

**ENSIGN GLOBAL UNIVERSITY, KPONG
EASTERN REGION, GHANA**

**FACULTY OF PUBLIC HEALTH
DEPARTMENT OF COMMUNITY HEALTH**

**HEALTH-SEEKING BEHAVIOUR OF PEOPLE LIVING WITH
NONCOMMUNICABLE DISEASES RURAL GHANA; A CASE OF DODI**

ASANTEKROM, GHANA

BY

AMEFU SETH KWASI.

257100345

MAY, 2025

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**A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH, FACULTY
OF PUBLIC HEALTH, ENSIGN GLOBAL COLLEGE IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE
MASTER OF PUBLIC HEALTH DEGREE**

MAY, 2025

DECLARATION

I, Amefu Seth Kwasi, hereby certify that, except for references to other people's work, which I have duly cited, this project submitted to the Department of Community Health, Ensign Global University, Kpong is the result of my own investigation, and has not been presented for any other degree elsewhere.

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DEDICATION

This work is dedicated to all individuals living with noncommunicable diseases in rural communities, whose experiences inspired this research and whose resilience continues to highlight the need for improved access to quality healthcare.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to God for His guidance, strength, and protection throughout the course of this study.

My deepest appreciation goes to my supervisor, Dr. Alberta Agudey for the guidance, feedback, and continuous support provided throughout this research. Your insights and encouragement greatly contributed to the successful completion of this work.

I am also grateful to the management and staff of the selected health facilities in the Asuogyaman District for their cooperation and assistance during data collection. Special thanks to all respondents who willingly participated in this study and shared their experiences.

I extend my heartfelt thanks to my family and friends for their unwavering support, patience, and encouragement throughout this academic journey. Finally, I acknowledge all authors and researchers whose work contributed to the development of this study.

DEFINITION OF TERMS

Noncommunicable Diseases (NCDs): Chronic diseases that are not transmitted from person to person, typically of long duration and slow progression, such as hypertension, diabetes, asthma, and cardiovascular diseases.

Health-Seeking Behaviour: The actions and decisions taken by individuals in response to perceived health needs, including when, where, and from whom care is sought.

Formal Healthcare: Healthcare services provided by trained and licensed medical professionals within recognized health facilities such as hospitals, clinics, and CHPS compounds.

Informal Healthcare: Healthcare practices and services obtained outside the formal health system, including the use of herbal medicine, home remedies, and spiritual or traditional healing.

Delay in Seeking Care: The postponement or avoidance of seeking appropriate healthcare services after the onset or recognition of illness symptoms.

Healthcare Utilization: The extent to which individuals access and use available health services for diagnosis, treatment, and management of health conditions.

Predisposing Factors: Individual characteristics such as age, sex, education, and occupation that influence a person's inclination to seek healthcare.

Enabling Factors: Resources and conditions that facilitate or hinder access to healthcare services, including income, health insurance status, transportation, and availability of services.

Need Factors: Perceived or evaluated health conditions that influence an individual's decision to seek care, such as severity or duration of illness.

National Health Insurance Scheme (NHIS): A government-established health insurance system in Ghana designed to improve access to healthcare services by reducing out-of-pocket payments.

Traditional/Informal Care Use: The use of non-biomedical treatment options such as herbal medicine, home remedies, or spiritual healing in managing health conditions.

Primary Healthcare: Essential healthcare services provided at the first level of contact within the health system, including preventive, promotive, and basic curative services.

CHPS (Community-based Health Planning and Services): A Ghana Health Service initiative that delivers primary healthcare services at the community level through designated zones and outreach activities.

LIST OF ABBREVIATIONS

Abbreviation	Meaning
AOR	Adjusted Odds Ratio
CHPS	Community-based Health Planning and Services
CI	Confidence Interval
GBD	Global Burden of Disease
GHS	Ghana Health Service
LMICs	Low- and Middle-Income Countries
NHIS	National Health Insurance Scheme
NCDs	Noncommunicable Diseases
PHC	Primary Health Care
SAGE	Study on Global Ageing and Adult Health
SDG	Sustainable Development Goals
STEPS	STEPwise Approach to NCD Risk Factor Surveillance
WHO	World Health Organization

ABSTRACT

Background: Noncommunicable diseases (NCDs) are a leading cause of morbidity and mortality globally, with a rapidly increasing burden in low- and middle-income countries such as Ghana. In rural settings, limited access to healthcare services and structural barriers often influence how individuals seek care for chronic conditions, affecting timely diagnosis and effective management.

Aim: This study aimed to assess the prevalence of noncommunicable diseases, examine health-seeking behaviours, and identify factors influencing healthcare utilization among individuals living with NCDs in Dodi Asantekrom in the Asuogyaman District.

Methods: A facility-based cross-sectional study was conducted using a purposive sampling technique. Data was collected from individuals diagnosed with NCDs using a structured, interviewer-administered questionnaire. Descriptive statistics were used to summarize key variables, while chi-square tests were conducted to examine associations between health-seeking behaviour and selected socio-demographic and structural factors. Data analysis was performed using STATA version 18.

Results: Hypertension was the most prevalent condition (76.39%), followed by asthma (12.13%) and peptic ulcer disease (11.80%). The majority of respondents had lived with their condition for four years or more, and most were diagnosed by medical doctors (75.08%). Formal healthcare utilization was high (98.7%); however, a significant proportion of respondents reported delays in seeking care (94.43%) and switching between healthcare providers (89.18%). Informal care use was also widespread (96.7%), mainly as a complementary approach. Socio-demographic factors were not significantly associated with health-seeking behaviour, while transportation emerged as the only significant structural determinant ($p < 0.05$).

Conclusion: The study highlights a high burden of hypertension and widespread reliance on formal healthcare services, alongside significant delays in care-seeking and extensive use of informal care. Health-seeking behaviour in this setting is influenced more by structural barriers than by socio-demographic characteristics. Addressing these structural constraints is essential for improving timely access to care and strengthening NCD management in rural communities.

Keywords: Noncommunicable diseases, Health-seeking behaviour, Rural healthcare, Ghana, Hypertension, Informal care, Healthcare access

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Noncommunicable diseases (NCDs) are non-infectious health conditions characterized by their long duration and typically slow progression (Coates et al., 2020). They are not transmissible directly from one person to another and typically have a long duration with slow progression (WHO, 2021). NCDs have emerged as the leading cause of death globally (Garnett et al., 2023), responsible for approximately 74% of all deaths worldwide. Notably, over 80% of these deaths occur in low- and middle-income countries (LMICs), underscoring a significant global health disparity (WHO, 2023). According to the Centers for Disease Control and Prevention (CDC, 2023), in the United States, NCDs account for nearly 89% of all deaths, with cardiovascular diseases and cancers being the most prevalent causes. Similarly, in the United Kingdom, about 89% of deaths are attributed to NCDs, highlighting their dominance even in high-income settings (Garnett et al., 2023).

NCDs were once considered diseases of affluence (WHO, 2023), but are now increasingly prevalent in developing countries due to demographic transitions, urbanization, and the adoption of unhealthy behaviours such as tobacco use, physical inactivity, and poor diets (Beaglehole et al., 2015). Cardiovascular diseases alone account for about 19 million deaths globally, followed by cancers (10 million), chronic respiratory diseases (4 million), and diabetes (over 2 million), making NCDs not only a major cause of death but also a significant driver of disability and economic loss (WHO, 2023).

Sub-Saharan Africa is undergoing a significant epidemiological transition, with NCDs increasingly contributing to the disease burden. Rapid urbanization, increased life expectancy, and

dietary changes have accelerated the incidence of NCDs across the continent. In South Africa, NCDs cause over 50% of all deaths, with hypertension and diabetes leading the rise (Mayosi & Benatar, 2014). In sub-Saharan Africa, noncommunicable diseases are contributing increasingly to the overall burden of disease. In South Africa, NCDs account for over 50% of all deaths, with hypertension and diabetes being the leading causes (Mayosi & Benatar, 2014). Similarly, in Kenya, NCDs are responsible for approximately 27% of deaths, primarily driven by cardiovascular conditions and diabetes (Mwai et al., 2019). In Nigeria, a study by Adeloye et al. (2017) estimated that NCDs contribute to about 29% of all deaths, with cardiovascular diseases and diabetes as major contributors. In Ghana, NCDs account for a substantial proportion of mortality, with estimates suggesting that nearly half of all deaths are attributable to chronic conditions (WHO, 2023; GHS, 2023).

Despite these trends, many countries in the region face the challenge of a dual burden of communicable and noncommunicable diseases. Resource constraints, workforce shortages, and systemic inefficiencies hinder the management and prevention of chronic conditions. The rural-urban divide further worsens the issue, with rural populations often experiencing reduced access to preventive and curative services, limited health literacy, and structural inequalities in care (The Lancet Global Health, 2019).

In Ghana, the burden of NCDs is particularly pronounced. Recent national data indicate that NCDs constitute a substantial proportion of mortality in Ghana, with national and WHO estimates indicating that chronic conditions account for nearly half of all deaths (WHO, 2023; GHS, 2023). Regionally, in the Greater Accra Region, NCDs represent nearly 50% of mortality, reflecting urban lifestyle risk factors (Ofori-Asenso et al., 2016). Meanwhile, in the Ashanti Region, NCD prevalence is rising steadily, with diabetes alone affecting around 6% of the adult population

(Agyemang et al., 2019). To address this growing concern, the Ghana Health Service, in collaboration with WHO and other partners, launched the 2023 STEPS Survey to gather baseline data on NCD risk factors and inform national responses (WHO, 2024). Despite these strategic interventions, the implementation of effective prevention and control mechanisms remains hampered by limited funding, poor integration of services at the primary healthcare level, and insufficient community engagement. Challenges persist in scaling up screening, diagnosis, and long-term management of chronic illnesses, particularly in underserved rural regions (WHO, 2024).

Understanding how individuals respond to illness and engage with the health system is vital to improving NCD outcomes. Health-seeking behaviour, defined as the process through which individuals recognize symptoms, decide on a course of action, and seek appropriate care, is a crucial determinant in the management of chronic diseases (Sarfo et al., 2016). In rural contexts, where formal healthcare services may be limited or perceived as inaccessible, individuals often rely on informal care systems, including traditional medicine, herbalists, spiritual healing, and self-medication. These alternatives, deeply rooted in cultural and spiritual worldviews, often coexist with biomedical treatment but can delay or replace timely medical intervention (Sarfo et al., 2016; Awuah et al., 2017).

The barriers to healthcare access in rural Ghana include geographical isolation, poor road networks, and long travel times to health facilities, which contribute to significant delays in care (Seidu et al., 2020). Economic constraints, particularly among uninsured or underinsured populations, result in high out-of-pocket expenditures that discourage individuals from seeking early or routine care. For instance, a study in rural Northern Ghana found that only about 40% of individuals with chronic conditions sought formal healthcare within six months of symptom onset

(Amankwah-Poku et al., 2023). Cultural perceptions of illness, fatalism, and stigma also influence health-seeking choices, especially for chronic conditions that may not present with acute symptoms (Amoah et al., 2018). Systemic issues, such as insufficient numbers of trained health personnel, inadequate diagnostic equipment, and inconsistent availability of essential medicines, further limit the capacity of rural health facilities to deliver continuous and quality care (Seidu et al., 2020).

The absence of reliable information about local health-seeking patterns undermines efforts to design effective interventions tailored to the specific socio-cultural and infrastructural realities of the region. This study, therefore, seeks to explore the health-seeking behaviour of individuals living with NCDs in Dodi Asantekrom, thereby contributing much-needed evidence to inform public health policy and local health planning in rural Ghana.

1.2 Problem Statement

Noncommunicable diseases (NCDs) have become the leading cause of morbidity and mortality globally, accounting for approximately 74% of all deaths worldwide (WHO, 2022). Each year, an estimated 41 million people die from NCDs, with 17 million of these deaths occurring prematurely before the age of 70 (WHO, 2022). The burden is disproportionately higher in low- and middle-income countries (LMICs), where over 75% of NCD-related deaths occur (Vos et al., 2020). Evidence shows that this increasing burden is driven by factors such as urbanization, lifestyle changes, and dietary transitions (Bennett et al., 2020). Beyond the health implications, NCDs pose a significant economic threat, with projections indicating a potential global cost of over \$50 trillion by 2030 if no urgent action is taken (World Economic Forum, 2021).

Ghana reflects this growing burden, with NCDs accounting for nearly 45% of all deaths nationally (GHS, 2023). Conditions such as hypertension and diabetes are increasingly prevalent in both

urban and rural populations, with a substantial proportion of cases remaining undiagnosed or poorly managed (Awuah et al., 2021). Furthermore, evidence from the WHO SAGE study indicates that a significant proportion of older adults in Ghana live with multiple chronic conditions, often with limited access to continuous and adequate care (WHO, 2020). Weak screening systems, inadequate diagnostic capacity, and fragmented service delivery further contribute to delayed detection and poor management of these conditions (Ofori-Asenso et al., 2019).

Despite this growing burden, many individuals living with NCDs—particularly in rural communities—do not consistently seek timely and appropriate formal healthcare. Delays in care-seeking, reliance on informal or traditional treatment options, and inconsistent engagement with health services contribute to poor disease control and increased risk of complications. In rural areas, these challenges are compounded by structural barriers such as long distances to health facilities, high out-of-pocket costs, and limited availability of services, as well as socio-cultural factors that influence healthcare decisions (Nonvignon et al., 2022; Gyamfi et al., 2023).

Although awareness of NCDs has increased in Ghana, there remains limited empirical evidence on the specific health-seeking behaviours of individuals living with these conditions in rural communities and the underlying factors influencing their healthcare decisions. This lack of context-specific understanding constrains the development of targeted, culturally appropriate interventions aimed at improving timely access to quality care. There is therefore a need to investigate the health-seeking behaviours of people living with NCDs in rural Ghana, with particular attention to the social, economic, and cultural factors that shape their engagement with healthcare services.

1.3 Rationale

The increasing burden of noncommunicable diseases (NCDs) in low- and middle-income countries (LMICs) presents a major challenge to health systems, particularly in settings with limited resources. In Ghana, NCDs account for approximately 43% of all deaths, with conditions such as cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases contributing significantly to morbidity and mortality. Despite this growing burden, the capacity of the primary healthcare system to effectively prevent, detect, and manage these conditions remains constrained, especially in rural areas where access to healthcare services is often limited.

Effective management of NCDs depends not only on the availability of healthcare services but also on how individuals recognize symptoms and engage with the health system. Health-seeking behaviour plays a critical role in determining whether individuals access timely diagnosis, adhere to treatment, and maintain continuous care. In Ghana, health-seeking behaviour is influenced by multiple factors, including socioeconomic status, cultural beliefs, and accessibility of healthcare services. Evidence from the Jasikan District indicates that although many individuals prefer formal healthcare, factors such as age and health insurance status significantly shape healthcare choices, while barriers such as high medication costs, transportation challenges, and long waiting times hinder timely care-seeking (Ketor et al., 2024).

In response to the growing NCD burden, Ghana has adopted the World Health Organization's Package of Essential Noncommunicable Disease Interventions (WHO-PEN) to strengthen primary healthcare systems for the prevention, early detection, and management of NCDs (World Health Organization, 2020). While such initiatives aim to improve service delivery, their effectiveness depends largely on how individuals utilize available healthcare services, particularly in rural communities where structural and socio-cultural barriers may limit access.

Understanding health-seeking behaviour in this context is therefore important for public health research, policy, practice and education. From a research perspective, the study provides community-level evidence on how people living with NCDs in a rural Ghanaian setting use formal and informal care and the barriers that shape those choices, helping to address the limited local evidence identified in the literature. For policy, the findings can assist the Ghana Health Service and district health authorities to tailor NCD strategies to the practical access constraints experienced in rural communities rather than relying only on national-level patterns. For practice, the results can inform CHPS compounds and health centres on areas that may require stronger screening, continuity of care, referral, medicine availability and access support. The study also has educational relevance because its findings can guide patient counselling and community health education on timely care-seeking, long-term NCD management and the safe use of informal remedies alongside formal treatment. Together, these contributions can support more responsive primary healthcare and better NCD management in Dodi Asantekrom and similar rural settings.

1.4 Conceptual framework

The conceptual foundation of this study is grounded in Andersen's Behavioral Model of Health Services Use (Andersen, 1995; Andersen & Davidson, 2007). The model provides a useful framework for understanding the factors that influence healthcare utilization, explaining health service use as a function of three interrelated components: predisposing factors, enabling resources, and need-related factors. In the context of this study, the model is particularly relevant for examining the health-seeking behaviour of individuals living with noncommunicable diseases (NCDs) in rural communities such as Dodi Asantekrom. It provides a structured approach to understanding how individual characteristics, resource availability, and health needs interact to shape decisions to seek formal or informal healthcare.

Predisposing factors refer to the socio-demographic characteristics and belief systems that influence individuals' inclination to seek healthcare. In this study, these include age, sex, educational level, marital status, and occupation. Among individuals living with NCDs, these characteristics can shape how symptoms are perceived, the level of urgency attached to seeking care, and preferences for different types of healthcare providers. For example, individuals with lower levels of education or certain socio-cultural orientations may be more likely to delay seeking formal medical care or rely on informal treatment options, thereby affecting timely diagnosis and management of chronic conditions.

Enabling factors refer to the structural and logistical conditions that facilitate or hinder access to healthcare services. In this study, these include income, health insurance (NHIS) status, distance to health facilities, means of transportation, and access-related barriers such as cost of care, availability of drugs, waiting time, and staff attitude. These factors determine whether individuals are able to access healthcare when needed. In rural settings such as Dodi Asantekrom, limited transport options, financial constraints, and gaps in service availability may restrict access to formal healthcare and influence reliance on alternative care options.

Need-related factors represent the individual's health condition and perceived need for care. In this study, these are reflected by indicators such as duration of illness and diagnosis status. These factors influence the urgency and frequency of healthcare utilization. Individuals who have lived longer with a condition or have received a formal diagnosis may be more likely to engage with healthcare services, although this may vary depending on other interacting factors.

By applying Andersen's Behavioral Model, this study is able to examine how these predisposing, enabling, and need-related factors interact to influence health-seeking behaviour among individuals living with NCDs. Specifically, these factors determine whether individuals seek

formal or informal care, delay treatment, or switch between healthcare providers. The model therefore serves as a useful framework for understanding healthcare utilization patterns and identifying context-specific barriers to effective NCD management in rural Ghana.

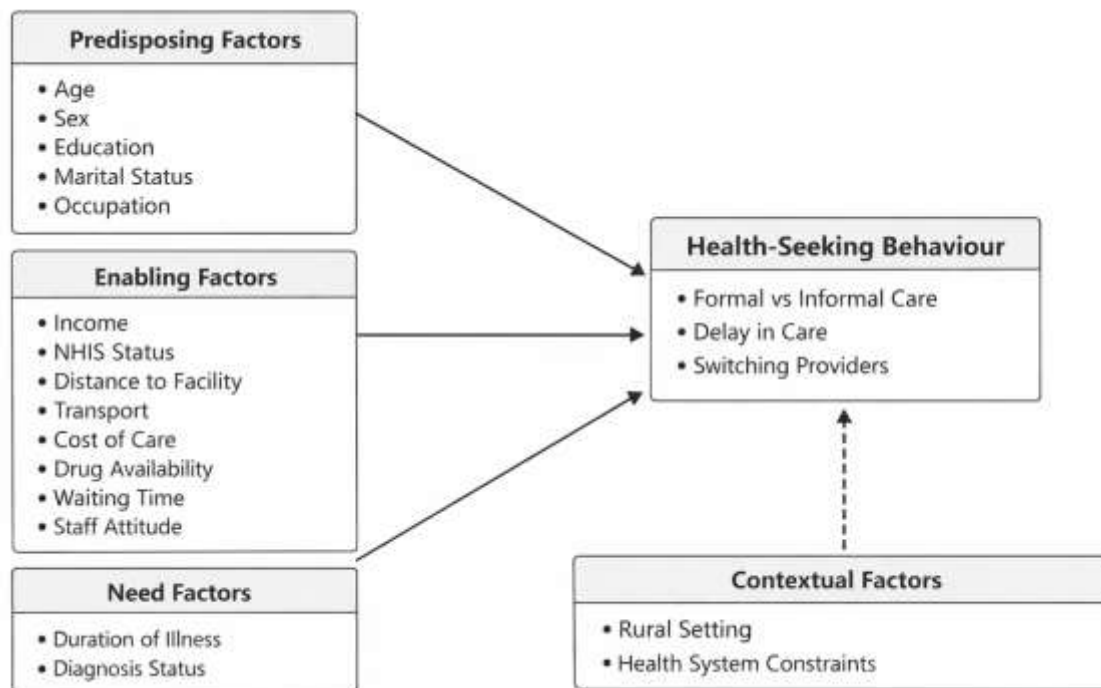


Figure 1.1 Conceptual Framework Based on the Anderson's Behavioral Model

1.5 Research Questions

1. What are the most prevalent noncommunicable diseases among residents of Dodi Asantekrom?
2. What are the common health-seeking behaviours exhibited by individuals living with noncommunicable diseases in Dodi Asantekrom?
3. What factors influence the health-seeking behaviours of people with noncommunicable diseases in Dodi Asantekrom?

4. What policy recommendations can be made to improve health-seeking behaviour and access to care for individuals with noncommunicable diseases in rural Ghana?

1.6 General Objective

To assess the health-seeking behaviour of people living with noncommunicable diseases (NCDs) in Dodi Asantekrom, a rural community in Ghana.

1.6.1 Specific Objectives

1. To determine the distribution of NCDs among residents in Asantekrom.
2. To describe the health-seeking behaviours of individuals living with noncommunicable diseases in Dodi Asantekrom.
3. To assess the factors associated with health-seeking behaviours among individuals living with noncommunicable diseases in Dodi Asantekrom.
4. To generate policy recommendations based on objective 1,2 and 3 to improve health seeking behavior and access to health care in Dodi Asantekrom.

1.7 Profile of Study Area

Dodi Asantekrom is a rural community located within the Asuogyaman District in the Eastern Region of Ghana (Okrah et al., 2017). The district itself is predominantly rural, with a majority of residents engaged in subsistence farming, fishing, and small-scale trading, which reflects the broader economic activities typical of rural Ghanaian communities (GSS, 2022).

According to the 2021 Population and Housing Census, the Eastern Region has a rural population of about 55%, highlighting significant rural residency with challenges related to infrastructure and access to services (GSS, 2022). Literacy rates in the region stand at roughly 65% among adults aged 15 and above, which is slightly below the national average. Poverty remains a pressing issue,

with the Eastern Region exhibiting a poverty rate of 25.3%, indicating that a significant portion of the population lives below the national poverty line (GSS, 2022).

The Ghana Demographic and Health Survey (GDHS, 2021) reports that antenatal care coverage is relatively high at 83% for the region, yet access to comprehensive healthcare, including NCD screening and management, remains limited, especially in rural communities like Dodi Asantekrom. The latest Ghana STEPS Survey (2023) reveals that the burden of noncommunicable diseases such as hypertension and diabetes is increasing in the Eastern Region, but rural dwellers have lower rates of diagnosis and treatment uptake compared to urban residents (GHS, 2023).

Dodi Asantekrom's health service landscape is typical of rural Ghanaian settings, comprising government health posts, private clinics, and traditional medicine practitioners. The district faces common rural health system challenges such as inadequate health infrastructure, limited health workforce, transportation barriers, and high out-of-pocket healthcare expenses (GHS, 2022; GSS, 2022b). These factors collectively influence health-seeking behaviors and contribute to delays in diagnosis and treatment of chronic diseases.



Figure 1.2 Map of Asuogyaman District

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Noncommunicable diseases (NCDs) have become the dominant cause of mortality and long-term morbidity globally (Vos et al., 2020), representing a major shift in the global burden of disease. In 2023, the World Health Organization (WHO, 2023) reported that NCDs account for approximately 74% of all deaths worldwide, translating to over 41 million deaths annually (WHO, 2023). Importantly, nearly 77% of these deaths occur in low- and middle-income countries (LMICs), and a substantial proportion are classified as premature, occurring before the age of 70 years (WHO, 2023). This distribution reflects profound inequities in prevention, early detection, and chronic disease management capacity across health systems.

The global NCD burden is concentrated in four major categories: cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. Together, these conditions account for more than 80% of premature NCD mortality (WHO, 2023). Beyond mortality, NCDs contribute significantly to disability-adjusted life years (DALYs), with the Global Burden of Disease (GBD) Study 2019 demonstrating that cardiovascular diseases and diabetes are among the top contributors to years lived with disability globally (Vos et al., 2020). Unlike acute infectious diseases, NCDs require sustained engagement with healthcare systems, long-term medication adherence, and lifestyle modification, making individual health-seeking behaviour a critical determinant of outcomes.

Although global frameworks such as Sustainable Development Goal (SDG) target 3.4 aim to reduce premature NCD mortality by one-third by 2030, progress remains uneven (United Nations, 2023). Many LMICs continue to experience rising NCD prevalence alongside persistent infectious

disease burdens, creating what has been described as a “double burden” of disease (The Lancet Global Health, 2019). In such contexts, understanding how individuals recognise symptoms, interpret illness, and navigate available care options becomes essential for effective health system planning.

This chapter synthesises empirical and conceptual literature on the epidemiology of NCDs and the patterns of healthcare engagement associated with chronic disease management. Using a funnel approach, it begins with global trends, narrows to sub-Saharan Africa, and then focuses on Ghana. The review highlights existing knowledge while identifying critical gaps in district-level evidence relevant to rural communities such as Dodi Asantekrom.

2.2 Epidemiological Landscape of Noncommunicable Diseases

The epidemiological transition from communicable to noncommunicable diseases has reshaped health priorities worldwide. According to WHO (2023), cardiovascular diseases remain the leading cause of NCD mortality globally, responsible for approximately 20.5 million deaths annually, followed by cancers (around 10 million deaths), chronic respiratory diseases (3–4 million deaths), and diabetes (including deaths from kidney disease attributable to diabetes). These conditions disproportionately affect populations in LMICs, where risk factor control, early detection systems, and chronic care infrastructure are often inadequate.

The GBD 2019 analysis further demonstrates that NCDs account for a growing share of global DALYs, particularly in ageing populations and in countries undergoing rapid urbanisation (Vos et al., 2020). However, while high-income countries have seen declines in age-standardised mortality rates for certain NCDs due to improved prevention and treatment, many countries in sub-Saharan

Africa are experiencing increasing absolute numbers of NCD cases due to demographic growth and epidemiological transition (Bennett et al., 2020).

In sub-Saharan Africa, NCDs now account for approximately 37% of total deaths, a proportion projected to increase substantially over the coming decades (WHO, 2023). Hypertension prevalence in several SSA countries exceeds 30% among adults, yet awareness, treatment, and control rates remain low (Ataklte et al., 2015; WHO, 2023). Diabetes prevalence is also rising, particularly in urbanising regions, driven by dietary changes, reduced physical activity, and increasing obesity (IDF, 2021). The region's health systems, historically oriented toward infectious disease control, are often underprepared for the sustained management demands of chronic diseases (The Lancet Global Health, 2019).

Ghana reflects these broader regional trends. The Ghana Health Service (GHS) reports that NCDs account for approximately 45% of all deaths nationally (GHS, 2024). Hypertension prevalence among adults is estimated to exceed 30%, with a significant proportion of cases undiagnosed or poorly controlled (GHS, 2023). The WHO STEPS Survey conducted in Ghana confirmed high levels of behavioural risk factors, including unhealthy diet, insufficient physical activity, and harmful alcohol use (WHO, 2024). Similarly, Ofori-Asenso et al. (2016) found substantial prevalence of metabolic syndrome components among Ghanaian adults, underscoring the underlying risk environment.

Importantly, rural-urban disparities persist. While urban areas often show higher measured prevalence due to lifestyle transitions and better detection rates, rural communities frequently experience lower screening coverage and delayed diagnosis (Gyamfi et al., 2023). As a result, the apparent lower prevalence in rural settings may mask substantial unmet need. Furthermore,

district-level data on specific rural communities remain limited, as national surveys are not always powered to produce granular local estimates.

This limited sub-national documentation creates challenges for planning context-specific interventions. Without understanding the local burden and distribution of NCDs in rural communities, health authorities may struggle to align service delivery, screening efforts, and behavioural interventions appropriately. The absence of detailed epidemiological data at the community level therefore strengthens the rationale for district-focused investigations that examine not only disease prevalence but also how individuals engage with available healthcare systems.

2.3 Patterns of Health-Seeking Behaviour in Chronic Disease Management

2.3.1 Conceptualising Health-Seeking Behaviour in Chronic Illness

Health-seeking behaviour refers to the sequence of actions individuals undertake when they perceive a health problem, including symptom recognition, interpretation, decision-making, and choice of care provider. In the context of chronic diseases, this process is often gradual and iterative rather than immediate and crisis-driven. Unlike acute infections that present with sudden and disruptive symptoms, noncommunicable diseases (NCDs) such as hypertension and diabetes may remain asymptomatic for extended periods, complicating early detection (WHO, 2023).

Symptom recognition is therefore a critical first step. Evidence indicates that many individuals with hypertension are unaware of their condition because early stages often produce no noticeable symptoms (Mills et al., 2020). Similarly, the International Diabetes Federation estimates that nearly half of adults living with diabetes globally remain undiagnosed, largely due to low screening uptake and delayed recognition of risk (IDF, 2021). Where symptoms are mild or ambiguous, individuals may normalise them or attribute them to stress, ageing, or temporary illness.

Illness interpretation further shapes care pathways. Cultural beliefs and prior experiences influence whether symptoms are understood as biomedical conditions requiring hospital care or as spiritual, social, or lifestyle-related disturbances (Awuah et al., 2017). This interpretive process directly affects the timing and type of care sought.

Decision-making in chronic illness is often influenced by household dynamics, financial considerations, and perceived effectiveness of available services. Unlike acute emergencies where decisions may be rapid, chronic disease care involves evaluating costs, distance, previous experiences with health providers, and expected treatment outcomes. Consequently, health-seeking behaviour in NCD management is typically more deliberative and influenced by long-term considerations.

The contrast between chronic and acute care pathways is therefore significant. Acute illnesses tend to prompt immediate, often single-episode care engagement. Chronic diseases, however, require repeated visits, ongoing medication adherence, lifestyle modification, and sustained interaction with health systems. The behavioural demands of chronic care create additional points at which disengagement may occur.

2.3.2 Care Pathways for NCDs in Global Contexts

Globally, care pathways for NCDs increasingly emphasise preventive screening and early diagnosis. In high-income countries, routine blood pressure monitoring, diabetes screening, and cancer detection programmes are integrated into primary healthcare systems, enabling earlier entry into care (WHO, 2023). Preventive engagement is associated with improved outcomes and reduced complication rates.

However, even in well-resourced systems, gaps remain in continuity of care. Mills et al. (2020) demonstrate that hypertension awareness and control remain suboptimal worldwide, particularly in LMICs. Screening alone does not guarantee treatment initiation or long-term adherence.

Biomedical engagement remains the dominant formal pathway for NCD management globally. Yet, self-medication and informal care are also common, especially in contexts where prescription medicines are accessible without strict regulation. Pharmacies frequently serve as first points of contact for individuals experiencing chronic symptoms, particularly when perceived barriers to hospital care exist.

Continuity of care represents a major challenge in chronic disease management. Long-term adherence to medication and follow-up appointments requires stable financial resources, reliable medicine supply, and trust in healthcare providers. Evidence suggests that treatment discontinuation is common when patients experience financial strain, medication side effects, or perceived improvement in symptoms (Moucheraud et al., 2019). Thus, global patterns highlight that health-seeking for NCDs is not only about entry into care but sustained engagement over time.

2.3.3 Health-Seeking Patterns in Sub-Saharan Africa

In sub-Saharan Africa, health-seeking patterns for chronic diseases reflect pluralistic healthcare environments. Individuals frequently navigate between public hospitals, private clinics, pharmacies, traditional healers, and spiritual centres (Awuah et al., 2017). This pluralism is not merely cultural but often structural, driven by availability, cost, and accessibility.

Treatment discontinuation is a recurring theme across SSA studies. Research indicates that patients diagnosed with hypertension or diabetes often interrupt medication due to cost, distance to

facilities, or stock-outs of essential medicines (Mills et al., 2020). Financial and access barriers therefore significantly shape chronic care trajectories.

Medication adherence challenges are compounded by limited diagnostic infrastructure and workforce shortages in many primary healthcare facilities (The Lancet Global Health, 2019). In some rural SSA settings, patients may travel long distances for follow-up appointments, leading to irregular attendance and inconsistent treatment monitoring.

At the same time, community-based and informal providers remain influential in chronic illness management. Spiritual interpretations of disease coexist with biomedical explanations, leading many individuals to combine prayer, herbal remedies, and formal treatment. Such patterns illustrate that health-seeking behaviour in SSA is shaped by both cultural meaning systems and structural health system limitations.

2.3.4 Health-Seeking Behaviour in Ghana

Ghana exhibits similar pluralistic patterns in chronic disease management. Qualitative research shows that individuals living with hypertension and diabetes often move between biomedical facilities and traditional or faith-based healers, particularly when treatment outcomes are perceived as unsatisfactory (Awuah et al., 2017). Facility preference is frequently influenced by proximity, perceived quality of care, waiting time, and availability of medicines.

The National Health Insurance Scheme (NHIS) has increased utilisation of formal services; however, studies indicate that insurance coverage does not eliminate indirect costs such as transportation and diagnostic fees (Nonvignon et al., 2022). Consequently, some patients continue to rely on pharmacies or informal care options for convenience or affordability.

Delays in diagnosis remain a concern. National survey data indicate substantial proportions of undiagnosed hypertension and diabetes cases, suggesting low screening uptake, particularly in rural areas (GHS, 2023; WHO, 2024). Continuity issues are also documented, with some patients defaulting on follow-up visits due to financial strain or perceived symptom improvement.

Rural-specific patterns are particularly underexplored. Available research suggests that rural residents face additional barriers including longer travel distances, fewer trained health personnel, and limited diagnostic capacity (Gyamfi et al., 2023). However, most Ghanaian studies on NCD health-seeking behaviour are concentrated in urban or regional centres, leaving gaps in community-level evidence.

Despite increasing recognition of the NCD burden nationally, limited empirical research has examined how individuals in specific rural communities navigate chronic care pathways over time. There remains insufficient understanding of how symptom recognition, cultural interpretation, financial realities, and local health system characteristics interact to shape health-seeking behaviour at the district level. This gap underscores the importance of investigating chronic disease care trajectories within rural Ghanaian settings such as Dodi Asantekrom.

2.4 Determinants of Health-Seeking Behaviour in NCD Care

Health-seeking behaviour in the management of noncommunicable diseases is shaped by an interaction of socio-demographic, economic, perceptual, and health system factors that influence both initial care utilisation and sustained engagement. At the individual level, age, gender, and educational attainment significantly structure patterns of healthcare use. Older adults often experience a higher burden of chronic disease and therefore have greater interaction with health services; however, chronic symptoms may also be normalised as part of ageing, leading to delayed screening and treatment initiation (WHO, 2023). Gender differences are similarly documented

across LMICs, with women generally demonstrating higher healthcare utilisation than men, partly due to greater lifetime exposure to formal health systems. In contrast, men in many sub-Saharan African settings exhibit lower engagement with preventive screening and routine follow-up for chronic conditions (Mills et al., 2020). Educational attainment influences health literacy, risk perception, and treatment adherence. Individuals with higher levels of education are more likely to understand the asymptomatic progression of conditions such as hypertension and to comply with long-term medication regimens (IDF, 2021). In Ghana, national STEPS data indicate variation in awareness and control of hypertension across socio-demographic groups, suggesting that educational and social gradients influence chronic disease management (GHS, 2023).

Economic capacity remains a central determinant of sustained engagement in NCD care. Chronic diseases require long-term medication, periodic laboratory monitoring, and repeated facility visits, creating continuous financial obligations. Globally, the WHO and World Bank (2021) report that out-of-pocket health expenditures continue to expose millions of households to financial hardship, particularly in LMICs where health insurance coverage is incomplete. For chronic conditions, recurring medication costs and indirect expenses such as transportation frequently lead to treatment interruption or delayed follow-up (WHO, 2023). In Ghana, although the National Health Insurance Scheme (NHIS) has improved access to formal healthcare, financial protection is not absolute. Studies indicate that patients still incur costs related to diagnostics, transportation, and medicines not consistently available at insured facilities (Nonvignon et al., 2022). Geographic accessibility further compounds financial barriers, particularly in rural areas where longer travel distances and limited transport infrastructure increase the indirect cost of care (GHS, 2024). Thus, economic vulnerability and structural constraints jointly shape patterns of healthcare utilisation and continuity in chronic disease management.

Perceived need and illness interpretation represent important behavioural determinants of care-seeking. Chronic conditions such as hypertension are frequently asymptomatic in early stages, leading individuals to underestimate disease severity and delay screening or treatment (Mills et al., 2020). Care-seeking often occurs only after complications develop, by which time disease progression may be advanced. Cultural belief systems further shape interpretation of chronic symptoms in many sub-Saharan African contexts. Illness may be attributed to spiritual causation, stress, or social disruption, influencing preferences for prayer-based or traditional healing before biomedical consultation (Awuah et al., 2017). Risk perception also affects preventive engagement; individuals who do not perceive themselves as susceptible to NCDs, particularly younger adults, are less likely to participate in screening initiatives even when exposed to behavioural risk factors (WHO, 2023). These perceptual dynamics illustrate that health-seeking behaviour is embedded within cultural meaning systems and subjective evaluation of health threats.

Health system and quality-of-care factors further influence both initial utilisation and long-term retention in chronic care. Long waiting times, perceived negative staff attitudes, and fragmented service delivery have been associated with disengagement from NCD management programmes (Ofori-Asenso et al., 2019). Trust in healthcare providers is especially critical for chronic conditions requiring sustained interaction. Although Ghana has adopted national frameworks for NCD prevention and control, facility-level readiness remains uneven, particularly between urban referral hospitals and rural primary healthcare facilities (Gyamfi et al., 2023). WHO (2023) highlights that inconsistent availability of essential NCD medicines and diagnostic tools in many LMIC primary care settings undermines continuity and discourages adherence. Where patients perceive services as unreliable or inaccessible, they may shift between providers or discontinue treatment entirely.

Importantly, these determinants do not operate independently but intersect in context-specific ways. A rural resident with limited income and low health literacy may simultaneously encounter financial hardship, geographic barriers, and cultural interpretations that collectively influence delayed or inconsistent care engagement. Conversely, even economically stable individuals may disengage if service quality is perceived as inadequate. While national-level studies in Ghana have examined associations between socio-demographic and economic variables and service utilisation, there remains limited empirical research exploring how these interacting determinants shape chronic disease care trajectories within specific rural communities. Most existing evidence is urban-focused or cross-sectional, leaving insufficient understanding of how structural, perceptual, and health system factors converge at district level. Addressing this gap is essential for designing interventions that strengthen sustained NCD management in rural Ghanaian settings.

2.5 Utilisation of Traditional and Informal Care in Chronic Disease Management

The utilisation of traditional and informal care remains a significant component of health-seeking behaviour in many low- and middle-income countries, particularly in sub-Saharan Africa. The World Health Organization (WHO, 2019) reports that traditional and complementary medicine continues to be widely used across African countries, often coexisting with biomedical systems rather than functioning as a separate alternative. In the context of noncommunicable diseases (NCDs), where management requires long-term treatment, lifestyle modification, and sustained interaction with health services, patients may incorporate traditional practices into their care pathways for cultural, economic, or experiential reasons. The persistence of traditional medicine use in chronic illness management therefore reflects both structural realities and deeply embedded belief systems.

Globally, evidence indicates that individuals living with chronic diseases frequently engage in complementary or alternative therapies alongside prescribed biomedical treatment. A systematic review of traditional and complementary medicine use in sub-Saharan Africa found high prevalence of herbal and non-biomedical treatment utilisation, particularly for long-term conditions (James et al., 2018). Such practices are often motivated by perceived affordability, accessibility, cultural familiarity, or dissatisfaction with aspects of formal healthcare. Importantly, the use of traditional medicine is not always a rejection of biomedical care; rather, it may represent an attempt to integrate multiple therapeutic approaches within a single illness experience. In chronic disease contexts, where symptom improvement may be gradual, patients may seek additional remedies in pursuit of faster or more holistic relief.

In sub-Saharan Africa, pluralistic healthcare systems are common, and movement between formal and informal providers is often fluid. Awuah et al. (2017), in a qualitative study of NCD health-seeking behaviour in Ghana, documented that individuals frequently combined hospital treatment with herbal remedies or prayer-based healing. Such pluralism was influenced by financial constraints, social networks, and cultural interpretations of illness. Where access to biomedical services is perceived as limited—whether due to cost, distance, or medicine stock-outs—traditional healers and informal providers may serve as accessible and trusted alternatives. The WHO and World Bank (2021) further highlight that financial hardship remains a barrier to sustained engagement with formal healthcare in many LMICs, reinforcing the conditions under which patients may turn to less costly or community-based options.

In Ghana, traditional medicine is formally recognised within national health policy, yet integration between biomedical NCD services and traditional practitioners remains limited. Ofori-Asenso et al. (2019) note that Ghana's health system faces readiness challenges in responding to the rising

burden of chronic diseases, including gaps in diagnostic capacity and continuity of care. In contexts where facility-level constraints undermine patient confidence or convenience, reliance on informal care pathways may increase. Rural settings intensify these dynamics. Gyamfi et al. (2023) document disparities in chronic disease service readiness between urban and rural districts, including workforce shortages and infrastructure limitations. In such environments, traditional healers and prayer centres are often geographically closer and socially embedded within communities, making them accessible first points of contact for individuals experiencing persistent symptoms.

The coexistence of biomedical and traditional systems has important implications for NCD management. While pluralistic care-seeking may reflect culturally integrated health behaviour, it also raises concerns regarding treatment adherence, delayed diagnosis, and potential interactions between herbal preparations and prescribed medications. Awuah et al. (2017) observed that some patients did not consistently disclose concurrent herbal use to biomedical providers, complicating continuity of care. However, the mere presence of traditional medicine use does not inherently indicate poor health-seeking behaviour; rather, it reflects a broader socio-cultural framework within which chronic illness is understood and managed.

Despite national recognition of medical pluralism in Ghana, empirical evidence documenting the specific patterns, sequencing, and determinants of traditional and informal care utilisation among rural populations living with NCDs remains limited. Much of the available literature is urban-based or generalised across conditions without isolating chronic disease pathways. There is insufficient district-level evidence examining how rural residents navigate between traditional and formal systems in managing long-term illnesses. Understanding these dynamics is essential for designing culturally responsive and context-sensitive interventions that strengthen chronic disease

management while acknowledging existing community practices. The paucity of granular rural evidence therefore justifies focused investigation within communities such as Dodi Asantekrom.

2.6 Synthesis of Empirical Gaps and Justification for the Study

The reviewed literature demonstrates that noncommunicable diseases constitute a major and growing public health burden globally and in Ghana, with cardiovascular diseases, diabetes, chronic respiratory diseases, and cancers contributing substantially to morbidity and mortality (WHO, 2023; GHS, 2024). Evidence also confirms that health-seeking behaviour for chronic diseases is shaped by complex interactions between socio-demographic characteristics, economic constraints, cultural interpretations of illness, and health system readiness. While this body of literature provides important insights into patterns and determinants of chronic disease care engagement, several empirical and contextual gaps remain.

First, much of the global literature focuses on prevalence, risk factors, and clinical management outcomes rather than detailed behavioural pathways. Although studies such as Mills et al. (2020) and IDF (2021) document awareness and treatment gaps, they provide limited insight into the lived decision-making processes through which individuals interpret symptoms, select providers, and sustain or discontinue care. The behavioural dimension of chronic disease management, particularly in low-resource settings, remains underexplored relative to epidemiological metrics.

Second, in sub-Saharan Africa, research increasingly acknowledges the pluralistic nature of healthcare systems and the role of traditional and informal care in chronic disease management (James et al., 2018; Awuah et al., 2017). However, many studies are urban-based or regionally aggregated, limiting their applicability to rural contexts where structural constraints and cultural embeddedness may differ substantially. Rural communities often face additional barriers related

to geographic accessibility, workforce shortages, and limited diagnostic infrastructure (Gyamfi et al., 2023), yet detailed empirical accounts of how these factors shape sequential care-seeking decisions remain scarce.

Rural communities such as Dodi Asantekrom operate within unique socio-economic and infrastructural realities that may not be adequately represented in national or urban-focused research. Structural limitations in rural primary healthcare facilities, combined with cultural norms and economic constraints, may generate distinct patterns of care-seeking that are insufficiently documented in existing literature. Without evidence from district-level settings, policy responses risk being generalised and insufficiently responsive to local behavioural dynamics.

The literature underscores the need for community-level investigation into health-seeking behaviour among individuals living with noncommunicable diseases in rural Ghana. By examining the prevalence of NCDs, the pathways through which individuals seek care, and the determinants shaping those decisions within a specific rural context, this study seeks to address the documented gaps in behavioural and district-level evidence.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design

The study used a quantitative descriptive and analytical cross-sectional design to assess the health-seeking behaviours of people living with noncommunicable diseases (NCDs) in Dodi Asantekrom. Data were collected from eligible respondents at one point in time, allowing the study to describe the distribution of NCDs and patterns of healthcare use within the study population. The descriptive component was appropriate for summarizing respondents' characteristics, NCD profiles and health-seeking behaviours, while the analytical component allowed associations between health-seeking behaviour and selected socio-demographic, structural and access-related factors to be examined using chi-square tests. The design was suitable because the study sought to describe patterns and assess associations rather than establish causal relationships.

3.2 Study Site

The study was conducted in Dodi Asantekrom, a rural community located in the Eastern Region of Ghana. Specifically, data were collected from individuals receiving care at the following healthcare facilities:

- **Boso Health Centre**
- **Anum Health Centre**
- **Church of Christ Health Centre**
- **Asikuma CHPS Zone**
- **New Dodi CHPS Zone**

- **Dodi Asantekrom CHPS Zone**

These facilities were selected because they serve as the primary points of care for residents of Dodi Asantekrom and surrounding rural communities. Their inclusion ensured geographic and service-level representation, allowing for a comprehensive assessment of health-seeking behaviour among individuals living with noncommunicable diseases in the district.

3.3 Study Population

The study population consisted of adult residents (18 years and above) diagnosed with or experiencing symptoms of noncommunicable diseases such as hypertension, diabetes, asthma, stroke, and cardiovascular conditions.

3.4 Inclusion Criteria

- Residents aged 18 years and above.
- Individuals who self-reported having been diagnosed with at least one NCD or show clear symptoms.

3.5 Exclusion Criteria

- Individuals with acute medical conditions requiring immediate care.
- Those unable to communicate due to cognitive or physical impairment.
- Non-residents or temporary visitors to the community.

3.6 Sample Size

The sample size was calculated using the Cochran's formula:

$$n = \frac{Z^2 \times pq}{e^2}$$

Where;

n = sample size (Cochran, 1977)

Z = the z-score that corresponds with 95% confidence interval which is 1.96

p = The proportion of people with NCDs who actively seek care = 61%

q = 1 - p = 0.39 (proportion who do not)

e = Margin of error set at 5% (0.05)

Therefore;

$$n = \frac{(1.96)^2 \times (0.61 \times 0.39)}{(0.05)^2} \cong 366$$

Considering possible non-responses, a non-response rate of 10 % was added to the sample size, which results in a total of 403 participants.

Although the minimum sample size was calculated to be 403, a total of 367 respondents were reached during data collection due to logistical constraints and field challenges. Following data cleaning and validation, 305 questionnaires were deemed complete and suitable for analysis.

This represents a final response rate of approximately 75.7% based on the initially calculated sample size, and 83.1% of the collected data. Only fully completed and consistent responses were included in the final analysis to ensure data quality and reliability.

3.7 Sampling Procedure

A purposive-consecutive sampling approach was employed for this study. Initially, purposive sampling was used to identify eligible participants based on predefined inclusion criteria,

specifically individuals diagnosed with or receiving treatment for noncommunicable diseases (NCDs).

Following this, consecutive sampling was applied, where all eligible participants who presented at the selected health facilities during the data collection period were recruited continuously until the required sample size was achieved.

The study was conducted at six health facilities within the Asuogyaman District, namely:

- Boso Health Centre
- Anum Health Centre
- Church of Christ Health Centre (Asikuma)
- Asikuma CHPS Zone
- New Dodi CHPS Zone
- Dodi Asantekrom CHPS Zone

Healthcare workers at each facility assisted in identifying eligible patients based on medical records or ongoing treatment for conditions such as hypertension, diabetes, asthma, or other chronic noncommunicable diseases. Patients who met the inclusion criteria and consented to participate were enrolled consecutively until the required sample size was reached.

This purposive approach ensured that the study targeted individuals with lived experience of NCDs and was well-suited for generating contextually relevant insights into their health-seeking behaviours.

3.8 Data Collection Methods and Instruments

Data for this study was collected using a structured, interviewer-administered questionnaire, designed to align with the study's objectives. The questionnaire was used to gather relevant data from individuals living with noncommunicable diseases (NCDs) in Dodi Asantekrom. It was administered in either English or the local languages (Twi or Ewe), depending on the respondent's preference, to ensure clear understanding and accurate responses.

The tool covered several sections. To address the first objective, questions focused on the types of chronic conditions respondents had been diagnosed with, the duration of the illness, and the health professional who provided the diagnosis. To explore the health-seeking behaviours of individuals, the questionnaire asked about usual sources of care, reasons for healthcare choices, and any changes made in health-seeking patterns since diagnosis.

To examine the factors influencing these behaviours, the tool collected socio-demographic data, including age, education, occupation, income, and health insurance status. It also assessed barriers to care such as distance to health facilities, cost, availability of drugs, and attitudes of healthcare workers. Additionally, the use of informal or traditional care options was explored.

The questionnaire was pre-tested in a nearby rural community to check for clarity, relevance, and flow before actual data collection began.

3.9 Pre-testing

The questionnaire and interview guides were pre-tested among 40 residents in the Frankadua Health Centre. Feedback was used to refine the tools for clarity, cultural sensitivity, and logical flow.

3.10 Data Handling

All completed questionnaires were securely stored on password-protected devices. Participant anonymity was maintained throughout the study.

3.11 Data Analysis

Quantitative data was analyzed using STATA version 18. Prior to analysis, data was cleaned and checked for completeness and consistency. Descriptive statistics were used to summarize the characteristics of respondents and key study variables. Frequencies and percentages were generated for categorical variables such as sex, education, occupation, NHIS status, and health-seeking behaviour, while means and standard deviations were used for continuous variables where applicable.

Health-seeking behaviour, the main outcome variable, was analyzed in terms of type of care sought (formal versus informal), delays in seeking care, and switching between healthcare providers. Cross-tabulations were conducted to examine the distribution of health-seeking behaviour across independent variables. Bivariate analysis was performed using chi-square tests to assess associations between health-seeking behaviour and explanatory variables, including age, sex, education.

3.13 Dissemination of Results

Findings will be presented to the Ghana Health Service, local health authorities, and community leaders. Results will be also shared through academic conferences, policy briefs, and a final thesis submitted to Ensign Global University.

3.14 Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) of Ensign Global College. All participants provided written informed consent. Participation was voluntary, and

respondents were able to withdraw at any time. Confidentiality and privacy were strictly maintained. The study posed minimal risk and offered no direct benefits, but the findings contributed to improved healthcare strategies for NCDs in rural Ghana.

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CHAPTER FOUR

4.0 RESULTS

4.1 Socio-Demographic Characteristics of Respondents

4.1.1 Age Distribution of Respondents

The age distribution of respondents is presented in Table 4.1. The largest proportion (28.20%) of respondents were within ages 36–45 years, followed by those aged 55 years and above (26.89%) and 46–54 years (20.00%). A little above 17% of the respondents were within ages 26–35 years while the least proportion was within the 18–25 age group (7.54%).

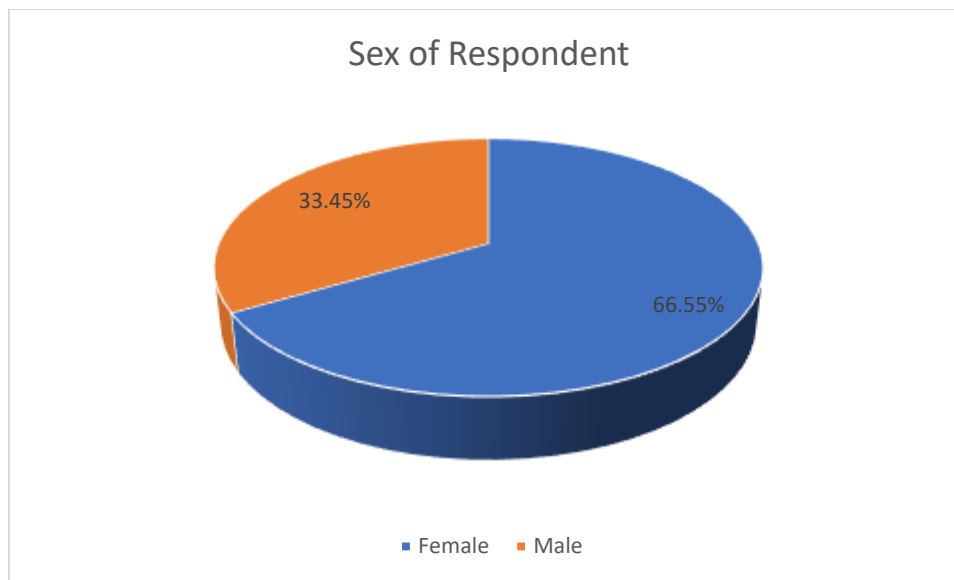
Table 4.1 Age Distribution of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Age group	18–25	23	7.54
	26–35	53	17.38
	36–45	86	28.20
	46–54	61	20.00
	55+	82	26.89

4.1.2 Sex of Respondents

The distribution of respondents by sex is presented in Figure 4.1. The majority of respondents (66.55%) were female, while 33.45% were male.

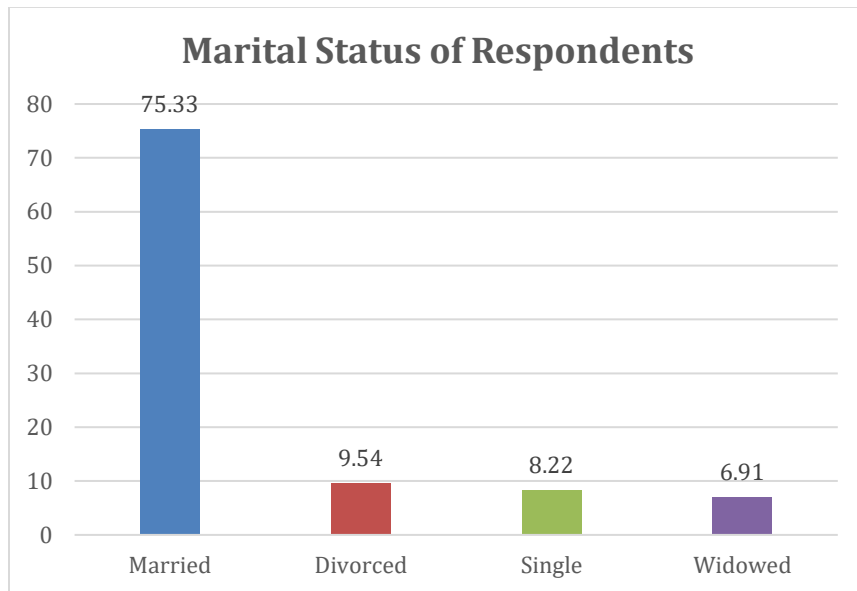
Figure 4.1 Sex of Respondents



4.1.3 Marital Status of Respondents

The marital status of respondents is presented in Figure 4.2. The majority were married (75.33%), while smaller proportions were divorced (9.54%), single (8.22%), and widowed (6.91%).

Figure 4.2 Marital Status of Respondents



4.1.4 Educational Level of Respondents

The educational level of respondents is presented in Table 4.2. The largest proportion had Junior High School education (34.10%), followed by those with primary education (32.46%) and no formal education (25.25%). Respondents with Senior High School education accounted for 6.23%, while tertiary education was the least represented (1.97%).

Table 4.2 Educational Level of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Educational level	Junior High	104	34.10
	Primary	99	32.46
	No formal education	77	25.25
	Senior High	19	6.23
	Tertiary	6	1.97
Total		305	100

4.1.5 Religious Affiliation of Respondents

The religious affiliation of respondents is presented in Table 4.3. The majority of respondents were Christians (86.56%), followed by those practising traditional religion (11.80%). A very small proportion identified as Muslims (1.64%).

Table 4.3 Religious Affiliation of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Religion	Christian	264	86.56
	Traditional	36	11.80
	Muslim	5	1.64

4.1.6 Average Monthly Income of Respondents

The average monthly income of respondents is presented in Table 4.4. The largest proportion earned between GHS 100–299 (40.34%), followed by those earning GHS 300–599 (34.10%). Respondents earning less than GHS 100 accounted for 13.11%, while 8.52% earned GHS 600–999. Only 3.93% earned GHS 1,000 and above.

Table 4.4 Average Monthly Income of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Monthly Income (GHS)	<100	40	13.11
	100–299	123	40.34
	300–599	104	34.10
	600–999	26	8.52
	1000+	12	3.93

4.1.7 Occupation of Respondents

The occupational distribution of respondents is presented in Table 4.5. The majority were engaged in agriculture (65.57%), followed by trading/self-employment (20.33%). Smaller proportions were unemployed (4.59%), students (3.61%), and those in formal employment (2.95%) and retired (2.95%).

Table 4.5 Occupation of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Occupation	Agriculture	200	65.57
	Trading/Self-employed	62	20.33
	Unemployed	14	4.59
	Student	11	3.61
	Formal employment	9	2.95
	Retired	9	2.95

4.2 Prevalence of Noncommunicable Diseases Among Respondents

4.2.1 Prevalence of Selected Noncommunicable Diseases

The prevalence of noncommunicable diseases among respondents is presented in Table 4.6. Hypertension was the most commonly reported condition (76.39%), followed by asthma (12.13%) and peptic ulcer disease (11.80%). Diabetes was reported by 2.62% of respondents, while chronic

respiratory disease, arthritis, epilepsy, and sickle cell disease were each reported by less than 1% of respondents.

Table 4.6 Prevalence of Noncommunicable Diseases Among Respondents

Variable	Frequency (n)	Percentage (%)
Hypertension	233	76.39
Diabetes	8	2.62
Stroke	1	0.33
Asthma	37	12.13
Chronic respiratory disease	1	0.33
Peptic ulcer disease	36	11.80
Arthritis	1	0.33
Epilepsy	1	0.33
Sickle cell disease	1	0.33

Note: Respondents could select more than one NCD. Percentages are therefore based on N = 305, but the frequencies are not expected to sum to 305.

4.2.2 Duration and diagnosis of Noncommunicable Diseases Among Respondents

The duration and source of diagnosis of noncommunicable diseases among respondents are presented in Table 4.7. The largest proportion of respondents had lived with their condition for 7 years and above (36.39%), followed by those who had lived with their condition for 4–6 years (35.08%). Respondents who had lived with their condition for 1–3 years accounted for 24.92%, while the least proportion had lived with their condition for less than one year (3.61%). The majority of respondents were diagnosed by a doctor (75.08%), followed by nurses (22.62%). A small proportion reported being self-diagnosed (1.64%), while very few were diagnosed by traditional healers (0.66%).

Table 4.7 Duration and diagnosis of Noncommunicable Diseases Among Respondents

Variable	Category	Frequency (n)	Percentage (%)
Duration of condition	Less than 1 year	11	3.61
	1–3 years	76	24.92
	4–6 years	107	35.08
	7+ years	111	36.39
Diagnosed by	Doctor	229	75.08
	Nurse	69	22.62
	Self-diagnosed	5	1.64
	Traditional healer	2	0.66

4.3 Health-Seeking Behaviour of Respondents

4.3.1 Type of Healthcare Sought (Formal vs Informal)

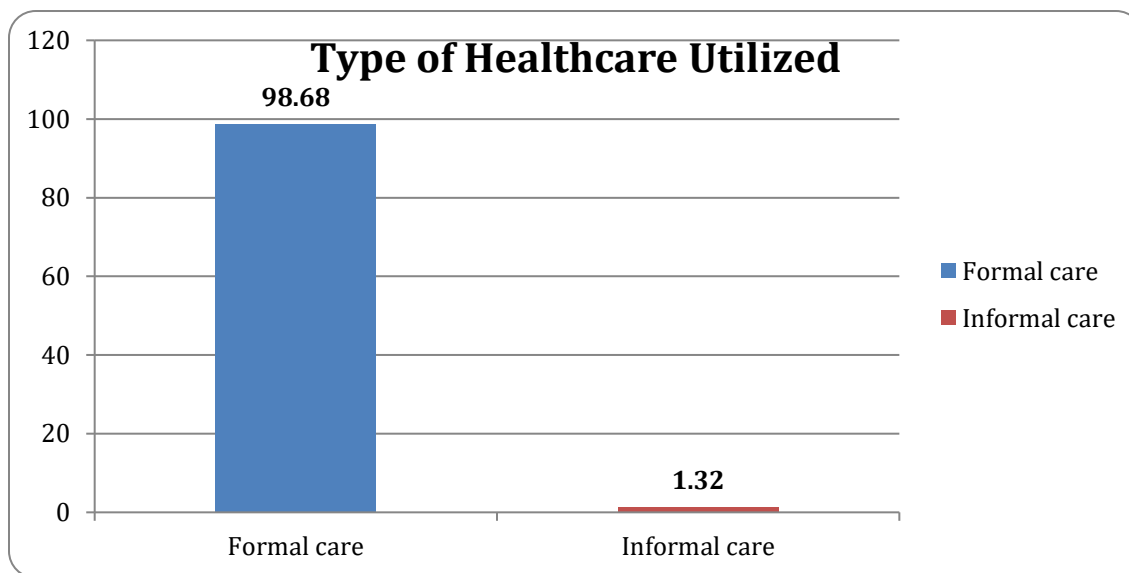


Figure 4.3 Type of Healthcare Utilized by Respondents

The results indicate that an overwhelming majority of respondents (98.7%) sought care from formal healthcare providers, while only a very small proportion (1.3%) relied on informal care.

4.3.2 Factors Influencing Choice of Healthcare Provider

Cost of care emerged as the most influential factor, with nearly all respondents (99.3%) indicating it as an important factor. Similarly, quality of care (99.0%), waiting time (99.5%), and the attitude of healthcare workers (99.0%) were widely considered critical in choosing healthcare providers. In contrast, proximity to the facility was less influential, with only about one-third (32.7%) considering it important.

Table 4.8 Key Factors Influencing Healthcare Choice

Factor	Important (%)	Not Important (%)
Cost of care	99.34	0.66
Quality of care	98.97	1.03
Waiting time	99.48	0.52
Attitude of health staff	98.95	1.05
Proximity to facility	32.67	67.33

4.3.3 Change in Healthcare Provider and Delay in Seeking Care

The findings indicate that a large majority of respondents (89.18%) had changed their healthcare provider since diagnosis, suggesting considerable movement within the healthcare system. Additionally, an overwhelming proportion (94.43%) reported that they had delayed or avoided seeking care at some point. This highlights a significant gap between healthcare need and utilization, likely influenced by underlying barriers to accessing timely and appropriate care.

Table 4.9 Change in Healthcare Provider and Delay in Seeking Care

Variable	Category	Frequency (n)	Percentage (%)
Change in healthcare provider	Yes	272	89.18
	No	33	10.82
Delay or avoidance of care	Yes	288	94.43
	No	17	5.57

4.3.4 Barriers to Accessing Healthcare

The most commonly reported barriers to accessing healthcare were long distance to health facilities (89.8%) and high cost of treatment (85.6%), indicating that geographical and financial constraints are major challenges. Lack of drugs was also reported by over one-third of respondents (37.7%). In contrast, factors such as transportation, waiting time, staff attitude, and cultural beliefs were reported by relatively few respondents.

Table 4.10 Reported Barriers to Healthcare Access

Barrier	Yes (%)	No (%)
High cost of treatment	85.57	14.43
Long distance to facility	89.84	10.16
Lack of transportation	6.89	93.11
Long waiting time	3.93	96.07
Poor staff attitude	6.89	93.11
Lack of drugs	37.70	62.30

Lack of information	9.18	90.82
Cultural/religious beliefs	4.26	95.74

4.3.5 Use of Traditional/Informal Healthcare

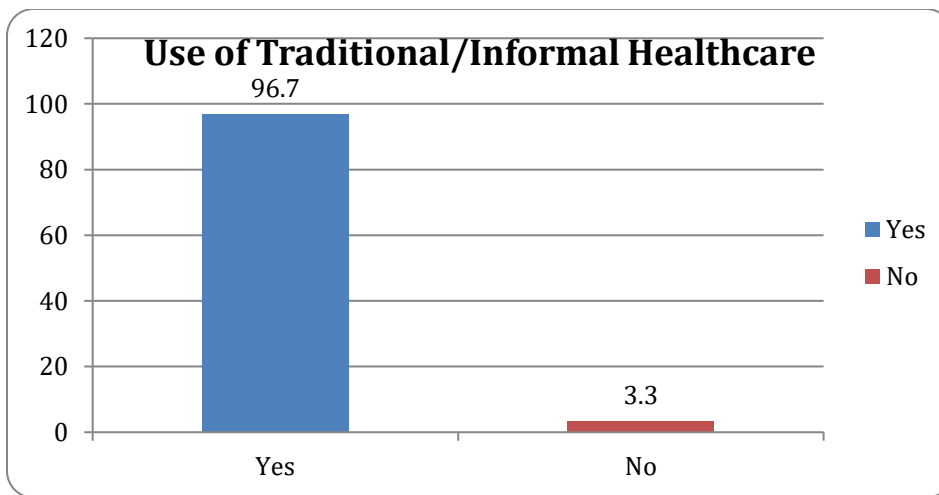


Figure 4.4 Use of Traditional/Informal Healthcare

A very high proportion of respondents (96.7%) reported that they had used some form of traditional or informal care to manage their condition. This suggests that although formal healthcare utilization was dominant, informal care remained embedded in respondents' health-seeking practices.

4.3.6 Types and Reasons for Use of Traditional/Informal Care

The findings indicate that home remedies (90.48%) and herbal medicine (87.41%) were the most commonly used forms of informal care among respondents, while prayer or spiritual healing was less frequently reported (6.46%). This suggests that informal care practices are largely based on accessible and practical treatment options.

In terms of reasons for use, affordability (93.47%) and proximity to healthcare (90.72%) were the most influential factors, highlighting the importance of economic and geographical accessibility in healthcare decisions. In contrast, relatively few respondents cited trust in traditional healing (9.28%), cultural beliefs (2.75%), or negative experiences with formal healthcare (1.72%) as reasons for using informal care. Overall, the use of traditional or informal care appears to be driven more by pragmatic considerations than by cultural or experiential factors.

Table 4.11 Types and Reasons for Use of Traditional/Informal Care

Variable	Category	Percentage (%)
Types of informal care used	Home remedies (Yes)	90.48
	Herbal medicine (Yes)	87.41
	Prayer/spiritual healing (Yes)	6.46
Reasons for use of informal care	More affordable (Yes)	93.47
	Closer to home (Yes)	90.72
	Trust in traditional healing (Yes)	9.28
	Cultural belief (Yes)	2.75
	Negative experience with hospitals (Yes)	1.72

Note: Multiple responses were permitted for the types and reasons for informal care; percentages are reported for each response item.

4.3.7 Frequency and Effectiveness of Use of Informal Care

The findings indicate that the majority of respondents (93.77%) used informal care occasionally rather than regularly, while only a small proportion (3.93%) reported using it consistently. This suggests that informal care is largely utilized as a supplementary rather than a primary healthcare option.

In terms of perceived effectiveness, most respondents (91.14%) considered informal care to be somewhat effective, while a smaller proportion (6.56%) viewed it as very effective. Very few respondents perceived it as ineffective or were uncertain. Overall, these findings indicate moderate confidence in informal care, reinforcing its role as a complementary approach rather than a primary treatment option.

Table 4.12 Frequency and Perceived Effectiveness of Informal Care Use

Variable	Category	Frequency (n)	Percentage (%)
Frequency of informal care use	Occasionally (few times a year)	286	93.77
	Regularly (e.g., monthly)	12	3.93
	Never	7	2.30
Perceived effectiveness of informal care	Somewhat effective	278	91.14
	Very effective	20	6.56
	Not effective	7	2.30

4.4 Factors Associated with Health-Seeking Behaviours Among Individuals Living with Noncommunicable Diseases in Dodi Asantekrom.

4.4.1 Socio-demographic Characteristics Associated with Health-Seeking Behaviour

The results indicate that socio-demographic characteristics were generally not significantly associated with health-seeking behaviour among respondents.

Age was not significantly associated with health-seeking behaviour ($\chi^2 = 0.51(4)$, $p = 0.973$), although the majority of respondents across all age groups utilized formal healthcare services. Similarly, sex showed no statistically significant association ($\chi^2 = 1.53(1)$, $p = 0.216$), despite a slightly higher proportion of males reporting informal care use compared to females.

Educational level was also not significantly associated with health-seeking behaviour ($\chi^2 = 4.78(4)$, $p = 0.311$), although respondents across all educational categories predominantly utilized formal care. Likewise, average monthly income did not show a statistically significant association ($\chi^2 = 9.05(5)$, $p = 0.107$), even though individuals in higher income categories appeared slightly more likely to use formal healthcare services.

Occupation also demonstrated no significant association with health-seeking behaviour ($\chi^2 = 0.44(5)$, $p = 0.994$), with formal care being the dominant choice across all occupational groups.

Overall, these findings suggest that socio-demographic factors such as age, sex, education, income, and occupation do not significantly influence the choice between formal and informal healthcare among respondents. Instead, other factors may play a more critical role in determining health-seeking behaviour.

Table 4.13 Socio-demographic Characteristics Associated with Health-Seeking Behaviour

Variables	Formal care n (%)	Informal care n (%)	χ^2 (df)	P-value
Age group			0.51 (4)	0.973
18–25	23 (100.00)	0 (0.00)		
26–35	52 (98.11)	1 (1.89)		
36–45	85 (98.84)	1 (1.16)		
46–54	60 (98.36)	1 (1.64)		
55+	81 (98.78)	1 (1.22)		
Sex			1.53 (1)	0.216
Female	201 (99.50)	1 (0.50)		
Male	100 (97.09)	3 (2.91)		
Level of education			4.78 (4)	0.311
Junior High	104 (100.00)	0 (0.00)		
No formal education	75 (97.40)	2 (2.60)		
Primary	98 (98.99)	1 (1.01)		
Senior High	18 (94.74)	1 (5.26)		
Tertiary	6 (100.00)	0 (0.00)		
Average monthly income (GHS)			9.05 (5)	0.107
1,000+	11 (91.67)	1 (8.33)		
100–299	1 (100.00)	0 (0.00)		
100–299*	120 (98.36)	2 (1.64)		
300–599	104 (100.00)	0 (0.00)		
600–999	25 (96.15)	1 (3.85)		
<100	40 (100.00)	0 (0.00)		
Occupation			0.44 (5)	0.994
Agriculture	197 (98.50)	3 (1.50)		
Trading/Self-employed	61 (98.39)	1 (1.61)		
Formal employment	9 (100.00)	0 (0.00)		
Unemployed	14 (100.00)	0 (0.00)		
Student	11 (100.00)	0 (0.00)		
Retired	9 (100.00)	0 (0.00)		

4.4.2 Structural and Access Factors Influencing Health-Seeking Behaviour

The analysis of structural and access-related factors shows mixed influences on health-seeking behaviour. Possession of a valid National Health Insurance Scheme (NHIS) card was not significantly associated with the type of healthcare utilized ($\chi^2 = 1.89(1)$, $p = 0.170$), suggesting that insurance coverage alone does not determine whether individuals seek formal or informal care.

Similarly, distance to the nearest health facility did not show a statistically significant association with health-seeking behaviour ($\chi^2 = 0.04(1)$, $p = 0.840$), indicating that proximity to health services may not be a major deciding factor in this setting.

However, means of transportation to health facilities was found to be significantly associated with health-seeking behaviour ($\chi^2 = 41.00(2)$, $p < 0.001$). Respondents who used motorbikes were predominantly users of formal healthcare services, while those relying on other means of transportation were relatively more represented among informal care users. This suggests that mobility and transport accessibility play a critical role in determining access to formal healthcare.

The findings highlight that while insurance status and physical distance may not strongly influence healthcare choices, transportation access remains a key structural determinant of health-seeking behaviour.

Table 4.14 Structural and Access Factors Influencing Health-Seeking Behaviour

Variables	Formal care n (%)	Informal care n (%)	χ^2	P-value
NHIS status			1.89 (1)	0.17
Yes	230 (76.41)	2 (50.00)		
No	71 (23.59)	2 (50.00)		
Distance to health facility			0.04 (1)	0.84
1–5 km	295 (98.01)	4 (100.00)		
>5 km	6 (1.99)	0 (0.00)		
Means of transportation			41 (2)	0.000*
Bicycle	4 (1.33)	0 (0.00)		
Motorbike	292 (97.01)	2 (50.00)		
Other means	5 (1.66)	2 (50.00)		

4.4.3 Barriers Influencing Health-Seeking Behaviour

The analysis of barriers to healthcare access revealed that most of the examined factors were not statistically significantly associated with health-seeking behaviour. Cost of treatment ($\chi^2 = 1.21$, $p = 0.271$) and long distance to health facilities ($\chi^2 = 0.26$, $p = 0.609$), although commonly reported, did not significantly influence whether respondents sought formal or informal care.

Similarly, waiting time ($p = 0.837$), staff attitude ($p = 0.706$), lack of drugs ($p = 0.182$), lack of information ($p = 0.635$), and cultural or religious beliefs ($p = 0.817$) were not significantly associated with health-seeking behaviour. This suggests that these factors, while present, may not independently determine the type of healthcare utilized.

However, transportation barrier was found to be significantly associated with health-seeking behaviour ($\chi^2 = 5.87$, $p = 0.015$). Respondents who experienced transportation challenges were

more likely to utilize informal care compared to those without such barriers. This highlights transportation as a critical structural constraint affecting access to formal healthcare services.

Overall, the findings indicate that transport-related challenges are the most influential barrier, while other commonly perceived barriers such as cost and distance may not significantly alter healthcare choices in this population.

Table 4.15 Barriers Influencing Health-Seeking Behaviour

Variables	Formal care n (%)	Informal care n (%)	χ^2	P-value
Cost barrier (High cost)			1.21	0.271
Yes	259 (86.05)	2 (50.00)		
No	42 (13.95)	2 (50.00)		
Distance barrier (Long distance)			0.26	0.609
Yes	271 (90.03)	3 (75.00)		
No	30 (9.97)	1 (25.00)		
Transportation barrier			5.87	0.015*
Yes	19 (6.31)	2 (50.00)		
No	282 (93.69)	2 (50.00)		
Waiting time barrier			0.04	0.837
Yes	11 (3.65)	1 (25.00)		
No	290 (96.35)	3 (75.00)		
Staff attitude barrier			0.14	0.706
Yes	20 (6.64)	1 (25.00)		
No	281 (93.36)	3 (75.00)		
Drug availability barrier			1.78	0.182
Yes	114 (37.87)	1 (25.00)		
No	187 (62.13)	3 (75.00)		

Information barrier			0.23	0.635
Yes	27 (8.97)	1 (25.00)		
No	274 (91.03)	3 (75.00)		
Cultural/religious barrier			0.05	0.817
Yes	12 (3.99)	1 (25.00)		
No	289 (96.01)	3 (75.00)		

CHAPTER FIVE

5.0 DISCUSSION

5.1 Prevalence, Duration, and Diagnosis of NCDs

The findings of this study indicate that hypertension is by far the most prevalent noncommunicable disease among respondents, accounting for over three-quarters of reported conditions, while asthma and peptic ulcer disease were observed at much lower levels, and diabetes and other chronic conditions were relatively uncommon. This distribution reflects a pattern that is increasingly characteristic of many low- and middle-income settings, where hypertension tends to dominate the NCD profile. One plausible explanation for this is the largely asymptomatic nature of hypertension, which allows it to accumulate silently within populations, particularly in settings where routine screening is inconsistent.

This finding is consistent with evidence from Ghana and the wider sub-Saharan African region. Bosu (2010) reported that hypertension remains one of the most prevalent chronic conditions in Ghana, with estimates ranging widely but consistently exceeding other NCDs. Similarly, the Ghana Health Service (2023) STEPS survey highlights that a significant proportion of adults are living with elevated blood pressure, many of whom are either undiagnosed or inadequately managed. Beyond Ghana, global evidence from Global Burden of Disease Study (Vos et al., 2020) also underscores cardiovascular conditions as the leading contributors to morbidity and mortality, particularly in low-resource settings.

In contrast, the relatively low proportion of diabetes observed in this study differs somewhat from global trends, where diabetes is increasingly prominent. The observed lower prevalence may reflect underdiagnosis rather than true absence. This interpretation aligns with findings by Agyemang et al. (2012), who noted that limitations in screening and diagnostic infrastructure in

sub-Saharan Africa often result in underestimation of certain NCDs. From the perspective of Andersen's model, this highlights the role of enabling factors, particularly access to diagnostic services, in shaping not only health-seeking behaviour but also the observed burden of disease.

The study further shows that a substantial proportion of respondents had lived with their condition for extended periods, with over 70% reporting durations of four years or more. This finding resonates with evidence from the WHO SAGE study in Ghana (World Health Organization, 2020), which documented that many older adults live with chronic conditions for extended periods, often with inconsistent access to care. Similarly, Atun et al. (2013) argue that weak health system responsiveness in LMICs contributes to delayed diagnosis and suboptimal management of chronic diseases, thereby prolonging disease duration. Within Andersen's framework, this pattern reflects the influence of **need factors**, particularly how individuals perceive the severity of their condition and decide when to seek care.

With respect to diagnosis, the finding that the majority of respondents were diagnosed by doctors, with a notable proportion diagnosed by nurses and very few by traditional healers or self-diagnosis, suggests a relatively strong reliance on formal healthcare systems for definitive diagnosis. This is encouraging, particularly in a rural setting, as it indicates that biomedical services remain central in the identification of chronic conditions.

This pattern is consistent with findings from Sakeah et al. (2016), who observed that although informal care is commonly used in rural Ghana, formal health facilities are often the preferred option for diagnosis, especially for chronic or severe conditions. Likewise, Atinga et al. (2018) found that factors such as health insurance coverage significantly increase the likelihood of utilizing formal healthcare services. However, the minimal role of traditional healers in diagnosis

does not necessarily imply their absence in the care pathway; rather, it may indicate that their role is more prominent in symptom management than in formal disease identification.

Viewed through Andersen's model, this finding reflects the interplay between enabling factors, such as access to health facilities and insurance coverage, and predisposing factors, including trust in biomedical care and beliefs about illness. Together, these factors shape the pathway through which individuals move from symptom recognition to formal diagnosis.

The findings imply that while hypertension dominates the NCD profile and many individuals live with these conditions for extended periods, there is meaningful engagement with formal healthcare providers for diagnosis. However, the patterns also point to potential gaps in early detection and equitable access to diagnostic services. These dynamics highlight the need to strengthen both community-level screening and access to diagnostic infrastructure, especially in rural settings where the burden of chronic disease continues to grow.

5.2 Health-Seeking Behaviours Among Individuals Living With Noncommunicable Diseases

The findings of this study reveal a complex pattern of health-seeking behaviour among individuals living with noncommunicable diseases in Dodi Asantekrom. Although an overwhelming majority of respondents reported utilizing formal healthcare services (98.7%), a similarly high proportion indicated that they had delayed seeking care (94.43%) and frequently switched between healthcare providers (89.18%). At the same time, the widespread use of informal care (96.7%), largely as a supplementary option, highlights the layered and dynamic nature of healthcare decision-making in this context.

The very high reliance on formal healthcare services suggests a strong recognition of the importance of biomedical care in managing chronic conditions. This is not entirely surprising,

given the nature of noncommunicable diseases such as hypertension and diabetes, which require continuous monitoring and long-term treatment. Globally, there is increasing awareness that effective management of NCDs depends on sustained engagement with formal health systems (World Health Organization, 2022; Beaglehole et al., 2011). In Ghana specifically, efforts such as the adoption of WHO-PEN have further emphasized the role of primary healthcare facilities in managing chronic conditions (World Health Organization, 2020). This may partly explain why respondents in this study overwhelmingly reported seeking care from formal providers.

This finding is consistent with studies conducted in similar settings. Sakeah et al. (2014) observed that although rural populations often explore multiple care options, formal health facilities remain the preferred source of care for chronic and serious conditions. Likewise, Atinga et al. (2018) found that individuals enrolled in the National Health Insurance Scheme are significantly more likely to utilize formal healthcare services, reflecting the role of financial protection in facilitating access.

Despite this high utilization, the finding that a large majority of respondents delayed or avoided seeking care at some point reveals a critical gap between healthcare need and actual utilization. This pattern suggests that engagement with formal healthcare is often reactive rather than proactive. Chronic conditions such as hypertension are often asymptomatic in their early stages, which can reduce perceived need for immediate care (World Health Organization, 2020). This interpretation is supported by Atun et al. (2013), who argue that low perceived need and delayed recognition of illness are key contributors to late healthcare utilization in low-resource settings. Similarly, evidence from the WHO SAGE study (World Health Organization, 2020) indicates that many individuals with chronic conditions delay seeking care until complications arise.

The high rate of switching between healthcare providers further reflects challenges in continuity of care. This behaviour may be driven by dissatisfaction with services, inconsistent availability of medications, or attempts to balance cost and quality. The fact that cost of care (99.3%), waiting time (99.5%), quality of care (99.0%), and staff attitude (99.0%) were identified as key determinants of provider choice suggests that patients are actively evaluating their healthcare options rather than passively accepting available services. This aligns with findings from Aboagye et al. (2021), who reported that patients in Ghana often switch providers due to perceived differences in service quality and affordability. In a similar vein, Atun et al. (2013) emphasize that weak health system responsiveness can lead to fragmentation of care, particularly for chronic diseases that require consistent management.

One of the most striking findings of this study is the coexistence of high formal healthcare utilization with equally high use of informal care. While only a small proportion relied exclusively on informal providers, the vast majority reported using some form of informal care, primarily home remedies and herbal medicine. This suggests that informal care is not an alternative to formal healthcare, but rather a complementary strategy embedded within the broader health-seeking pathway. Such pluralistic health-seeking behaviour is widely documented in sub-Saharan Africa, where individuals often combine different forms of care depending on accessibility, cost, and perceived effectiveness (World Health Organization, 2020; Sakeah et al., 2014).

Interestingly, affordability (93.47%) and proximity (90.72%) were the dominant drivers, while cultural beliefs and trust in traditional healing were cited by relatively few respondents. It suggests that individuals are making rational decisions based on resource constraints and accessibility. This interpretation is supported by Atinga et al. (2018), who highlight that financial and geographic barriers are key determinants of healthcare choices in Ghana. Similarly, global evidence indicates

that cost and accessibility often outweigh cultural preferences in shaping healthcare utilization in low-resource settings (World Health Organization, 2022).

The reported barriers to healthcare access further reinforce the central role of structural constraints. Long distance to health facilities (89.8%) and high cost of treatment (85.6%) were the most commonly reported challenges, while factors such as staff attitude and waiting time were less frequently cited. These findings are consistent with a substantial body of literature identifying financial and geographic barriers as major constraints to healthcare access in rural settings (Bosu, 2010; Atun et al., 2013). However, it is notable that these barriers did not necessarily prevent individuals from eventually seeking formal care, but rather influenced the timing and pathway of care-seeking. This helps explain why high levels of formal healthcare utilization coexist with high levels of delayed care-seeking and informal care use.

From the perspective of Andersen's Behavioral Model, these findings illustrate the dynamic interaction between predisposing, enabling, and need factors. While predisposing factors such as awareness of disease and perceived importance of treatment appear to encourage the use of formal healthcare, enabling factors, particularly cost, distance, and accessibility shape how and when individuals engage with the health system. These findings highlight that individuals do not simply choose between formal and informal care; rather, they move between different options depending on their circumstances at a given time. Addressing the challenges identified will therefore require a comprehensive approach that goes beyond increasing awareness to include reducing financial and geographic barriers, improving service quality, and strengthening continuity of care within the health system.

5.3 Factors Associated with Health-Seeking Behaviours Among Individuals Living with Noncommunicable Diseases in Dodi Asantekrom.

The findings of this study present an important insight into the determinants of health-seeking behaviour among individuals living with noncommunicable diseases in Dodi Asantekrom. Notably, socio-demographic characteristics such as age, sex, education, income, and occupation were not significantly associated with the type of healthcare utilized. Instead, structural and access-related factors emerged as the most influential determinants.

The absence of significant associations between socio-demographic factors and health-seeking behaviour suggests a relatively uniform pattern of healthcare utilization across the study population. Chronic diseases often require long-term management, and this shared understanding may lead individuals across different backgrounds to converge toward formal healthcare use. This pattern aligns with global evidence indicating that NCDs increasingly demand continuous engagement with formal health systems regardless of socio-demographic differences (World Health Organization, 2022; Beaglehole et al., 2011).

However, this finding contrasts with several empirical studies conducted in Ghana and similar contexts. For example, Sakeah et al. (2014) found that education and socioeconomic status significantly influenced healthcare utilization, with more educated individuals more likely to seek formal care. Similarly, Atinga et al. (2018) reported that income and financial capability play a critical role in determining access to healthcare services. Aboagye et al. (2021) further demonstrated that socio-economic inequalities significantly shape health-seeking patterns, particularly in rural populations.

The finding that NHIS status was not significantly associated with healthcare utilization also challenges existing literature. Previous studies have consistently shown that health insurance

improves access to formal healthcare by reducing out-of-pocket costs (Atinga et al., 2018; Aboagye et al., 2021). However, in this study, the lack of association suggests that financial protection alone may not be sufficient to influence behaviour. This may be because other barriers such as transportation costs, opportunity costs, and service availability remain significant even for insured individuals. Atun et al. (2013) similarly argue that health system effectiveness depends not only on financing mechanisms but also on the broader context of service delivery and accessibility.

In the same vein, distance to health facilities was not significantly associated with health-seeking behaviour, despite being widely reported as a barrier. This finding appears to contradict a substantial body of literature that identifies distance as a key determinant of healthcare utilization in rural settings (Sakeah et al., 2014; Bosu, 2010). However, it is important to distinguish between physical distance and functional accessibility. Individuals may be willing to travel longer distances for care if they perceive the benefits to outweigh the costs, particularly for chronic conditions that require reliable treatment. This suggests that perceived need, a central component of Andersen's Behavioral Model, may play a more critical role than geographic proximity in determining care-seeking decisions (Andersen, 1995).

In contrast, means of transportation emerged as a highly significant determinant of health-seeking behaviour. Respondents with access to motorbikes were significantly more likely to utilize formal healthcare services, while those without reliable transport were more likely to rely on informal care. This finding highlights transportation as a critical enabling resource that directly influences access to healthcare. It also aligns with broader evidence from sub-Saharan Africa, where transportation barriers have been shown to significantly limit healthcare utilization even when facilities are geographically available (Atun et al., 2013; World Health Organization, 2020). In practical terms, this suggests that mobility is the key factor shaping access in rural settings.

The analysis of barriers further reinforces this conclusion. Although cost and distance were widely reported, they were not statistically associated with the type of healthcare utilized. This indicates that while these barriers are prevalent, they may not independently determine whether individuals choose formal or informal care. Instead, they may influence other dimensions of health-seeking behaviour, such as delays in seeking care or frequency of visits. This interpretation is supported by findings from the WHO SAGE study (World Health Organization, 2020), which highlight that financial and geographic constraints often affect the timing and continuity of care rather than the initial choice of provider.

Importantly, transportation barriers were again found to be significantly associated with health-seeking behaviour, with individuals facing transport challenges more likely to rely on informal care. This finding is consistent with the broader literature, which emphasizes that access to healthcare in rural settings is shaped more by logistical and infrastructural factors than by individual preferences alone (Atun et al., 2013; Beaglehole et al., 2011).

From a theoretical perspective, these findings strongly support Andersen's Behavioral Model, particularly the dominant role of enabling factors in determining healthcare utilization. While predisposing factors such as age, education, and income are traditionally expected to influence behaviour, their effects appear to be minimal in this context. Instead, enabling resources, especially transportation, play a decisive role in shaping whether individuals can translate their health needs into actual healthcare use. Improving healthcare utilization for NCDs in rural Ghana requires more than increasing awareness or expanding insurance coverage. While these interventions remain important, they must be complemented by efforts to address practical barriers to access, particularly transportation and mobility. Without such improvements, individuals may continue to

face significant challenges in accessing timely and appropriate care, despite recognizing its importance.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study examined the prevalence of noncommunicable diseases (NCDs), health-seeking behaviours, and the factors influencing healthcare utilization among individuals living with NCDs in Dodi Asantekrom. The study revealed that hypertension is the most prevalent noncommunicable disease among respondents (76.39%), with a substantial proportion of individuals living with their condition for several years, particularly 7 years and above (36.39%). This reflects the chronic nature of NCDs and suggests potential delays in diagnosis and long-term management challenges. Despite this, most respondents were diagnosed by trained health professionals, particularly doctors (75.08%), indicating meaningful engagement with formal healthcare systems.

In terms of health-seeking behaviour, the findings demonstrate a complex pattern characterized by very high utilization of formal healthcare services (98.7%), alongside widespread use of informal care (96.7%) and significant delays in seeking treatment (94.43%). Additionally, a large proportion of respondents reported switching between healthcare providers (89.18%). With regard to determinants of health-seeking behaviour, the study found that socio-demographic characteristics were not significantly associated with healthcare utilization ($p > 0.05$). Instead, transportation emerged as the most important structural determinant, with means of transportation showing a statistically significant association with healthcare utilization ($\chi^2 = 41.00$, $p < 0.001$). Generally, the findings highlight that improving NCD management in rural Ghana requires a shift from solely individual-focused interventions to approaches that address structural barriers to healthcare access.

6.2 Recommendations

1. The Ghana Health Service should expand routine screening for hypertension and other NCDs at the community level through CHPS compounds and outreach services. This will help identify cases earlier and reduce the proportion of individuals living with undiagnosed or long-standing conditions.
2. Given the widespread use of informal care, health education programmes should acknowledge these practices and provide guidance on safe and appropriate use. This approach will help ensure that informal care complements rather than delays formal medical treatment.
3. Local authorities and health stakeholders should prioritize interventions that improve rural transportation, such as community transport initiatives or mobile health services. This will directly enhance access to formal healthcare facilities.
4. Investments should be made in improving the availability of essential drugs, reducing service disruptions, and enhancing the overall quality of care at primary healthcare facilities. This will reduce the need for patients to switch providers and improve continuity of care.

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APPENDIX

INFORMED CONSENT

GENERAL INFORMATION ABOUT THE STUDY

My name is Amefu Seth Kwasi, a Master of Public Health student at Ensign Global University, Kpong. I am conducting a study titled: “Health-Seeking Behaviour of People Living with Noncommunicable Diseases in Rural Ghana: A Case of Dodi Asantekrom.” You are being invited to take part because you live in Dodi Asantekrom and have experience or knowledge related to managing noncommunicable diseases (such as high blood pressure, diabetes, stroke, or chronic respiratory problems).

If you agree to participate, you will be asked to answer some questions about your health, how you seek care, and the challenges you may face in getting healthcare. The questions are simple and will only take about 10 minutes of your time. You will respond by choosing or stating answers that best describe your situation.

Benefits/Risks of the Study

There are no known risks to taking part in this study. The only inconvenience may be the time it takes to answer the questions. There is no direct benefit to you, but your participation will help provide important information that can improve healthcare services and support for people living with long-term illnesses in rural communities like yours.

Confidentiality

Your privacy will be fully respected. Your name or any personal details that can identify you will not be recorded in the study report. All information collected will be stored securely and only used

for academic purposes. Only the researcher and her academic supervisor will have access to the data, and it will be protected by a password.

Compensation

Your participation in this study is completely voluntary. There will be no payment or reward for taking part. However, we are grateful for your time and willingness to contribute to this important research.

Right to Withdraw

You can choose not to take part, or stop the interview at any point without giving any reason. There will be **no penalty** or loss of any benefit for deciding not to continue. You are also free to ask any questions before, during, or after the study.

PARTICIPANT AGREEMENT

I have read (or have had read to me) the information above. I understand that I will be asked questions about my health and how I seek care for noncommunicable diseases. I have had the chance to ask any questions, and all my questions have been answered. I understand that taking part is voluntary and I can stop at any time without any problem. I agree to participate in this study.

Name of Participant

Signature of Participant

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date

QUESTIONNAIRE

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Age: _____ years
2. Sex:
☐ Male ☐ Female ☐ Other
3. Marital Status:
☐ Single ☐ Married ☐ Divorced ☐ Widowed
4. Level of Education:
☐ No formal education ☐ Primary ☐ Junior High ☐ Senior High ☐ Tertiary
5. Religion:
☐ Christian ☐ Muslim ☐ Traditional ☐ Other: _____
6. Occupation: _____
7. Average Monthly Income (GHS):
☐ <100 ☐ 100–299 ☐ 300–599 ☐ 600–999 ☐ 1,000+
8. Do you have a valid National Health Insurance (NHIS) card?
☐ Yes ☐ No
9. Distance to the nearest health facility:
☐ <1 km ☐ 1–5 km ☐ >5 km
10. Means of transportation to health facility:
☐ Walking ☐ Bicycle ☐ Motorbike ☐ Taxi ☐ Other: _____

SECTION B: TYPES OF NCDs (Relates to RQ1)

11. Have you been diagnosed by a health professional with any of the following NCDs?
(Select all that apply):
☐ Hypertension
☐ Diabetes
☐ Stroke
☐ Asthma
☐ Heart disease
☐ Cancer
☐ Chronic respiratory disease
☐ Other: _____

12. How long have you lived with this condition(s)?

☐ Less than 1 year ☐ 1–3 years ☐ 4–6 years ☐ 7+ years

13. Who diagnosed your condition?

☐ Doctor ☐ Nurse ☐ Pharmacist ☐ Traditional healer ☐ Self-diagnosed

SECTION C: CHOICE OF HEALTHCARE SERVICES (Relates to RQ2)

14. Where do you usually seek care for your NCD? (Choose one):

- ☐ Government hospital/clinic
- ☐ Private hospital/clinic
- ☐ Pharmacy/Chemical shop
- ☐ Herbal/traditional medicine center
- ☐ Prayer camp/spiritual center
- ☐ Self-medication/home care

15. Why do you prefer this healthcare option?

Please indicate how important each of the following factors is in your choice of healthcare provider. Use the scale:

1 – Not Important

2 – Slightly Important

3 – Neutral

4 – Important

5 – Very Important

a. Proximity to the facility

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

b. Affordability of care

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

c. Perceived quality of care

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

d. Short waiting time

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

e. Attitude of healthcare workers

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

f. Availability of medicines

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

g. Cultural or religious compatibility

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

16. Have you changed your choice of healthcare provider since diagnosis?

☐ Yes ☐ No

17. If yes, why? (Check all that apply):

☐ Cost of care

☐ Poor treatment outcome

☐ Long distance

☐ Negative staff attitude

☐ Other: _____

18. Have you ever delayed or avoided seeking care for your NCD?

☐ Yes ☐ No

19. If yes, what were the main reasons? (Select all that apply):

☐ High cost of treatment

☐ Long distance to health facility

☐ No transportation

☐ Long waiting time

☐ Poor attitude of healthcare workers

☐ Lack of drugs

☐ Lack of information about services

☐ Religious/cultural beliefs

☐ Other: _____

20. On a scale of 1 to 5, how serious are these barriers to accessing care?

☐ 1 – Not serious

☐ 2 – Slightly serious

☐ 3 – Neutral

- ☐ 4 – Serious
- ☐ 5 – Very serious

21. Have you ever used any form of traditional or informal care to manage your NCD?

- ☐ Yes ☐ No

22. If yes, what type(s) did you use? (Select all that apply):

- ☐ Herbal medicine
- ☐ Prayer/spiritual healing
- ☐ Home remedies
- ☐ Family/friends' advice
- ☐ Other: _____

23. Why did you use traditional/informal care? (Select all that apply):

- ☐ More affordable
- ☐ Closer to home
- ☐ Trust in traditional healing
- ☐ Cultural belief
- ☐ Negative experience with hospital care
- ☐ Other: _____

24. How often do you use traditional/informal care?

- ☐ Regularly (e.g., monthly)
- ☐ Occasionally (e.g., few times a year)
- ☐ Rarely
- ☐ Never

25. How effective do you perceive traditional/informal care to be in managing your condition?

- ☐ Very effective
- ☐ Somewhat effective
- ☐ Not effective
- ☐ Not sure