with my medication or clinic visits	31(13.5)	60(26.1)	80(34.8)	42(18.3)	17(7.4)	3.20	1.12	Factor
Lack of family support affects my ability to manage my condition.	40(17.4)	71(30.9)	79(34.3)	27(11.7)	13(5.7)	3.43	1.08	Factor
I participate in support group or community programs	11(4.8)	15(6.5)	65(28.3)	91(39.6)	48(20.9)	2.35	1.03	Factor
My access to healthcare services is great	11(4.8)	15(6.5)	65(28.3)	91(39.6)	48(20.9)	3.22	1.15	Factor
Transportation or distance issues prevent you from accessing care	31(13.5)	68(29.6)	72(31.3)	38(16.5)	21(9.1)	3.17	1.22	Factor

Source: Field Survey, 2025

As shown in Table 4.3, the analysis of social factors influencing self-care practices among hypertensive patients attending UBTH indicated that financial and social support barriers significantly impacted disease management, with the highest percentage of respondents (27.0%) agreeing that the high cost of medication affects their ability to manage hypertension, and a substantial proportion (26.5%) remaining neutral, resulting in an overall mean score of 3.45 (SD=1.24), suggesting that while cost is a notable barrier, perceptions vary. Regarding social support, 26.1% agreed that nobody helps with medication or clinic visits, and 34.8% are neutral, with a mean score of 3.20 (SD=1.12), indicating moderate acknowledgment of social assistance as a factor. Family support appeared to influence self-care, with 30.9% agreeing that lack of family support affects their management, and a mean score of 3.43 (SD=1.08), highlighting its significant role. Furthermore, participation in support groups or community programs is minimal, with only 6.5% agreeing and a mean score of 2.35 (SD=1.03), suggesting low engagement, which could be an area for intervention to enhance peer support and community involvement. Similarly, access to healthcare services was perceived positively by a small fraction (6.5%) agreeing it is great, but 28.3% remain neutral, and a significant 39.6% disagree that access is good, with a mean score of 3.22 (SD=1.15), indicating moderate dissatisfaction that could hinder effective self-care. Transportation or distance issues are moderately perceived as barriers, with 29.6% agreeing that transportation issues prevent access and a mean score of 3.17 (SD=1.22), emphasizing the need for improved healthcare accessibility.



N.B: Low = (11.0 - 18.81); High = (18.82 - 27.00)

Fig 4.2 Pie chart distribution of respondents on the extent of social factors determinant on their self-care behaviour

In addition, fig 4.2 showed that majority (68%) of the respondents reported a high level of influence the social factors had in determining their self-care practices while about 32% reported a low level of influence. This implies that the measured social factors played a relative role as a determinant towards self-care practices.

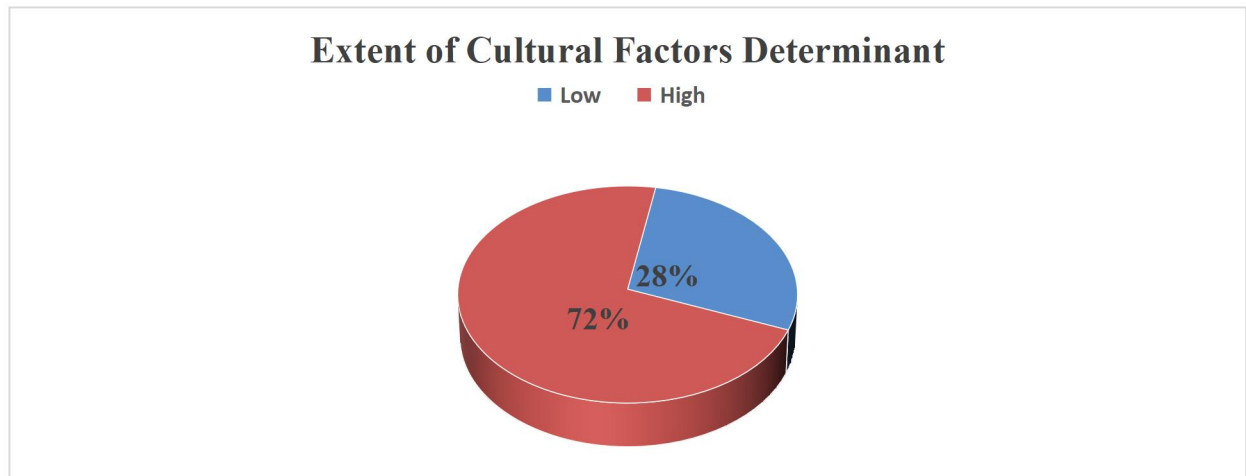
4.4 Cultural Factors Influencing Self-care Practices Among Hypertensive Patients Attending UBTH

Table 4.4: Distribution of respondents on the cultural determinants influencing their self-care behaviours (n=230)

Cultural factors	Strongly agree F (%)	Agree F (%)	Neutral F (%)	Disagree F (%)	Strongly disagree F (%)	Mean	Standard deviation	Remarks
I use traditional medicine or herbal remedies for your blood pressure.	34(14.8)	46(20.0)	74(32.2)	55(23.9)	21(9.1)	3.07	1.18	Factor
I believe traditional or spiritual practices help control hypertension.	31(13.5)	53(23.0)	81(35.2)	40(17.4)	25(10.9)	3.11	1.17	Factor
I feel pressured to follow cultural food customs that affect your diet.	27(11.7)	74(32.2)	55(23.9)	43(18.7)	31(13.5)	3.10	1.23	Factor
Religious beliefs are involved in my choice of treatment.	30(13.0)	76(33.0)	69(30.0)	32(13.9)	23(10.0)	3.25	1.16	Factor
Cultural or religious leaders have advised me about my health.	8(3.5)	26(11.3)	104(45.2)	66(28.7)	26(11.3)	2.67	0.94	Not a factor
I face stigma or shame in your community for having hypertension.	11(4.8)	46(20.0)	85(37.0)	55(23.9)	33(14.3)	2.77	1.08	Not a factor

Source: Field Survey, 2025

As reported in Table 4.4, traditional medicine and spiritual beliefs played a moderate role in health management, with 20.0% of respondents agreeing and a mean score of 3.07 (SD=1.18) regarding the use of traditional or herbal remedies, indicating that some patients incorporate these practices alongside or instead of conventional treatments. Similarly, 23.0% agreed that traditional or spiritual practices help control hypertension, with a mean of 3.11 (SD=1.17), suggesting that cultural beliefs in spiritual healing influence perceptions and possibly behaviors related to hypertension management. Regarding dietary customs, 32.2% agreed that they feel pressured to follow cultural food practices affecting their diet, with a mean score of 3.10 (SD=1.23), highlighting the influence of cultural eating habits on adherence to dietary recommendations; this underscores the importance of culturally sensitive nutritional counseling that respects traditional food practices while promoting healthy modifications. Religious beliefs also significantly influenced treatment choices, with 33.0% agreeing that religion impacts their treatment decisions and a mean score of 3.25 (SD=1.16), emphasizing that spirituality and religious guidance are integral to health behaviors in this population. Notably, cultural or religious leaders were less frequently involved in health advice, with only 11.3% agreeing that they have advised them about their health and a mean score of 2.67 (SD=0.94), indicating that formal or community-based religious influence on health practices is limited. Additionally, stigma associated with hypertension appeared to be less prominent, with only 20.0% agreeing that they face shame or stigma in their community, and a mean score of 2.77 (SD=1.08), suggesting that social stigma is not a predominant barrier to self-care.



N.B: Low = (15.0 - 25.03); High = (25.04 - 32.00)

Fig 4.3 Pie chart distribution of respondents on the extent of cultural factors determinant on their self-care behaviour

Furthermore, fig 4.3 showed that about 72% of the respondents reported a high level of influence the cultural factors had in determining their self-care practices while only 28% reported a low level of influence. This implies that the measured cultural factors played a relative role as a determinant towards self-care practices.

4.5 Hypothesis Testing

4.5.1 Relationship between Socio-demographic Characteristics and Hypertensive Patients' Level of Adherence to Self-care Practices

Table 4.5: Bivariate analysis of the relationship between respondents' demographic characteristics and their level of adherence to self-care practices

Variables	Low Adherence (F)	High Adherence (F)	Total	χ^2 value	df	p-value	Remarks
Age							
30 - 40	11	18	29	1.753 ^a	3	0.625	Not significant
41 - 50	26	42	68				
51 - 60	34	41	75				
> 60	20	38	58				
Gender							
Male	39	57	96	0.077 ^a	1	0.781	Not significant
Female	52	82	134				
Marital Status							
Single	23	36	59	0.011 ^a	1	0.916	Not significant
Married	68	103	171				
Religion							
Christianity	62	92	154	0.094 ^a	1	0.759	Not significant
Islam	29	47	76				
Educational status							
No formal education	7	8	15	11.278 ^a	6	0.080	Not significant
Read and write	15	8	23				
Primary	9	16	25				
Junior secondary	17	25	42				
Senior secondary	22	33	55				
Intermediate	3	15	18				
University	18	34	52				
Occupation							
Government employed	19	36	55	14.602 ^a	4	0.006	Significant
Private employed	20	38	58				
Retired	35	23	58				
Housewife	10	23	33				
Farmer	7	19	26				
Residential status							
Rural	30	62	92	3.103 ^a	1	0.078	Not significant
Urban	61	77	138				
Smokes							
Yes	17	11	28	5.964 ^a	1	0.015	Significant
No	74	128	202				
Duration of hypertension							
< 5yrs	28	24	52	14.799 ^a	4	0.005	Significant
6 - 10 yrs	27	49	76				
11 -15 yrs	16	30	46				
16 - 20 yrs	8	29	37				
> 21 yrs	12	7	19				

Monthly income							
< ₦100,000	55	77	132	0.572 ^a	1	0.449	Not significant
> ₦100,000	36	62	98				

Source: Field survey, 2025

The analysis of the relationship between socio-demographic characteristics and level of adherence to self-care practices, presented in Table 4.5 showed that respondents' occupation ($\chi^2 = 14.602$; p-value = 0.006) had a statistically significant association with their level of adherence at the 1% level; the distribution demonstrated that retirees had the highest proportion of high adherence (65.5%), compared to government-employed respondents, where 36 out of 55 (65.5%) exhibited high adherence, suggesting that retirees and government employees may have better adherence possibly due to more flexible schedules or stable routines. Conversely, farmers and housewives showed relatively lower adherence levels, implying potential barriers such as limited access to health information or resources. Smoking status was also significantly associated with adherence, with a χ^2 value of 5.964 and a p-value of 0.015, signifying significance at the 5% level; among smokers, only 11 out of 28 (39.3%) demonstrated high adherence, whereas non-smokers had a much higher proportion (63.4%) with high adherence, indicating that smoking may negatively influence self-care behaviors, possibly due to underlying health risk perceptions or lifestyle factors. In addition, respondents' age, with a χ^2 of 1.753 and p-value of 0.625, was not significant, and the majority across age groups showed mixed adherence levels, which suggests age alone may not be a determinant in adherence behaviors in this sample. Similarly, gender, with a χ^2 of 0.077 and p=0.781, showed no significant difference; both males and females had comparable proportions of high adherence (59% for males and 61% for females), indicating gender does not significantly influence adherence. Marital status, religion, educational

level, residential status, and income also showed no significant associations, implying these factors might not directly influence adherence behaviors among these hypertensive patients.

Table 4.6: Multivariate Logistic Analysis of the relationship between respondents' demographic characteristics and their level of adherence to self-care practices

Variables	B	S.E.	Wald	df	Sig.	OR	95% C.I.	
							Lower	Upper
Constant	-0.681	1.028	0.438	1	0.508	0.506	-0.681	
Age (RC = > 60)			1.282	3	0.733			
30 - 40	-0.281	0.548	0.263	1	0.608	0.755	0.258	2.211
41 - 50	-0.480	0.464	1.071	1	0.301	0.619	0.249	1.536
51 - 60	-0.109	0.467	0.055	1	0.815	0.897	0.359	2.239
Gender (RC = Female)								
Male	0.099	.330	0.091	1	0.763	1.104	.579	2.108
Marital Status (RC = Married)								
Single	-0.240	0.395	0.370	1	0.543	0.787	0.363	1.705
Religion (RC = Islam)								
Christianity	0.259	0.379	0.466	1	0.495	1.295	0.616	2.723
Educational status (RC = University)			12.670	6	0.049			
No formal education	-0.440	0.706	0.388	1	0.533	0.644	0.161	2.570
Read and write	-1.462***	0.611	5.727	1	0.017	0.232	0.070	0.767
Primary	-0.624	0.592	1.110	1	0.292	0.536	0.168	1.711
Junior secondary	-0.771	0.531	2.104	1	0.147	0.463	0.163	1.311
Senior secondary	-0.337	0.494	0.467	1	0.494	0.714	0.271	1.878
Intermediate	1.381*	0.836	2.726	1	0.099	3.978	0.772	20.483
Occupation (RC = Farmer)			13.929	4	0.008			
Government employed	-0.686	0.609	1.270	1	0.260	0.504	0.153	1.661
Private employed Retiored	-0.332	0.606	0.299	1	0.584	0.718	0.219	2.354
Retired	-1.632***	0.596	7.490	1	0.006	0.196	0.061	0.629
Housewife	-0.173	0.671	0.066	1	0.797	0.841	0.226	3.132
Residential status (RC = Urban)								
Rural	0.772**	0.360	4.587	1	0.032	2.164	1.068	4.385

Smokes (RC = Yes)								
No	1.193**	0.498	5.743	1	0.017	3.297	1.243	8.746
Duration of hypertension (RC => 21 yrs)								
< 5yrs	0.618	0.667	0.858	1	0.354	1.855	0.502	6.852
6 - 10 yrs	1.225*	0.643	3.624	1	0.057	3.403	0.964	12.007
11 -15 yrs	1.117*	0.654	2.918	1	0.088	3.055	0.848	11.003
16 - 20 yrs	2.152***	0.767	7.877	1	0.005	8.606	1.914	38.693
Monthly income category (RC => ₦100,000)								
< ₦100,000	-0.265	0.344	0.593	1	0.441	0.767	0.391	1.505

, **, and * denote 10%, 5%, and 1% level of significance respectively*

Source: Field survey, 2025

Furthermore, the multivariate logistic analysis presented in Table 4.6 revealed that patients aged 30-40 years had an odds ratio (OR) of 0.755 (95% CI: 0.258-2.211, p=0.608), suggesting they are approximately 24.5% less likely to adhere compared to those over 60, but this difference is not statistically significant, indicating that age in this range does not strongly influence adherence. Similarly, patients aged 41-50 years had an OR of 0.619 (CI: 0.249-1.536, p=0.301), indicating about a 38.1% reduction in adherence likelihood compared to the over-60 group, but again, this is not significant. Patients aged 51-60 years had an OR of 0.897 (CI: 0.359-2.239, p=0.815), implying a similar adherence likelihood as those over 60. These findings suggest that age groups below 60 do not significantly differ from those over 60 regarding adherence, highlighting that age alone may not be a strong predictor within this population.

Gender analysis showed that males had an OR of 1.104 (CI: 0.579-2.108, p=0.763), implying they are about 1.1 times likely to adhere than females, but this difference is not statistically significant. Marital status revealed that single individuals had an OR of 0.787 (CI: 0.363-1.705, p=0.543), indicating that they are about 78.7% more likely to have high adherence compared to married respondents. Regarding religion, Christians had an OR of 1.295 (CI: 0.616-2.723,

p=0.495), suggesting they are about 29.5% more likely to adhere than Muslims. On the other hand as regards respondents' educational status. Respondents with no formal education had an OR of 0.644 (CI: 0.161-2.570, p=0.533), indicating a lower likelihood of adherence with 35.6% less likelihood compared to those with university education, but this is not significant. Those who can read and write had an OR of 0.232 (CI: 0.070-0.767, p=0.017), implying they are about 76.8% less likely to adhere than university graduates, and this difference is statistically significant. Participants with primary, junior secondary, and senior secondary education had ORs of 0.536, 0.463, and 0.714 respectively, but none of these were statistically significant. However, respondents with intermediate education had an OR of 3.978 (CI: 0.772-20.483, p=0.099), suggesting a trend toward higher adherence compared to university-educated respondents, although this was not statistically significant. These findings suggest that limited literacy, particularly being able to read and write but not attaining higher education, may be a barrier to adherence, and targeted educational support could be beneficial.

In addition, results on respondents' occupation showed that retired individuals had an OR of 0.196 (CI: 0.061-0.629, p=0.006), implying they are about 80.4% less likely to adhere compared to farmers, and this is statistically significant. Other occupational groups such as government-employed, private employed, and housewives did not show significant differences. Residential status revealed that rural residents had an OR of 2.164 (CI: 1.068-4.385, p=0.032), indicating they are over twice as likely to adhere compared to urban residents, and this was statistically significant. This may reflect community support or traditional health practices prevalent in rural areas. Regarding smoking status, non-smokers had an OR of 3.297 (CI: 1.243-8.746, p=0.017), meaning they are over three times more likely to adhere to self-care practices than smokers, and this association is statistically significant. For the duration of hypertension, respondents with less

than 5 years had an OR of 1.855 (CI: 0.502-6.852, $p=0.354$), which was not significant. Those with 6-10 years had an OR of 3.403 (CI: 0.964-12.007, $p=0.057$), indicating a near-significant trend toward higher adherence. Patients with 11-15 years of hypertension had an OR of 3.055 (CI: 0.848-11.003, $p=0.088$), also suggesting a positive trend but not reaching significance. Notably, patients with 16-20 years of hypertension had an OR of 8.606 (CI: 1.914-38.693, $p=0.005$), implying they are over eight times more likely to adhere than those with over 21 years of the condition, and this is statistically significant. This suggests that longer duration of hypertension is associated with increased adherence, potentially due to greater disease awareness or experience. Likewise, income level did not significantly influence adherence; respondents earning less than ₦100,000 had an OR of 0.767 (CI: 0.391-1.505, $p=0.441$), indicating no significant difference compared to higher income earners.

4.5.2 Relationship between Social determinants of Self-care Practices Among Hypertensive Patients and their Level of Adherence to Self-care Practices

Table 4.7: Bivariate Analysis of the relationship between the social determinants of self-care practices among respondents and their level of adherence to self-care practices

Variables	Low Adherence (F)	High Adherence (F)	Total	χ^2 value	df	p-value	Remarks
High cost of medication							
Strongly agree	25	31	56	17.321 ^a	4	0.002	Significant
Agree	32	30	62				
Neutral	15	46	61				
Disagree	7	24	31				
Strongly disagree	12	8	20				
Lack of assistance with medications							
Strongly agree	12	19	31	12.424	4	0.014	Significant
Agree	34	26	60				
Neutral	28	52	80				
Disagree	10	32	42				
Strongly disagree	7	10	17				
Lack of family support							
Strongly agree	5	8	13	4.181 ^a	4	0.382	Not significant
Agree	8	19	27				
Neutral	31	48	79				
Disagree	26	45	71				
Strongly disagree	21	19	40				
Participation in support groups/community programs							
Strongly agree	3	8	11	5.364 ^a	4	0.252	Not significant
Agree	5	10	15				
Neutral	26	39	65				
Disagree	43	48	91				
Strongly disagree	14	34	48				
Access to healthcare services							
Strongly agree	13	18	31	2.595 ^a	4	0.628	Not significant
Agree	26	42	68				
Neutral	29	43	72				
Disagree	12	26	38				
Strongly disagree	11	10	21				
Transportation/distance issues							
Strongly agree	16	21	37	5.318 ^a	4	0.256	Not significant
Agree	19	40	59				
Neutral	29	36	65				
Disagree	21	24	45				
Strongly disagree	6	18	24				

Source: Field survey, 2025

As shown in Table 4.7, the analysis of social determinants influencing adherence to self-care practices among hypertensive patients at UBTH identified several significant and non-significant variables. High cost of medication was significantly associated with adherence levels, with a chi-square value of 17.321 ($df=4$, $p=0.002$), indicating a strong statistical relationship at the 0.2% significance level. Specifically, among respondents who strongly agreed that medication costs posed a barrier, 31 out of 56 (55.4%) demonstrated high adherence, whereas only 8 out of 20 (40%) of those who strongly disagreed reported high adherence. Conversely, those who strongly agreed had a higher proportion (44.6%) with low adherence, suggesting that financial constraints can negatively influence consistent self-care practices. The implication is that financial barriers like medication costs are critical and interventions such as subsidization or financial assistance programs could enhance adherence. Similarly, lack of assistance with medications was also significantly related to adherence, with a chi-square value of 12.424 ($df=4$, $p=0.014$). Respondents who strongly agreed that they lacked assistance had only 19 out of 31 (61.3%) with high adherence, whereas those who strongly disagreed had 10 out of 17 (58.8%) with high adherence. This indicates that social support, including help with medication management, plays a vital influence in adherence behavior. Individuals receiving care lacking assistance tend to be more likely to struggle with consistent medication intake, so community support programs and caregiver involvement should be targeted to improve adherence.

In contrast, findings as regards lack of family support ($\chi^2=4.181$, $p=0.382$) indicated that no significant relationship was found between respondents' perceived family support and their adherence level to self-care practices. Specifically, among respondents who agreed they lacked family support, 8 out of 13 (61.5%) showed low adherence, and 5 (38.5%) showed high adherence. Conversely, among those who disagreed with lacking family support, 45 out of 71

(63.4%) exhibited low adherence, and 26 (36.6%) had high adherence. The similar proportions across categories and the high p-value suggest that whether or not a patient perceives lack of family support does not statistically influence their adherence level. This implies that family support may not be a decisive factor affecting adherence in this sample, or that other support mechanisms compensate for family support deficits. Therefore, focusing solely on family support may not be sufficient in interventions aimed at improving adherence.

As regards respondents' participation in support groups or community programs ($\chi^2=5.364$, $p=0.252$), the result showed no meaningful association was observed between participation in support groups and adherence levels. Among respondents who strongly agreed they participate in such programs, only 3 out of 11 (27.3%) had high adherence, while among those who strongly disagreed, 34 out of 48 (70.8%) had high adherence. Despite these apparent differences, the p-value indicates that these variations are not statistically significant. This suggests that participation in community or support groups does not reliably predict adherence levels in this population, possibly because other factors have a stronger influence or because participation rates are too low to detect an effect. Consequently, while support groups may have other benefits, their direct impact on adherence may be limited or require further investigation. Moreso, findings on respondents' access to healthcare services ($\chi^2=2.595$, $p=0.628$) revealed that perceived access to healthcare services does not significantly affect adherence. Among respondents who strongly agreed that they had good access, 18 out of 31 (58.1%) reported high adherence, compared to 26 out of 38 (68.4%) among those who strongly disagreed that access was good. The similar adherence rates and high p-value suggest that, within this sample, perceived access to healthcare does not influence whether patients adhere to self-care practices. This could mean that other barriers or facilitators overshadow healthcare access, or that patients'

perceptions do not accurately reflect their actual access. Therefore, improving healthcare access alone may not significantly change adherence behaviors.

Also, the result indicates no significant association between transportation or distance challenges ($\chi^2=5.318$, $p=0.256$) and adherence. Specifically, respondents who strongly agreed that transportation issues affected them, 21 out of 37 (56.8%) had low adherence, while among those who strongly disagreed, 18 out of 24 (75%) had low adherence. Despite some differences in percentages, the statistical test showed that these differences were not significant, implying that transportation barriers do not strongly determine adherence levels, and suggests that other factors may mitigate transportation challenges, or that such issues are not perceived as critical by most patients.

Table 4.8: Multivariate Logistic Analysis of the relationship between the social determinants of self-care practices among respondents and their level of adherence to self-care practices

Variables	B	S.E.	Wald	df	Sig.	OR	95% C.I.	
							Lower	Upper
Constant	-0.100	1.173	0.007	1	0.932			
High cost of medication			14.921	4	0.005			
Agree	-0.717	0.656	1.195	1	0.274	0.488	0.135	1.766
Neutral	1.284**	0.595	4.661	1	0.031	3.612	1.126	11.587
Disagree	1.153**	0.488	5.598	1	0.018	3.169	1.219	8.240
Strongly disagree	-0.146	0.424	0.119	1	0.730	0.864	0.377	1.982
Lack of assistance with medications			15.536	4	0.004			
Agree	-1.275*	0.770	2.745	1	0.098	0.279	0.062	1.263
Neutral	0.712	0.612	1.353	1	0.245	2.038	0.614	6.760
Disagree	0.459	0.539	0.724	1	0.395	1.582	0.550	4.553
Strongly disagree	-0.850	0.537	2.508	1	0.113	0.427	0.149	1.224
Lack of family support			1.969	4	0.741			
Agree	0.248	0.771	0.104	1	0.747	1.282	0.283	5.808
Neutral	0.695	0.633	1.203	1	0.273	2.003	0.579	6.933
Disagree	0.604	0.484	1.557	1	0.212	1.829	0.708	4.723
Strongly disagree	0.469	0.513	0.836	1	0.360	1.599	0.585	4.371
Participation in support groups/community programs			8.071	4	0.089			
Agree	0.649	0.826	0.617	1	0.432	1.913	0.379	9.649
Neutral	-0.687	0.794	0.749	1	0.387	0.503	0.106	2.385
Disagree	-0.122	0.811	0.023	1	0.881	0.885	0.181	4.339
Strongly disagree	0.227	1.003	0.051	1	0.821	1.255	0.176	8.957
Access to healthcare services			3.291	4	0.510			
Agree	-0.855	0.754	1.287	1	0.257	0.425	0.097	1.863
Neutral	0.356	0.648	0.302	1	0.582	1.428	0.401	5.080
Disagree	0.107	0.541	0.039	1	0.843	1.113	0.386	3.210
Strongly disagree	0.093	0.556	0.028	1	0.867	1.098	0.369	3.264

Transportation/distance issues			1.966	4	0.742			
Agree	0.571	0.753	0.576	1	0.448	1.771	0.405	7.742
Neutral	-0.302	0.556	0.295	1	0.587	0.739	0.248	2.200
Disagree	-0.234	0.543	0.185	1	0.667	0.792	0.273	2.293
Strongly disagree	0.069	0.569	0.015	1	0.903	1.071	0.351	3.271

, **, and * denote 10%, 5%, and 1% level of significance respectively*

Note: Reference category is Strongly agree

Source: Field survey, 2025

As shown in Table 4.8, the multivariate logistic regression analysis of the relationship between various social determinants and respondents' level of adherence to self-care practices showed that respondents who agreed that high medication costs affect their self-care had an odds ratio (OR) of 0.488 (95% CI: 0.135-1.766, $p=0.274$), implying they are approximately 51.2% less likely to adhere to self-care practices compared to those who strongly agreed; nevertheless, this difference was not statistically significant. In contrast, respondents who were neutral about the impact of medication costs had an OR of 3.612 (CI: 1.126-11.587, $p=0.031$), indicating they are about 3.6 times more likely to adhere than those who strongly agree, which is statistically significant. Similarly, respondents who disagreed with the statement had an OR of 3.169 (CI: 1.219-8.240, $p=0.018$), suggesting they are roughly 3.2 times more likely to adhere than those who strongly agreed; this association is likewise statistically significant. These findings imply that perceiving high medication costs as a barrier may negatively influence adherence, whereas those who do not see cost as a barrier are significantly more likely to adhere, highlighting the importance of addressing medication affordability to improve self-care behaviors.

Regarding the lack of assistance with medications, respondents who agreed had an OR of 0.279 (CI: 0.062-1.263, $p=0.098$), suggesting they are about 72.1% less likely to adhere compared to those who strongly agree, though this result is marginally non-significant. Those who were

neutral about lacking assistance had an OR of 2.038 (CI: 0.614-6.760, $p=0.245$), indicating a non-significant trend towards higher adherence, and respondents who disagreed had an OR of 1.582 (CI: 0.550-4.553, $p=0.395$). Similarly, lack of family support showed no significant association, with ORs close to 1 and p -values well above 0.05, suggesting family support does not significantly influence adherence in this analysis. Also, participation in support groups or community programs was associated with an OR of 1.913 (CI: 0.379-9.649, $p=0.432$) for those who agreed to participation, indicating a non-significant trend toward higher adherence. Other categories, including neutral and disagreement, also showed non-significant associations, implying that participation may have a positive effect that this study was not sufficiently powered to detect definitively.

In addition, access to healthcare services did not show a significant relationship, with those who agreed about access issues having an OR of 0.425 (CI: 0.097-1.863, $p=0.257$). Other categories (neutral, disagree, strongly disagree) similarly did not demonstrate significant effects, indicating that access barriers may not be a strong predictor of adherence in this particular model, although logistical barriers could still be relevant at the individual level. Similarly, transportation or distance issues did not significantly influence adherence, with respondents who agreed having an OR of 1.771 (CI: 0.405-7.742, $p=0.448$). Other categories also showed no significant effects, suggesting that transportation challenges did not exert a statistically significant effect on self-care adherence in this analysis.

4.5.3 Relationship between Cultural determinants of Self-care Practices Among Hypertensive Patients and their Level of Adherence to Self-care Practices

Table 4.9: Bivariate Analysis of the relationship between the cultural determinants of self-care practices among respondents and their level of adherence to self-care practices

Variables	Low Adherence (F)	High Adherence (F)	Total	χ^2 value	df	P-value	Remarks
Usage of traditional medicine							
Strongly agree	12	22	34	8.037 ^a	4	0.090	Not significant
Agree	18	28	46				
Neutral	18	46	74				
Disagree	19	26	55				
Strongly disagree	4	17	21				
Believe in traditional/spiritual practices							
Strongly agree	16	15	25	2.539 ^a	4	0.638	Not significant
Agree	19	26	40				
Neutral	32	49	81				
Disagree	14	34	53				
Strongly disagree	10	15	31				
Pressure to follow cultural food customs							
Strongly agree	8	19	27	2.001 ^a	4	0.736	Not significant
Agree	28	46	74				
Neutral	22	33	55				
Disagree	19	24	43				
Strongly disagree	14	17	31				
Religious belief choice of treatment							
Strongly agree	14	16	30	2.237 ^a	4	0.692	Not significant
Agree	28	48	76				
Neutral	30	39	69				
Disagree	10	22	32				
Strongly disagree	9	14	23				
Advice from cultural/religious leaders							
Strongly agree	4	20	26	5.959 ^a	4	0.202	Not significant
Agree	14	42	66				
Neutral	43	61	104				
Disagree	24	42	26				
Strongly disagree	6	20	8				
Stigma/shame for having hypertension							
Strongly agree	10	1	11	21.230 ^a	4	0.003	Significant
Agree	13	33	46				
Neutral	27	58	85				
Disagree	22	33	55				
Strongly disagree	19	14	33				

Source: Field Survey, 2025

The analysis of the relationship between cultural determinants and adherence to self-care practices among hypertensive patients as shown in Table 4.9, showed that usage of traditional medicine ($\chi^2=8.037$, $df=4$, $p=0.090$) does not significantly influence their adherence levels. Among those strongly agreeing they use traditional medicine, 12 had low adherence and 22 had high adherence. Similarly, in the strongly disagree group, 4 had low adherence and 17 high adherence. This suggests that traditional medicine use does not notably affect adherence behaviors in this sample. Similarly, patients' beliefs in traditional or spiritual healing approaches ($\chi^2=2.539$, $df=4$, $p=0.638$) do not significantly impact their adherence. Specifically, in the strongly agree category, 16 had low adherence and 15 high adherence; in strongly disagree, 10 low and 15 high. The high p-value indicates no significant relationship, implying that such beliefs may coexist with good adherence or have minimal influence on it. Additionally, the pressure to adhere to cultural dietary practices ($\chi^2=2.001$, $df=4$, $p=0.736$) does not significantly relate to adherence levels. This suggests that cultural food customs may not be a barrier or facilitator in adherence behaviors in this context.

Furthermore, patients' religious beliefs influencing their treatment choices ($\chi^2=2.237$, $df=4$, $p=0.692$), and the influence of advice from cultural or religious leaders ($\chi^2=5.959$, $df=4$, $p=0.202$) also do not significantly relate to adherence. Contrastingly, stigma/shame for having hypertension ($\chi^2=21.230$, $df=4$, $p=0.003$) showed a statistically significant relationship. Patients who strongly agree that they feel stigma or shame related to hypertension predominantly had low adherence (90.9%), whereas only 1 out of 11 (9.1%) had high adherence. This indicates that feeling shame or stigma significantly correlates with poor adherence, potentially leading to concealment, denial, or reluctance to adhere to treatment due to social or cultural shame.

Table 4.10: Multivariate Logistic Analysis of the relationship between the cultural determinants of self-care practices among respondents and their level of adherence to self-care practices

Variables	B	S.E.	Wald	df	Sig.	OR	95% C.I.	
							Lower	Upper
Constant	-5.048	1.824	7.657	1	0.006	0.006		
Usage of traditional medicine			8.208	4	0.084			
Agree	1.517	0.788	3.705	1	0.054	4.559	0.973	21.373
Neutral	-0.500	0.524	0.909	1	0.340	0.607	0.217	1.694
Disagree	-0.133	0.509	0.069	1	0.793	0.875	0.323	2.372
Strongly disagree	-0.368	0.575	0.410	1	0.522	0.692	0.224	2.136
Believe in traditional/spiritual practices			4.837	4	0.304			
Agree	1.076	0.653	2.712	1	0.100	2.932	0.815	10.545
Neutral	1.192	0.593	4.048	1	0.044	3.294	1.031	10.522
Disagree	0.917	0.530	2.998	1	0.083	2.503	0.886	7.070
Strongly disagree	0.952	0.547	3.027	1	0.082	2.591	0.887	7.573
Pressure to follow cultural food customs			6.193	4	0.185			
Agree	-1.689	0.720	5.504	1	0.019	0.185	0.045	0.757
Neutral	-0.981	0.641	2.341	1	0.126	0.375	0.107	1.317
Disagree	-0.894	0.603	2.198	1	0.138	0.409	0.126	1.333
Strongly disagree	-0.620	0.583	1.130	1	0.288	0.538	0.171	1.687
Religious belief hoice of treatment			6.713	4	0.152			
Agree	1.137	0.674	2.840	1	0.092	3.116	0.831	11.687
Neutral	1.439	0.650	4.906	1	0.027	4.215	1.180	15.057
Disagree	0.944	0.524	3.240	1	0.072	2.570	0.920	7.181
Strongly disagree	1.281	0.536	5.703	1	0.017	3.600	1.258	10.301
Advice from cultural/religious leaders			9.050	4	0.060			
Agree	2.730	1.005	7.387	1	0.007	1.340	2.141	109.888
Neutral	1.208	0.838	2.082	1	0.149	3.348	0.648	17.289
Disagree	0.946	0.825	1.317	1	0.251	2.576	0.512	12.967
Strongly disagree	0.910	0.897	1.029	1	0.310	2.485	0.428	14.431

Stigma/shame for having hypertension			17.930	4	0.001			
Agree	2.533	1.260	4.039	1	0.044	2.595	1.065	148.987
Neutral	3.240	1.242	6.804	1	0.009	2.527	2.238	291.212
Disagree	4.054	1.256	10.417	1	0.001	5.638	4.914	676.006
Strongly disagree	3.730	1.266	8.684	1	0.003	4.661	3.487	497.762

**** denote 5% level of significance**

Note: Reference category = Strongly agree

Source: Field survey, 2025

Furthermore, the multivariate logistic regression analysis presented in Table 4.10 showed that respondents who agreed regarding the use of traditional medicine, had an odds ratio (OR) of 4.559 (95% CI: 0.973-21.373, $p=0.054$), implying they are approximately 4.56 times more likely to adhere to self-care practices compared to those who strongly agree with the use of traditional medicine, although this is marginally non-significant at the 5% level. Those who were neutral or disagreed had ORs of 0.607 and 0.875 respectively, indicating no significant differences from the reference. For belief in traditional or spiritual practices, respondents who agreed had an OR of 2.932 (CI: 0.815-10.545, $p=0.100$), suggesting they are nearly three times more likely to adhere, but this is not statistically significant. Respondents who were neutral, disagreed, or strongly disagreed also showed increased odds (ORs of 3.294, 2.503, and 2.591 respectively), with the neutral category being statistically significant ($p=0.044$). These findings suggest a trend where belief in traditional practices may influence adherence, but the evidence is weak.

More so, pressure to follow cultural food customs was significantly associated with lower adherence, with respondents who agreed having an OR of 0.185 (CI: 0.045-0.757, $p=0.019$), implying they are about 81.5% less likely to adhere compared to those who strongly agree. This indicates that cultural pressure may negatively impact self-care adherence, and addressing

cultural food norms could improve adherence outcomes. Regarding the influence of religious beliefs on treatment choices, respondents who agreed had an OR of 3.116 (CI: 0.831-11.687, $p=0.092$), indicating they are over three times more likely to adhere, but this is marginally non-significant. The neutral and disagree categories showed increased odds (ORs of 4.215 and 2.570 respectively), with the neutral being statistically significant ($p=0.027$). This suggests that religious beliefs may have some influence on adherence, though further research is needed.

However, advice from cultural or religious leaders was significantly associated with increased adherence, with respondents who agreed exhibiting an OR of 1.340 (CI: 2.141-109.888, $p=0.007$). This indicates they are about 1.34 times more likely to adhere compared to those who strongly agree, emphasizing the potential positive role of leaders' advice. The neutral and disagree categories showed elevated odds but were not statistically significant. More so, the study revealed an association between stigma or shame related to having hypertension and adherence. Respondents who agreed that stigma/shame exists had an OR of 2.595 (CI: 1.065-148.987, $p=0.044$), indicating they are about 2.6 times more likely to adhere than those who strongly agree. Those who were neutral or disagreed exhibited even higher ORs (3.240 and 4.054 respectively), with the "Disagree" category being highly significant ($p=0.001$). These results suggest that feelings of stigma or shame may motivate individuals to adhere more strictly to self-care, possibly due to a desire to conceal or cope with their condition.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Discussion of Findings

5.1.1 Level of Self-care Practices Adherence Among Hypertensive Patients Attending UBTH

The Findings from this study revealed that a substantial proportion of hypertensive individuals receiving care at UBTH exhibited good adherence to key self-care practices, particularly with regard to medication compliance. Over 80% of respondents reported consistently taking their prescribed medications, aligning with previous studies that underscore medication adherence as a fundamental component of effective hypertension management (Krousel-Wood et al., 2020). This commendable level of compliance is encouraging, given its pivotal role in maintaining optimal blood pressure control and preventing related complications. Nevertheless, adherence to other self-care behaviors, including regular blood pressure monitoring and dietary adjustments, was observed to be moderate, with only about half of the patients consistently engaging in these practices. These results corroborate existing studies that highlight challenges in maintaining routine self-monitoring and dietary adherence, often influenced by cultural, economic, and informational barriers (Kang et al., 2021). Notably, the relatively high adherence to avoiding alcohol and tobacco suggests effective health messaging in this area, which is consistent with findings from similar settings where targeted health education improves risk behavior modification (Ogedegbe et al., 2022). Engagement in physical activity and proactive seeking of hypertension-related information also showed moderate adherence, indicating room for improvement, especially considering the The findings also reflect the positive impact of health

literacy on self-care behaviors as documented in prior studies (Baker et al., 2020). Moreover, the high level of confidence reported by respondents in managing their hypertension corresponds with existing evidence indicating that self-efficacy serves as a key determinant of consistent and sustained self-care practices (Lorig et al., 2019).

5.1.2 Social Factors Influencing Self-care Practices Among Hypertensive Patients

Attending UBTH

The significant influence of social factors on the self-care practices exhibited by hypertensive individuals receiving care at UBTH are consistent with existing literature that underscores the critical role of social determinants in chronic disease management. The high percentage of respondents who identified the high cost of medication as a barrier corroborates previous research indicating that financial constraints are a primary obstacle to effective hypertension control (Akinlua et al., 2020). Similarly, the moderate perception of inadequate social and family support reflects the importance of social networks in promoting adherence to self-care behaviors, which is supported by studies showing that strong familial and social support correlates positively with better health outcomes in hypertensive populations (Adeoye et al., 2021). However, the observed low engagement in support groups or community programs suggests a missed opportunity, as previous studies suggest that peer support networks can significantly improve self-management and adherence (Kumar et al., 2021). The moderate dissatisfaction with healthcare access and transportation issues further emphasizes systemic barriers, aligning with findings that accessibility challenges hinder consistent healthcare utilization and self-care. The pie chart indicating that 68% of respondents perceive social factors as having a high impact on their self-care practices confirms the substantial role of these determinants.

5.1.3 Cultural Factors Influencing Self-care Practices Among Hypertensive Patients Attending UBTH

Cultural factors exerted a high influence on their self-care behaviors, with traditional medicine and spiritual beliefs playing a notable role in shaping health perceptions and behaviors. Approximately 20% of respondents affirmed using herbal remedies and believed in their efficacy for controlling hypertension, which aligns with existing literature that emphasizes the pervasive role of traditional medicine in many African communities. Such practices are often deeply rooted in cultural norms and may coexist with or substitute conventional treatments, potentially impacting adherence to biomedical management of hypertension. Furthermore, cultural food customs had a considerable influence, with nearly one-third of respondents feeling pressured to adhere to traditional dietary practices that may conflict with recommended nutritional guidelines for hypertension management. This finding corroborates prior studies highlighting how cultural dietary habits can serve as barriers to optimal self-care and necessitate culturally sensitive nutritional interventions (Ogunleye et al., 2020).

Religious beliefs also significantly impacted treatment decisions, with a third of respondents acknowledging spirituality's role, consistent with research showing that faith and religious guidance are integral to health behaviors in many populations. However, the involvement of religious or cultural leaders in health advice was limited, suggesting a potential area for strengthening community engagement in health promotion. More so, social stigma related to hypertension appeared to be less prominent among respondents, with only about 20% acknowledging shame or stigma, which contrasts with studies from other contexts where social stigma is a major barrier to self-care (Sarki et al., 2021).

5.1.4 Hypothesis Testing

The significant association between occupation, particularly being retired or employed in the government sector, and higher adherence corroborates studies suggesting that stable routines and access to resources facilitate better health behaviors. Conversely, the finding that smoking status negatively impacts adherence aligns with prior research highlighting lifestyle behaviors as barriers to consistent self-care (Khan et al., 2020). The lack of significant influence from age, gender, educational level, and income aligns with some studies indicating that adherence behaviors are multifaceted and not solely determined by socio-demographic factors (Amoah et al., 2021). The length of hypertension duration shows a positive relationship with adherence, which supports studies suggesting that increased disease awareness over time fosters better management practices (Ojo et al., 2020).

Regarding social determinants, financial barriers such as medication costs and lack of assistance with medications significantly diminish adherence, echoing global findings that economic constraints are primary obstacles in managing chronic diseases (WHO, 2020). The non-significant effect of family support and participation in community groups suggests that social support's role may vary contextually, aligning with research indicating that perceived support does not always translate into behavioral change. On cultural determinants, beliefs in traditional/spiritual practices and pressure to conform to cultural food customs showed no significant impact on adherence, reinforcing the notion that cultural beliefs may coexist with health behaviors rather than necessarily impede them (Nguyen et al., 2021). However, the significant association between stigma/shame and adherence appeared to motivate better adherence, possibly reflecting a desire to conceal the condition or avoid social judgment.

5.2 Implications of findings to Nursing

The outcomes of this study carry important implications for nursing practice, especially in the management of individuals with hypertension. Nurses play a pivotal role in acknowledging that socio-demographic variables—such as occupation and duration of illness—affect patients' adherence to self-care practices, and should therefore customize education and support interventions accordingly. The observed effect of financial constraints, including medication costs and lack of support, underscores the necessity for nurses to advocate for adequate resources, offer counseling on cost-effective care strategies, and facilitate access to financial assistance programs. Furthermore, the impact of cultural beliefs and associated stigma on adherence emphasizes the need for culturally sensitive and competent nursing care, nurses should incorporate respect for patients' beliefs, work with community and religious leaders, and address stigma openly to improve engagement. The findings suggest that nurses should also focus on enhancing social support networks and involve family members in the care process to foster better adherence. Moreover, integrating health education that emphasizes the importance of consistent self-care, regardless of demographic or cultural background, can help mitigate barriers identified in the study.

5.3 Limitations of the Study

Despite the valuable insights generated from this study, certain limitations remain. The cross-sectional research design restricts the ability to draw causal inferences between socio-demographic, social, and cultural factors and adherence behaviors. Furthermore, the use of self-reported data may have introduced social desirability bias, possibly resulting in an overestimation of adherence levels among respondents. Additionally, since the study was

conducted within a single healthcare facility, the findings may not be fully generalizable to other populations or contexts with differing socio-cultural characteristics. Furthermore, some variables, such as cultural beliefs and stigma, are complex and may not be fully captured through quantitative measures alone, suggesting a need for qualitative approaches to deepen understanding. Another limitation of study findings is also as regards the fact that the study did not control for other potential confounding variables, such as psychological factors or health literacy, which may also affect adherence behaviors.

5.4 Summary of the Study

In summary, the study showed that majority (53%) were female with a mean age of approximately 49 years. About 74.3% were married with majority (67.0%) identified as Christians. More so, educational attainment was relatively high, with 23.9% having completed senior secondary education and 22.6% holding university degrees. Occupationally, about 50.4% were either retired or employed in the private sector, with a mean monthly income of ₦83,258.24. Furthermore, about 60% of the hypertensive patients resided in urban areas, providing better access to healthcare facilities, while 40% lived in rural settings. The study also showed that most respondents had been diagnosed with hypertension for 6–10 years (33.0%) and had an average duration of 8 ± 2 years. Regarding self-care practices, adherence to medication was notably high ($\bar{x} = 3.18$). However, practices like home blood pressure monitoring ($\bar{x} = 2.46$) and dietary management ($\bar{x} = 2.45$) showed moderate adherence. Similarly, respondents' engagement in physical activity was moderate, with a mean score of 2.74 (SD=1.13), while respondents' confidence in managing hypertension was high, with a mean score of 2.95 (SD=1.06). Furthermore, common social factors significantly impacting self-care included the perception that high medication costs affected management ($\bar{x} = 3.45$), family support ($\bar{x} = 3.43$), access to

healthcare services ($\bar{x} = 3.22$), and transportation challenges ($\bar{x} = 3.17$). In terms of common influencing cultural determinants, respondents reported that religious beliefs ($\bar{x} = 3.25$), traditional medicine ($\bar{x} = 3.07$) and spiritual beliefs ($\bar{x} = 3.11$) influenced health perceptions, and pressure to adhere to cultural food customs which could affect dietary adherence ($\bar{x} = 3.10$), significantly influenced treatment decisions.

Inferential analysis revealed that occupation ($\chi^2=14.602$, $p=0.006$), smoking status ($\chi^2=5.964$, $p=0.015$), duration of hypertension ($\chi^2=14.799$, $p=0.005$), and residence ($\chi^2=3.103$, $p=0.078$) were significantly associated with adherence levels. Multivariate logistic regression further indicated that retirees were less likely to adhere (OR=0.196, 95% CI: 0.061–0.629, $p=0.006$), while rural residents (OR=2.164, 95% CI: 1.068–4.385, $p=0.032$) and non-smokers (OR=3.297, 95% CI: 1.243–8.746, $p=0.017$) were more adherent. Longer duration of hypertension (16–20 years) significantly increased adherence odds (OR=8.606, 95% CI: 1.914–38.693, $p=0.005$). In addition, cultural factors such as the use of traditional medicine and spiritual beliefs did not significantly affect adherence in bivariate analyses. However, stigma or shame related to hypertension was significantly associated with lower adherence ($p=0.003$), with those feeling stigmatized more likely to be non-adherent. Multivariate analysis confirmed that perceived stigma increased the likelihood of adherence (OR=2.595, 95% CI: 1.065–148.987, $p=0.044$), possibly indicating that individuals motivated to conceal their condition may adhere more strictly to self-care routines.

5.5 Conclusion of the Study

In conclusion, the study showed that respondents occupation significantly affected adherence, with retirees and government employees showing higher adherence levels, potentially due to

more flexible routines or stability. Additionally, non-smokers were more likely to adhere, highlighting the detrimental effect of smoking on self-care behaviors. Longer duration of hypertension was strongly associated with increased adherence, suggesting that disease experience and awareness foster better self-management. Social determinants such as perceived high medication costs and lack of assistance with medications also played critical roles. Patients perceiving medication costs as a barrier were less likely to adhere, while those who disagreed that cost was an obstacle or were neutral were more adherent. Similarly, lack of assistance with medications was associated with lower adherence. On the other hand, cultural factors, especially stigma or shame related to hypertension, emerged as significant motivators for adherence. Patients experiencing stigma were more likely to adhere, possibly driven by a desire to conceal their condition or avoid social judgment. More so, cultural pressure to follow dietary customs negatively impacted adherence. Nonetheless, advice from cultural or religious leaders positively affected adherence, indicating that leveraging community leaders could enhance health promotion efforts.

5.6 Recommendations

Based on the findings of this study, the following are recommended;

1. Implementing Financial Support Programs: Develop and promote subsidization schemes or medication assistance programs to reduce the financial burden of hypertension management, thereby improving adherence among patients perceiving high medication costs.

2. **Enhancing Social Support and Community Engagement:** Establish community-based support groups and caregiver involvement initiatives to provide assistance with medication management and foster social networks that encourage consistent self-care behaviors.
3. **Engaging Community and Religious Leaders:** Leverage the influence of cultural and religious leaders by providing them with health education and involving them in awareness campaigns to address cultural norms, reduce stigma, and promote adherence to self-care practices.
4. **Promoting Continuous Patient Education:** Design tailored educational interventions that increase awareness about hypertension, its management, and the importance of adherence, especially targeting patients with limited literacy and longer disease duration.
5. **Addressing Cultural Beliefs and Stigma:** Develop culturally sensitive programs to destigmatize hypertension, dispel misconceptions about traditional/spiritual practices in relation to treatment, and encourage open discussions about the condition to improve adherence and overall health outcomes.

5.7 Suggestion for Further Studies

For further studies, it is suggested onward research should focus on evaluating the effectiveness of comprehensive intervention strategies that simultaneously address financial constraints, social support systems, and cultural beliefs influencing hypertension self-care practices. Longitudinal studies are particularly needed to monitor how adherence behaviors evolve over extended periods and to identify factors that sustain or hinder long-term compliance. Moreover, there is a need to investigate the potential of emerging technologies, such as mobile health (mHealth) applications, SMS reminder systems, and telemedicine, in promoting consistent medication use

and lifestyle modifications among hypertensive patients. Additionally, comparative studies across different regions and qualitative research exploring patients' perceptions, beliefs, and experiences related to hypertension management can provide deeper insights into barriers and facilitators of adherence.

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APPENDIX I
QUESTIONNAIRE

FACULTY OF NURSING SCIENCES, COLLEGE OF MEDICAL SCIENCES, UNIVERSITY OF BENIN.

**ASSESSMENT OF SOCIOCULTURAL AND DETERMINANTS OF SELF-CARE PRACTICES
AMONG PATIENTS WITH HYPERTENSION ATTENDING UNIVERSITY OF BENIN
TEACHING HOSPITAL, BENIN CITY, EDO STATE.**

Dear Respondent,

I am a student of the above-named institution, carrying out a study on the assessment of sociocultural and determinants of self-care practices of hypertension. This study is aimed at assessing the sociocultural and determinants of self-care practices among patients with hypertension attending University of Benin Teaching Hospital. I pledge that personal information that is directly traceable to you will not be required for this hence a high level of anonymity and confidentiality will be maintained. I humbly request your willful and kind participation in this study, by filling out the questionnaire.

IROH LOUINTA ETINOSA

Researcher

INSTRUCTIONS: Please tick [☐] where appropriate in the spaces provided.

SECTION A: SOCIODEMOGRAPHIC DATA

1. Age-30-40yrs(☐) 41-50yrs (☐) 51-60yrs (☐) Above 60yrs (☐)
2. Gender: Male (☐) Female (☐)
3. Marital Status: Single (☐) Married (☐)
4. Educational status: Illiterate (☐) read and write(☐) primary(☐), junior secondary (☐).
Senior secondary (☐), intermediate (☐), university (☐)
5. Occupation: Government employed (☐), Private employed (☐), Retired (☐),
housewife (☐), Farmer (☐)
6. Residence: Rural (☐), Urban (☐)
7. Smokes: Yes (☐) No (☐)
8. Religion: Christian (☐) Muslim (☐)
9. Duration of hypertension: <5yrs (☐), 6-10yrs (☐), 11-15yrs(☐) 16-20yrs(☐) >21yrs
(☐)
10. Monthly income: <N100,000 (☐) >N100,000

SECTION B: SELF-CARE PRACTICES

In this section;

Response Option: | A= Always | O= Often | S= Sometimes | R= Rarely | N= Never

SN	STATEMENT	A	O	S	R	N
11	I take my hypertension medication as prescribed.					
12	I regularly monitor my blood pressure at home					
13	I follow a special diet to manage my blood pressure					

14	I avoid alcohol and tobacco due to my condition.					
15	I engage in physical activity to control my blood pressure					
16	I seek information on how to manage my hypertension					
17	I feel confident in my ability to manage my hypertension.					

SECTION C: This section seeks to identify the social determinants that affect hypertension management among patients.

Response Options: | **SA** = Strongly Agree | **A** = Agree | **N** = Neutral | **D** = Disagree | **SD** = Strongly Disagree |

SN	STATEMENT	SA	A	N	D	SD
18	High cost of medication affects my ability to manage hypertension.					
19	Nobody helps me with my medication or clinic visits					
20	Lack of family support affects my ability to manage my condition.					
21	I participate in support group or community programs					
22	My access to healthcare services is great					
23	Transportation or distance issues prevent you from accessing care					

SECTION D: This section seeks to identify the cultural determinants that affect hypertension management.

Response Options: | **SA** = Strongly Agree | **A** = Agree | **N** = Neutral | **D** = Disagree | **SD** = Strongly Disagree |

SN	STATEMENT	SA	A	N	D	SD
24	I use traditional medicine or herbal remedies for your blood pressure.					
25	I believe traditional or spiritual practices help control hypertension.					
26	I feel pressured to follow cultural food customs that affect your diet.					
27	Religious beliefs are involved in my choice of treatment.					
28	Cultural or religious leaders have advised me about my health.					
29	I face stigma or shame in your community for having hypertension.					

APPENDIX II

RELIABILITY TEST

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha ^a	Cronbach's Alpha Based on Standardized Items ^a	N of Items
.874	.882	19

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B11_Medication_adherence	53.90	18.369	.621	.559	.861 ^a
B12_BP_monitoring	54.67	16.506	.654	.448	.857 ^a
B13_Special_diet	54.43	19.357	.577	.641	.865 ^a
B14_Avoid_alcohol_tobacco	54.03	16.654	.609	.517	.862 ^a
B15_Physical_activity	54.40	16.524	.590	.428	.864 ^a
B16_Seek_information	54.27	16.892	.633	.493	.859 ^a
B17_Confidence	54.00	18.621	.621	.599	.861 ^a
C18_Cost_affects_management	53.30	16.286	.604	.569	.862 ^a
C19_No_one_helps_with_medication	53.93	19.237	.579	.652	.865 ^a
C20_Lack_family_support	53.53	19.844	.548	.690	.868 ^a
C21_Participate_support_group	54.60	17.628	.501	.716	.871 ^a
C22_Access_to_healthcare	53.77	18.461	.611	.566	.861 ^a
C23_Transportation_issues	54.03	21.620	.490	.824	.872 ^a
D24_Use_traditional_medicine	53.80	16.303	.544	.596	.868 ^a
D25_Believe_traditional_spiritual	53.87	18.602	.501	.717	.871 ^a
D26_Pressured_by_cultural_foods	53.77	16.668	.566	.716	.866 ^a
D27_Religious_beliefs_in_treatment	53.93	19.582	.578	.602	.865 ^a
D28_Leaders_advised_about_health	54.67	17.264	.566	.584	.866 ^a
D29_Stigma_shame	54.30	18.079	.578	.595	.865 ^a

HEALTH RESEARCH ETHICS COMMITTEE (HREC)

UNIVERSITY OF BENIN TEACHING HOSPITAL

P.M.B. 1111 BENIN CITY NIGERIA Telephone: 052-600418 Website: ubth.org

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Committee email: ubthresearchethics@gmail.com

Registration Number:

NHREC-UBTH-HREC/24/12/2022B

PROTOCOL NUMBER: ADM/E 22/A/VOL.VII/2025/22129

PROPOSAL TITLE: "ASSESSMENT OF SOCIOCULTURAL DETERMINANT OF SELF-CARE PRACTICES AMONG PATIENT WITH HYPERTENSION ATTENDING UNIVERSITY OF BENIN TEACHING HOSPITAL, BENIN CITY"

PRINCIPAL INVESTIGATOR(S): IROH LOUINTA ETINOSA

DEPARTMENT/INSTITUTION: DEPARTMENT OF NURSING SCIENCE, SCHOOL OF BASIC MEDICAL SCIENCES UNIVERSITY OF BENIN, BENIN CITY, EDO STATE

DATE CONSIDERED: AUGUST 26TH, 2025

DECISION OF THE COMMITTEE: APPROVED

THIS APPROVAL DATES 26/8/2025 TO 25/8/2026. IF THERE IS DELAY IN STARTING THE RESEARCH, PLEASE INFORM THE HREC SO THAT THE DATES OF APPROVAL CAN BE ADJUSTED ACCORDINGLY

REMARK:

CHAIRMAN: PROF. (MRS) A.N. OFILI

SIGNATURE & DATE

[Signature] 26/8/2025

SUPERVISOR (S): DR T. A. EHWARIEME

DECLARATION BY INVESTIGATOR(S):

PROTOCOL NUMBER (please quote in all enquiries)

Note that no participant accrual or activity related to this research may be conducted outside of these dates. All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study. In multiyear research, endeavor to submit your annual re-port to the HREC early in order to obtain renewal of your approval and avoid disruption of your research. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification

Signature & Date.....



ubthresearchethics@gmail.com

Registration Number: NHREC/24/01/202