

Assessing the Influence of Nhima on Healthcare Access for Marginalized Community of Lusaka'S Bauleni Compound

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ABSTRACT

This study aimed to evaluate the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities, specifically women and children, in Lusaka's Bauleni Compound. The research examined the relationship between NHIMA health insurance coverage and healthcare access, assessed the effectiveness of NHIMA in improving access, and identified key factors underpinning its effectiveness.

Using a cross-sectional design, 230 residents of Bauleni were surveyed through structured questionnaires focusing on demographic characteristics and experiences with NHIMA services. Descriptive statistics were used to summarize the data, while chi-square tests, ordinal logistic regression, and multinomial logistic regression were employed to examine associations between NHIMA enrolment and healthcare access.

The results indicated that 54.6% of respondents were enrolled in NHIMA. NHIMA enrolment significantly increased healthcare visits, with a higher proportion of enrolled individuals (56.0%) visiting healthcare facilities 1-2 times in the past year compared to non-enrolled individuals (35.1%) ($\chi^2 = 42.061$, $p < 0.001$). This study highlights the positive role of NHIMA in enhancing healthcare access in Bauleni, particularly in increasing service utilization among insured individuals. However, barriers such as lack of information and financial constraints hindered full utilization of NHIMA services. The findings suggest that improving NHIMA awareness campaigns, simplifying the enrolment process, and enhancing service quality at affiliated facilities could lead to increased healthcare access among marginalized populations.

Policy implications include the need for targeted interventions that address financial and informational barriers to NHIMA enrolment and access. Policy reforms should focus on expanding NHIMA's coverage and improving the delivery of healthcare services to ensure that marginalized groups, particularly women and children, benefit fully from the national insurance scheme.

Keywords: National Health Insurance Management Authority, Healthcare Access, Marginalized Communities, Bauleni Compound, Cross-Sectional Study, Chi-square Tests, Ordinal Logistic Regression, Multinomial Logistic Regression.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

Healthcare access is a fundamental right that should be available to all, regardless of their socioeconom-

ic status (Baumgartner et al.2020). This study investigated the influence of the National Health Insurance Management Authority (NHIMA), a healthcare insurance provider, on healthcare access for marginalized communities specifically women. It explores how the presence and effectiveness of health insurance affect the ability of marginalized communities to access essential healthcare services. This introduction sets the stage for examination of this critical issue. The chapter highlights on the statement of the problem and presents the objectives of the study before presenting the significance of the study which is presented right before the scope of the study and definition of key terms.

1.1 Background to the study

The influence of health care insurance on healthcare access for marginalized communities” refers to the impact and effects of health insurance coverage on the ability of marginalized and underserved communities to access healthcare services (Ercia, 2021). It is an investigation into how the presence or absence of health insurance can either facilitate or hinder the ability of individuals from these communities to obtain necessary healthcare, including medical treatments, preventive services, and health related information.

Research in the field of healthcare access has consistently emphasized the significance of health insurance coverage in facilitating healthcare access for underserved populations (Chu et al. 2021). A systematic review of 159 studies in Africa and Asia found that health insurance, particularly community-based and social health insurance, improves service utilization and financial protection, but evidence for its impact on quality of care, social inclusion, and community empowerment is weak or inconclusive (Spaan et al., 2012). These findings underscore the importance of addressing healthcare disparities and the pivotal role of health insurance in this endeavour. Despite the acknowledged importance of health insurance in improving healthcare access, there remains a critical gap in understanding its specific impact on marginalized communities, especially in underprivileged urban areas. This research seeks to address this gap by systematically assessing how the provision of health insurance, with a specific focus on NHIMA, influences the accessibility of healthcare services for marginalized communities in urban areas.

To shed light on this issue, Lusaka's Bauleni Compound is chosen as the primary study site. Bauleni Compound represents a unique and challenging setting, characterized by a marginalized population with diverse healthcare needs. Focusing on this specific urban area, the research can provide insights that are directly relevant to improving healthcare access in both within Zambia and globally.

1.2 Statement of the Research Problem

Zambia has a population of 19.47 million and over 60% of its population lives below the poverty datum line (Zambia Demographic Health Survey, 2023), this threshold lacks access to proper social services especially health. The state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity is health (WHO, 2015). Health comes as a pivotal direction toward high levels of productivity hence contributing to the economic growth of the nation which would consequently trickle down to economic development. In the existing body of literature, it is well-established that access to quality healthcare services is a fundamental right and a cornerstone of public health, (Baumgartner et al. 2020). Research has demonstrated that the presence of comprehensive health insurance schemes significantly enhances the accessibility, affordability, and utilization of healthcare services for various demographic groups (Hoffman et al., 2008; Tirgil et al., 2018).

Furthermore, it has been widely acknowledged that marginalized communities, often burdened by socioeconomic disparities and limited resources, stand to benefit immensely from targeted health insurance initiatives (Makhloufi et al., 2015). However, despite the wealth of research on the broad topic

of health insurance and healthcare access, there exists a notable gap in the literature concerning its specific impact on marginalized communities, particularly within the case of urban settings. The available literature predominantly emphasizes broader population groups or rural areas, thereby neglecting the unique challenges and dynamics that marginalized urban communities, such as those in Lusaka's Bauleni Compound, face in accessing healthcare services. This gap in the literature represents a significant problem, as it hinders the development of targeted policies and interventions that could meaningfully improve the healthcare outcomes of marginalized urban populations. Without a nuanced understanding of the specific barriers faced by these communities, it becomes exceedingly difficult to design effective and sustainable healthcare access programs. Filling this gap is imperative not only for the sake of equity and social justice but also for achieving broader public health objectives.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this research is to examine the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities (women and children) in Lusaka's Bauleni Compound, Zambia.

1.3.2 Specific Objectives

The specific objectives of the study are:

1. To assess the relationship between health insurance coverage provided by NHIMA and healthcare access for marginalized communities in Lusaka's Bauleni Compound.
2. To evaluate the effectiveness of the National Health Insurance Management Authority (NHIMA) in improving healthcare access for the marginalized communities in Bauleni.
3. To evaluate factors that underpin the effectiveness of NHIMA in the healthcare provision for the marginalized.

1.4 Research Questions

The following research questions will guide the study:

1. What is the relationship between health insurance coverage provided by NHIMA and healthcare access for marginalized communities in Lusaka's Bauleni Compound?
2. How effective is National Health Insurance Management Authority (NHIMA) in improving healthcare access for the marginalized communities in Bauleni Compound?
3. What are the key factors that underpin the effectiveness of NHIMA in the healthcare provision for the marginalized in Bauleni Compound?

1.5 Scope of the Study

This study investigates the effect of NHIMA's health insurance coverage on healthcare accessibility for marginalized communities in Lusaka's Bauleni Compound. The research aims to fill a notable gap in the existing literature by focusing on urban, marginalized populations, a demography often overlooked in previous studies. The primary variables under examination include health insurance coverage, health awareness initiatives, support programs for vulnerable groups, and the management of healthcare provider networks. Data will be sourced from representatives of NHIMA, healthcare providers, and residents of Bauleni Compound. The study's scope is limited to Bauleni Compound, and findings and recommendations will be tailored to address the unique challenges and opportunities present in the area.

1.7 Significance of the Study

By examining the influence of health insurance, specifically focusing on NHIMA, on healthcare access in Lusaka's Bauleni Compound, this research addresses a critical gap in the existing literature. The findings are expected to offer valuable insights into the specific challenges and opportunities faced by urban marginalized populations in accessing healthcare services. Moreover, this study holds the promise of guiding policymakers, healthcare providers, and relevant stakeholders towards implementing targeted interventions that can lead to tangible improvements in the health outcomes of these underserved communities.

1.8 Operational Definition

The following key terms have been defined in line with the study.

1.8.1 Health Insurance Coverage: Refers to the extent and quality of insurance provided by NHIMA, encompassing the range of healthcare services and treatments accessible to individuals or communities.

1.8.2 Health Awareness and Education Efforts: Encompass NHIMA's programs and campaigns aimed at increasing health literacy and knowledge among marginalized populations.

1.8.3 Management of Healthcare Provider Networks: Refers to NHIMA's strategies and practices in organizing and overseeing the network of healthcare providers available to marginalized communities, ensuring effective coordination and delivery of healthcare services.

1.8.4 Marginalized Communities: Refers to the women and children of Lusaka's Bauleni Compound who lack adequate access to economic, social, and partisan resources with the emphasis on women.

1.9 Organisation of the Dissertation

This dissertation is presented as follows:

Chapter One: Introduction

This chapter gives an introduction to the topic, provides the background to the study, defines and outlines the research problem, operational definitions, states the aim of the study, the objectives, and identifies the research questions. The chapter also emphasizes the significance of the study, scope of the study, definition of key terms and provides the layout of the paper.

Chapter Two: Literature review

This chapter reviews existing literature related to the topic. The aim and objectives of this study will be linked with other studies related to examining the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities (women and children) in Lusaka's Bauleni Compound, Zambia. Additionally, the chapter postulates the theoretical and conceptual framework relevant to the topic.

Chapter Three: Research methodology

This chapter identifies and discusses the research methodology to be used. It identifies the research design and approach, target population, sampling, research instruments, data collection, data analysis, reliability, validity as well as ethical considerations.

Chapter Four: Presentation and Analysis of Results

This chapter gives a presentation and analysis on the examine the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities (women and children) in Lusaka's Bauleni Compound, Zambia.

Chapter Five: Discussion of the findings

This chapter presents interprets and discusses study results. The chapter answers the research questions by presenting findings concerning the objectives and research questions of the study. Additionally, it discusses the findings of the study by linking findings to the reviewed literature.

Chapter Six – Conclusions and recommendations

This chapter concludes the dissertation with a summary of the research findings and makes recommendations on strategies that the National Health Insurance Management Authority (NHIMA) and the Ministry of Health and its cooperating partners can make especially on policies that enhances good health and sustainability for highly healthy and productivity nation that will consequently lead to economic growth and development.

CHAPTER 2: LITERATURE REVIEW

2.0 Overview

This chapter provides a review of the existing literature on the National Health Insurance Schemes in various parts of the worlds and their impact on healthcare access and utilization. The purpose of this literature review is to identify gaps in the current body of knowledge that justify this study. The chapter first conducts an empirical review of related studies. It then explore relevant theoretical frameworks and formulate a conceptual framework before identifying gaps in the literature.

2.1 Empirical Review

2.1.1 Global Perspective

2.1.1.1 Impact of Health Insurance on Healthcare Utilization

In many countries of the world, health insurance schemes have been acknowledged as vital in increasing the access to health care especially for vulnerable populations. This section explores the impact of health insurance on healthcare utilization from studies conducted in various regions: The countries of the world that are most affected by non-communicable diseases, include the United States of America, the European countries, Asian countries, Sub-Saharan Africa, and Southern Africa.

The Affordable Care Act (ACA) in the United States hence sought to enhance the health insurance coverage with far-reaching effects on the accessibility of health care. According to the research done by Sommers, Gunja, Finegold, and Musco (2015) after the ACA was put into place it was established that the newly insured groups especially those from the vulnerable groups used health care services more frequently than before. This shows that health insurance is relevant to all societies in the enhancement of health care access.

In Brazil, the Unified Health System (SUS) has played a role in enhancing the health care facilities of the vulnerable groups. Paim et al.'s (2011) study revealed that SUS positively impacted the healthcare seeking behavior and health status of the poor. This model shows how public health insurance can positively influence the healthcare seeking behavior.

In Mexico, the Seguro Popular program was introduced to offer health insurance to the una favor of people. Frenk et al. (2006) conducted a study and determined that, Seguro Popular raised the level of health care and enhanced the health of the insured populace. This show that health insurance programs are efficient when they are targeted.

Germany has compulsory health insurance and its role in enhancing or hindering the health care is significant. Busse and Blümel (2014) conducted research on German health insurance system and established that the system provides equal access to healthcare services to all the citizens whereby the high

utilization and good health status is proof. This model can help explain how mandatory health insurance can help increase the availability of health care to all.

In Japan, health care for all has seen to it that almost every citizen has access to health care services. In the work of Shigeoka (2014), he established that health insurance boosted the usage of health facilities, lowered mortality rates, and increased general health outcomes (Shigeoka, 2014). This model illustrates the possible positive effects of the extensive health insurance plans.

Since its introduction in 1989, health insurance has been recognized as the most critical component of access to health care in South Korea. In a cross-sectional study that was conducted by Kwon (2009) it was established that the adoption of NHI enhanced the health seeking behavior particularly among older people and the poor (Kwon, 2009). This goes back to the argument that insurance programs have the potential of closing the gaps in the access to health care.

Thus, in the Thai case, the Universal Coverage Scheme (UCS) has been key in expanding the coverage of health care services. According to Limwattananon et al. (2015) research work, it was discovered that the UCS brought about a tremendous change in the uptake of health care services among the formerly uninsured population. This supports the concept of UHC in increasing the uptake of health care services. The New Cooperative Medical Scheme (NCMS) in China has expanded healthcare services especially in the rural area. Yip et al. (2012) revealed that the NCMS raised the prevalence of using the healthcare services especially the inpatient care. This demonstrates how health insurance is vital in boosting healthcare in the rural areas.

In Vietnam, the health insurance was introduced, and this has resulted to increased health care seeking behaviors. Wagstaff (2010) in a study established that health insurance had a positive effect on the uptake of health care services especially among the needy and poor (Wagstaff, 2010). This goes to support the importance of insurance in reducing this financial aspect that hinders access to health care services.

In Indonesia, introduction of Jaminan Kesehatan Nasional (JKN) has helped to improve on the availability of healthcare. The research by Agustina et al. (2019) noted that the JKN coverage enhanced the health-seeking behaviors among the population especially the poor. This supports the argument of national health insurance in enhancing on health care accessibility.

In Philippines, the Philippine Health Insurance Corporation (PhilHealth) has also led to an enhancement of health care provision. Studies by Lavado et al. (2010) established that Phil Health coverage improved the usage of health care services especially the maternal and child health services. This shows why health insurance is crucial in expanding the uptake of necessary health care services.

As such, the use of community-based health insurance in India has immensely helped in the improvement of health care delivery. Raza et al. (2015) revealed that people who were in such schemes had a higher tendency of visiting health facilities thus enhancing their health status. This is in line with a general observation that health insurance reduces the financial hindrances to health care services hence increasing health care seeking behaviours.

In Ghana, the National Health Insurance Scheme (NHIS) has played a very important role especially to the rural people. Asibey and Agyemang's (2017) study also pointed out that insured people in the rural areas sought medical care more often than the uninsured ones. This is quite a clear indication of the role of insurance in ironing out the financial hitch that may be a barrier to accessing health care services.

The same can also be observed in the case of Kenya. According to the study conducted by Mugo, (2023) health insurance enrollments enhanced the health status by raising the health care seeking rates. The study

concluded that health insurance enrolment results in a decrease in mortality hence enhancing the health of the Kenyan population even with very few people taking up insurance.

In Rwanda however, the community-based health insurance scheme (CBHI) has proved to be efficient. Lu et al. (2012) in their study revealed that CBHI enhanced the uptake of health care services among the rural population leading to better health status. This model depicts the possibility of community-based programs in the improvement of access to health care.

In South Africa, the NHI is designed to achieve UHC for the population. McIntyre et al. (2017) revealed that NHI coverage enhanced the healthcare seeking among the vulnerable groups. This model depicts how NHI can stimulate uptake of health care services.

This trend has been realized in various regions across the globe regarding the aspect of health insurance. Across the Americas, such as in the United States and Brazil, in Europe such as Germany, in Asia including Japan and South Korea, in Sub-Saharan Africa including Ghana and Kenya, and in Southern Africa including South Africa, health insurance schemes have always positively impacted on the health care systems especially among the vulnerable and the poor. These results stress the role of health insurance in eliminating the financial constraints and improving the fairness of access to the healthcare services.

2.1.2 Sub-Saharan Africa

2.1.2.1 Barriers to Healthcare Access and the Role of Health Insurance

In Sub-Saharan Africa, healthcare access remains a significant challenge, particularly for marginalized communities. Various studies have explored the barriers and the impact of health insurance schemes on improving healthcare utilization in this region.

2.1.2.1.1 General Barriers to Healthcare Access

One of the major barriers to healthcare access in Sub-Saharan Africa is financial constraints. According to a scoping review by Schokkaert et al. (2017), out-of-pocket payments significantly hinder access to healthcare services, particularly for low-income populations. This financial burden often results in delayed or foregone medical care, exacerbating health disparities (Schokkaert et al., 2017).

Geographical barriers also play a critical role. Many rural areas in Sub-Saharan Africa are characterized by poor infrastructure, making it difficult for individuals to reach healthcare facilities. This is compounded by the scarcity of healthcare providers in these regions, leading to long travel times and high transportation costs (Gwatkin, 2003).

Moreover, sociocultural factors, such as traditional beliefs and practices, can influence healthcare utilization. For instance, in many communities, there is a reliance on traditional healers and alternative medicine, which can delay the use of formal healthcare services (Van Der Hoeven, Kruger, & Greeff, 2012).

2.1.2.1.2 Impact of Health Insurance Schemes

Health insurance schemes have been introduced in several Sub-Saharan African countries to address these barriers and improve healthcare access. Community-based health insurance (CBHI) schemes have shown promise in this regard. For example, in Rwanda, the Mutuelles de Santé scheme has significantly increased healthcare utilization among rural populations. A study by Lu et al. (2012) found that CBHI membership was associated with higher rates of healthcare utilization and better health outcomes.

Similarly, in Ghana, the National Health Insurance Scheme (NHIS) has been successful in enhancing healthcare access. Research by Dixon, Tenkorang, and Luginaah (2011) indicated that NHIS enrollees were more likely to use healthcare services compared to those without insurance. This suggests that health

insurance can mitigate financial barriers and promote timely healthcare utilization (Dixon, Tenkorang, & Luginaah, 2011).

In Nigeria, the National Health Insurance Scheme (NHIS) has also had a positive impact on healthcare access, though challenges remain. A study by Onoka, Onwujekwe, Hanson, and Uzochukwu (2013) highlighted that while NHIS improved healthcare utilization among insured individuals, issues such as low enrollment and limited coverage persist (Onoka et al., 2013).

Kenya's National Hospital Insurance Fund (NHIF) has similarly aimed to improve healthcare access. According to Mbau et al. (2020), NHIF coverage has led to increased healthcare utilization, particularly for inpatient services. However, disparities in access remain, with rural and low-income populations still facing significant barriers (Mbau et al., 2020).

In Tanzania, the Community Health Fund (CHF) has been instrumental in increasing healthcare utilization among rural populations. A study by Macha, Kuwawenaruwa, Makawia, Mtei, and Borghi (2014) found that CHF membership was associated with higher utilization of healthcare services, although challenges such as low enrolment and poor service quality were noted.

Uganda has also explored the potential of health insurance schemes to improve healthcare access. A pilot project by Basaza, Criel, and Van der Stuyft (2007) demonstrated that CBHI increased healthcare utilization and reduced out-of-pocket expenditures among members. However, sustainability and scalability remain concerns (Basaza, Criel, & Van der Stuyft, 2007).

In Ethiopia, the implementation of health insurance schemes has shown mixed results. Research has indicated that while insurance coverage improved healthcare utilization, challenges such as limited coverage, financial sustainability, and administrative inefficiencies need to be addressed (Alemayehu et al., 2023; Hussien et al., 2022).

2.1.2.1.3 Challenges in Health Insurance Implementation

Despite the positive impact of health insurance schemes, several challenges persist in Sub-Saharan Africa. Low enrolment rates are a common issue, often due to lack of awareness, mistrust in the system, and affordability concerns. For instance, in Ghana, Dixon et al. (2011) noted that wealthy individuals were less likely to enrol in NHIS due to perceived poor quality of services.

Administrative inefficiencies and limited coverage also hinder the effectiveness of health insurance schemes. In Nigeria, Onoka et al. (2013) highlighted that given the high level of catastrophic expenditure towards health by individuals established in the study area, particularly in the poorest quintile of population, he recommended for an urgent need to revisit the existing health financing strategy (NHIS) that places the burden of payment on households. The expansion of the existing national health insurance scheme is advocated so that more people (especially the poor) would be provided with financial risk protection.

Moreover, the quality of healthcare services provided under insurance schemes remains a concern. Studies have shown that insured individuals sometimes receive substandard care due to overcrowded facilities, lack of medical supplies, and inadequate staffing (Macha et al., 2014; Basaza et al., 2007). These issues can undermine the perceived benefits of health insurance and discourage enrollment.

2.1.3 Southern Africa

2.1.3.1 Healthcare Access and the Role of Health Insurance

In Southern Africa, access to healthcare remains a critical issue, particularly for marginalized and low-income populations. Health insurance schemes have been introduced in various countries within the region to address these challenges and improve healthcare utilization.

2.1.3.1.1 General Barriers to Healthcare Access

Financial barriers are a significant obstacle to healthcare access in Southern Africa. A study by Chitekwe (2022) identified out-of-pocket payments as a major barrier that prevents many individuals from seeking medical care. This financial burden disproportionately affects low-income populations, exacerbating health inequalities (Chitekwe, 2022).

Geographical barriers also play a crucial role in limiting healthcare access. Many rural areas in Southern Africa are characterized by poor infrastructure, which makes it difficult for residents to reach healthcare facilities (Harris et al., 2011). This issue is further compounded by the scarcity of healthcare providers in these regions, leading to long travel times and high transportation costs (Harris et al., 2011).

Sociocultural factors also impact healthcare utilization. Traditional beliefs and practices can influence health-seeking behaviour, with some communities relying on traditional healers instead of formal healthcare services. Additionally, gender dynamics often limit women's access to healthcare, as they may require permission from male family members to seek medical care (Moeti et al., 2019).

2.1.3.1.2 Impact of Health Insurance Schemes

Health insurance schemes in Southern Africa have shown potential in overcoming these barriers and improving healthcare access. In South Africa, the National Health Insurance (NHI) scheme aims to provide universal health coverage. A study by McIntyre et al. (2017) found that NHI coverage significantly increased healthcare utilization among marginalized populations. However, challenges such as administrative inefficiencies and limited provider networks remain (McIntyre et al., 2017).

In Zimbabwe, the introduction of health insurance schemes has also had a positive impact. Research by Nkala and Liu (2021) asserted that Health insurance coverage positively influences access and utilization of specialty healthcare services in Zimbabwe. This suggests that health insurance can mitigate financial barriers and promote timely healthcare utilization (Nkala and Liu, 2021).

In Namibia, the Social Health Insurance (SHI) scheme has been instrumental in increasing healthcare utilization. A study by Allcock et al. (2019) found that SHI coverage led to higher rates of healthcare utilization, particularly for preventive and primary care services. However, issues such as low enrolment and high dropout rates need to be addressed to ensure the sustainability of the scheme (Allcock et al., 2019).

Botswana's public health insurance system has also been effective in improving healthcare access. According to Achoki and Lesego (2017), insured individuals were more likely to seek medical care and had better health outcomes compared to those without insurance. This underscores the importance of health insurance in promoting healthcare access and improving health outcomes (Achoki & Lesego, 2017).

In Lesotho, the introduction of health insurance has shown mixed results. While a study by Mathauer et al. (2011) indicated that insurance coverage increased healthcare utilization, challenges such as limited coverage, financial sustainability, and administrative inefficiencies remain (Mathauer et al., 2011).

2.1.3.1.3 Challenges in Health Insurance Implementation

Despite the positive impact of health insurance schemes, several challenges persist in Southern Africa. Low enrolment rates are a common issue, often due to lack of awareness, mistrust in the system, and affordability concerns. For instance, in South Africa, McIntyre et al. (2017) noted that low-income individuals were less likely to enrol in NHI due to premium costs and perceived poor quality of services (McIntyre et al., 2017).

The quality of healthcare services provided under insurance schemes remains a concern. Studies have shown that insured individuals sometimes receive substandard care due to overcrowded facilities, lack of

medical supplies, and inadequate staffing (Morudu & Kollamparambil, 2020). These issues can undermine the perceived benefits of health insurance and discourage enrolment.

2.2 Theoretical Framework

In this study, two theoretical models were employed in order to provide a comprehensive understanding of healthcare access and utilization within the marginalized community of Bauleni. The selected frameworks are the Health Belief Model (HBM) and Levesque's Conceptual Framework of Access to Healthcare. Each model offers unique insights into the factors influencing health behaviours and access, making them well-suited for analysing the impact of NHIMA's health insurance services.

2.2.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is a psychological model developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels working in the U.S. Public Health Services. It aims to explain and predict health behaviors by focusing on the attitudes and beliefs of individuals. HBM posits that a person's motivation to engage in health-related behaviors depends on their perceptions of:

- **Perceived Susceptibility:** Beliefs about the chances of getting a condition or disease.
- **Perceived Severity:** Beliefs about the seriousness of the condition and its potential consequences.
- **Perceived Benefits:** Beliefs about the effectiveness of taking specific actions to reduce the threat of the condition or disease.
- **Perceived Barriers:** Beliefs about the material and psychological costs of taking the action.
- **Cues to Action:** Factors that activate readiness to change (e.g., symptoms, advice from others, media campaigns).
- **Self-Efficacy:** Confidence in one's ability to take action.

In the context of this study, HBM provides a useful framework for understanding how marginalized communities perceive and engage with NHIMA's health insurance services. It helps to elucidate the factors that influence individuals' decisions to enrol in and utilize these services. The model can guide the analysis of how perceived susceptibility and severity of health conditions, along with perceived benefits and barriers to NHIMA, affect healthcare access. Additionally, examining cues to action and self-efficacy can offer insights into the motivational aspects that drive healthcare-seeking behaviors among the marginalized populations in Bauleni Compound (Hochbaum, 1958; Rosenstock, 1974).

2.2.1 Gaps in the Literature

The literature review gave a general and specific understanding of the effects of health insurance schemes on the accessibility and use of health care services globally and in the studied regions. Nevertheless, it is equally crucial to recognize that there is no published research on the effects of NHIMA on health care accessibility and use in Zambia.

However, to the best of author's knowledge, no study has investigated the impact of health insurance on healthcare access and utilization in Zambia despite previous similar research being done in the United States, Brazil, Mexico, Germany, Japan, South Korea, Thailand, China, Vietnam, Indonesia, the Philippines, India, Ghana, Kenya, Rwanda, and South Africa. The papers analyzed for this review established that health insurance programs enhanced the health seeking behavior and utilization of health care services among vulnerable groups in these countries. Nevertheless, given the specific Zambia's socio-economic and healthcare environment, a more specific examination is required.

In particular, the research carried out in countries of Sub-Saharan Africa, namely Ghana, Kenya, Rwanda, Nigeria, Tanzania, and Uganda, focuses on the aspect of health insurance that helps to overcome the

financial barriers and increase the utilization of healthcare services. Nonetheless, there is no scientific evidence on how NHIMA affects health care in Zambia's vulnerable groups, especially in Bauleni Compound of Lusaka. This was important because Zambia has several special health care needs including exploitation through out-of-pocket health care payments, poor health facilities in rural areas, and cultural factors that influence health-seeking behaviour.

Thus, the research gap lies in the fact that there is a poor understanding of how NHIMA affects health care access and usage within the context of Zambia. Carrying out a study to establish the association between NHIMA's health insurance cover and health care accessibility in Zambia will help address this research gap and benefit policy makers and health professionals. This research seeks to gather data that is context oriented to Zambia in order to assist in policy formulation to enhance the health care delivery and outcomes of vulnerable populations.

2.3 Levesque's Conceptual Framework of Access to Healthcare

Levesque's framework, introduced in 2013, as cited by Cu et al. (2021) conceptualizes access to healthcare through five dimensions: approachability, acceptability, availability/accommodation, affordability, and appropriateness. It also incorporates five corresponding abilities of individuals and populations: to perceive, to seek, to reach, to pay, and to engage in healthcare. This dual perspective allows for a thorough examination of both health system factors and patient-related factors affecting access to healthcare (Levesque, Harris, & Russell, 2013).

In the context of this study, Levesque's framework is particularly relevant as it provides a comprehensive approach to evaluating NHIMA's impact on healthcare access. The dimensions of access (affordability, availability/accommodation, approachability, acceptability, and appropriateness) align well with the study's objectives to assess healthcare access and identify barriers faced by marginalized communities. The corresponding abilities (to perceive, to seek, to reach, to pay, and to engage) offer a robust structure to analyze both the systemic and individual-level factors influencing healthcare access.

In conclusion, both the Health Belief Model and Levesque's Conceptual Framework of Access to Healthcare offer valuable theoretical underpinnings for this study. The HBM focuses on individual attitudes and beliefs towards healthcare services, while Levesque's framework provides a multidimensional perspective on access to healthcare. Together, they facilitate a comprehensive understanding of the factors influencing healthcare access for marginalized communities in Lusaka's Bauleni Compound, guiding the evaluation of NHIMA's effectiveness and identifying areas for improvement.

2.3.1 Conceptual Framework

The conceptual framework for this research is designed to illustrate the relationship between NHIMA's health insurance coverage and healthcare access for marginalized communities in Lusaka's Bauleni Compound.

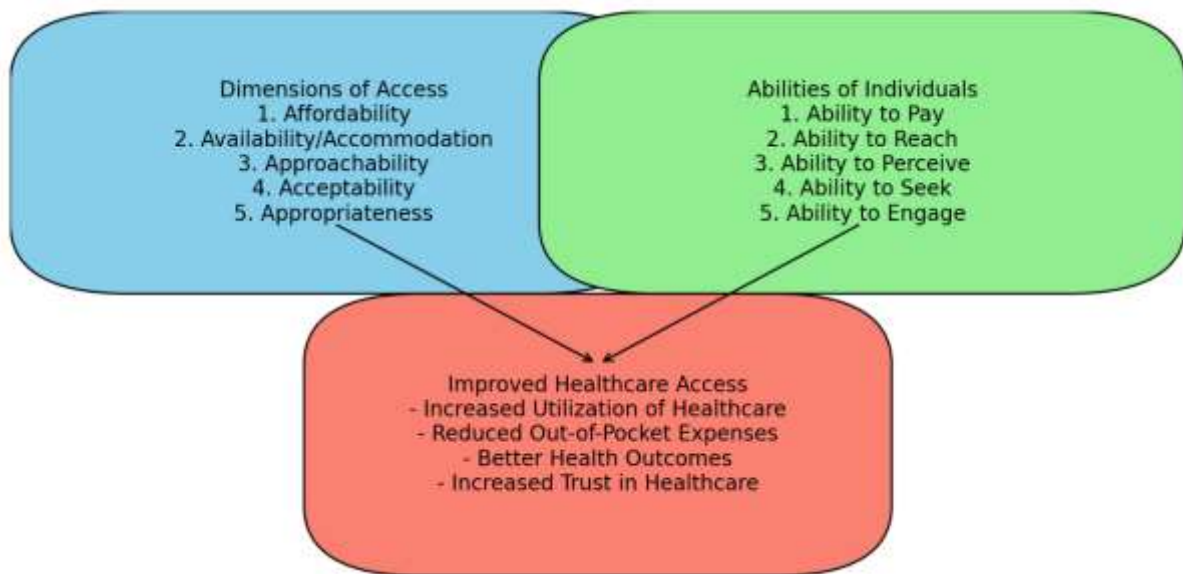


Figure 2.4: Conceptual Framework - Adopted from Levesque's (2013) Conceptual Framework of Access to Healthcare

The conceptual framework illustrated the relationship between NHIMA's health insurance coverage and healthcare access for marginalized communities in Lusaka's Bauleni Compound. This framework was structured around Levesque's dimensions of access to healthcare and corresponding abilities of individuals, ultimately leading to improved healthcare access.

Key Components of the Framework:

1. Dimensions of Access:

- **Affordability:** Examines whether the cost of healthcare services is manageable for individuals, including the cost of enrolling in NHIMA and out-of-pocket expenses.
- **Availability/Accommodation:** Looks at the presence of NHIMA-accredited healthcare facilities within reach of community members and whether these facilities can accommodate their healthcare needs.
- **Approachability:** Pertains to the extent to which healthcare services are approachable, meaning how easily individuals can get information about NHIMA services.
- **Acceptability:** Addresses whether the services provided by NHIMA are culturally acceptable and meet the expectations and needs of the community.
- **Appropriateness:** Assesses whether the healthcare services provided are appropriate and responsive to the specific health needs of the community.

2. Abilities of Individuals:

- **Ability to Pay:** Refers to the financial capacity of individuals to afford NHIMA services and healthcare costs.
- **Ability to Reach:** Assesses the individuals' ability to physically access NHIMA-accredited healthcare facilities, considering factors like distance and transportation.
- **Ability to Perceive:** Pertains to the awareness and understanding of NHIMA services among community members.
- **Ability to Seek:** Looks at the willingness and capability of individuals to seek out healthcare services.

- **Ability to Engage:** Assesses how well individuals can engage with healthcare services, including their ability to follow treatment plans and utilize services effectively.
3. **Improved Healthcare Access:**
- The ultimate goal is to improve healthcare access for marginalized communities. This is achieved by:
 - **Increased Utilization of Healthcare:** More individuals using healthcare services.
 - **Reduced Out-of-Pocket Expenses:** Lower personal healthcare costs due to NHIMA coverage.
 - **Better Health Outcomes:** Improved overall health and well-being of community members.
 - **Increased Trust in Healthcare:** Greater confidence in the healthcare system and NHIMA services.

Relationships Indicated by Arrows:

- **Pathway to Improved Access:** The arrows clearly indicate that improvements in the dimensions of access and corresponding abilities lead to better healthcare access. For instance, improving the affordability and availability of services enhances the ability to pay and reach, which then contributes to improved healthcare access.

The framework aligned with the study's objectives by providing a comprehensive approach to evaluating NHIMA's impact on healthcare access. It allowed for the examination of both systemic factors (dimensions of access) and individual factors (abilities) that influence healthcare access in marginalized communities. This dual perspective helped in identifying barriers and facilitators to healthcare access, guiding the evaluation of NHIMA's effectiveness, and pinpointing areas for improvement.

This conceptual framework provided a structured approach to assess the influence of NHIMA on healthcare access for marginalized communities in Lusaka's Bauleni Compound. By focusing on the dimensions of access and corresponding abilities, the framework offered a holistic view of the factors affecting healthcare access and guides the evaluation of NHIMA's effectiveness in improving health outcomes for the community.

2.5 Summary

Chapter 2 conducts an exhaustive literature review on the impact of health insurance schemes on healthcare access and utilization, highlighting the significant role of health insurance in promoting equitable healthcare access globally and regionally. It surveys empirical evidence from various regions, including the Americas, Europe, Asia, Sub-Saharan Africa, and Southern Africa, and contrasts global and regional findings. The chapter discusses relevant theoretical perspectives, including the Health Belief Model and Levesque's Conceptual Framework of Access to Healthcare, as foundations for understanding the factors influencing healthcare access.

The chapter identifies a critical research gap—the absence of focused studies on the impact of NHIMA in Zambia—positioning this research to fill that void and contribute to the field's understanding. By addressing this gap, the study aims to provide contextualized information to aid in decision-making and improve healthcare outcomes in Zambia. A conceptual framework is established to investigate the specific impact of NHIMA's health insurance coverage on healthcare access for marginalized communities in Lusaka's Bauleni Compound.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the research methodology used to evaluate the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities in Lusaka's Bauleni Compound. The chapter details the study design, setting, sample selection, sampling technique, data collection methods, data analysis procedures, inclusion and exclusion criteria, and ethical considerations.

3.1 Study Approach

This study employed a quantitative research approach to assess the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities in Lusaka's Bauleni Compound. A quantitative approach was chosen because it allows for the systematic collection and analysis of numerical data, which is necessary for examining patterns of healthcare access and the effectiveness of NHIMA in improving these outcomes. The approach facilitated the use of structured questionnaires and statistical analyses to draw inferences and identify relationships between NHIMA enrolment and healthcare access, making it the most suitable for addressing the research objectives.

3.2 Study Design

The study made use of a cross-sectional study design. In this design, data on the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities in Lusaka's Bauleni Compound was collected at a single point in time. This design was chosen for its efficiency in assessing the prevalence of outcomes or exposures within a specific population and its utility in generating hypotheses about associations between variables (Cherry, 2022; Setia, 2016; Reio, Nimon & Shuck, 2015).

The study was conducted in Bauleni Compound, a peri-urban settlement located in Lusaka, Zambia. Bauleni Compound has experienced rapid growth over the last decade due to migration from other regions, particularly the Copperbelt, as individuals search for better employment opportunities and living conditions (Chipungu et al., 2018). It is characterized by a predominantly low-income population, with approximately 61% of households headed by individuals aged between 20 and 34 years (Tidwell et al., 2019).

The compound presents a variety of challenges, particularly limited access to essential services such as healthcare and water. Many residents rely on local health facilities, including Bauleni Health Center and a mini hospital, which serve the needs of the community (Chipungu et al., 2018). Despite these facilities, access to adequate healthcare remains a significant issue, making Bauleni an ideal setting for evaluating the impact of NHIMA on healthcare access for marginalized populations, particularly women and minority groups.

The area's social dynamics further highlight its complexity, with a strong sense of community organization and social capital. Residents often engage in communal responsibilities such as sanitation maintenance, although challenges related to resource constraints and poor management of shared facilities remain prevalent (Chipungu et al., 2018). These factors make Bauleni a critical study area for understanding healthcare access within a peri-urban, low-income setting in Zambia.



Figure 3.2: Satellite Map for Bauleni Compound (Source: Google Maps (2024))

3.4 Sample Selection

A multi-stage sampling method was used to select the study participants, combining stratified sampling and simple random sampling. This approach ensured that every woman in Bauleni Compound has an equal chance of being included in the study, thereby minimizing selection bias (Elfil & Negida, 2017; Hayes, 2023).

1. **Stratification:** Bauleni Compound was divided into several smaller, manageable sections or strata based on geographical boundaries, such as neighbourhoods or blocks. This ensured that the sample represented the diversity within Bauleni.
2. **Listing Households:** A comprehensive list of households within each stratum was compiled. This was done with the help of local leaders, community health workers, or existing records from local authorities.
3. **Simple Random Sampling:** Within each stratum, a simple random sampling method was used to select households. This ensured that every household within each stratum had an equal chance of being included in the study.
4. **Household Member Selection:** From each selected household, one female adult member was randomly chosen to participate in the study. This was done using a random number table or a lottery method.

This multi-stage sampling approach allowed for a more organized and representative selection of participants, considering the vast and diverse nature of Bauleni Compound.

3.5 Sampling Technique and Sample Size Calculation

For this study, a sample size of 230 participants was calculated using the formula for finite population correction in cross-sectional study designs (Taherdoost, 2016). This calculation was based on the estimated population of households in Bauleni Compound, a confidence level of 95%, and a margin of error of 5%. The formula used was:

3.5.1 Sample Size

The following prevalence study sample size determination formula sourced from Taherdoost (2016) was

used for calculating the minimum sample size to be considered for this study.

- Level of confidence: 95%
- Margin of error: 5%
- Expected proportion of population with characteristic of interest: 50%

$$n = \frac{Z^2 p(1-p)}{E^2}$$

Where:

- **n** is Sample size
- **Z** is the z-score corresponding to the level of confidence (1.96 for 95% confidence).
- **P** is the expected proportion of the population with the characteristic of interest (0.5 for 50%).
- **E** is the margin of error (0.05 for 5%)

$$\begin{aligned} n &= \frac{Z^2 p(1-p)}{E^2} \\ n &= \frac{(1.96^2)(0.5)(1-0.5)}{0.05^2} \\ n &= \frac{(3.8)(0.5)(0.5)}{0.0025} \\ n &= \frac{0.9604}{0.0025} \\ n &= 384.16 \end{aligned}$$

Rounding up to the nearest whole number, we get:

$$n=385$$

However, since the population size was less than 10,000, the sample size was adjusted using the following formula:

$$n = \frac{n}{1 + \frac{n}{N}}$$

where:

- **n** is the calculated sample size
- **N** is the population size

Substituting the values, we get:

$$n = \frac{385}{1 + \frac{385}{570}}$$

Simplifying the equation, we get:

$$\begin{aligned} n &= \frac{385}{1.674} \\ n &= 229.7 \end{aligned}$$

Rounding up to the nearest whole number, we get:

$$n=230$$

Therefore, the sample size for a cross-sectional study with a total population of 570 employees became **n = 230**.

3.6 Data Collection

Data was collected using structured questionnaires, which were administered to the selected participants. The questionnaires were designed to gather comprehensive information on participants' experiences with NHIMA services, including enrollment, accessibility, and perceived effectiveness. The questionnaires were pre-tested on a small sample from a similar setting to ensure clarity, relevance, and reliability (Reio, Nimon & Shuck, 2015).

3.7 Data Analysis

The collected data was analyzed using both descriptive and inferential statistical methods to address the research objectives. Descriptive analysis was applied to summarize the demographic characteristics of the respondents, the extent of NHIMA enrolment, and patterns of healthcare access. This involved the use of cross-tabulations and frequency distributions to provide an overview of the data and highlight key trends regarding NHIMA's influence on healthcare access among marginalized communities.

For the inferential analysis, several statistical tests were employed to examine the relationships between NHIMA enrolment, healthcare access, and other factors influencing the effectiveness of NHIMA. Chi-square tests were utilized to assess the association between NHIMA enrolment and healthcare access, particularly focusing on the frequency of healthcare visits in the past 12 months.

In addition to the chi-square tests, a multinomial logistic regression model was used to assess the likelihood of accessing healthcare services based on NHIMA enrolment. This model controlled for various demographic and socio-economic factors, such as age, marital status, education level, and employment status.

Moreover, an ordinal logistic regression model was employed to evaluate the relationship between satisfaction with the accessibility of NHIMA-accredited healthcare facilities and the perceived overall effectiveness of NHIMA. This analysis also considered other factors such as affordability of NHIMA services, coordination between NHIMA and healthcare providers, and the availability of NHIMA-accredited facilities.

These inferential methods provided robust insights into the factors underpinning NHIMA's effectiveness in improving healthcare access for marginalized communities, revealing statistically significant relationships between the dependent and independent variables (Setia, 2016; Reio, Nimon & Shuck, 2015).

3.7.1 Variables and Measurement

The study used both dependent and independent variables to explore the influence of NHIMA health insurance coverage on healthcare access for marginalized communities in Bauleni. The dependent variables represent outcomes related to healthcare access, while the independent variables capture various demographic, socio-economic, and service-related factors.

Table 3.7.1: Dependent and Independent Variables Based on Study Objectives

Objective	Dependent Variable	Independent Variables
1. Assess the relationship between NHIMA health insurance coverage and healthcare access	- Number of healthcare visits in the past 12 months (Q12: 0 times, 1-2 times, 3-4 times, 5 or more times)	- NHIMA enrolment status (Q10)

2. Evaluate the effectiveness of NHIMA in improving healthcare access	- Overall effectiveness of NHIMA (Q17: Very effective, Effective, Neutral, Ineffective, Very ineffective)	- Satisfaction with accessibility of NHIMA-accredited facilities (Q14) - Perceived quality of healthcare services (Q13) - Affordability of NHIMA services (Q18.3) - Coordination between NHIMA and healthcare providers (Q18.4) - Availability of NHIMA-accredited facilities (Q18.5)
3. Evaluate the factors underpinning NHIMA's effectiveness in healthcare provision	- Overall effectiveness of NHIMA (Q17)	- Awareness of NHIMA (Q18.1) - Accessibility of NHIMA services (Q18.2) - Affordability of NHIMA services (Q18.3) - Coordination with healthcare providers (Q18.4) - Availability of accredited facilities (Q18.5) - Main challenges to accessing healthcare services (Q16: Lack of coverage, Financial barriers, Long waiting times, Transportation, Distance, Cultural barriers, Awareness of available services)

3.8 Inclusion Criteria

The inclusion criteria for the study were:

- Female residents of Bauleni Compound
- Adults aged 18 years and above

Willingness to participate in the study and provide informed consent. 3.9 Exclusion Criteria

The exclusion criteria for the study were:

- Individuals not residing in Bauleni Compound
- Individuals under 18 years of age
- Individuals unwilling to provide informed consent

3.10 Ethical Considerations

Informed consent was obtained from all participants, ensuring they were fully aware of the study's purpose and their rights, including the right to withdraw at any time without penalty (Setia, 2016). Confidentiality of participant information was strictly maintained, and data was used solely for the purposes of this study.

CHAPTER FOUR

DATA PRESENTATION

4.0 Introduction

This chapter presents a comprehensive analysis derived from the survey conducted among the marginalized communities in Lusaka's Bauleni Compound. The analysis aimed to assess the demographic characteristics of the respondents and their experiences with the National Health Insurance Management Authority (NHIMA) and healthcare access. The chapter details the demographic characteristics of the respondents, followed by an in-depth examination of their healthcare access and the effectiveness of NHIMA.

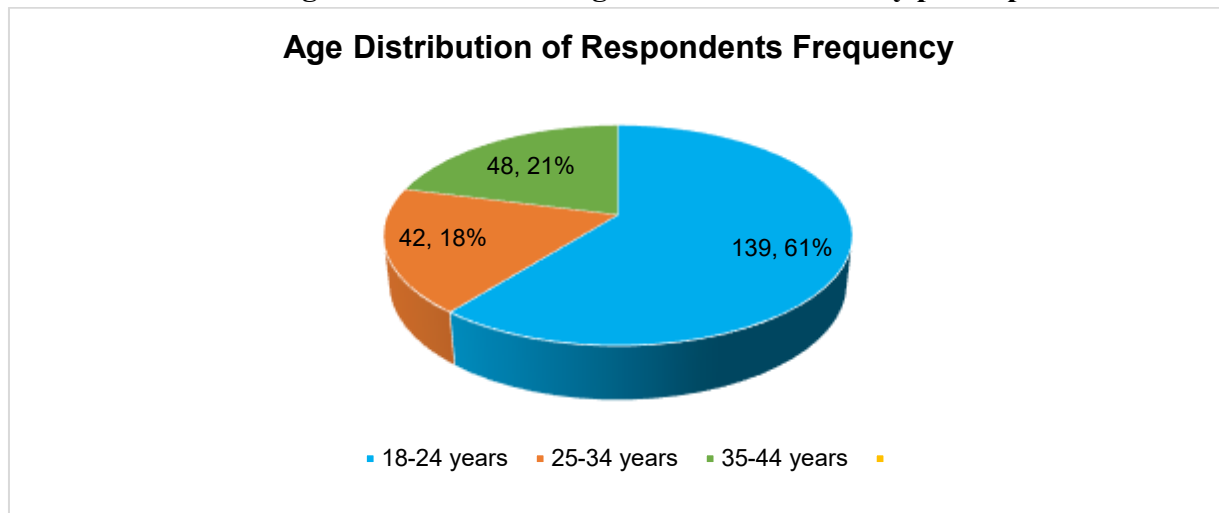
4.1 Demographic Information

This section provides an overview of the demographic characteristics of the respondents, including their age distribution, marital status, employment status, highest level of education, household size, and housing

status. These demographics are crucial for understanding the context within which healthcare access and NHIMA's effectiveness are assessed.

4.1.1 Age Distribution of Respondents

Figure 1 indicates the age distribution of study participants.

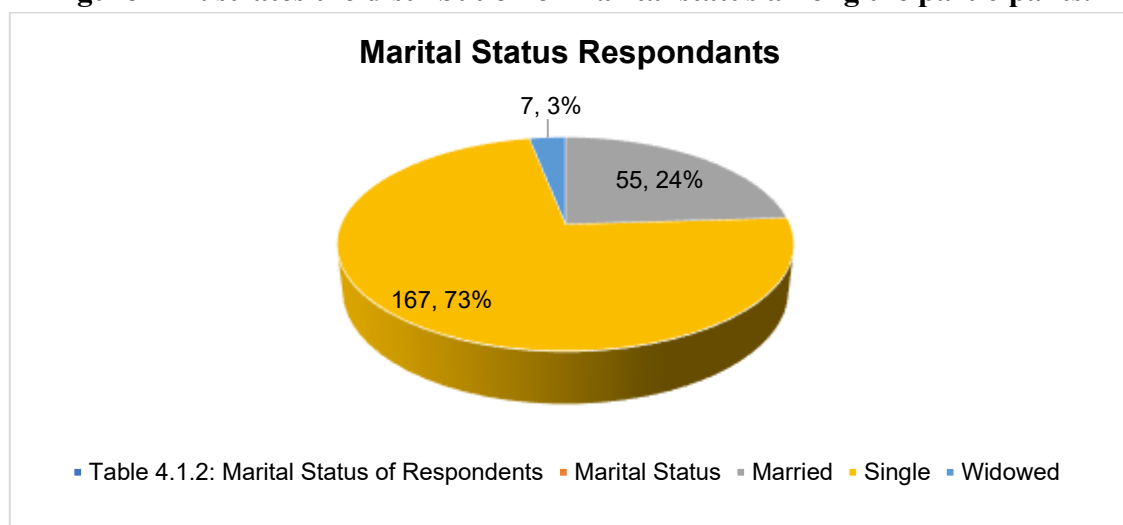


Source: Author using survey data

Figure 1 shows the age distribution of respondents in Bauleni Compound. The majority of participants fell within the 18-24 age group, representing 60.7% (n=139) of the total sample. Participants aged 25-34 constituted 18.3% (n=42), while those aged 35-44 made up 21.0% (n=48). This distribution suggests a predominantly young adult population within the community.

4.1.2 Marital Status of Respondents

Figure 2 illustrates the distribution of marital status among the participants.



Source: Author using survey data

Figure 2 illustrates the distribution of marital status among the participants. The majority of respondents are single, representing 72.9% (n=167) of the sample. Married respondents constitute 24.0% (n=55), while

widowed participants make up 3.1% (n=7).

4.1.3 Employment Status of Respondents

Table 1 shows the employment status of the survey participants.

Table 1: Employment Status of Respondents

Employment Status	Frequency	Percent
Employed (full-time/part-time)	27	11.8%
Unemployed	21	9.2%
Self-employed	49	21.4%
Student	132	57.6%
Total	229	100.0%

Source: Author using survey data

Table 4.1.3 shows the employment status of the survey participants. Students constitute the largest group, representing 57.6% (n=132) of the respondents. Self-employed individuals make up 21.4% (n=49), employed respondents account for 11.8% (n=27), and unemployed individuals constitute 9.2% (n=21).

4.1.4 Highest Level of Education of Respondents

Table 2 presents the highest level of education among the respondents.

Table 2: Highest Level of Education of Respondents

Education Level	Frequency	Percent
Secondary education or equivalent	49	21.4%
Tertiary education (College/University)	166	72.5%
Vocational training	14	6.1%
Total	229	100.0%

Source: Author using survey data

Table 2 shows the highest level of education among the respondents. The majority, 72.5% (n=166), have tertiary education, followed by 21.4% (n=49) with secondary education, and 6.1% (n=14) with vocational training.

4.1.5 Number of People in Household

Figure 3 indicates the number of people in each respondent's household.

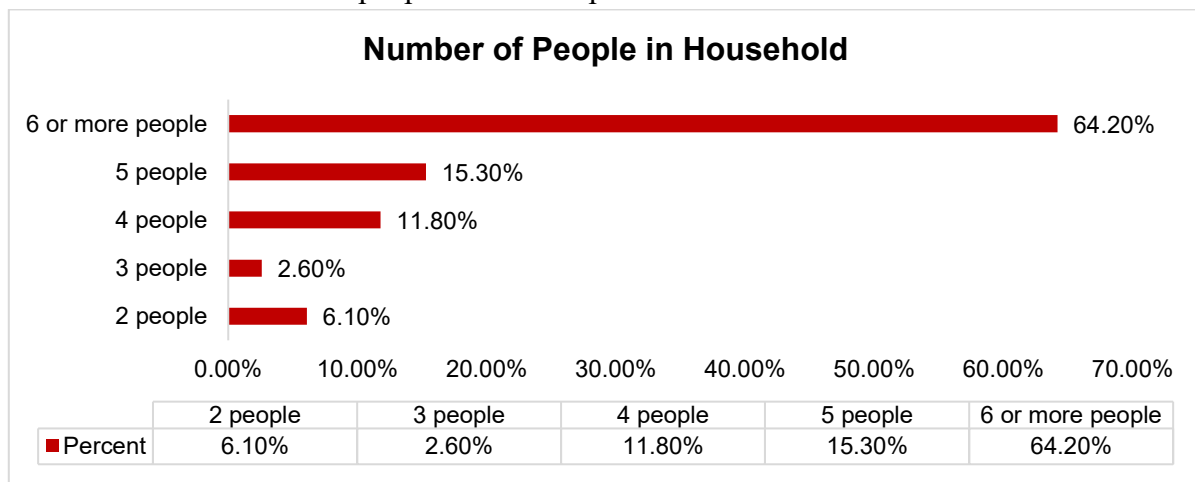


Figure 3: Number of People in Household

Source: Author using survey data

Figure 3 shows the number of people in each respondent's household. The majority, 64.2% (n=147), live in households with 6 or more people. Households with 5 people make up 15.3% (n=35), those with 4 people constitute 11.8% (n=27), households with 2 people account for 6.1% (n=14), and households with 3 people represent 2.6% (n=6).

4.1.6 Current Housing Status

Table 3 shows the current housing status of the respondents.

Table 3: Current Housing Status

Housing Status	Frequency	Percent
I own my home	35	15.3%
I rent my home	47	20.5%
I live with family or friends	133	58.1%
Other (please specify)	14	6.1%
Total	229	100.0%

Source: Author using survey data

Table 3 shows the current housing status of the respondents. The majority, 58.1% (n=133), live with family or friends. Those who rent their homes constitute 20.5% (n=47), homeowners make up 15.3% (n=35), and those in other housing arrangements represent 6.1% (n=14).

4.2 Healthcare Access and NHIMA Effectiveness

This section examines the respondents' healthcare access and the effectiveness of NHIMA. It includes the number of healthcare visits in the past 12 months, NHIMA enrolment status, and reasons for not enrolling in NHIMA.

4.2.1 Number of Healthcare Visits in Past 12 Months

Figure 4 indicates the number of healthcare visits by respondents in the past 12 months.

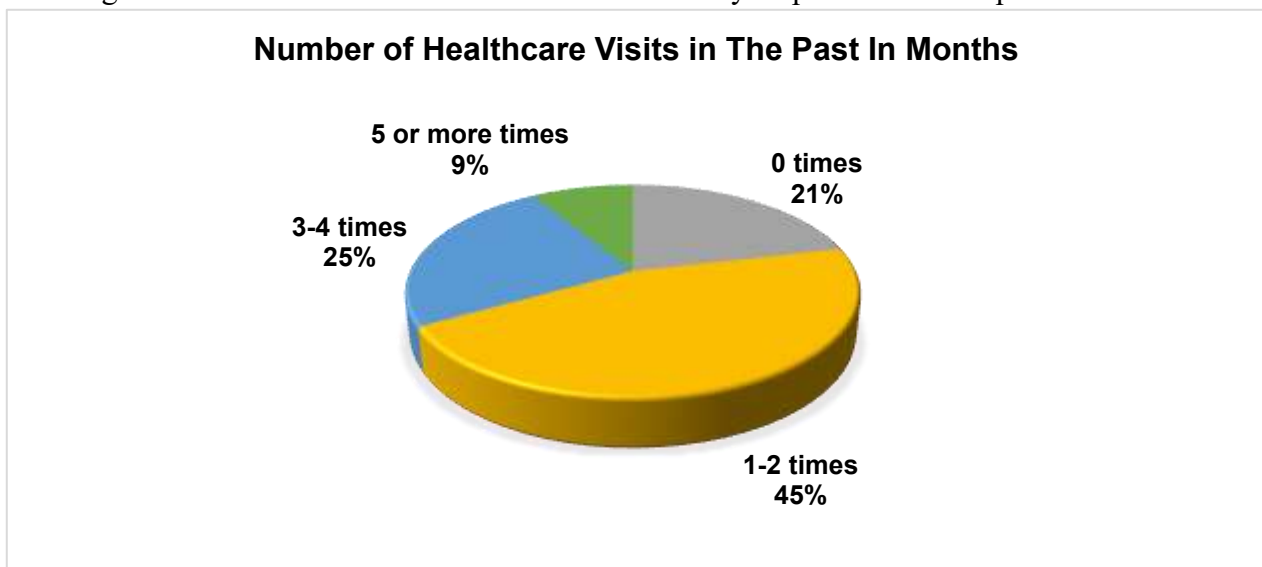


Figure 4: Number of Healthcare Visits in Past 12 Months

Source: Author using survey data

Figure 4 shows that the majority of respondents, 45.4% (n=104), visited healthcare facilities 1-2 times in the past 12 months. This is followed by 24.5% (n=56) who visited 3-4 times, 21.4% (n=49) who did not visit at all, and 8.7% (n=20) who visited 5 or more times.

4.2.2 Enrolment in NHIMA

Table 4 shows the enrolment status of respondents in the NHIMA program.

Table 4: Enrolment in NHIMA

Enrolment Status	Frequency	Percent
No, I am not enrolled in NHIMA	97	42.4%
Yes, I am enrolled in NHIMA	125	54.6%
I don't know	7	3.1%
Total	229	100.0%

Source: Author using survey data

Table 4 shows that 54.6% (n=125) of the respondents are enrolled in the NHIMA program, while 42.4% (n=97) are not enrolled, and 3.1% (n=7) are unsure about their enrolment status.

4.2.3 Reasons for Not Enrolling in NHIMA

Figure 5 provides a comprehensive overview of the reasons for not enrolling in NHIMA among the respondents.

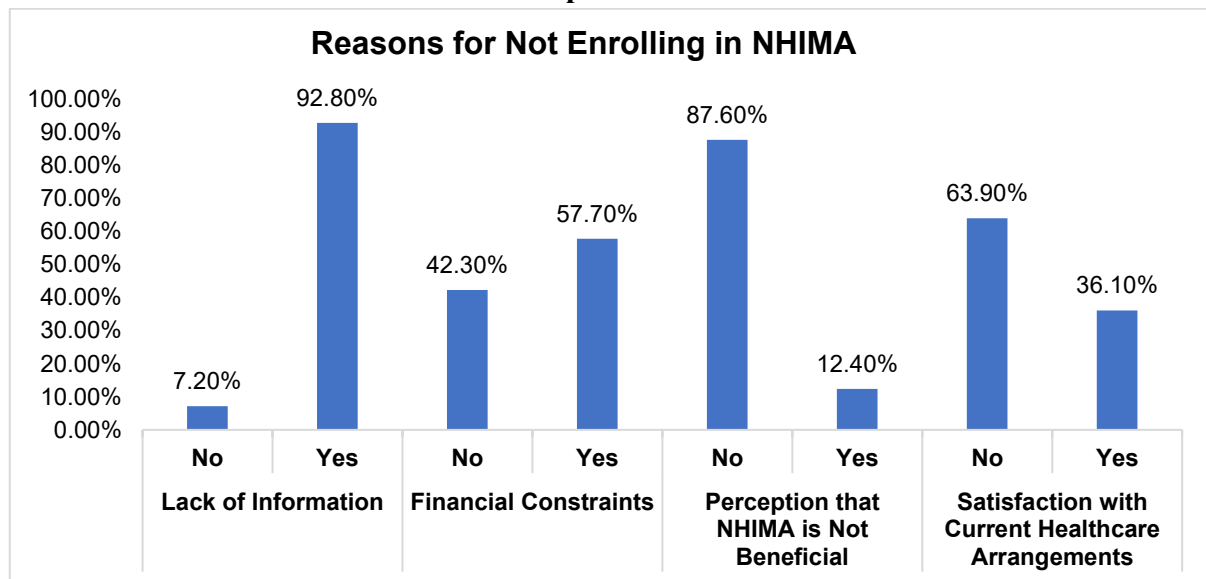


Figure 5: Reasons for Not Enrolling in NHIMA

Source: Author using survey data

Figure 5 shows that 92.8% (n=90) of the respondents feel they lack information about NHIMA, while 7.2% (n=7) do not.

Figure 5 indicates that 57.7% (n=56) of the respondents cited financial constraints as a reason for not enrolling in NHIMA, while 42.3% (n=41) did not face such constraints.

Figure 5 shows that 12.4% (n=12) of the respondents perceive NHIMA as not beneficial, while 87.6% (n=85) do not share this perception.

Figure 5 shows that 36.1% (n=35) of the respondents are satisfied with their current healthcare arrangements, while 63.9% (n=62) are not.

Overall, the data from Figure 4.2.3 indicate that a significant portion of respondents face challenges related to information, financial constraints, and perceptions of NHIMA's benefits, as well as dissatisfaction with current healthcare arrangements. These insights can help in understanding the barriers to NHIMA enrolment and in tailoring strategies to improve its adoption and effectiveness.

4.2.4 Unable to Access Medical Treatment in Past 12 Months

Figure 6 indicates the frequency of respondents who were unable to access medical treatment in the past 12 months.

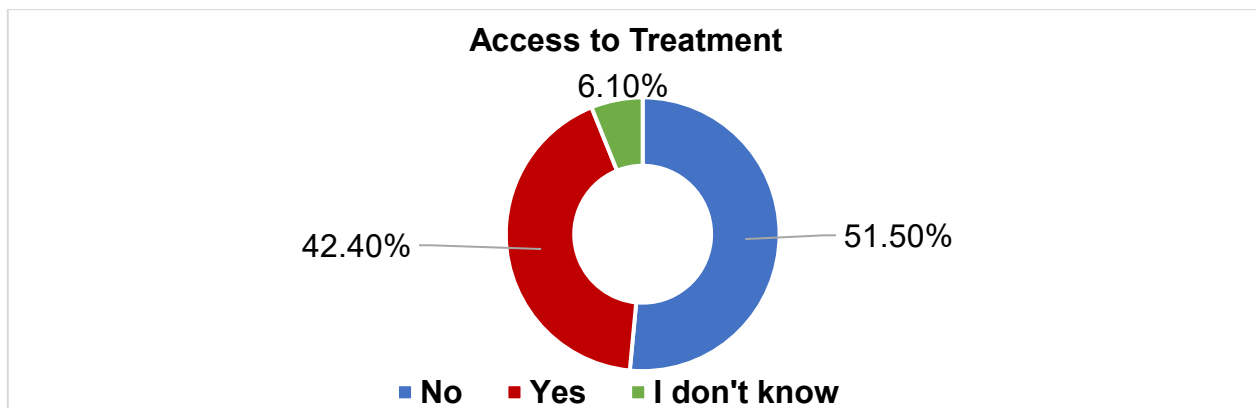


Figure 6: Unable to Access Medical Treatment in Past 12 Months

Source: Author using survey data

Figure 6 shows that 42.4% (n=97) of respondents were unable to access medical treatment in the past 12 months.

4.3 Effectiveness of NHIMA in Improving Healthcare Access

This section evaluates the perceived effectiveness of NHIMA in improving healthcare access among the respondents. It includes their overall satisfaction with NHIMA, the accessibility of NHIMA-accredited healthcare facilities, the quality of healthcare services, and the ability to access medical treatment.

4.3.1 Overall Effectiveness of NHIMA

Figure 7 shows the respondents' perception of the overall effectiveness of NHIMA.

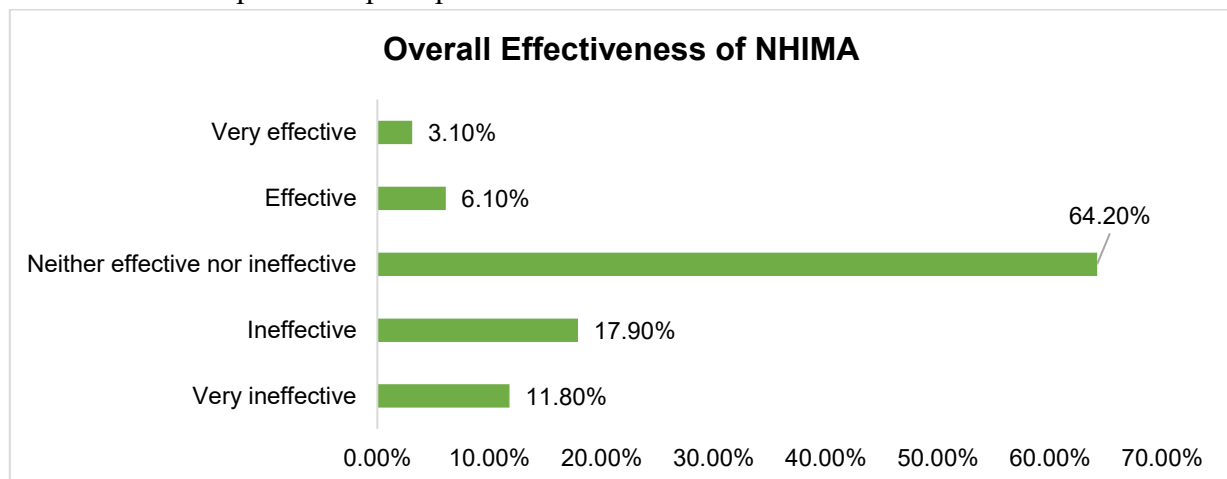


Figure 7: Overall Effectiveness of NHIMA

Source: Author using survey data

Figure 7 indicates that the majority of respondents, 64.2% (n=147), rated NHIMA as neither effective nor ineffective. Only 6.1% (n=14) found NHIMA effective, and 3.1% (n=7) rated it as very effective. A significant portion, 17.9% (n=41), found NHIMA ineffective, while 11.8% (n=27) rated it very ineffective.

4.3.2 Satisfaction with Accessibility of NHIMA-accredited Healthcare Facilities

Table 5 shows the respondents' satisfaction with the accessibility of NHIMA-accredited healthcare facilities.

Table 5: Satisfaction with Accessibility of NHIMA-accredited Healthcare Facilities

Satisfaction Level	Frequency	Percent
Very dissatisfied	31	13.5%
Dissatisfied	63	27.5%
Neither satisfied nor dissatisfied	111	48.5%
Satisfied	24	10.5%
Very satisfied	0	0.0%
Total	229	100.0%

Source: Author using survey data

Table 5 indicates that nearly half of the respondents, 48.5% (n=111), were neither satisfied nor dissatisfied with the accessibility of NHIMA-accredited healthcare facilities. Dissatisfied respondents accounted for 27.5% (n=63), and 13.5% (n=31) were very dissatisfied. Only 10.5% (n=24) expressed satisfaction, and none were very satisfied.

4.3.3 Rating of Healthcare Services Quality

Figure 8 shows the respondents' rating of the quality of healthcare services.

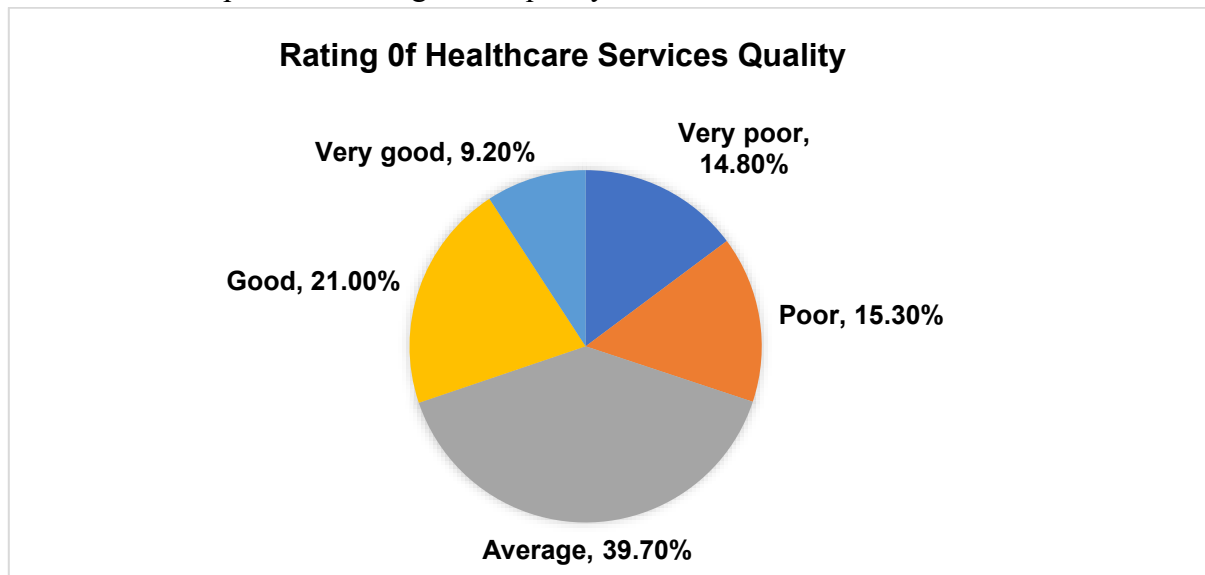


Figure 8: Rating of Healthcare Services Quality

Source: Author using survey data

Figure 8 shows that 39.7% (n=91) of the respondents rated the quality of healthcare services as average. This was followed by 21.0% (n=48) who rated it as good, and 9.2% (n=21) who found it very good. However, 15.3% (n=35) rated the services as poor, and 14.8% (n=34) rated them as very poor.

Figure 8 indicates that 42.4% (n=97) of the respondents were unable to access medical treatment in the past 12 months, while 51.5% (n=118) were able to access treatment, and 6.1% (n=14) were unsure.

4.3.4 Main challenges or barriers in accessing healthcare services

Table 6 provides a comprehensive overview of the main challenges or barriers that hindered the respondents from accessing healthcare services.

Table 6: Main challenges or barriers in accessing healthcare services

Reason Category	Response Category	Frequency	Percent
Lack of NHIMA Coverage on Some Services	No	112	48.9%
	Yes	117	51.1%
	Total	229	100.0%
Inability to Afford Healthcare Costs	No	132	57.6%
	Yes	97	42.4%
	Total	229	100.0%
Long Waiting Times	No	63	27.5%
	Yes	166	72.5%
	Total	229	100.0%
Lack of Transportation	No	160	69.9%
	Yes	69	30.1%
	Total	229	100.0%
Distance to Healthcare Facilities	No	146	63.8%
	Yes	83	36.2%
	Total	229	100.0%
Language or Cultural Barriers	No	215	93.9%
	Yes	14	6.1%
	Total	229	100.0%
Lack of Awareness about Available Services	No	98	42.8%
	Yes	131	57.2%
	Total	229	100.0%

Source: Author using survey data

Table 6 shows that 51.1% (n=117) of the respondents cited lack of NHIMA coverage on some services as a reason for not accessing medical treatment, while 48.9% (n=112) did not.

Table 6 indicates that 42.4% (n=97) of the respondents cited inability to afford healthcare costs as a reason for not accessing medical treatment, while 57.6% (n=132) did not face such constraints.

Table 6 shows that 72.5% (n=166) of the respondents cited long waiting times as a reason for not accessing medical treatment, while 27.5% (n=63) did not.

Table 6 indicates that 30.1% (n=69) of the respondents cited lack of transportation as a reason for not accessing medical treatment, while 69.9% (n=160) did not.

Table 6 shows that 36.2% (n=83) of the respondents cited distance to healthcare facilities as a reason for not accessing medical treatment, while 63.8% (n=146) did not.

Table 6 indicates that 6.1% (n=14) of the respondents cited language or cultural barriers as a reason for not accessing medical treatment, while 93.9% (n=215) did not.

Table 6 shows that 57.2% (n=131) of the respondents cited lack of awareness about available services as a reason for not accessing medical treatment, while 42.8% (n=98) did not.

Overall, the data from Table 4.3.4 indicate various reasons for respondents' inability to access medical treatment in the past 12 months. These insights can help in understanding the barriers to healthcare access and in tailoring strategies to improve it.

4.4 Key Determinants of NHIMA's Effectiveness

This section explores the key determinants contributing to the effectiveness of the National Health Insurance Management Authority (NHIMA) as perceived by respondents. It is divided into three subsections: Factors Contributing to NHIMA's Effectiveness, NHIMA's Impact on Health Outcomes, and Suggestions to Increase Enrolment. Each subsection presents data and analysis that provide insights into various aspects of NHIMA's operations and their impact on healthcare access and quality.

4.4.1 Factors Contributing to NHIMA's Effectiveness

Figure 9 provides a comprehensive overview of the factors contributing to NHIMA's effectiveness among the respondents.

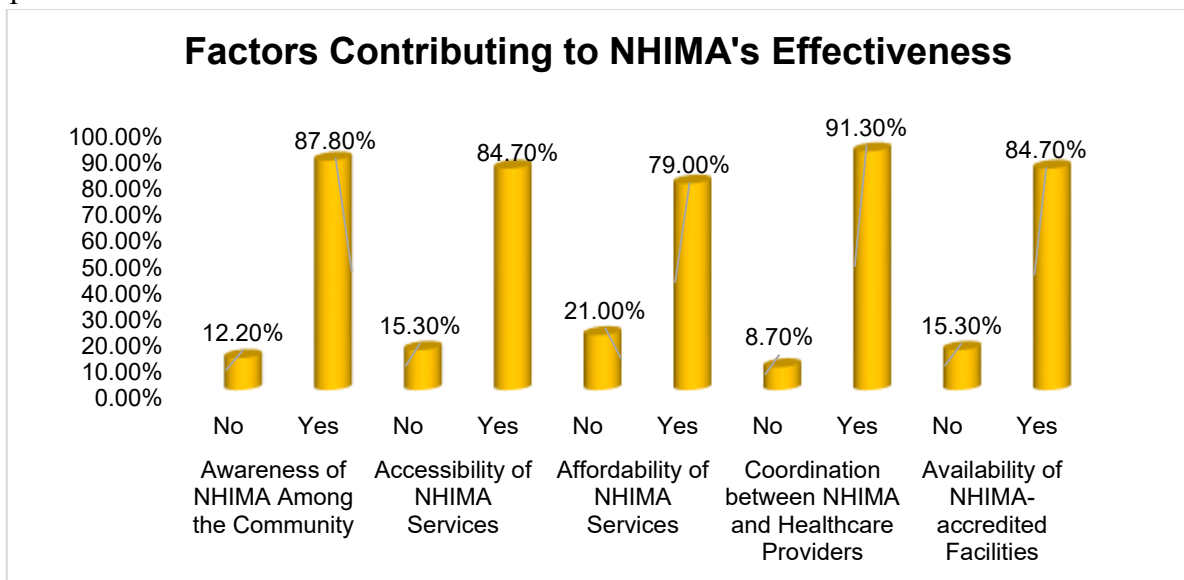


Figure 9: Factors Contributing to NHIMA's Effectiveness

Source: Author using survey data

Figure 9 shows that 87.8% (n=201) of the respondents are aware of NHIMA, while 12.2% (n=28) are not. Figure 9 indicates that 84.7% (n=194) of the respondents find NHIMA services accessible, while 15.3% (n=35) do not.

Figure 9 shows that 79.0% (n=181) of the respondents find NHIMA services affordable, while 21.0% (n=48) do not.

Figure 9 indicates that 91.3% (n=209) of the respondents feel there is good coordination between NHIMA and healthcare providers, while 8.7% (n=20) do not.

Figure 9 shows that 84.7% (n=194) of the respondents find NHIMA-accredited facilities available, while 15.3% (n=35) do not.

Overall, the data from Figure 9 indicate that most respondents find NHIMA to be effective in terms of awareness, accessibility, affordability, coordination, and availability of accredited facilities. These insights can help in understanding the factors that contribute to the perceived effectiveness of NHIMA and in identifying areas for improvement.

4.4.2 NHIMA's Impact on Health Outcomes

Table 7 provides a comprehensive overview of NHIMA's impact on health outcomes among the respondents.

Table 7: NHIMA's Impact on Health Outcomes

Impact Category	Response Category	Frequency	Percent
Improved Access to Preventative Care	No	89	38.9%
	Yes	140	61.1%
	Total	229	100.0%
Reduced Out-of-Pocket Healthcare Expenses	No	41	17.9%
	Yes	188	82.1%
	Total	229	100.0%
Improved Access to Specialist Services	No	69	30.1%
	Yes	160	69.9%
	Total	229	100.0%
No Noticeable Impact	No	161	70.3%
	Yes	68	29.7%
	Total	229	100.0%

Source: Author using survey data

Improved Access to Preventative Care: Table 7 shows that 61.1% (n=140) of the respondents reported improved access to preventative care due to NHIMA, while 38.9% (n=89) did not.

Reduced Out-of-Pocket Healthcare Expenses: Table 7 indicates that 82.1% (n=188) of the respondents experienced reduced out-of-pocket healthcare expenses because of NHIMA, while 17.9% (n=41) did not.

Improved Access to Specialist Services: Table 7 shows that 69.9% (n=160) of the respondents reported improved access to specialist services due to NHIMA, while 30.1% (n=69) did not.

No Noticeable Impact: Table 7 indicates that 29.7% (n=68) of the respondents felt that NHIMA had no noticeable impact on their health outcomes, while 70.3% (n=161) did not share this perception.

Overall, the data from Table 7 indicate that a majority of respondents reported positive impacts of NHIMA on their health outcomes, particularly in terms of improved access to preventative care, reduced out-of-pocket expenses, and improved access to specialist services. However, a notable proportion of respondents also reported no noticeable impact, suggesting areas where NHIMA's effectiveness could be enhanced.

4.4.3 Suggestions to Increase Enrolment

Table 8 provides a comprehensive overview of suggestions to increase enrolment in NHIMA among the respondents.

Table 8: Suggestions to Increase Enrolment

Suggestion Category	Response Category	Frequency	Percent
Increase Awareness Campaigns	No	7	3.1%
	Yes	222	96.9%
	Total	229	100.0%
Make Enrolment Process Easier	No	14	6.1%
	Yes	215	93.9%
	Total	229	100.0%

Provide More Comprehensive Coverage	No	7	3.1%
	Yes	222	96.9%
	Total	229	100.0%
Reduce or Subsidize Contribution Rates	No	70	30.6%
	Yes	159	69.4%
	Total	229	100.0%
Improve Service Quality at NHIMA-affiliated Facilities	No	7	3.1%
	Yes	222	96.9%
	Total	229	100.0%

Source: Author using survey data

Table 8 shows that 96.9% (n=222) of the respondents suggested increasing awareness campaigns to boost enrolment in NHIMA, while 3.1% (n=7) did not.

Table 8 indicates that 93.9% (n=215) of the respondents suggested making the enrollment process easier, while 6.1% (n=14) did not.

Table 8 shows that 96.9% (n=222) of the respondents suggested providing more comprehensive coverage to increase enrolment in NHIMA, while 3.1% (n=7) did not.

Table 8 indicates that 69.4% (n=159) of the respondents suggested reducing or subsidizing contribution rates, while 30.6% (n=70) did not.

Table 8 shows that 96.9% (n=222) of the respondents suggested improving service quality at NHIMA-affiliated facilities, while 3.1% (n=7) did not.

Overall, the data from Table 8 indicate that the majority of respondents have suggested various measures to increase enrolment in NHIMA, including increasing awareness campaigns, making the enrollment process easier, providing more comprehensive coverage, reducing or subsidizing contribution rates, and improving service quality at affiliated facilities. These insights can help in developing strategies to enhance NHIMA enrolment.

4.5.1 Relationship Between NHIMA Health Insurance Coverage and Healthcare Access for Marginalized Communities in Lusaka's Bauleni Compound

This section evaluates the relationship between NHIMA health insurance coverage and healthcare access for marginalized communities in Lusaka's Bauleni Compound. The analysis includes a crosstabulation and chi-square tests to determine if there is a significant difference in healthcare access based on NHIMA enrolment.

4.5.1.1 Crosstabulation - Enrolment in NHIMA vs. Number of Healthcare Visits in Past 12 Months

Table 9: Crosstabulation - Enrolment in NHIMA vs. Number of Healthcare Visits in Past 12 Months

Enrolment in NHIMA	0 times	1-2 times	3-4 times	5 or more times	Total
No, I am not enrolled in NHIMA	21.6% (21)	35.1% (34)	36.1% (35)	7.2% (7)	100.0% (97)
Yes, I am enrolled in NHIMA	22.4% (28)	56.0% (70)	11.2% (14)	10.4% (13)	100.0% (125)

I don't know	0.0% (0)	0.0% (0)	100.0% (7)	0.0% (0)	100.0% (7)
Total	21.4% (49)	45.4% (104)	24.5% (56)	8.7% (20)	100.0% (229)

Source: Author using survey data

The crosstabulation in Table 9 shows the distribution of healthcare visits based on NHIMA enrolment status. Among the respondents who are not enrolled in NHIMA, 21.6% (n=21) did not visit healthcare facilities in the past 12 months, 35.1% (n=34) visited 1-2 times, 36.1% (n=35) visited 3-4 times, and 7.2% (n=7) visited 5 or more times. In contrast, among those enrolled in NHIMA, 22.4% (n=28) did not visit healthcare facilities, 56.0% (n=70) visited 1-2 times, 11.2% (n=14) visited 3-4 times, and 10.4% (n=13) visited 5 or more times. Notably, the majority of NHIMA-enrolled respondents visited healthcare facilities 1-2 times, suggesting a higher utilization rate of healthcare services among this group. For those who do not know their NHIMA status, all 7 individuals (100.0%) visited healthcare facilities 3-4 times.

4.5.1.2 Chi-Square Test Results for the Relationship Between NHIMA Enrolment and Healthcare Visits

Table 10: Chi-Square Test Results for the Relationship Between NHIMA Enrolment and Healthcare Visits

Test	Value	df	Asymptotic Significance (2-sided)	Monte Carlo Sig. (2-sided)	95% Confidence Interval (2-sided)	Monte Carlo Sig. (1-sided)	95% Confidence Interval (1-sided)
Pearson Chi-Square	42.061	6	.000	.000	.000 - .013	-	-
Likelihood Ratio	41.727	6	.000	.000	.000 - .013	-	-
Fisher's Exact Test	36.209	-	-	.000	.000 - .013	-	-
Linear-by-Linear Association	.121	1	.728	.716	.658 - .775	.432	.368 - .496
N of Valid Cases	229						

Source: Author using survey data

The chi-square tests in Table 10 provide a statistical analysis of the relationship between NHIMA enrolment and the frequency of healthcare visits. The Pearson chi-square test shows a value of 42.061 with 6 degrees of freedom and a p-value of .000, indicating a significant association between NHIMA enrolment and the number of healthcare visits in the past 12 months. Similarly, the likelihood ratio test also indicates significance with a value of 41.727 and a p-value of .000. Fisher's exact test corroborates these findings with a p-value of .000. However, the linear-by-linear association is not significant (p = .728), suggesting that the relationship between NHIMA enrolment and healthcare visits does not follow a simple linear trend.

The chi-square tests indicate a statistically significant association between enrolment in NHIMA and the number of healthcare visits in the past 12 months. Specifically, those enrolled in NHIMA are more likely to have visited healthcare facilities 1-2 times, while those not enrolled are distributed more evenly across the different categories of visit frequency. This suggests that NHIMA enrolment might be associated with increased utilization of healthcare services. The majority of NHIMA-enrolled respondents utilizing healthcare services 1-2 times reflects a trend of higher healthcare access among insured individuals compared to their uninsured counterparts. This insight highlights the importance of health insurance in improving healthcare access and utilization among marginalized communities.

4.5.1.3 Impact of NHIMA Coverage on the Likelihood of Accessing Healthcare Services

This section employs a multinomial logistic regression model to determine the impact of NHIMA coverage on the likelihood of accessing healthcare services. The analysis includes the likelihood ratio chi-square test, odds ratios, and confidence intervals for different enrolment categories.

4.5.1.3.1 Multinomial Logistic Regression for the Impact of NHIMA Coverage on Healthcare Access

The table 11 below presents the odds ratios for the different enrolment categories and their impact on healthcare access. The odds ratios provide a clear picture of how much more or less likely individuals are to access healthcare services depending on their NHIMA enrolment status.

Table 11: Multinomial Logistic Regression for the Impact of NHIMA Coverage on Healthcare Access

Access Healthcare Services	Odds Ratio	Std. Error	z-value	p-value	[95% Conf. Interval for Odds Ratio]
No (base outcome)					
Yes - NHIMA Enrolment	0.401	0.2676	-3.41	0.001	0.238 to 0.679
Constant	1.466	0.2185	1.75	0.080	0.955 to 2.250
I don't know - NHIMA Enrolment	4.52e-08	823.4372	-0.02	0.984	0 to 1.15e+693
Constant	0.416	0.3168	-2.77	0.006	0.224 to 0.774

Source: Author using survey data

In Table 11, the odds ratios provide insights into the impact of NHIMA enrolment on healthcare access. For the outcome "Yes," the odds ratio for NHIMA enrolment is 0.401, with a confidence interval ranging from 0.238 to 0.679. This indicates that individuals enrolled in NHIMA are 60% less likely to report being unable to access healthcare services compared to those not enrolled. The constant odds ratio is 1.466, which represents the baseline odds of accessing healthcare services when NHIMA enrolment is not considered.

For the outcome "I don't know," the odds ratio for NHIMA enrolment is extremely low (4.52e-08), indicating no significant difference due to the large standard error and confidence interval. The constant odds ratio for this category is 0.416, which is significant and represents the intercept.

In summary, the multinomial logistic regression analysis indicates that NHIMA coverage significantly impacts the likelihood of accessing healthcare services. Specifically, those enrolled in NHIMA are approximately 60.7% less likely to report being unable to access healthcare services compared to those not enrolled. The goodness of fit measures, including the likelihood ratio chi-square test and pseudo R-squared values, confirm that the model provides a significant and reasonable fit to the data. These findings support the positive role of NHIMA in enhancing healthcare access among marginalized communities.

4.5.1.3.2 Goodness of Fit for Multinomial Logistic Regression Model

The goodness of fit for the multinomial logistic regression model was assessed using the likelihood ratio chi-square test and pseudo-R-squared value.

Table 12: Goodness of Fit for Multinomial Logistic Regression Model

Test	Value	df	p-value
Likelihood Ratio Chi-Square	37.57	2	0.000
Pseudo R-squared	0.0936		
Log likelihood	-181.902		

Source: Author using survey data

The likelihood ratio chi-square test value is 37.57 with 2 degrees of freedom and a p-value of 0.000, indicating that the model fits significantly better than an empty model. The pseudo-R-squared value is 0.0936, suggesting that approximately 9.36% of the variance in healthcare access can be explained by NHIMA enrolment.

The multinomial logistic regression analysis indicates that NHIMA coverage significantly impacts the likelihood of accessing healthcare services. Specifically, those enrolled in NHIMA are 60% less likely to report being unable to access healthcare services compared to those not enrolled. The goodness of fit measures, including the likelihood ratio chi-square test and pseudo R-squared value, confirm that the model provides a significant and reasonable fit to the data. These findings support the positive role of NHIMA in enhancing healthcare access among marginalized communities.

4.5.2 Effectiveness of NHIMA in Improving Healthcare Access for Marginalized Communities in Bauleni

This section evaluates the effectiveness of the National Health Insurance Management Authority (NHIMA) in improving healthcare access for marginalized communities in Bauleni. The analysis includes a crosstabulation, chi-square tests, and symmetric measures to determine the relationship between satisfaction with the accessibility of NHIMA-accredited healthcare facilities and the overall effectiveness of NHIMA.

4.5.2.1 Crosstabulation - Satisfaction with Accessibility of NHIMA-accredited Healthcare Facilities vs. Overall Effectiveness of NHIMA

Table 13: Crosstabulation - Satisfaction with Accessibility of NHIMA-accredited Healthcare Facilities vs. Overall Effectiveness of NHIMA

Satisfaction with Accessibility of NHIMA-accredited Healthcare Facilities	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective	Total
Very Dissatisfied	12.7% (7)	23.6% (13)	25.5% (14)	38.2% (21)	0% (0)	100% (55)
Dissatisfied	0% (0)	11.1% (7)	22.2% (14)	66.7% (42)	0% (0)	100% (63)
Neither Satisfied nor Dissatisfied	0% (0)	6.3% (7)	11.7% (13)	69.4% (77)	12.6% (14)	100% (111)

Total	3.1% (7)	11.8% (27)	17.9% (41)	61.1% (140)	6.1% (14)	100% (229)
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Source: Author using survey data

The crosstabulation in Table 13 shows the distribution of respondents' satisfaction with the accessibility of NHIMA-accredited healthcare facilities and their overall perception of NHIMA's effectiveness. Among respondents who are very dissatisfied with the accessibility of NHIMA-accredited facilities, 12.7% (n=7) find NHIMA very ineffective, 23.6% (n=13) find it ineffective, 25.5% (n=14) find it neither effective nor ineffective, and 38.2% (n=21) find it effective. This suggests that even among the very dissatisfied, a significant portion still finds NHIMA effective, indicating other factors might influence their overall perception.

For those dissatisfied with accessibility, none find NHIMA very ineffective, 11.1% (n=7) find it ineffective, 22.2% (n=14) find it neither effective nor ineffective, and 66.7% (n=42) find it effective. This indicates that dissatisfaction with accessibility does not strongly correlate with an overall negative perception of NHIMA, as a majority still find it effective.

Among respondents who are neither satisfied nor dissatisfied, none find NHIMA very ineffective, 6.3% (n=7) find it ineffective, 11.7% (n=13) find it neither effective nor ineffective, 69.4% (n=77) find it effective, and 12.6% (n=14) find it very effective. This suggests that a neutral stance on accessibility is associated with a predominantly positive perception of NHIMA's effectiveness.

Overall, the majority of respondents who find NHIMA effective are either neither satisfied nor dissatisfied or dissatisfied with the accessibility of NHIMA-accredited facilities. This highlights that while accessibility is an important factor, its improvement alone may not drastically alter perceptions of NHIMA's overall effectiveness, suggesting the influence of other contributing factors.

4.5.2.2 Chi-Square Test Results for the Relationship Between Satisfaction with Accessibility and Overall Effectiveness of NHIMA

Table 14: Chi-Square Test Results

Test	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	57.501	8	.000
Likelihood Ratio	60.570	8	.000
Linear-by-Linear Association	44.111	1	.000
N of Valid Cases	229		

Source: Author using survey data

The chi-square tests in Table 14 indicate a significant relationship between satisfaction with the accessibility of NHIMA-accredited healthcare facilities and the overall effectiveness of NHIMA. The Pearson chi-square value is 57.501 with 8 degrees of freedom and a p-value of .000, indicating a strong association. Similarly, the likelihood ratio test shows a significant result with a value of 60.570 and a p-value of .000. The linear-by-linear association is also significant with a value of 44.111 and a p-value of .000. These results confirm that satisfaction with the accessibility of NHIMA-accredited facilities significantly impacts the perceived overall effectiveness of NHIMA.

4.5.2.3 Ordinal Logistic Regression Analysis: Assessing the Impact of Key Factors on Perceived Effectiveness of NHIMA

The ordinal logistic regression model was employed to explore the relationships between various key factors and the perceived overall effectiveness of NHIMA. The aim of this analysis was to determine how satisfaction with the accessibility of NHIMA-accredited healthcare facilities, affordability of NHIMA

services, and coordination between NHIMA and healthcare providers influenced the respondents' perception of NHIMA's effectiveness in improving healthcare access.

This method allowed for a detailed examination of how these independent variables influenced the likelihood of respondents rating NHIMA as effective or ineffective. By controlling for the ordinal nature of the dependent variable (the perceived effectiveness of NHIMA), the ordinal logistic regression provided a more nuanced understanding of how these factors contribute to perceptions of NHIMA's overall impact.

4.5.2.3.1 Goodness-of-Fit for Ordinal Logistic Regression

To ensure the suitability of the model, goodness-of-fit tests were conducted. These tests evaluated whether the model adequately fit the data and provided reliable results. The Pearson chi-square and deviance statistics were used for this purpose, and the results are shown below:

Table 14: Goodness-of-Fit for Ordinal Logistic Regression

Test	Chi-Square	df	Sig.
Pearson	10.181	6	.117
Deviance	15.443	6	.017

The goodness-of-fit tests in Table 14 indicate that the Pearson chi-square value is 10.181 with 6 degrees of freedom and a p-value of .117, suggesting a good fit for the model.

4.5.2.3.2 Ordinal Logistic Regression Analysis: Assessing the Impact of Key Factors on Perceived Effectiveness of NHIMA

The ordinal logistic regression model provided odds ratios for each of the independent variables, which offer insights into the likelihood of respondents perceiving NHIMA as effective based on their satisfaction with NHIMA services. The odds ratios allow for the interpretation of how changes in the independent variables (such as satisfaction with NHIMA's accessibility or affordability) impact the likelihood of respondents perceiving NHIMA as more or less effective. The results are summarized in the table below:

Table 14: Ordinal Logistic Regression Analysis: Assessing the Impact of Key Factors on Perceived Effectiveness of NHIMA

Parameter	Odds Ratio	Std. Error	Wald	df	Sig.	95% Confidence Interval
[s3_17_effectiveness_nhima = 0]	.009	.455	106.739	1	.000	.004 to .022
[s3_17_effectiveness_nhima = 1]	.057	.297	93.254	1	.000	.032 to .102
[s3_17_effectiveness_nhima = 2]	.186	.248	46.070	1	.000	.114 to .302
[s3_17_effectiveness_nhima = 3]	8.894	.290	56.928	1	.000	5.040 to 15.699
Location						
[s2_14_accessibility_nhima_facilities=1]	.100	.357	41.807	1	.000	.049 to .201
[s2_14_accessibility_nhima_facilities=2]	.348	.344	9.422	1	.002	.177 to .683
[s2_14_accessibility_nhima_facilities=3]	1.000a	.	.	0	.	.

Source: Author using survey data a This parameter is set to zero because it is redundant.

The odds ratios in Table 14 provide insights into the relationship between satisfaction with accessibility and the perceived overall effectiveness of NHIMA. The odds ratio for respondents who are very dissatisfied with accessibility is 0.100 (95% CI: 0.049 to 0.201), indicating that they are less likely to perceive NHIMA as effective compared to those who are neither satisfied nor dissatisfied. Similarly, the

odds ratio for those who are dissatisfied is 0.348 (95% CI: 0.177 to 0.683), suggesting a lower likelihood of perceiving NHIMA as effective. The reference group (neither satisfied nor dissatisfied) has an odds ratio of 1.000, serving as the baseline for comparison.

The chi-square tests and ordinal logistic regression analysis indicate a statistically significant relationship between satisfaction with the accessibility of NHIMA-accredited healthcare facilities and the perceived overall effectiveness of NHIMA. Specifically, higher dissatisfaction with accessibility is associated with lower perceived effectiveness, as reflected in the lower odds ratios. These findings suggest that improving the accessibility of NHIMA-accredited facilities could enhance overall satisfaction and effectiveness perceptions among the community.

4.5.3 Evaluating the Factors Underpinning NHIMA's Effectiveness in Providing Healthcare to the Marginalized

To better understand the factors contributing to the perceived overall effectiveness of NHIMA, several key variables were examined. These variables include awareness of NHIMA among the community, accessibility of NHIMA services, affordability of NHIMA services, coordination between NHIMA and healthcare providers, and availability of NHIMA-accredited healthcare facilities.

In this analysis, crosstabulations were performed to explore the relationship between each of these factors and the perceived overall effectiveness of NHIMA. This helped identify which factors had the greatest influence on how respondents perceived the effectiveness of NHIMA in providing healthcare services to marginalized communities.

4.5.3.1 Crosstabulations of Key Factors and Perceived Overall Effectiveness of NHIMA

The table 15 below presents the results of the crosstabulation analysis, which shows the distribution of respondents' satisfaction with various factors and their overall perception of NHIMA's effectiveness:

Table 15: Crosstabulations of Factors vs. Overall Effectiveness of NHIMA

Factor	Very Ineffective	Ineffective	Neither Effective nor Ineffective	Effective	Very Effective	Total
Awareness of NHIMA Among the Community						
No	0% (0)	25.0% (7)	75.0% (21)	0% (0)	0% (0)	100% (28)
Yes	13.4% (27)	16.9% (34)	62.7% (126)	7.0% (14)	0% (0)	100% (201)
Total	11.8% (27)	17.9% (41)	64.2% (147)	6.1% (14)	0% (0)	100% (229)
Accessibility of NHIMA Services						
No	0% (0)	60.0% (21)	40.0% (14)	0% (0)	0% (0)	100% (35)
Yes	13.9% (27)	10.3% (20)	68.6% (133)	7.2% (14)	0% (0)	100% (194)
Total	11.8% (27)	17.9% (41)	64.2% (147)	6.1% (14)	0% (0)	100% (229)

Affordability of NHIMA Services						
No	0% (0)	41.7% (20)	43.8% (21)	14.6% (7)	0% (0)	100% (48)
Yes	14.9% (27)	11.6% (21)	69.6% (126)	3.9% (7)	0% (0)	100% (181)
Total	11.8% (27)	17.9% (41)	64.2% (147)	6.1% (14)	0% (0)	100% (229)
Coordination between NHIMA and Healthcare Providers						
No	0% (0)	65.0% (13)	35.0% (7)	0% (0)	0% (0)	100% (20)
Yes	12.9% (27)	13.4% (28)	67.0% (140)	6.7% (14)	0% (0)	100% (209)
Total	11.8% (27)	17.9% (41)	64.2% (147)	6.1% (14)	0% (0)	100% (229)
Availability of NHIMA-accredited Facilities						
No	0% (0)	20.0% (7)	80.0% (28)	0% (0)	0% (0)	100% (35)
Yes	13.9% (27)	17.5% (34)	61.3% (119)	7.2% (14)	0% (0)	100% (194)
Total	11.8% (27)	17.9% (41)	64.2% (147)	6.1% (14)	0% (0)	100% (229)

Source: Author using survey data

The crosstabulation analysis in Table 15 shows the distribution of respondents' satisfaction with various factors related to NHIMA and their overall perception of NHIMA's effectiveness. Among respondents who are aware of NHIMA, 13.4% find NHIMA very ineffective, 16.9% find it ineffective, 62.7% find it neither effective nor ineffective, and 7.0% find it effective. This indicates a mixed perception of NHIMA's effectiveness among those aware, with a majority being neutral. For those who are not aware of NHIMA, none find it very effective or effective, 25.0% find it ineffective, and 75.0% find it neither effective nor ineffective. This suggests that lack of awareness might correlate with a more neutral or slightly negative perception.

In terms of accessibility of NHIMA services, among those who reported accessibility, 13.9% find NHIMA very ineffective, 10.3% find it ineffective, 68.6% find it neither effective nor ineffective, and 7.2% find it effective. The high neutral response suggests accessibility might not be a significant differentiator for effectiveness. Those who reported no accessibility overwhelmingly found NHIMA neither effective nor ineffective (40.0%, indicating that lack of access is associated with a neutral stance, possibly due to lack of engagement).

For affordability of NHIMA services, among those who found NHIMA services affordable, a majority (69.6%, were neutral, with a notable minority finding it ineffective. This suggests that while affordability is crucial, it alone does not guarantee a perception of effectiveness. Those who did not find NHIMA services affordable showed a similar pattern, with 43.8% finding it neither effective nor ineffective and a significant portion (41.7%, finding it ineffective. This indicates that affordability is a critical factor influencing perceptions of NHIMA's effectiveness.

Regarding coordination between NHIMA and healthcare providers, among respondents who noted good coordination, 12.9% found NHIMA very ineffective, 13.4% found it ineffective, 67.0% found it neither effective nor ineffective, and 6.7% found it effective. This suggests that effective coordination may not be widely recognized but is likely influential for a positive perception. Those who reported poor coordination primarily found NHIMA ineffective 65.0%, indicating that lack of coordination is a significant barrier to perceived effectiveness.

In terms of the availability of NHIMA-accredited facilities, among those who reported availability, 13.9% found NHIMA very ineffective, 17.5% found it ineffective, 61.3% found it neither effective nor ineffective, and 7.2% found it effective. This suggests that while facility availability is crucial, it alone does not determine the perceived effectiveness of NHIMA. Those who reported no availability primarily found NHIMA neither effective nor ineffective 80.0%, indicating that lack of available facilities contributes to a neutral or negative perception of effectiveness.

4.5.3.2 Chi-Square Test Results for the Relationship Between Factors and Overall Effectiveness of NHIMA

To further examine the strength of these relationships, chi-square tests were conducted. The results are summarized in the table below:

Table 16: Chi-Square Test Results for the Relationship Between Factors and Overall Effectiveness of NHIMA

Factor	Pearson Chi-Square	df	p-value	Monte Carlo Sig. (95% CI)
Awareness of NHIMA Among the Community	7.189	3	.066	.062 (.055, .068)
Accessibility of NHIMA Services	52.056	3	.000	.000 (.000, .000)
Affordability of NHIMA Services	37.393	3	.000	.000 (.000, .000)
Coordination between NHIMA and Healthcare Providers	33.981	3	.000	.000 (.000, .000)
Availability of NHIMA-accredited Facilities	9.107	3	.028	.025 (.020, .030)

Source: Author using survey data

The chi-square tests in Table 16 indicate significant relationships between several factors and the overall effectiveness of NHIMA, given a significance level of 5%.

For awareness of NHIMA among the community, the chi-square value is 7.189 with a p-value of .066, which is above the 5% significance threshold, indicating that this factor does not have a statistically significant relationship with the overall effectiveness of NHIMA.

In contrast, the chi-square value for accessibility of NHIMA services is 52.056 with a p-value of .000, demonstrating a strong and highly significant association. This indicates that accessibility is a crucial determinant of the perceived effectiveness of NHIMA, with high confidence that this relationship is not due to chance.

Similarly, the affordability of NHIMA services shows a significant relationship with overall effectiveness, with a chi-square value of 37.393 and a p-value of .000. This underscores the critical role affordability plays in shaping perceptions of NHIMA's effectiveness, suggesting that more affordable services are likely perceived as more effective.

Coordination between NHIMA and healthcare providers also exhibits a significant association, evidenced by a chi-square value of 33.981 and a p-value of .000. Effective coordination appears essential for enhancing the perceived effectiveness of NHIMA, highlighting the need for strong collaboration between NHIMA and healthcare providers.

Lastly, the availability of NHIMA-accredited facilities has a chi-square value of 9.107 with a p-value of .028, indicating a statistically significant relationship. This suggests that the availability of accredited facilities is an important factor influencing the overall effectiveness of NHIMA, although the strength of this association is not as robust as for accessibility, affordability, and coordination.

In conclusion, the chi-square tests confirm that accessibility, affordability, and coordination are critical factors that significantly influence the perceived effectiveness of NHIMA. While awareness of NHIMA among the community did not show a significant relationship, the availability of NHIMA-accredited facilities did, suggesting areas where improvements could enhance NHIMA's effectiveness in providing healthcare to marginalized communities.

The chi-square tests indicate statistically significant relationships between various factors and the overall effectiveness of NHIMA. Specifically, accessibility and affordability of NHIMA services, as well as coordination between NHIMA and healthcare providers, show strong associations with the perceived effectiveness of NHIMA. These findings suggest that improving these factors could significantly enhance the overall effectiveness of NHIMA in improving healthcare access for marginalized communities. While awareness and availability of NHIMA-accredited facilities also contribute to perceived effectiveness, their impact is relatively weaker. Therefore, strategic efforts to improve accessibility, affordability, and coordination are likely to yield the most significant improvements in the effectiveness of NHIMA services.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Overview

This chapter discusses the findings from the study conducted to evaluate the effectiveness of the National Health Insurance Management Authority (NHIMA) in improving healthcare access for marginalized women and children in Bauleni Compound.

5.1 Demographic Information

The demographic characteristics of the respondents provide crucial context for understanding healthcare access and the effectiveness of the National Health Insurance Management Authority (NHIMA) in Bauleni Compound. The majority of participants, 60.7% (n=139), are within the 18-24 age group, indicating a predominantly young adult population. This demographic is significant as young adults often have different healthcare needs and utilization patterns compared to older adults. In a study by Asibey and Agyemang (2017), similar age distributions were noted, with younger populations showing varying levels

of healthcare utilization based on insurance coverage (Asibey & Agyemang, 2017). This age group's engagement with healthcare services can be influenced by their socioeconomic status and awareness of health insurance benefits.

The marital status distribution reveals that 72.9% of the respondents are single, which might correlate with the high percentage of young adults. Single individuals may have different health priorities and economic capabilities affecting their healthcare access. Previous research has shown that marital status can influence health-seeking behavior, with married individuals often having better health outcomes due to combined household resources and support systems (Asibey & Agyemang, 2017). In the context of Bauleni Compound, the predominance of single individuals highlights the need for targeted health education and support programs to enhance healthcare utilization.

Regarding employment status, the largest group comprises students, representing 57.6% of the respondents. Self-employed individuals make up 21.4% employed respondents account for 11.8% and unemployed individuals constitute 9.2%. Employment status is a critical factor in determining healthcare access, as those employed or self-employed are more likely to afford health services or benefit from health insurance. This finding is consistent with studies indicating that employment status significantly influences health insurance enrolment and utilization (Asibey & Agyemang, 2017; Anderson et al., 2012). The high percentage of students suggests a need for policies that cater to the financial constraints of this group, such as affordable health insurance plans.

Education level is another determinant of healthcare access, with 72.5% of respondents having tertiary education. Higher education levels are associated with better health literacy and greater utilization of health services. This aligns with findings from various studies that suggest a direct correlation between education and health service utilization (Anderson et al., 2012; Asibey & Agyemang, 2017). In Bauleni Compound, the high education level could positively impact the community's overall health outcomes, provided that individuals are aware of and can access available healthcare services.

The household size distribution shows that 64.2% of respondents live in households with six or more people. Larger household sizes can strain resources, making it challenging to afford healthcare services. This is supported by findings from other studies where larger household sizes were linked to lower per capita income and reduced healthcare access (Asibey & Agyemang, 2017; Dong et al., 2009). In Bauleni Compound, interventions aimed at improving healthcare access should consider the financial burdens faced by large households.

These demographic insights underscore the importance of tailored health policies and insurance schemes that address the unique needs of different population segments. Expanding NHIMA's coverage and ensuring affordability for young adults, students, and large households could significantly enhance healthcare utilization in Bauleni Compound.

5.2 Relationship between health insurance coverage provided by NHIMA and healthcare access for marginalized women and children in Lusaka's Bauleni Compound

The relationship between NHIMA health insurance coverage and healthcare access in Bauleni Compound is a critical focus of this study. The findings indicate a significant positive impact of NHIMA enrolment on healthcare utilization among marginalized women and children in the community.

The chi-square tests reinforce these observations, with a Pearson chi-square value of 42.061 ($p < .0001$), indicating a significant association between NHIMA enrolment and the number of healthcare visits. The likelihood ratio and Fisher's exact test further corroborate this significant relationship. The lack of significance in the linear-by-linear association ($p = .728$) suggests that the relationship does not follow a

simple linear trend but rather a more complex pattern of healthcare access influenced by insurance status. Multinomial logistic regression analysis provides additional insights into the impact of NHIMA coverage on healthcare access. The odds ratio for NHIMA enrollment is 0.401, indicating that insured individuals are approximately 60% less likely to report being unable to access healthcare services compared to those not enrolled. This substantial reduction highlights the crucial role of NHIMA in mitigating financial barriers and enhancing healthcare accessibility.

These findings align with broader literature that emphasizes the positive impact of health insurance on healthcare access. For example, Asibey and Agyemang (2017) and Van Der Wielen et al. (2018) found that health insurance significantly improves health-seeking behavior in rural Ghana, while Acharya et al. (2013) reported increased healthcare utilization among insured individuals in low- and middle-income countries. Similarly, Barasa et al. (2018) highlighted the success of Kenya's health insurance reforms in improving access to healthcare services for vulnerable populations.

However, it is important to note that insurance coverage alone may not be sufficient to fully address healthcare access issues. Nteziryayo, Basaza, Karamagi, & Namyalo (2024) pointed out that marginalized communities often face additional barriers such as long distances to healthcare facilities and poor quality of care, even when insured. Therefore, while NHIMA coverage significantly enhances healthcare access, comprehensive strategies addressing structural and cultural barriers are essential to ensure equitable healthcare for all.

5.3 Effectiveness of NHIMA in Improving Healthcare Access

The effectiveness of the National Health Insurance Management Authority (NHIMA) in improving healthcare access for marginalized women and children in Bauleni can be evaluated through various parameters including satisfaction with NHIMA services, accessibility of NHIMA-accredited healthcare facilities, quality of healthcare services, and the ability to access medical treatment.

The descriptive statistics from the study revealed that 64.2% of respondents rated NHIMA as neither effective nor ineffective, while a smaller portion found it effective 6.1%, or very effective 3.1%. In contrast, a notable percentage perceived NHIMA as ineffective 17.9%, or very ineffective 11.8%. These findings suggest mixed perceptions of NHIMA's effectiveness, with a significant portion of the community remaining neutral or dissatisfied. Similar sentiments were observed in Ghana, where Dalinjong and Laar (2012) found that perceptions of health insurance effectiveness were influenced by service delivery quality and accessibility issues.

Regarding the accessibility of NHIMA-accredited healthcare facilities, nearly half of the respondents 48.5%, were neither satisfied nor dissatisfied. A larger percentage expressed dissatisfaction 27.5%, or were very dissatisfied 13.5%, while only 10.5% were satisfied. This indicates a general dissatisfaction with the accessibility of NHIMA-accredited facilities, which could hinder the perceived effectiveness of NHIMA. This aligns with findings from Sub-Saharan Africa where barriers such as distance to facilities and service availability affect health insurance utilization (Nteziryayo, Basaza, Karamagi, & Namyalo, 2024).

Further analysis reveals key determinants contributing to NHIMA's effectiveness. Awareness of NHIMA among the community is high, with 87.8% of respondents aware of the scheme. Accessibility and affordability of NHIMA services are also perceived positively, with 84.7% and 79.0% of respondents respectively acknowledging these aspects. Additionally, coordination between NHIMA and healthcare providers is perceived positively by 91.3% of respondents. These factors indicate that NHIMA's operational attributes are well-regarded by the community, similar to observations in Kenya where health

insurance significantly reduced out-of-pocket expenses and improved service accessibility (Barasa et al., 2018).

Evaluating NHIMA's impact on health outcomes, the majority of respondents reported positive effects, such as improved access to preventative care 61.1%, reduced out-of-pocket healthcare expenses 82.1%, and improved access to specialist services 69.9%. However, 29.7% of respondents felt that NHIMA had no noticeable impact on their health outcomes, indicating areas for potential improvement. These findings are consistent with a systematic review by Acharya et al. (2013), which found that health insurance schemes improve healthcare utilization but highlighted the need for addressing accessibility and service quality.

The crosstabulation analysis shows a significant relationship between satisfaction with the accessibility of NHIMA-accredited facilities and the perceived overall effectiveness of NHIMA. For instance, among those very dissatisfied with accessibility, a substantial proportion still finds NHIMA effective, suggesting that other factors influence their overall perception. The chi-square tests confirm a strong association between these variables, with a Pearson chi-square value of 57.501 ($p < .0001$), indicating that satisfaction with accessibility significantly impacts the perceived effectiveness of NHIMA. This is supported by studies in other regions, which show that satisfaction with healthcare accessibility and quality significantly influences perceptions of health insurance schemes (Ekman, 2007).

The ordinal logistic regression analysis further supports these findings, indicating that higher dissatisfaction with accessibility correlates with lower perceived effectiveness. Respondents who are very dissatisfied with accessibility are significantly less likely to perceive NHIMA as effective, as reflected by the lower odds ratios (0.100, 95% CI: 0.049 to 0.201). Improving the accessibility of NHIMA-accredited facilities could enhance overall satisfaction and effectiveness perceptions among the community.

In conclusion, while NHIMA has positively impacted healthcare access and reduced financial barriers, there are areas requiring improvement, particularly in the accessibility of accredited facilities. Addressing these issues could enhance the overall effectiveness of NHIMA and better serve marginalized communities in Bauleni. This is in line with findings from various studies which emphasize the importance of improving service accessibility and quality to enhance the effectiveness of health insurance schemes (Barasa et al., 2018; Ekman, 2007).

5.4 Factors Underpinning the Effectiveness of NHIMA in Healthcare Provision

The evaluation of factors contributing to the effectiveness of the National Health Insurance Management Authority (NHIMA) in healthcare provision for marginalized communities reveals significant insights. Various factors such as awareness, accessibility, affordability, coordination, and availability of NHIMA-accredited facilities were analyzed to understand their impact on the perceived effectiveness of NHIMA. The crosstabulation analysis showed mixed perceptions of NHIMA's effectiveness among respondents. Among those aware of NHIMA, 13.4% found it very ineffective, 16.9% ineffective, and 62.7% neither effective nor ineffective. In comparison, none of the respondents unaware of NHIMA found it very effective or effective, with 25.0% finding it ineffective and 75.0% neither effective nor ineffective. This suggests that lack of awareness correlates with neutral or slightly negative perceptions. This finding aligns with previous studies that emphasize the importance of awareness in improving perceptions of health insurance schemes (Mebratie et al., 2013).

Regarding the accessibility of NHIMA services, 13.9% of those reporting accessibility found NHIMA very ineffective, while 10.3% found it ineffective. A significant majority, 68.6% were neutral. This high neutral response suggests that while accessibility is crucial, it may not be the sole factor influencing

perceived effectiveness. Those reporting no accessibility overwhelmingly found NHIMA neither effective nor ineffective 40.0%, indicating that lack of access leads to a neutral stance possibly due to disengagement. Similar findings were reported by Ekman (2007), where accessibility issues were identified as significant barriers to the effectiveness of health insurance schemes.

Affordability of NHIMA services showed that among those who found services affordable, 69.6% were neutral about NHIMA's effectiveness, with a notable minority finding it ineffective. Among those who did not find NHIMA services affordable, 43.8% were neutral and 41.7% found it ineffective. This indicates that while affordability is critical, it alone does not guarantee a perception of effectiveness. Affordability has been highlighted in various studies as a critical factor in health insurance effectiveness, where higher costs are associated with reduced utilization and satisfaction (Dror & Preker, 2002).

Coordination between NHIMA and healthcare providers was another significant factor. Among respondents noting good coordination, 12.9% found NHIMA very ineffective, 13.4% ineffective, and 67.0% neutral. Those reporting poor coordination primarily found NHIMA ineffective 65.0%, suggesting that lack of coordination is a significant barrier to perceived effectiveness. Effective coordination has been noted as essential for improving the functionality and perception of health insurance schemes (Barasa et al., 2018).

In terms of the availability of NHIMA-accredited facilities, 13.9% of those reporting availability found NHIMA very ineffective, 17.5% ineffective, and 61.3% neutral. This indicates that while facility availability is important, it alone does not determine perceived effectiveness. Those reporting no availability primarily found NHIMA neither effective nor ineffective 80.0%, underscoring the need for sufficient healthcare infrastructure to enhance insurance effectiveness (Osei Asibey & Agyemang, 2017). In conclusion, the factors of accessibility, affordability, and coordination are critical determinants of NHIMA's effectiveness. Enhancing these factors could significantly improve the perceived effectiveness of NHIMA in providing healthcare to marginalized communities. Awareness and availability also contribute, but their impact is relatively weaker. Strategic efforts to improve accessibility, affordability, and coordination are likely to yield significant improvements in NHIMA's effectiveness.

5.5 Limitations of the Study

This study, while providing insightful findings on the effectiveness of NHIMA in improving healthcare access, was subject to several limitations that influenced the interpretation of the results. Below, each limitation is discussed alongside the strategies employed to mitigate its effects:

5.5.1 Reported Data

Reliance on self-reported data introduced biases such as the overestimation or underestimation of personal experiences with healthcare services and NHIMA effectiveness. Respondents might have answered in socially desirable ways rather than truthfully. To mitigate this, the study incorporated several checks to minimize bias, including cross-validation questions to ensure response consistency and anonymity to promote honest reporting. Additionally, a pilot test of the questionnaire was conducted to refine questions and reduce the likelihood of misunderstandings, thereby enhancing the reliability of the data collected.

5.5.2 Potential Non-Response Bias

An adequate response rate did not fully eliminate the risk of non-response bias, which might have skewed results if non-respondents differed significantly from respondents. Strategies to enhance response rates included convenient scheduling and diligent follow-ups. Additionally, statistical adjustments and

sensitivity analyses were conducted to estimate and account for potential biases, comparing demographic characteristics of respondents and non-respondents to ensure comprehensive and unbiased conclusions.

5.5.3 Recall Bias

Participants might have had difficulty accurately recalling past healthcare utilization and experiences related to NHIMA, leading to recall bias. To mitigate this, the questionnaire was designed to be as specific and clear as possible, minimizing the reliance on long-term memory and encouraging more accurate reporting of recent healthcare interactions and insurance experiences.

5.5.4 Resource and Time Constraints

Resource and time constraints might have limited the depth of the investigation and the sample size. Despite these constraints, the study utilized available resources efficiently to collect meaningful data within the set timeframe. Future studies with more extensive resources could provide deeper insights and include larger, more diverse samples.

By addressing these limitations, the study contributed valuable insights into the effectiveness of NHIMA in improving healthcare access for marginalized communities in Bauleni, while also highlighting areas for future research and intervention.

5.6 Chapter Conclusion

This chapter concluded the investigation into healthcare access and the effectiveness of NHIMA among marginalized women and children in Bauleni Compound. The findings underscored the importance of health insurance coverage in improving healthcare access. Despite the limitations encountered, the study provided significant insights that can inform targeted interventions to enhance healthcare access and utilization among marginalized populations. These insights have practical implications for policymakers, healthcare providers, and community leaders, contributing to the broader goal of improving healthcare access and equity in Zambia and beyond.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter synthesizes the findings from the study on the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities, specifically women and children in Lusaka's Bauleni Compound. It concludes the research by summarizing the key insights, offering recommendations, and suggesting areas for future research. The study aimed to assess the relationship between NHIMA health insurance coverage and healthcare access, evaluate the effectiveness of NHIMA, and identify factors underpinning the effectiveness of NHIMA in healthcare provision for marginalized communities.

6.2 Conclusion of the Study

The study on the influence of the National Health Insurance Management Authority (NHIMA) on healthcare access for marginalized communities in Lusaka's Bauleni Compound revealed several key insights.

A significant relationship was found between NHIMA health insurance coverage and healthcare access among marginalized women and children. Higher frequencies of healthcare visits were observed among NHIMA-enrolled respondents compared to those not enrolled, indicating the positive impact of NHIMA coverage on healthcare utilization.

The effectiveness of NHIMA in improving healthcare access was mixed among respondents, with some perceiving it as effective while others did not. However, statistical analysis highlighted that dissatisfaction with accessibility, affordability, and coordination of NHIMA services were key factors influencing these perceptions.

Furthermore, high awareness of NHIMA and positive perceptions of its accessibility, affordability, and coordination with healthcare providers were noted among the community. Despite this, the availability of NHIMA-accredited facilities remained a concern, suggesting the need for improvement in healthcare infrastructure.

In conclusion, the study validated the significant impact of NHIMA health insurance coverage on enhancing healthcare access. It underscored the importance of addressing barriers related to accessibility, affordability, and coordination to improve NHIMA's effectiveness in providing equitable healthcare services to marginalized communities.

6.3 Recommendations

Based on the findings, several recommendations are proposed to enhance the effectiveness of the National Health Insurance Management Authority (NHIMA) and improve healthcare access for marginalized communities in Lusaka's Bauleni Compound:

1. **Integrate Awareness Campaigns:** NHIMA should increase awareness campaigns to ensure that all community members are fully informed about the benefits and enrolment procedures of NHIMA. The study found that about two-thirds of respondents were not enrolled in NHIMA, with most of them citing a lack of information as a primary reason. NHIMA can enhance community outreach through workshops, seminars, and collaboration with local leaders to address this information gap and boost enrolment.
2. **Improve Accessibility of NHIMA Services:** NHIMA should address the accessibility issues by expanding the network of NHIMA-accredited healthcare facilities. The study revealed that most of the respondents were dissatisfied with the accessibility of these facilities. NHIMA can strategically place more accredited facilities within easy reach of the community to reduce travel time and costs, thereby encouraging more frequent utilization of healthcare services.
3. **Enhance Affordability of NHIMA Services:** NHIMA should consider reducing or subsidizing contribution rates to make health insurance more affordable for the community. The study indicated that most of the respondents cited financial constraints as a barrier to enrolment. NHIMA can implement sliding scale fees based on income or provide targeted subsidies for low-income households to make NHIMA more accessible to those in financial need.
4. **Strengthen Coordination with Healthcare Providers:** NHIMA should improve coordination with healthcare providers to ensure seamless service delivery. The study found a significant relationship between coordination and perceived effectiveness of NHIMA. NHIMA can establish regular communication channels, joint training programs, and shared goals with healthcare providers to enhance the quality and efficiency of services provided.
5. **Expand Service Coverage:** NHIMA should broaden the range of services covered to include more comprehensive care, such as specialist services and preventive care. The study showed that most of the respondents faced challenges due to the lack of coverage on some services. By expanding coverage, NHIMA can better meet the diverse healthcare needs of the community, thereby improving overall satisfaction and health outcomes.

6. **Implement Feedback Mechanisms:** NHIMA should establish robust feedback mechanisms to continuously monitor and address the concerns of beneficiaries. The study highlighted mixed perceptions of NHIMA's effectiveness, with a significant portion of respondents remaining neutral or dissatisfied. NHIMA can regularly collect and act on feedback from the community to help identify areas for improvement and foster trust in the organization.
7. **Enhance Health Education Programs:** NHIMA should develop and implement health education programs to improve health literacy and encourage preventive healthcare practices. The study found that 61.1% (n=140) of respondents reported improved access to preventive care due to NHIMA. By promoting preventive care and healthy lifestyles through educational initiatives, NHIMA can contribute to better health outcomes and reduce the overall burden on healthcare facilities.

By implementing these recommendations, NHIMA can significantly improve healthcare access and outcomes for marginalized communities in Lusaka's Bauleni Compound, contributing to better health and well-being for women and children in the area.

6.4 Future Research

Future research should focus on the following areas to build on the findings of this study:

Longitudinal Studies: Conduct longitudinal studies to track the impact of NHIMA on healthcare access and health outcomes over time. This will provide insights into the long-term effectiveness of NHIMA interventions.

1. **Broader Geographic Scope:** Expand the research to include other urban and rural areas in Zambia to compare healthcare access and NHIMA effectiveness across different contexts.
2. **Impact of Digital Health Services:** Investigate the impact of digital health services, such as telehealth and online health education, on improving healthcare access and utilization among marginalized communities.
3. **Health Insurance and Specific Health Outcomes:** Explore the relationship between NHIMA coverage and specific health outcomes, such as maternal and child health, to identify targeted areas for intervention.

By addressing the identified gaps and implementing the recommended strategies, it is possible to enhance the effectiveness of NHIMA in improving healthcare access and outcomes for marginalized communities in Zambia, thereby contributing to their overall health and well-being.

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