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FACTORS INFLUENCING VOLUNTARY NATIONAL HOSPITAL INSURANCE FUND ENROLMENT AND RETENTION: A CASE OF BUSIA COUNTY

FRANKIE GWEYA AKUTE

MBA-HCM 107102

A RESEARCH DISSERTATION SUBMITTED TO STRATHMORE BUSINESS SCHOOL AS A PARTIAL FULFILMENT OF THE MASTER'S BUSINESS ADMINISTRATION HEALTHCARE MANAGEMENT AT STRATHMORE UNIVERSITY

STRATHMORE UNIVERSITY BUSINESS SCHOOL

NOVEMBER 2021

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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Signature:

Date: Monday, November 15, 2021

Approval

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Director, Office of Graduate Studies

DEDICATION

This thesis work is dedicated to:

My wife, Virginiah Wandithia - my continued source of support and encouragement during graduate school and life

Our lovely children Robyn, Jeremy and Roman. I am truly grateful for having you in my life.

My parents, Daniel and Mary Akute, who have always supported me unconditionally and taught me to work hard for the things that I hope to achieve.

My mentors, Prof. Joseph and Sarah Ellen Mamlin, without whom this dream would not have been possible.

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I needed all of you.

Thank you.

ABSTRACT

Health insurance is an important aspect of health financing. Health insurance is an insurance that covers the whole or a part of the risk of a person incurring medical expenses, spreading the risk over numerous persons. The low uptake of NHIF in Kenya demonstrates the need for measures and strategies that would motivate and spur change at conceptual and theoretical levels in terms of universal healthcare provision. Kenya currently lacks evidence on whether income in the informal sector which contributes to the voluntary contribution members is sustainable and predictable making it able to support the financing of universal health coverage. The study used a cross-sectional survey design to determine factors influencing voluntary National Hospital insurance Fund enrolment and retention, a case of Busia County. Its specific objectives included: to examine the influence of economic status on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia County; to establish the influence of individual awareness on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia County; to determine the influence of cultural practices on retention of individuals voluntary enrolled with the NHIF in Busia County; and to explore the influence of quality of service on retention of individuals voluntary enrolled with the NHIF in Busia County. The theoretical foundation featured the conventional health insurance theory and the expected utility theory. The study population was drawn from Busia County and was concentrated in four sub counties; Bunyala, Butula, Teso North and Matayos. The accessible population for the study was 63,458. The sample size for this study was 397 participants. The study used structured questionnaires to collect data. The collected data was analysed quantitatively using SPSS version 20 and Minitab version 20. The results of the age distribution indicated that the majority of the respondents were above the age of 51. As far as the level of education was concerned, the majority of the NHIF members had only primary level of education. An assessment of the results relating to the employment status showed that most of the NHIF members were self-employed. Finally, the vast majority of the members had 4-6 children. Neither economic status factors nor cultural practices have negatively affected individuals' voluntary enrolment to the NHIF. However, most individuals are neither aware about the enrolment process nor the associated health benefits. The study recommended that the policy makers of the NHIF should do more in coming up with incentives to lure younger individuals to enrol with the scheme. Further, subsidies should be offered to the informal sector so as to boost the voluntary enrolment to the scheme. The NHIF should engage in more awareness campaigns to raise the level of awareness about the method of registration and the associated benefits that accrue to someone upon registration.

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LIST OF ABBREVIATIONS

AMPATH	Academic Model Providing Access to Healthcare
BPL	Below Poverty Line
CBHI	Community-Based Health Insurance
CHPS	Community-Based Health Planning and Services
FGD	Focus Group Discussion
HI	Host Institutions
HIV	Human Immunodeficiency Virus
KCBHFA	Kenya Community-Based Health Financing Association
LMICs	Low and Middle-Income Countries
NACOSTI	National Commission for Science Technology and Innovation
NASCOP	National AIDS and STI Control Programme
NHIF	National Hospital Insurance Fund
NHIS	National Health Insurance Scheme
SDGs	Sustainable Development Goals
UHC	Universal Health Coverage
VHI	Voluntary Health Insurance
WHO	World Health Organization
WTP	Willingness to Pay

CHAPTER ONE

INTRODUCTION

This chapter covers the background of the study, the problem statement, research objectives, scope of the study, and significance of the study. The background explores the concept of health insurance starting from the general to the specific voluntary health insurance schemes. The problem statement will provide a systematic explanation of the importance of the topic since it is tied to the research objectives by identifying the gap between the current situation and the desired goal. Then the scope of the study will determine the extent to which the study area will be covered and the specific parameters within which the study will focus. Finally, the significance of the study will provide more clarity on why the study is required by specifying the contribution that it will make to the existing body of knowledge on voluntary health insurance.

1.1 Background to the Study

Health insurance is an important aspect of health financing. Health insurance refers to a cover that relates to a partial or wholesome likelihood of an individual experiencing medical expenses and extending it to many other individuals (Tangcharoensathien, et al., 2015). Health insurance schemes are delineated in accordance with ownership and may be categorised into government or state-owned systems; employer-provided insurance; private or voluntary market-based systems; and member organisation-based systems. Such schemes represent the only viable mechanism for providing finance for healthcare in many developing countries given the ever-increasing healthcare costs, as well as out-of-pocket expenses (Priya & Srinivasan, 2015). The majority of health insurance schemes target formally employed individuals whose employers make compulsory monthly contributions to the schemes, however, individuals from the informal sector are not covered by such schemes and instead have to enrol in voluntary health insurance schemes (Vellakkal, 2013). Indeed, the Kenyan Government decided to extend the National Hospital Insurance Fund (NHIF) to cover the informal sector workers through the payment of a flat rate in 2012, and the cover was

enhanced through a number of reforms including outpatient services (Barasa, Mwaura, Rogo, & Andrawes, 2017).

One of the most critical determinants of the voluntary enrolment of individuals to the NHIF is the economic status of individuals. Economic status refers to an individual or group's position in society as reflected by measures such as occupation, income level or the level of education (Stein, Menti, & Rosemberg, 2021). Societal inequalities all over the world have entrenched differences in socioeconomic status and are driven by increments in human capital, living conditions, lifestyle, psychosocial resources (Darin-Mattsson, Fors, & Kåreholt, 2017). A study commissioned by the World Health Organization in 2018 established that the provision of quality and accessible healthcare is an issue that has bedeviled many international development organizations, communities, governments and policy makers principally due to financial constraints (Kohl, 2018). The situation is much worse for developing countries owing to limited resources, competing interests from many other priority areas and exacerbated by high growth rates in population and persistent ailments such as malaria, Tuberculosis and HIV/AIDS (Tabish, 2019).

Another critical determinant of the voluntary enrolment of individuals to the NHIF is their awareness. Awareness alludes to the comprehension perception by an individual or group of individuals of what another individual or group of individuals are doing and how it affects one's own actions (Reinhardt, Mletzko, Sloep, & Drachsler, 2013). Health insurance awareness is dependent upon a number of factors including individuals' socioeconomic status, household attributes such as wealth and size, programme-related factors, socio capital, and institutional factors (Kimani, Ettarh, Warren, & Bellows, 2014). Programme-related factors may include the extent of ownership of mass media devices given that there is a direct correlation between this and the level of awareness of the availability of various health insurance schemes and even the uptake of the same (Prat & Strömberg, 2013).

Additionally, in order for individuals to voluntarily enrol into the NHIF, they require the right quality of services. Universal Health Coverage (UHC) seeks to see that everyone can access quality services that they need at an affordable cost (Mehl & Labrique, 2014). The services covered should be of sufficient quality and quantity hence UHC initiatives aim to

expand coverage especially to the poorest population. The services to be covered include preventive, promotion, treatment, rehabilitative and palliative care services. Service coverage is important in terms of depth and breadth. Over years, cases such as absence of requested services, additional charges for medicines and lack of diagnostic facilities have been reported. There have been delays in seeking treatment because of the transition process from one facility to another and additional costs charged for utilization of services (Ariga, 2018). Therefore, some members had lost trust in the health systems and confidence in the benefit package. Lack of access to the stated benefits is a reason why some potential members did not find enrolment attractive while existing ones may not renew their membership and therefore the need to ensure that the accredited healthcare providers deliver and comply with agreed quantity and quality services (Levesque, Harris, & Russell, 2013). This study is designed to examine factors influencing voluntary enrolment and retention into the National Hospital Insurance Fund (NHIF).

1.1.1 Overview of Kenya's Health Financing System

Kenya's health financing system features a mixture of options. Firstly, the Government finances healthcare through tax revenues and support from donor partners. Secondly, members make both compulsory contributions (for formal employees) and voluntary contributions (for informal employees or the unemployed) to the National Hospital Insurance Fund (NHIF). Thirdly, there are also contributions from members to private insurance companies. Finally, the uninsured citizens are compelled to make out-of-pocket payments for health services (Barasa *et al.*, 2017).

A recent addition to these is the community-based health insurance, which was established in 1999 and is yet to have a wide coverage. As at 2014 according to the Kenya Community-Based Health Financing Association (KCBHFA), only 1% of the insured population was covered across their nine insurance institutions (Kimani *et al*., 2012). Healthcare services are procured in a number of ways. Firstly, national and county health departments undertake to subsidise public facilities by providing budgetary allocations to hospitals. Secondly, public and private health insurers are contracted by the NHIF to provide healthcare services for its members. Thirdly, private health facilities are contracted by private health insurance

companies to provide healthcare services for their members (Barasa, Rogo, Mwaura, & Chuma, 2018).

1.1.2 Overview of the National Hospital Insurance Fund (NHIF)

The NHIF is a public institution that was established in 1966 to provide mandatory health insurance to formal sector employees, and its mandate later expanded to cover informal sector workers in 1998 (Deloitte Consulting Limited & International Finance Corporation, 2011). Formal employees are expected to register with NHIF compulsorily and make monthly payments on a pro-rated basis in accordance with their monthly incomes. However, informal employees may register with the fund voluntarily where they are expected to pay a flat rate contribution (Barasa *et al*., 2018).

NHIF procures healthcare as a passive undertaking rather than a strategic one (Munge, Mulupi, Barasa, & Chuma, 2018). Approximately 19% of the Kenyan population is covered by HI, with the NHIF dominating the sector with 16% of this, leaving a paltry 1% for the 32 private health insurers (Barasa *et al.*, 2018). The Government has demonstrated its commitment to the attainment of UHC by carrying out a number of capacity building initiatives on the NHIF through the introduction of a several reforms during the last eight years. NHIF's strategy is to enhance accessibility to quality health care services through the expansion of the population coverage as well as insulating members from the negative impact of out-of-pocket expenses. As the most widely used HI in both public and private sectors, the NHIF represents the best chance for enabling the attainment of Kenya's commitment to UHC by 2022 (Barasa *et al.*, 2018).

1.1.3 Voluntary Health Insurance

Individuals who are unemployed or employed in the informal sector may seek financial protection from the incurrence of health costs by opting to make regular payments voluntarily as part of a voluntary health insurance (VHI) scheme. The organisation and management of such schemes may be through government or even non-profit organisations (WHO, 2013).

Voluntary enrolment is, among other factors, dependent on the population's ability to pay the premium. According to the Kenya National Bureau of Statistics, the population of Kenya

was 47.5 million by the end of 2019 with 46.6% of this living below the poverty line. The situation in Busia County, which is the county where the research data will be collected, is much worse with an estimated 69.3% living below the poverty line (Omusotsi, et al., 2019).

The economic disparities have meant that the wealthy get access to healthcare while the poor do not or if they do, it is not quality healthcare. Countries seeking to close the gap and ensure UHC is achieved are doing so using the "bottom-up approach"; they seek to enhance the accessibility by lower income populations to health care services as well as financial protection (Jowett & Kutzin, 2015).

1.1.4 Busia County

The total number of health facilities in the County are 81. The main causes of morbidity and mortality in the County include road traffic accidents (RTAs), malaria, respiratory infections and skin diseases. The lack of hygiene has been identified as the primary cause of the majority of the ailments. There has been strong response to immunization campaigns throughout the County with 69% of the children under 5 being covered in 2010 (Busia County, 2018). According to the National AIDS and STI Control Programme (NASCOP), HIV prevalence has dropped slightly from 7% in 2013 to 6.7% in 2017. The education statistics indicate that there are 638 primary schools and 162 secondary schools populated by 252,057 and 52,488 students, respectively; as well as 25 Vocational Training Centres and 3 constituent university colleges (Busia County, 2018).

1.2 Problem Statement

The Kenyan population is per the 2019 census was 47.5 million, it has been experiencing a rise in the burden of non-communicable diseases from 25% in 2005 to 39% in 2017. The country has also been hampered by financing challenges for health care with only about 3.5% of MoH's budget being allocated to community health and primary health care in the year 2016/17. Additionally, the general government health expenditure (GGHE) as a proportion of the GDP was only 2%, well below the WHO recommended threshold of 5% and placing the country behind schedule in its pursuit of UHC (Ministry of Health, 2020). Despite its commitment to the SDGs, the Kenyan Government has been unable to properly integrate

appropriate mechanisms for both vertical and horizontal coordination that have led to an inability to keep in check prevailing 'turf wars' between ministries, public sector agencies and other primary stakeholders (Mauti, et al., 2020). This is a situation that has made it difficult to implement the Government's stated objective of achieving UHC by 2022 and exposed the vulnerable informal sector to financial risk owing to their inability to make out of pocket payments (Obare, Brolan, & Hill, 2014).

Researchers have tended to focus on the effects of socio-economic factors on the uptake of health insurance such as Nyaboga (2019); and Mwaura, *et al*., (2021) but such studies have been conducted in different geographical settings than Busia County, which is the context of this study meaning that their findings may not be accurate for this study. There are other studies such as Barasa, Kazungu, Nguhiu and Ravishankar (2021), whose context was international; and Langat, Naibei and Getare (2017) who focused on economic factors as one of the determinants of the uptake of general insurance rather than health insurance as the dependent variable. This indicates that there are prevailing gaps in the body of knowledge particularly in the determination of the relationship between economic status and the voluntary uptake of health insurance.

The research on the relationship between individual awareness and the uptake of health insurance in Kenya features works such as Kituku, Amata and Wachira (2016) who focused on UNAITAS Sacco members in Murang'a County; Wasike, Gachohi and Mutai (2017) who focused on informal settlements in Kibera, Nairobi; and Syombua (2018) who focused on a national survey. This underscores the need for this study given its unique geographical context of Busia County.

The existing body of knowledge on the influence of cultural practices on the uptake of health insurance in Kenya has focused predominantly on religious beliefs specifically (Hassan, Mwaura-Tenambergen, & Eunice, 2017; and Muiya, 2017) with only Gitau and Sile (2016) investigating the impact of cultural factors in insurance uptake. Indeed, even Gitau and Sile (2016) dwelt on general insurance not health insurance. This reflects a considerable gap in the existing body of knowledge, and indicates the importance of this study.

The relationship between quality of service and the uptake of health insurance in Kenya has also being poorly researched with only limited attention from Gathu, Mwangi and Oluoch (2016). The majority of researchers have tended to focus on general determinants of the uptake of health insurance such as Maina, Kithuka and Tororei (2016); Mohamed (2020); Lolos (2018); and Kipaseyia (2016). This shows that there is a demonstrable need for more focused research on this relationship, particularly within the informal sector of Kenya since that is where voluntary uptake of health insurance persists.

1.3 Research objectives

1.3.1 Overall Objective

To determine factors influencing voluntary National Hospital insurance Fund enrolment and retention, a case of Busia County.

1.3.2 Specific Objectives

i. To examine the influence of economic status on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia County
ii. To establish the influence of individual awareness on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia County
iii. To determine the influence of cultural practices on retention of individuals voluntary enrolled with the NHIF in Busia County
iv. To explore the influence of quality of service on retention of individuals voluntary enrolled with the NHIF in Busia County.

1.4 Scope of the Study

The study covered four out of the seven sub counties in Busia County; Teso North, Matayos, Bunyala and Butula where a voluntary NHIF enrolment project had been conducted through a collaborative partnership between Busia County and AMPATH Kenya.

1.5 Significance of the Study

The findings of this study will be crucial in illuminating trends of health insurance uptake in the informal sector of the economy in addition to providing working data on modelling the

concept of universal health coverage for both county and national governments. The findings may provide insight to future researchers on voluntary or compulsory revenue collection and pooling models on the path to realizing UHC.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the previous studies on factors influencing voluntary national hospital insurance fund enrolment and retention. The chapter covers theoretical review and empirical review, conceptual framework, Research gap and summary of the related literature.

2.2 Theoretical foundation

A theoretical review is a structure that guides research by relying on a formal theory that has been constructed by applying an established, coherent explanation of certain phenomena and relationship (Grant & Osanloo, 2014). Indeed, a theoretical review attempts to build a case for the importance of the study by presenting and reviewing the concepts, terms, definitions, models and theories found in a literature base and viewed from the orientation of a particular discipline (Rocco & Plakhotnik, 2009). This paper will explore a number of theories on insurance in order to build a case for the importance of the study.

Health insurance is an area that has been researched for a long time. There are several theories that have been developed on the subject. These include John Nyman's 2001 Theory of Demand for Health Insurance, which held that consumers' decision to acquire health insurance is predicated on the net comparison between the expected utility without insurance and expected utility with insurance. Thus, if the latter exceeds the former then the consumer will acquire the health insurance and vice versa (Nyman, 2003). Another theory is the theory of health insurance by Manning and Marquis (1996) who examined the trade-off between risk pooling and moral hazard. Thus, their theory stated that the optimal choice of a viable health insurance from an economic standpoint is based on the trade-off between the benefits accrued through the reduction of a family's financial risk and the adverse effects of wrongful inducements to acquire more health care. Other theories include Pauly's conventional health insurance theory and Louise's expected utility theory. Given that both of these theories cover concepts that are common in all the other theories, such as expected utility and moral hazard,

they will form the theoretical foundation of this paper and will be discussed at length in the following sections.

2.2.1 Conventional health insurance theory

The conventional health insurance theory developed from Mark Pauly's 1968 seminal paper on the economics of moral hazard suggests that, additional spending by individuals on health insurance should be viewed as a welfare loss to society given that it has a catastrophically adverse effect on the pricing of healthcare. It compels the procurement of an inordinately excessive level of healthcare by consumers than they would have at normal price at a value considerably below market price despite the costs incurred by the producer (Nyman, 2008). The imposition of coinsurance payments, deductibles and capitations represent the suggested solutions by the theory for the moral hazard since they seek to raise the price of medical care to insured customers while minimising inefficiencies in expenditures. Prevailing medical health care systems have developed as a direct consequence of the suppositions of this theory (Einav & Finkelstein, 2018).

According to Nyman (2008), the theory goes on to suggest that peoples' preference for the uncertainty of making small premium payments to the risk of falling sick and incurring high medical bills is the primary inducement for their acquisition of insurance. Further, given that the cost of production outweighs the benefit gotten from the purchase of any additional health care, there is no incentive for people to do so; therefore, co-payment and managed care policies have been advanced by economists as the most effective means of preventing the consumption of this additional and apparently worthless care. However, this theory supposes that the consumers have the disposable income to make the small premium payments, which may not necessarily be the case for the informal sector workers given their relatively poor economic status. It appears to be more suited to individuals who have more disposable income. This notwithstanding, it provides a useful foundation for the establishment of workable policies for health insurance schemes targeting the informal sector.

Whilst the theory assumes the connection between previous experiences with a given health insurance plan as a determinant of the present valuation of each alternative HI cover, future health insurance acquisition behaviour, when conducted optimally, is a product of the

assessment of current information (Cromwell, Trisolini, Pope, Mitchell & Greenwald, 2011). The models used by the theory are too simplistic to properly explain complex reality owing to continued variations in the applied techniques and technologies, and behavioural norms; thus necessitating permanent preferences and production functions to be overlooked (Kazaure, 2019).

Given that the theory has a strong connection to pricing of healthcare, it follows that it is consistent with independent variable one (economic status). Additionally, is can be surmised that the theory is aligned with independent variable two (individual awareness) since peoples' preference for making small premium payments is based on the fact that they do not want the lack of awareness (uncertainty) of falling sick and incurring high medical bills. Further, given that the theory presumes a connection between previous experiences with a given health plan, it figures that it is also aligned with independent variable four (quality of service). Lastly, the theory is aligned with the dependent variable (enrolment and retention to NHIF) since the decisions made by individuals regarding pricing of healthcare can either enhance their enrolment and retention to the NHIF or hinder it.

2.2.3 Expected Utility Theory

The Expected Utility Theory, which was advanced by Louise in 1954 holds that individuals make coherent and consistent choices by considering probable outcomes of alternative courses of action; ultimately the payoffs are independent of the probabilities. Additionally, the decision making process involves assessing the expected utility values when choosing between risky or uncertain prospects. These are the products of the aggregated utility values of outcomes and their respective probabilities (Harrison, 1994). Owing to the fact that voluntary decision-making is primarily based on expected utility, it is apparent that this theory provides a solid foundation for explaining the reasons why informal sector workers opt in or out of health insurance schemes.

Schneider (2004) posited that the theory can be adapted to the enrolment to health insurance by consumers through the consideration of outcomes of enrolment to a scheme against other alternatives and arriving to a conclusion based on the expected maximum utility. Wu (1996) affirmed that the Expected Utility Theory has a number of limitations. Firstly, it fails to make

provisions for how contextual characteristics influence the choices of decision makers. Secondly, decision makers are unable to make any cognitive simplifications in their selections, thereby only managing to satisfy rather than to maximize. Indeed, the lack of adequate awareness about the options of offer makes it difficult for informal workers to make decisions that will enable the maximization of utility so have to settle for satisfaction.

There are three critical characteristics of the theory and these include: the processes associated with decision made in conditions of risk and uncertainty; the assignment of linearity of decision weights to options; and fixed asset positional judgements. As a direct consequence of these assumptions, the theory always forecasts the selection of better alternatives (Sharpe, 2007).

Briggs (2014) supposed that under expected theory economists used to think that rigid interpretations were always applicable to rational agents, however, they now hold the view that the theory is at best a useful and perceptive tool of approximation. Indeed, experience has shown that peoples' decision-making process is riddled with systematic violations and fabrications. Kahneman and Tversky (1979) demonstrated using their prospect theory that there are inconsistencies whenever individuals express their preferences among the same choices, depending on the presentation of these choices.

This theory is consistent with independent variable one (economic status) owing to the fact that the concept of utility is based on the net effect of weighing the costs (this is an economic aspect) versus the benefits of acquiring insurance. It is also consistent with independent variable two (individual awareness) since the process involved in choosing among various risky prospects requires an awareness of the level of risk involved. Additionally, the theory is consistent with independent variable three (cultural practices) since the level uncertainty avoidance is a cultural dimension of behaviour that determines the level of risk that an individual is prepared to accept. Further, the theory is consistent with independent variable four (quality of service) since this is an expression of the benefits that accrue from the acquisition of insurance which in turn help to determine the level of utility. Finally, since an individual makes a choice to enrol or remain on a given insurance cover on the basis of

expected utility, it can also be surmised that the theory is consistent with the dependent variable (enrolment and retention to the NHIF).

2.3 Empirical Review

The empirical review refers to an organised collection of results from studies from the past that represent observations and propositions based on sensory experience and/or derived from experience through methods of inductive logic (Cooper & Schindler, 2014). In other words, an empirical review is a technique of discovery that is dependent on systematic observation and data in order to enable appropriate conclusions to be drawn (Beins, 2013). The management of public healthcare is an extremely involving undertaking for any government given the sheer numbers of people and the resources required. Some of the challenges that may be encountered include the accommodation of the interests of various stakeholders, the equitable coverage of all income groups, the mobilisation of support for UHC and financial risk protection, and convincing the poor to make voluntary contributions to a health cover (WHO, 2013). Thus, the empirical review is broken up into thematic segments that are aligned with the specific objectives to establish the existing body of knowledge. The following sections will explore various empirical studies carried on all the variables on the study starting from economic status then individual awareness, cultural practices, quality of service, and enrolment and retention to the NHIF, respectively.

2.3.1 Economic status and voluntary enrolment of individuals to the National Hospital Insurance

One of the critical determinants of an individual's consumption behaviour is the economic status. According to Bowles and Gintis (2001), economic status refers to an individual's characteristics that relate to earnings such as wages and salaries, income, wealth and occupational prestige. Kapsos and Bourmpoula (2013) distinguish between five main classifications of economic status. Firstly, extreme working poor who earn less than US $ 1.25. Secondly, moderate working poor earning between US$ 1.25 and US$2. Thirdly, near poor workers earning between US$2 and US$4. Fourthly, developing middle class workers earning between US$4 and US$13. Lastly, developed middle class workers earning above SU$13. Owuor (2016) explained that as far as the uptake of insurance products is concerned,

the economic status of an individual dictates the purchasing power, which, in turn, determines the perceived importance of insurance to an individual.

Mathur, Paul, Prasad and Das (2015) did a study on understanding the perception and factors influencing private voluntary health insurance and found that there is a strong correlation between medical expenditure, dependent family members, health status and individual's perception of product; and health insurance subscription in the region. Additionally, the study established that individuals' insurance status is also dependent upon their personality traits. A study by Adebayo, *et al*. (2014) on factors that influence the uptake of community health insurance determined that the majority of residents in low and middle income countries frequently have to deal with unaffordable healthcare expenses given that these expenses are distributed according to the costs incurred rather than the ability to pay. Thus, it is imperative for the governments of such countries to come up with subsidized healthcare systems, which can protect such community members from impoverishment arising from the need to meet high medical costs given that their standards of living are too low to support such payments. These systems would provide alternative financing for healthcare to reduce out-of-pocket payments particularly for community members working in the informal sector.

Ogundeji, Akomolafe, Ohiri and Butawa (2019) examined the factors influencing willingness and ability to pay for social health insurance in Nigeria and established that the vast majority of household heads (82%) were willing to pay the stipulated insurance premiums on behalf of their households; rural residents were willing to pay lower average premiums than their urban counterparts; and the factors that had the greatest influence on these results were household size, level of education, occupation and household income. Further, only 65% of the households had the ability to pay the average premium.

Govender, *et al*. (2013) analysed the coverage of the South African government health insurance scheme and posited that the most apparent causes of the poor enrolment to both contributory and non-contributory insurance schemes were the inadequacy of information, prevailing administrative challenges experienced during the enrolment process, and high costs of the services.

In a study on the assessment of equity in health care through the national health insurance schemes in Ghana, Odeyemi and Nixon (2013) affirmed that members were discouraged from enrolling to the CBHI by the long waiting time to be attended to by a medical care provider; the premiums were also too pricey; the premium payment model was also found to be inconvenient; and the discrimination by the service providers on the basis of socioeconomic status.

Muketha (2016), in a study investigating the determinants of the uptake of NHIF among informal sector workers in Kenya, affirmed that many households in the informal sector depend on traditional coping mechanisms to deal with adverse effects of ill health such as selling of household assets and informal borrowing given that they are typically living from hand to mouth. Indeed, many households may opt out of health care services altogether making them more susceptible to chronic ailments such as HIV/AIDS, hypertension and diabetes, and reducing their ability to live sustainable healthy lives.

2.3.2 Individual awareness effect on voluntary enrolment of individuals to the National Hospital Insurance Fund

Individual awareness refers to the level of conscious knowledge, or realisation or interest in getting the knowledge relating to a given subject matter, or the perception of events, objects or sensory patterns (Gafoor, 2012). Awareness may also be defined as the knowledge and comprehension of the occurrence or existence of something (Merriam-Webster, 2020). Within the realm of insurance, individual awareness pertains to the knowledge of insurance products, the risk involved, the financial cost, the different options available, the benefits associated, among others (CDC Consult, 2020).

Setswe, Muyanga, Witthuhn and Nyasulu (2015) did a study on public awareness and knowledge of the National Health Insurance in South Africa. Accordingly, the level of public awareness of the NHI was quite high at 80.3%; as far as the knowledge of how the NHI works is concerned, 49.8% responded in the affirmative; and the majority of respondents (71.8%) were ignorant about how the NHI concept originated and developed in South Africa. The poor knowledge also extended to what the NHI would pay for, that NHI actually pays for medical expenses, and the assurance of basic health as a result of health insurance.

Ariga (2018) investigated the determinants of enrolment and retention of members of the informal sector into the NHIF and established that organized members of the informal sector in Kenya are aware of the importance of NHIF, in fact 59% of those that voluntarily enrolled are aware of the health benefits of NHIF owing to the efforts of healthcare givers who have made NHIF services easily accessible to potential beneficiaries. Additionally, the affordability of benefits packages was found to be well within the established WHO standards.

A study by Mbau, Kabia,, Barasa, Honda and Hanson (2018) on NHIF reforms in Kenya found that although there have been many critical reforms by the Kenyan Government on NHIF including an upward revision of premium contribution rates for informal sector members, expansion of benefit entitlements to members, and provider payment reforms, the use of mass media communication outlets such as TV and radio advertisements as well as billboards on major roads to convey NHIF information has locked out critical segments of the population such as the elderly, uneducated, rural and marginalized communities and left them unaware of the benefits of NHIF.

Maluka, *et al*. (2018) did a study on contracting-out primary health care services in Tanzania towards UHC. The study revealed that Tanzania's long history of public-private partnerships in the health sector are a reflection of the well-entrenched institutional frameworks that guide interactions between the Government and NSPs. Indeed, through the management of NSP facilities by the government and faith-based institutions, demand for contractual arrangement has been created. Essentially, the support provided by development partners in the creation of public awareness and funding are a great indicator of their agreement with the established approach.

A study by Namuhisa (2014) on the determinants of uptake of national hospital insurance fund scheme by the informal sector in Nairobi County revealed that: there was a low enrolment of respondents to the NHIF (32%); and there is strong association between the NHIF uptake and the income level, awareness of the benefits of NHIF and accessibility of NHIF outlets. A different study by Maina, Kithuka and Tororei (2016) on perceptions and uptake of health insurance for maternal care in rural Kenya found that there is a strong

linkage between individuals with tertiary level of education and the uptake of insurance. Additionally, individuals of were aware of the benefits of insurance as well as the limits of the coverage were more willing to enrol with an insurance scheme. Finally, there was no correlation between both the level of income and family size and insurance uptake.

2.3.3 Cultural practices on retention of individuals voluntary enrolled with the NHIF

Culture is a pervasive concept that has interested many a scholar for a very long time. Lebrón (2013) posited that it comprises established modes of thinking, feeling and reacting that are conveyed and received primarily through the use of symbols. Schein (1990) affirmed that it consists of generally accepted and shared values, beliefs and ideas, as well as learned behaviours that provide individuals with a sense of belonging. Gitau and Sile (2016) explained that cultural practices that have a bearing on the uptake of insurance include religious beliefs surrounding death, traditional cultural beliefs, education and language.

Kotoh, Aryeetey and Van Der Geest (2018) conducted a study on factors that influence enrolment and retention in Ghana's National Health Insurance Scheme and determined that the enrolment and retention in the NHIS was affected by multi-dimensional and cross cutting factors. Firstly, the knowledge of the associated benefits as well as the good behaviour of healthcare providers act as a great incentive for enrolment and retention on the NHIS. Secondly, poverty discourages enrolment and retention, while traditional risk-taking arrangements have pushed people to only enrol or renew their membership upon necessity. Finally, challenges experienced in the delivery of services as well as the poor behaviour of healthcare providers have acted as barriers to enrolment and retention on the scheme.

Mulupi, Kirigia and Chuma (2013) assessed community perceptions of health insurance and their preferred design features and found that despite a high level of awareness by community members of HI schemes, they were not particularly knowledgeable about how the schemes work as well as the interplay between income and risk cross-subsidisation. The majority of people were dissatisfied with the scheme with one of the key issues being the loss of confidence by individuals due to contributions being non-refundable or transferrable whether or not one was sick. This notwithstanding, the government was found to be the most trusted

provider of health insurance through the NHIS owing to the comprehensive nature of the package offered with no co-payment.

Brinda, Andrés and Enemark (2014) carried out a study on the correlates of out-of-pocket and catastrophic health expenses in Tanzania and found that cultural practices in rural areas which foster the growth of larger household sizes lead to high out-of-pocket health expenses since these individuals choose to use traditional healers or only seek healthcare whenever a family member is sick given that they have more pressing economic concerns. Indeed, the lack of adequate provisions of the government for people within the informal sector through subsidized health insurance, have left many of them vulnerable and susceptible to these catastrophic out-of-pocket expenses and meant that they are unable to voluntarily enrol with health insurance.

Ombiro and Otieno (2019) studied the utilization of the national hospital insurance fund in Embu County and found that only a third of enrolled members (who were less than half of the respondents) were actively using the fund to settle their medical expenses. There was a direct correlation between the employment status and level of wealth and NHIF enrolment. Barriers to enrolment were found to be unaffordability of premiums, lack of knowledge of how to enrol and how the scheme works, some respondents were either disinterested or found the scheme not to be useful to them.

Niyinyumva (2019) did a study on influence of culture on health insurance uptake among patients at Chogoria Mission Hospital, Tharaka Nithi County. The results indicated that the most influential determinants of HI uptake are religious beliefs, the use of traditional medicine, misconception of value, patriarchal culture, and peer influence. These misconceptions manifested in beliefs such as providing for health insurance would be tantamount to inviting diseases or evil into the home.

2.3.4 Quality of service on retention of individuals voluntary enrolled with the NHIF

Organisations are motivated to achieve success through the attainment of predetermined objectives including high quality of service. The quality of service refers to a service provider’s ability to ensure customer satisfaction through the provision of efficient

performance so as to contribute to the achievement of profitability (Ramya, Kowsalya, & Dharanipriya, 2019). Quality of services play a vital role in the uptake of health insurance products particularly the number of qualified health staff, their attitude, the presence of quality of utilities, the efficiency of the payment systems, and the quality and sufficiency of drugs (Fenny, Kusi, Arhinful, & Asante, 2016).

A study by Abuosi, Domfeh, Abor and Nketiah-Amponsah (2016) on health insurance and quality of care found that uninsured and insured patients exhibited no discernible differences in respect to perceptions of quality but there was a distinction between the two groups as far financial access to care was concerned. Additionally, the study established that whilst health insurance has enable more equitable finance access to healthcare in Ghana, corrupt practices by some healthcare providers such as collection of informal fees have had an adverse effect on the same.

Obadha, Chuma, Kazungu, Abiiro and Barasa (2020) investigated preferences of healthcare providers for capitation payment in Kenya using a stratified random sampling approach on paper questionnaires administered to senior health facility managers from all 47 counties. They study found that capitation options with infrequent payment schedules, delayed disbursements, and broader pay packages were less popular than those that paid higher individual rates. Indeed, enrolled members tended to prefer higher payment rates as compensation for delayed disbursements.

A study was carried out by Mbau *et al*. (2020) on purchasing reforms by the NHIF which involved embedded case study methodology where data was collected nationally as well as in two purposively selected counties, 41 in-depth interviews were conducted. Accordingly, despite the best intentions which included an upward revision of premium contribution rates, an expansion of the benefit cover to include outpatient services as well as specialized services, and an introduction of provider payment methods and rates for new outpatient and specialized benefit packages; these reforms were poorly communicated and not affordable for some critical population groups, and there were gaps in the service delivery infrastructure. As a result, the intended benefits of the reforms were not felt by the intended beneficiaries.

A study by Spieker (2020) found that in response to quality assurance limitations on the part of the NHIF, the Ministry of Health launched a strategic collaboration with PharmAccess, a Dutch NGO, in 2013 to institutionalize accredited clinical and business quality standards as a part of a national quality assurance system whose scope included patient care, both in-patient and out-patient care; healthcare organization; specialized services; and ancillary services. This capacity building initiative focused on NHIF Quality Assurance Officers from 15 NHIF regions and included clinical officers, nurses, laboratory technologists, and public health officers in a 5-day quality assessment training followed by a roll-out of bi-monthly quality assessment in five regions

Nsiah-Boateng, *et al*. (2019) conducted a study on value and service quality assessment of the NHIS in Ghana and affirmed that there was an increment in the incurred claims ratio between 2011 and 2013 but reduced in 2014. Additionally, there was a drastic increment in the proportion of claims settled beyond 90 days in the same period. Further, although the value of the NHIS benefit package to subscribers rose, this was countered by the lack of responsiveness by the scheme to members' financial needs.

Salim and Hamed (2018) conducted an exploratory analysis of health insurance service in Sudan from the perspective of insurers and determined that although Social Health Insurance and Private Health Insurance have been available in Sudan for a long time, UHC has yet to be achieved. There was a generally good impression by respondents regarding the comprehensiveness and quality of the services but there no information relating to customer satisfaction. Apart from the inability to attain UHC, the health care services are not yet sustainable and there have been challenges in recruiting individuals from the informal sector and self-employed population.

Mosadeghrad (2014) assessed factors influencing healthcare service quality and found that in order to ensure quality healthcare the patients must cooperate with the service provider while the latter should provide a conducive environment for the former. Other factors include personal characteristics of the provider and patient, organisational factors pertaining to the healthcare provider, the prevalent healthcare system and the external environment.

2.3.5 Enrolment and Retention to NHIF

Kenya, like many developing countries, has been struggling to meet her UHC objectives due to difficulties in extending the coverage of health services to the poor who make up the majority of her population owing to health financing challenges. This situation has persisted despite the reforms undertaken by the NHIF to offer more accessible Voluntary health insurance (VHI) covers (Barasa *et al.*, 2017). The enrolment of individuals onto VHIs entails the discretionary registration by individuals through the payment of the stipulated premiums once they have been convinced of the expected utility of the schemes (Sagan & Thomson, 2016). Whilst the enrolment of individuals on to VHIs is difficult enough, it is even more difficult to ensure retention owing to the financial challenges faced by members of the informal sector that increase attrition rates (Barasa *et al.*, 2017).

A study by Kimani, Ettarh, Kyobutungi, Mberu and Muindi (2012) on the determinants of participation in public insurance by urban slum residents established that 10% were actively participating in NHIF while those who were members of microfinance institutions were most likely to be voluntarily enrolled with the NHIF. Additionally, whilst many of the respondents in the study expressed a willingness to encourage others within their circles to also enroll with the NHIF, they felt that the inability to pay would be an impediment to their voluntary enrolment. The study recommended the inclusion of microfinance as a viable financing option as part of a comprehensive national health financing policy framework.

According to Musungu (2021), despite the best efforts of the Government of Kenya through its Ministry of Health, initiatives aimed at the expansion of the coverage of NHIF, particularly among the informal sector, have not led to yielded the intended results with an estimated 73 percent not renewing their membership in 2017 reflecting a very high rate of attrition. The main causes of these were found to include the lower capacity of informal workers to pay for health insurance; lack of organization of the informal sector into recognizable large groups has made it difficult to recruit, control make regular collection of contributions; and the fact that it is a voluntary scheme.

Mukhwana, Ngaira and Mutai (2015) carried out a cross sectional study on the determinants of uptake and utilization of NHIF medical cover by people in the informal sector in

Kakamega County using mixed methods research design. Two sub-counties were selected randomly then two divisions, and 100 households within each division. According to the study, the respondents continued participation in the NHIF was dependent upon a number of factors including the cost of the services, domain of services and illnesses covered, as well as the harshness of penalties levied for late payments. Further, the scheme was adversely affected by negative publicity of fraud cases involving NHIF management, and the requirement for individuals to upload payments electronically made it difficult for those who were not educated.

Suchman (2018) carried out a study on the accreditation of private providers with national health insurance to improve the services to the low income-populations in Ghana and Kenya using in-depth interviews with 204 providers as well as 10 focus group discussions for a total of 171 participants. The results indicated that reforms within the NHIF in Kenya which led to increased affordability of the scheme to members of the informal sector created the perception of enhanced accessibility of health services for the poor and reduced the previous out-of-pocket payment concerns. However, system providers in both countries had a tendency to charge clients for services that they perceived to be above and beyond reimbursable expenses.

2.4 Research gaps

Several studies have been done in regard to enrolment and retention of health insurance cover. Mathura, Paul, Prasad and Das, (2015): Ogundeji, Akomolafe, Ohiri and Butawa, (2019) tried to find out our economic status affects the health insurance cover. The above however never showed how the economic factors affect voluntary retention and enrolment to universal health coverage. Setswe, Muyanga, Witthuhn and Nyasulu, (2015) did a study on public awareness and knowledge of the National Health Insurance in South Africa, the study utilized descriptive statistics. Findings showed that those who were aware of the health insurance enrolled and benefited from the cover. The study however never showed awareness practices on benefits of undertaking the health insurance cover. Namuhisa, (2014): Maina, Kithuka and Tororei, (2016) identified perception on uptake of the health insurance cover. The findings showed that income and education level highly influence the voluntary uptake

and retention of universal health coverage. The studies however never showed how income and education create awareness on health coverage systems. Kotoh, Aryeetey and Van der Geest, (2018) did a study on factors that influence enrolment and retention in Ghana's National Health Insurance Scheme. The results show that factors that influence enrolment and retention in the NHIS are multi-dimensional and cut across all stakeholders. People enrolled and renewed their membership because of NHIS' benefits and health providers' positive behavior. The study nonetheless failed to show the influence of culture on uptake of universal health coverage.

Ombiro and Otieno, (2019) studied the utilization of the national hospital insurance fund in Embu County and found that only a third of enrolled members (who were less than half of the respondents) were actively using the fund to settle their medical expenses. There was a direct correlation between the employment status and level of wealth and NHIF enrolment. The study however was done in Embu County unlike my study which is a case of Busia County. Abuosi et al., (2016) and Mosadeghrad, (2014) assessed on the quality of service and health insurance. From the findings, the major quality of care concern affecting all patients was the problem of inadequate resources, especially lack of doctors, lack of drugs and other basic supplies and equipment to work with. Also, quality in healthcare is a production of cooperation between the patient and the healthcare provider in a supportive environment. The studies above however never showed how quality service affects enrolment and retention of universal health coverage.

Table 2. 1: Summary of Research Gaps

Author of Study	Focus of study	Methodology	Findings	Knowledge Gaps	Focus of Current study
Mathur, Paul, Prasad and Das, (2015):	perception and factors influencing private voluntary health insurance	online questionnaire sent to sampled respondent followed by analysis	Family members, medical expenditure, health status & product perception were key determinants of health	The study never showed how the economic factors affect voluntary retention and enrolment to universal health coverage	Effects of economic status on voluntary enrolment and retention of NHIF

			insurance subscription		
Ogundej, Akomolafe , Ohiri and Butawa, (2019)	Factors influencing willingness and ability to pay for social health insurance in Nigeria	4000 Interviews in 1020 households. Contingent valuation used to elicit the willing to pay (WTP) for the household using the bidding game technique.	The average amount individuals were willing to pay was lower in rural areas compared to urban areas	The study never showed how the economic factors affect voluntary retention and enrolment to universal health coverage	Effects of economic status on voluntary enrolment and retention of NHIF
Setswe, Muyang, Witthuhn and Nyasulu, (2015)	Public awareness and knowledge of the National Health Insurance in South Africa	Descriptive cross-sectional study was conducted and a total of 748 adult respondents were sampled using a two-stage systematic sampling design.	80.3% of the respondents aware of the NHI and 49.8% did not know how the NHI works; and 71.8% lacked awareness about the origin of the development of the NHI concept in South Africa.	The study however never showed awareness practices on benefits of undertaking the health insurance cover.	Individual awareness effect on voluntary enrolment of individuals to the National Hospital Insurance Fund
Namuhisa(2014)	Determinants of uptake of national hospital insurance fund scheme by the informal sector in Nairobi County	Descriptive study design; stratified random sampling; the sample size was 97 respondents	The logistic regression model found that NHIF uptake was significantly associated with income level, awareness of NHIF benefits and	The study never showed how income create awareness on health coverage systems	Individual awareness effect on voluntary enrolment of individuals to the National Hospital Insurance Fund

			access to NHIF outlets.		
Maina, Kithuka and Tororei, (2016)	Perceptions and uptake of health insurance for maternal care in rural Kenya	cross-sectional study that sampled 139 pregnant women attending the antenatal clinic at a level 5 hospital in a Kenyan district	Knowing the benefits of insurance and the limits the insurance would settle in claims was associated with an increase in the uptake of insurance. No linkage between Monthly income and number of children.	The study never showed how income create awareness on health coverage systems	Individual awareness effect on voluntary enrolment of individuals to the National Hospital Insurance Fund
Kotoh, Aryeetey and Van der Geest, (2018	Factors that influence enrolment and retention in Ghana's National Health Insurance Scheme.	A household survey was conducted after 20 months educational and promotional activities aimed at improving e nrolment and retention rates in 15 communitie s in the Central and Eastern Regions (ERs) of Ghana	People enrolled and renewed their membershi p because of NHIS' benefits and health providers' p ositive behaviour	The study nonetheless failed to show the influence of culture on uptake of universal health coverage.	Cultural practices on retention of individuals voluntary enrolled with the NHIF

Ombiro and Otieno, (2019)	Utilization of the national hospital insurance fund in Embu County	Across-sectional study design consisting of mixed methods of data collection i.e. quantitative (household survey) and qualitative methods was used	Barriers to utilization of NHIF, particularly the cost of premiums, inadequate information and difficulty accessing needed services threaten to reverse the gains made so far in health insurance and universal health coverage	The study however was done in Embu County unlike my study which is a case of Busia County	Cultural practices on retention of individuals voluntary enrolled with the NHIF
Mosadeghrad (2014)	Factors influencing healthcare service quality	Exploratory in-depth individual and focus group interviews were conducted with 222 healthcare stakeholders	Personal factors of the provider and the patient, and factors pertaining to the healthcare organization, healthcare system, and the broader environment affect healthcare service quality	The study never showed how the factors affecting quality of service affect voluntary enrolment and retention of NHIF	Quality of service on retention of individuals voluntary enrolled with the NHIF

2.5 Conceptual framework

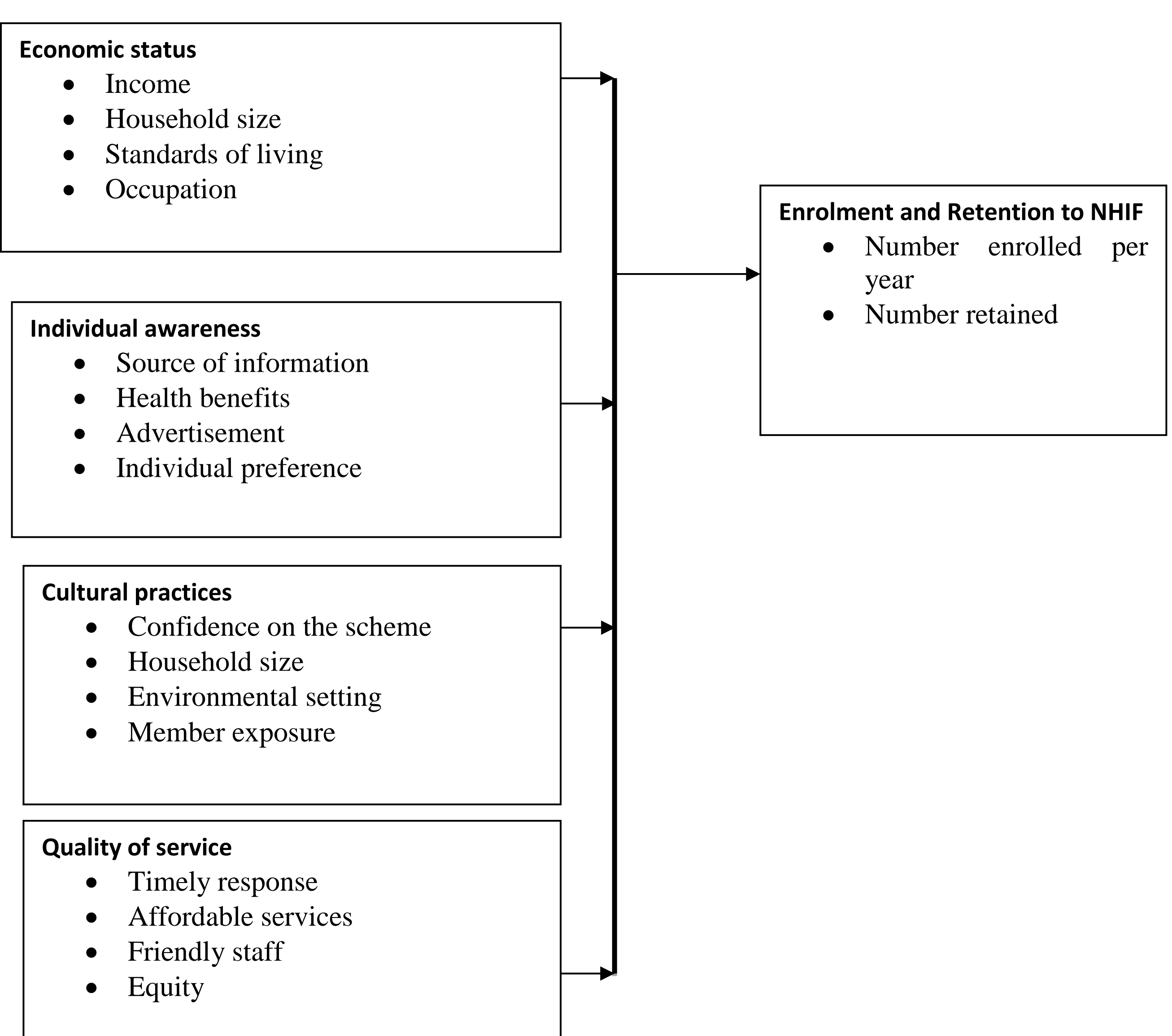

Figure 2. 1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 The Research Design

Kothari (2004) defined research design as the organization of conditions for collecting and analyzing data that enable the combination of research purpose and economy in procedure. Akhtar (2016) posited that research design is the adhesive that brings all the components of a research project together. Kothari (2004) identified three principle categories of research design, namely, exploratory research studies, descriptive and diagnostic research studies, and hypothesis-testing research studies. Exploratory studies are aimed at aiding the formulation of problem to facilitate more accurate investigation. Descriptive studies focus on explaining the attributes of the subjects of a given study while diagnostic studies establish how frequently something occurs.

According to Omair (2015), there are four categories of descriptive study designs. Firstly, case reports – these are singular in-depth investigations of a given case. Secondly, case series – these are collections of cases with similar outcomes to enable the identification of a new phenomenon. Thirdly, correlational studies – these involve the application of secondary data of two or more variables from several sources so as to determine the linkage between the variables. Lastly, cross-sectional studies – involve the use of a representative sample from a given population in order to enable generalizations of the findings. The study adopted a quantitative cross-sectional survey design to examine the factors influencing voluntary retention and enrolment into NHIF. The quantitative cross-sectional survey design focuses on the measurement of the outcome and the exposure of the respondents in a study simultaneously (Setia, 2016).

3.2 Population of the Study

The study population was drawn from Busia County and was concentrated in four sub counties; Bunyala, Butula, Teso North and Matayos. The distribution of population in the four subcounties is; Bunyala – 85,977, Matayos – 142,408, Butula – 140,334, and Teso North

– 138,034 (KNBS, 2019). The accessible population is a subset of target population that can be reached to obtain a sample (Mugenda & Mugenda 2003). Accessible population for the study was household heads in Bunyala – 10,747, Matayos – 17,801, Butula – 17,541, Teso North – 17,254 and NHIF staffs -115. Therefore, the total accessible population for the study was 63,458 respondents as shown in Table 3.1

Table 3. 1: Accessible Population

Category	Target Population
Household heads in Bunyala	10,747
Household heads in Matayos	17,801
Household heads in Butula	17,541
Household heads in Teso North	17,254
NHIF staffs	115
Total	**63,458**

3.3 Sampling Design

The sample size refers to a subset of the population that is taken to be representatives of the entire population (Singh & Masuku, 2013). The researcher obtained the sample size using Yamane formulae (1967).

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size required:

N is the population size = 63,458

e is the level of precision = 0.05

n = 63,458/ (1+63,458*0.05^2)

n = 397

Therefore, the sample size for this study was 397 participants.

The study used cluster sampling because the accessible population was mutually homogeneous yet internally heterogeneous groupings were evident. The accessible population was divided into clusters/groups and a simple random sample was used to select participants from each cluster. This sampling techniques were used because the researcher

could not get information about the population as a whole, but could get information about the clusters. The researcher compiled data from selected clusters and compiled them to get a picture about the sub county. The individual locations and sub location were the clusters in this case. Cluster sampling was important in this study because it allowed the selection of only household heads from the entire population. The method required fewer resources for the sampling process. Therefore, it was generally cheaper as it required fewer administrative and travel expenses.

Table 3. 2: Sample Size

Category	Sample Size
Household heads in Bunyala	67
Household heads in Matayos	111
Household heads in Butula	110
Household heads in Teso North	108
NHIF staffs	1
Total	**397**

3.4 Methods of Data Collection

The study used structured questionnaires to collect data. The structured questionnaire was composed of questions that the respondents answered directly and it contained both open and close-ended questions. The questionnaire had six sections. The first section was used to collect information on the respondents' profile. The second to sixth sections collected data relevant to the study objectives, by focusing on each objective in turn. The original intention was to use a variety of data collection methods including; key informant interviews, focus group discussions and structured questionnaires, however, owing to logistic limitations brought about by the lockdowns occasioned by the Covid-19 pandemic the researcher was not able to use key informant interviews and focus group discussions.

3.4.1 Structured Survey Questionnaires

The study used structured survey questionnaires as the main method of data collection. This is because the surveys helped the researcher to describe the characteristics of a large population which provided broad capability and ensured a more accurate sample for the gathering targeted findings which will help in making conclusion and recommendations. The

advantage of using a structured survey questionnaire was to enable the collection of useful comparable data from a large number of respondents (Mathers, Fox, & Hunn, 2009). The researcher was able to clarify any queries concerning the questions. This ensured that answers were reliably aggregated and that comparisons were made. The questionnaire was developed from the empirical review and organised systematically to mirror the order of the variables in the conceptual framework.

3.5 Pilot Study

A pilot study refers to a small study carried out before the actual field data collection (Cooper & Schindler, 2014). The pilot study was carried to ascertain the validity and reliability of research instruments. A pilot study was carried out in Bungoma County. Bungoma County was chosen for pilot study because the households had the same characteristics as those in Busia County in terms of voluntary National Hospital insurance Fund enrolment and retention. The sample size for the pilot study was informed by a suggestion by Mugenda and Mugenda (2003) to use a sample size of 10% of the study sample size for a pilot study. Therefore, the respondents for the pilot study was 40.

3.5.1 Validity

Validity is defined as the accurateness of the research instruments in measuring the underlying study phenomenon (Cooper & Schindler, 2014). The study used content validity to ascertain the validity of the research instruments. In doing this, the study used thesis supervisors and experts to rate the relevance of the questions in the research instruments. The feedback that the experts gave was used to improve the validity of the research instruments. Besides, the study ensured that the questions in the research instruments were in line with the set study objectives.

3.5.2 Reliability

The reliability of a research instrument is the level in which the research instrument can yield similar results when the instrument is used for the same target population repeatedly((Latunde, 2016). Cronbach's Alpha test of internal consistency was used to test the reliability of the questionnaires in this study. It tests the level in which the questions in the questionnaire

are consistent in giving almost similar findings whenever the instruments are used on the same target population. The study used a Cronbach's Alpha coefficient of at least 0.7 as the threshold of reliability (Mugenda & Mugenda, 2003).

3.6 Data Analysis

The collected data was analysed quantitatively using SPSS version 20 as well as Minitab. Quantitative analysis involved the use of descriptive statistics where tables were used to present frequency distributions of responses to various questions as well as measures of central tendency, namely, mean and standard deviation. The analysis was done by comparing the frequencies with the underlying empirical literature from Chapter 2. Inferential statistical analysis was also conducted using Pearson Coefficient Analysis and Multiple Regression Analysis.

3.7 Ethical Issues in Research

Authorization to conduct the proposed study was sort from Strathmore University and the National Commission for Science Technology and Innovation (NACOSTI). Permission to collect data from the proposed study site was obtained from Busia county health department prior to the commencement of the study. All the respondents were provided with verbal consent to participate in the study and no information was withheld regarding the nature of the study.

Confidentiality of the respondent data was ensured by having the respondents only identified by the national ID number in a password protected computer folder. Each of the participants was treated fairly and with respect. The interview transcripts were also password protected and will be destroyed two years after the study.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Response Rate

According to Saldivar (2012), a response rate is the proportion of individuals who actually submitted their responses to a survey that was administered to them. The study administered questionnaires to 397 individuals and received 318 back, representing a response rate of 80.1% which is consistent with Gordon (2002). This is illustrated in table 4.1 below.

Table 4. 1: Response Rate

Category	Response	Percentage
Returned Questionnaires	318	80.1%
Unreturned Questionnaires	79	19.9%
Total	**397**	**100%**

4.2. Socio-demographic Characteristics of Respondents

The demographic characteristics of the respondents were broken down in terms of the gender, age distribution, level of education, employment status, and family size. These categories were further cross-tabulated with various aspects of NHIF including the registration/enrolment status, knowledge of NHIF, length of enrolment, and NHIF defaulting status. This information was presented in four compounded tables from Table 4.2 through to 4.5. The general socio-demographic characteristics are illustrated in the following figures starting with gender, age, level of education, employment status, and family size, respectively.

The results of the gender distribution of the study are shown in Figure 4.1 which indicates that out of the 318 participants, 137 were male while 181 were female, representing 43.1% and 56.9%, respectively, indicating a relatively good gender diversity amongst the respondents included in the study. These findings corroborate Namuhisa (2014) who

determined that women were more likely to voluntarily enrol on to the NHIF than men given that many of them belong to social welfare groups such as chamas which encourage voluntary enrolment to health insurance.

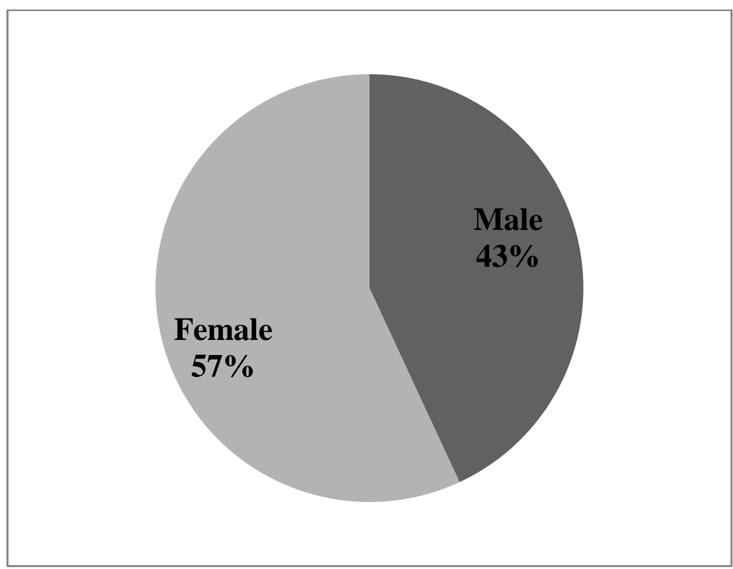

Figure 4.1: Gender Distribution of Respondents

Figure 4.2 presents the distribution of respondents in terms of the age bracket. According to the results, 48 respondents were between the ages of 21-30 years, 88 between the ages of 31-40 years, 87 between the ages of 41-50 years, and 95 over the age of 51 years, representing 15%, 28%, 27% and 30% of the total, respectively. This indicates that the majority of the respondents were above the age of 51 years. This is consistent with the findings of Ndung'u (2015) that the majority of people who voluntarily enrol with health insurance are typically above the age of 40 rather than the youth since health becomes more of a priority the older one gets.

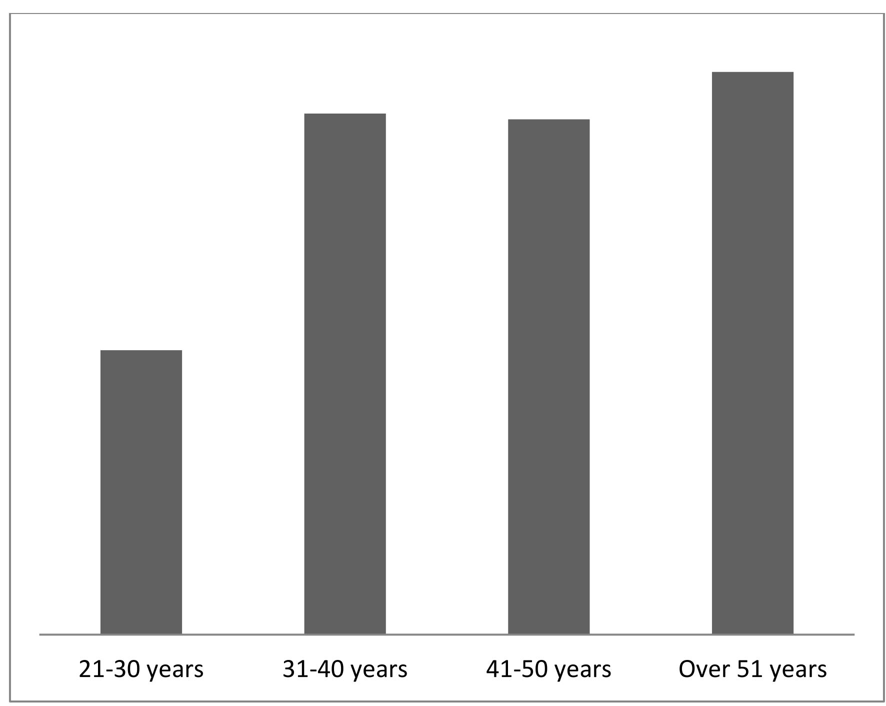

Figure 4.2: ***Age Bracket***

The distribution of respondents in terms of their level of education is displayed in figure 4.3. Accordingly, 195 had primary level, 26 had secondary level, 22 had tertiary level, 38 had undergraduate level, and 37 had graduate level of education, representing 61%, 8%, 7%, 12%, and 12% of the total respondents, respectively. This indicates that the majority of the respondents included in the study had only primary level education corroborating Kipaseiya (2016) who determined that the majority of people from rural communities in Kenya have the lowest level of education, and this has proved to be an impediment to their uptake of health insurance cover.

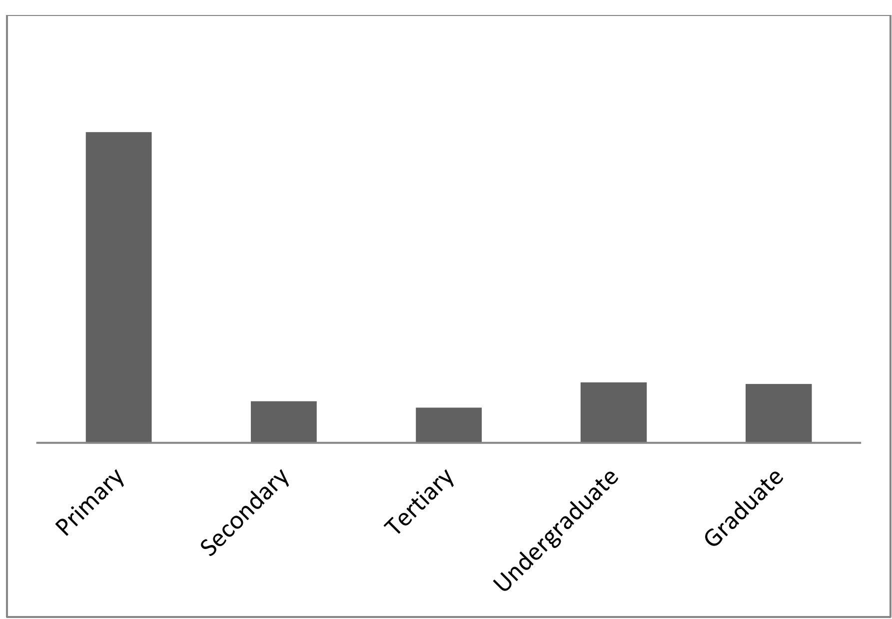

Figure 4.3: ***Level of Education***

Figure 4.4 shows the distribution of the respondents in terms of their employment status. Accordingly, 16% were contracted workers, 21% were casual labourers, and 63% were self-employed. This indicates that the majority of respondents who voluntarily enrolled with the NHIF were self-employed and is consistent with Muketha (2016) who found that the majority of people who voluntarily enrolled with the NHIF from rural areas were self-employed in the informal sector.

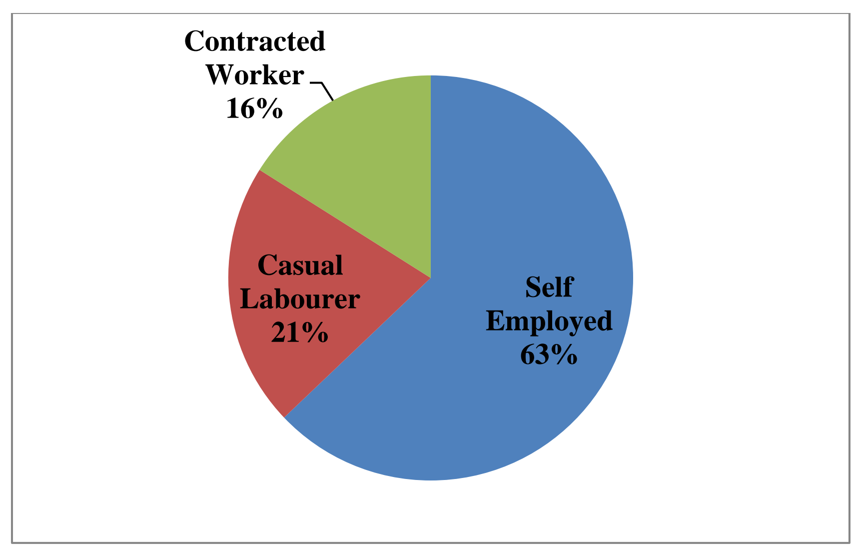

Figure 4. 4: ***Employment Status***

The distribution of respondents in terms of family size is illustrated in figure 4.5, which shows that 20% had 1-3 children, 62% had 4-6 children, and 18% had 7-9 children. This reflects that fact that the majority of respondents had between 4-6 children and agreed with Barasa, *et al.* (2017) who affirmed that the average family sizes of rural communities in Kenya is up to six children.

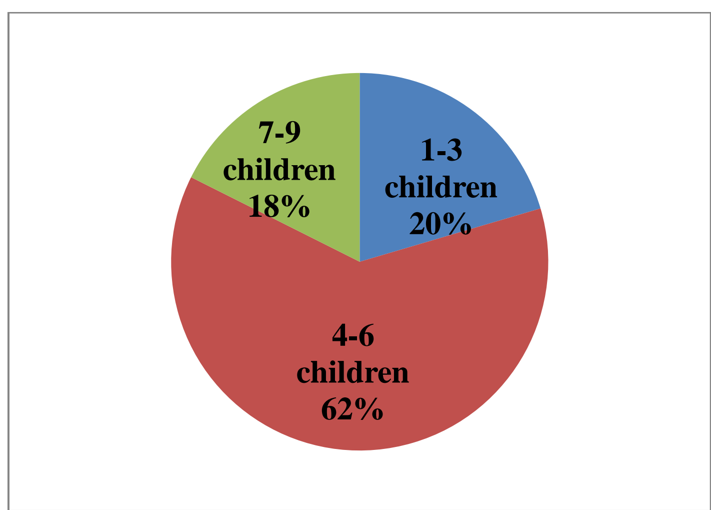

Figure 4. 5: ***Family Size***

4.2.1. Socio-demographic Characteristics Relating to NHIF Registration/ Enrolment

The socio-demographic characteristics relating to the NHIF registration/ enrolment status are captured in table 4.2. According to the results, there were 109 males that had registered with NHIF while the females were 51, representing 68% and 32%, respectively. Additionally, of those who were not registered with NHIF, 28 were males while 130 were female representing 18% and 82%, respectively. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

The results further showed that amongst the respondents that were registered with NHIF, 48 were between the ages of 21-30 years, 50 between the ages of 31-40 years, 38 between 41-50 years, and 26 over 51 years, representing 30%, 31%, 23%, and 16%, respectively. The p-values were also below 0.05 indicating that they were statistically significant at 95% confidence interval.

As far as the level of education was concerned, among the registered NHIF members, 59 had attended up to primary level, 13 up to secondary level, 13 up to tertiary level, 38

undergraduate and 37 postgraduate, representing 37%, 8%, 8%, 24%, and 23%, respectively. The p-values were less than 0.05 also indicating that they were statistically significant at 95% confidence interval.

An assessment of the registered members by employment status shows that 51 were contracted workers, 36 were casual labourers, and 73 were self-employed, representing 32%, 23%, and 46%. Further, the unregistered members were 31 casual labourers and 127 were self-employed, representing 20% and 80%, respectively. The p-values were well above 0.05 at 0.765 indicating that they were not statistically significant at 95% confidence interval. Finally, the registered members comprised 24 individuals that had 1-3 children, 103 had 4-6 children, and 33 had 7-9 children, representing 15%, 64%, and 21%, respectively. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

Table 4. 2: Socio Demographic Characteristics Relating to NHIF Registration/ Enrolment

Characteristics		Total		NHIF Member		Not NHIF Member		P Values (95% C.I.)
		No.	%	No.	%	No.	%	
Gender	Male	137	43.1%	109	68%	28	18%	<0.05
	Female	181	56.9%	51	32%	130	82%	
Age	21-30 years	48	15.1%	48	30%	0	0%	<0.05
	31-40 years	88	27.7%	50	31%	38	24%	
	41-50 years	87	27.4%	38	23%	51	32%	
	Over 51 years	95	29.9%	26	16%	69	44%	
Level of Education	Primary	195	61.3%	59	37%	136	86%	<0.05
	Secondary	26	8.2%	13	8%	13	8%	
	Tertiary	22	6.9%	13	8%	9	6%	
	Undergraduate	38	11.9%	38	24%	0	0%	
	Graduate	37	11.6%	37	23%	0	0%	
Employment Status	Contracted Workers	51	16.0%	51	32%	0	0%	0.765
	Casual Labourers	67	21.0%	36	23%	31	20%	
	Self-Employed	200	63.0%	73	46%	127	80%	
Family Size	1-3 children	64	20.0%	24	15%	41	26%	<0.05
	4-6 children	197	62.0%	103	64%	94	59%	
	7-9 children	57	18.0%	33	21%	23	15%	

4.2.2. Socio-demographic Characteristics Relating to Knowledge of NHIF

The socio-demographic characteristics relating to knowledge of NHIF are presented in table 4.3. Accordingly, of those respondents who felt that NHIF pays hospital bills, 100 were male while 31 were female, representing 76% and 24%, respectively. Those that felt that NHIF is a medical insurance cover were 37 males and 50 females, representing 43% and 57%, respectively. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval. An assessment of the age sets of the respondents who felt that NHIF pays hospital bills shows that 13 were between 21-30 years, 62 were 31-40 years, 74 were 41-50 years, and 82 were over 51 years. Further, those that felt that NHIF is a medical insurance cover included 35 who were 21-30 years, 26 were 31-40 years, 13 were 41-50 years, and 13 were over 51 years. The p-values were well above 0.05 at 0.974 indicating that they were not statistically significant at 95% confidence interval.

The results further showed that those that felt that NHIF pays hospital bills included 182 individuals who had attained primary level of education, 13 had secondary level, 9 had tertiary level, 27 had undergraduate level, and none had attained graduate level, representing 79%, 6%, 4%, and 0%, respectively. Those that felt that NHIF is a medical insurance cover included 13 at primary level, 13 at secondary level, 13 at tertiary level, 11 at undergraduate level, and 37 at graduate level, representing 15%, 15%, 15%, 13%, and 43%, respectively. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval. Additionally, those individuals who felt that NHIF pays hospital bills included 3 contracted workers, 67 casual labourers, and 162 self-employed individuals, representing 1%, 29%, and 70%, respectively. Individuals who felt that NHIF is a medical insurance cover included 49 contracted workers, no casual labourer, and 38 self-employed, representing 56%, 0%, and 44%, respectively. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

As far as the family size was concerned, those that felt that NHIF pays hospital bills comprised 54 with 1-3 children, 131 with 4-6 children, and 46 with 7-9 children, representing 23%, 57%, and 20%, respectively. Those that felt that NHIF is a medical insurance cover comprised 10 with 1-3 children, 66 with 4-6 children, and 11 with 7-9 children, representing

11%, 76%, and 13%, respectively. The p-values were well above 0.05 at 0.373 indicating that they were not statistically significant at 95% confidence interval.

Table 4.3: Socio-demographic Characteristics Relating to Knowledge of NHIF

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		Total		NHIF Pays Hospital Bills		NHIF is a Medical Insurance Cover		P Values (95% C.I)
		No.	**%**	**No.**	**%**	**No.**	%	
Gender	Male	137	43.1%	100	76%	37	43%	<0.05
	Female	181	56.9%	31	24%	50	57%	
Age	21-30 years	48	15.1%	13	6%	35	40%	0.974
	31-40 years	88	27.7%	62	27%	26	30%	
	41-50 years	87	27.4%	74	32%	13	15%	
	Over 51 years	95	29.9%	82	35%	13	15%	
Level of Education	Primary	195	61.3%	182	79%	13	15%	<0.05
	Secondary	26	8.2%	13	6%	13	15%	
	Tertiary	22	6.9%	9	4%	13	15%	
	Undergraduate	38	11.9%	27	12%	11	13%	
	Graduate	37	11.6%	0	0%	37	43%	
Employment Status	Contracted Workers	51	16.0%	3	1%	49	56%	<0.05
	Casual Labourers	67	21.0%	67	29%	0	0%	
	Self-Employed	200	63.0%	162	70%	38	44%	
Family Size	1-3 children	64	20.0%	54	23%	10	11%	0.373
	4-6 children	197	62.0%	131	57%	66	76%	
	7-9 children	57	18.0%	46	20%	11	13%	

4.2.3. Socio-demographic Characteristics Relating to Length of NHIF Enrolment

The socio-demographic characteristics relating to length of NHIF enrolment are shown in table 4.4. According to the results, of the male respondents, 38 had never been enrolled with NHIF, 37 for less than 5 years, and 62 for more than 5 years. As far as the females are concerned, 117 had never been enrolled with NHIF, 37 had been enrolled for less than 5 years, and 27 for more than 5 years. This indicates that there have been more males enrolled with the NHIF for 5 years or more than females. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval. The individuals who had

been enrolled with the NHIF for less than 5 years included 48 between the ages of 21-30 years, 13 between 31-40 years, 13 between 41-50 years, and none over 51 years. The individuals who had enrolled with the NHIF for more than 5 years included 40 between the ages of 31-40 years, 23 between 41-50 years, and 26 over 51 years. This indicates that the majority of respondents who had been enrolled with the NHIF for less than 5 years are between the ages 21-30 years while those that had been enrolled with the NHIF for more than 5 years were mainly between the ages of 31-40 years. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

The results also showed that the individuals who had been enrolled with the NHIF for less than 5 years included 13 who had attained primary level education, 26 had attained secondary level education, 11 had attained undergraduate level education, and 24 had attained graduate level education. Further, those who had enrolled with the NHIF for more than 5 years included 36 who had attained up to primary level of education, 13 up to tertiary level, 27 up to undergraduate level, and 13 up to graduate level. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

The individuals who had been enrolled with the NHIF for less than 5 years included 25 contracted workers, 13 casual labourers, and 36 self-employed while those who had been enrolled for more than 5 years included 26 contracted workers, 23 casual labourers, and 40 self-employed individuals. The p-values were above 0.05 at 0.389 indicating that they were not statistically significant at 95% level of significance.

As far as the family size is concerned, the individuals who had been enrolled for less than 5 years included 24 who had between 1-3 children, 40 who had 4-6 children, and 10 who had between 7-9 children. The individuals who had been enrolled for more than 5 years included 76 who had between 4-6 children, and 13 who had 7-9 children. The p-values were less than 0.05 indicating that they were statistically significant at 95% confidence interval.

Table 4.4: Socio-demographic Characteristics Relating to Length of NHIF Enrolment

		Total		Never		< 5 Years		> 5 Years		P Values (95% C.
		No.	%	No.	%	No.	%	No.	%	
Gender	Male	137	43.1%	38	25%	37	50%	62	70%	<0.05
	Female	181	56.9%	117	75%	37	50%	27	30%	
Age	21-30 years	48	15.1%	0	0%	48	65%	0	0%	<0.05
	31-40 years	88	27.7%	35	23%	13	18%	40	45%	
	41-50 years	87	27.4%	51	33%	13	18%	23	26%	
	Over 51 years	95	29.9%	69	45%	0	0%	26	29%	
Level of Education	Primary	195	61.3%	146	94%	13	18%	36	40%	<0.05
	Secondary	26	8.2%	0	0%	26	35%	0	0%	
	Tertiary	22	6.9%	9	6%	0	0%	13	15%	
	Undergraduate	38	11.9%	0	0%	11	15%	27	30%	
	Graduate	37	11.6%	0	0%	24	32%	13	15%	
Employment Status	Contracted Workers	51	16.0%	0	0%	25	34%	26	29%	0.389
	Casual Labourers	67	21.0%	31	20%	13	18%	23	26%	
	Self-Employed	200	63.0%	124	80%	36	49%	40	45%	
Family Size	1-3 children	64	20.0%	40	26%	24	32%	0	0%	<0.05
	4-6 children	197	62.0%	81	52%	40	54%	76	85%	
	7-9 children	57	18.0%	34	22%	10	14%	13	15%	

4.3.4. Socio-demographic Characteristics Relating to NHIF Defaulting Status

The socio-demographic characteristics relating to NHIF defaulting status are presented in table 4.5. According to the results, individuals who have defaulted on their NHIF payments included 49 males and 40 females, representing 55% and 45%, respectively. Those who have not defaulted on their payments included 88 males and 141 females, representing 38% and 62%, respectively. The p-values were less than 0.05 also indicating that they were statistically significant at 95% confidence interval.

Additionally, individuals who have defaulted on their NHIF payments included 13 between the ages of 21-30 years, 40 between 31-40 years, 23 between 41-50 years, and 13 over 51 years. Those who not defaulted on their payments included 35 between 21-30 years, 48

between 31-40 years, 64 between 41-50 years, and 82 over 51 years. The p-values were less than 0.05 also indicating that they were statistically significant at 95% confidence interval.

The respondents who had defaulted on their payments included 36 who had up to primary level education, 26 who had up to secondary level education, 14 who had up to undergraduate level education, and 13 who had up to graduate level education. Those who had not defaulted on their payments included 159 who had up to primary level education, 22 up to tertiary level education, 24 up to undergraduate level education, and 24 up to graduate level education. The p-values were above 0.05 at 0.967 indicating that they were not statistically significant at 95% confidence interval.

The results further show that the respondents who had defaulted on their payments included 13 contracted workers, 36 casual labourers, and 40 who were self-employed. Those who had not defaulted included 38 contracted workers, 31 casual labourers, and 160 who were self-employed. The p-values were above 0.05 at 0.626 indicating that they were not statistically significant at 95% confidence interval.

An assessment of the family size demographic shows that individuals who had defaulted on their payments included 13 with 1-3 children, 63 with 4-6 children, and 14 with 7-9 children. Those that had not defaulted included 51 with 1-3 children, 134 with 4-6 children, and 43 with 7-9 children. The p-values were above 0.05 at 0.478 indicating that they were not statistically significant at 95% confidence interval.

Table 4.5: Socio-demographic Characteristics Relating to NHIF Defaulting Status

Characteristics		Total		Has Defaulted		Has Not Defaulted		P values (95% C.I.)
		No.	%	No.	%	No.	%	
Gender	Male	137	43.1%	49	55%	88	38%	<0.05
	Female	181	56.9%	40	45%	141	62%	
Age	21-30 years	48	15.1%	13	15%	35	15%	<0.05
	31-40 years	88	27.7%	40	45%	48	21%	
	41-50 years	87	27.4%	23	26%	64	28%	
	Over 51 years	95	29.9%	13	15%	82	36%	
Level of Education	Primary	195	61.3%	36	40%	159	69%	0.967
	Secondary	26	8.2%	26	29%	0	0%	
	Tertiary	22	6.9%	0	0%	22	10%	
	Undergraduate	38	11.9%	14	16%	24	10%	
	Graduate	37	11.6%	13	15%	24	10%	
Employment Status	Contracted Workers	51	16.0%	13	15%	38	17%	0.626
	Casual Laborers	67	21.0%	36	40%	31	14%	
	Self-Employed	200	63.0%	40	45%	160	70%	
Family Size	1-3 children	64	20.0%	13	14%	51	22%	0.478
	4-6 children	197	62.0%	63	70%	134	59%	
	7-9 children	57	18.0%	14	16%	43	19%	

4.3 Descriptive Statistics

4.3.1 Economic Status and Voluntary Enrolment of Individuals to the NHIF

The results pertaining to the descriptive statistics of economic status and voluntary enrolment of individuals to the NHIF are shown in table 4.6. According to the results 91.4% of the respondents either strongly disagreed or disagreed with the assertion that the household income is little hence they were not able to enrol to National Hospital Insurance Fund. This was found not to be statistically significant by the ANOVA test at 95% confidence interval, which generated a p value of 0.233. Further, 68.8% of the respondents either strongly disagreed or disagreed that the household size is large depending on them making difficult

to have extra amount to pay for National Hospital Insurance Fund. This was found to be statistically significant by the ANOVA test at 95% confidence interval that produced a p value of 0.002.

The results also showed that 44.7% of the respondents were neutral towards the assertion that the standard of living is high which make them to have other priorities on food and shelter than enrolling in National Hospital Insurance Fund, only 37.8% were in agreement with this while the remaining 17.6% disagreed. Again, the ANOVA test at 95% confidence interval produced a p value of 0.113 indicating that this was not statistically significant. Lastly, 61.7% of the respondents agreed that their occupation allows them to live from hand to mouth amount which is hard to enrol to National Hospital Insurance Fund. The ANOVA test at 95% confidence interval produced a p value of 0.015 reflecting that this was statistically significant.

Table 4.6: Economic Status and Voluntary Enrolment of Individuals to the NHIF

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	P value (95% C.I.)*
The household income is little hence am not able to enrol to National Hospital Insurance Fund	31.8%	60.1%	0.0%	4.1%	4.1%	0.233
The household size depending on me is large making it difficult to have extra amount to pay for National Hospital Insurance Fund	11.9%	56.9%	0.0%	15.7%	15.4%	0.002
The standard of living is high which makes us to prioritize food and shelter over enrolling for National Hospital Insurance Fund	10.4%	7.2%	44.7%	29.6%	8.2%	0.113
My occupation allows me to have hand to mouth amount which is hard to enrol to National Hospital Insurance Fund	11.0%	7.2%	20.1%	44.7%	17.0%	0.015

*These are p values pertaining to the ANOVA Test of Statistical Significance at 95% Confidence Interval

4.3.2 Individual Awareness Effect on Voluntary Enrolment of Individuals to the NHIF

Table 4.7 presents the results relating to the effect of individual awareness on voluntary enrolment of individuals to the NHIF. According to the results, "Am not aware of how to enrol to the National Hospital Insurance Fund because no one has informed me" had a mean score of 3.2704 indicating a marginally high level of approval of 65.4% by the majority of respondents. This was found to be statistically significant by the ANOVA at 95% confidence interval which generated a p value of less than 0.05. Additionally, "there is no awareness on the health benefits after enrolling to National Hospital Insurance Fund" had a mean score of 3.3931 also indicating a marginally high level of approval by the respondents. The ANOVA test at 95% confidence interval provided a p value of 0.028 indicating that this was statistically significant.

The results further showed that "the advertisement made on the importance of National Hospital Insurance Fund has encouraged me to enrol to the scheme" had a mean score of

3.6667 indicating a high level of affirmation by the respondents. This was shown to be statistically significant thanks to the ANOVA test at 95% confidence interval that produced a p value of less than 0.05. Finally, “I personally prefer enrolling to National Hospital Insurance Fund because it is helpful during medication” had a mean score of 3.3994 indicating that the majority of respondents were in agreement with this. This was also found to be statistically significant by the ANOVA test at 95% confidence interval that generated a p value of less than 0.05.

Given that all the standard deviations were so low, it is clear that all the responses were concentrated tightly around the average responses indicating a low variation in the responses. Further, the high mean scores for all the indicators of individual awareness are a reflection that individual awareness plays a very significant role in the enrolment and retention of individuals to the NHIF.

Table 4.7: **Individual Awareness Effect on Voluntary Enrolment of Individuals to the NHIF**

	N	Mean	Std. Deviation	P value (95% C.I.)*
Am not aware of how to enrol to the National Hospital Insurance Fund because no one has informed me	318	3.2704	1.12995	<0.05
There is no awareness on the health benefits after enrolling to National Hospital Insurance Fund	318	3.3931	1.11183	<0.05
The advertisement made on the importance of National Hospital Insurance Fund has encouraged me to enrol to the scheme	318	3.6667	.85672	0.028
I personally prefer enrolling to National Hospital Insurance Fund because it is helpful during medication	318	3.3994	1.09239	<0.05
Valid N (listwise)	318			

*These are p values pertaining to the ANOVA of Statistical Significance at 95% Confidence Interval

4.3.3 Cultural Practices on Retention of Individuals Voluntarily Enrolled to the NHIF

The results pertaining to the influence of the cultural practices on retention of individuals voluntarily enrolled to the NHIF are presented in table 4.8. According to the results, 73.3% of the respondents either strongly disagreed or disagreed that majority of their family members don’t have confidence on the scheme and prefer paying through cash. The ANOVA test at 95% confidence interval provided a p value of less than 0.05 indicating that this was statistically significant. Further, 80.8% of the respondents either agreed or strongly agreed that the benefit of NHIF to cater for their large family size has made them to stick to it. This was found to be statistically significant by the ANOVA test at 95% confidence interval that produced a p value of 0.008.

Further, 77.1% of the respondents either strongly disagreed or disagreed that majority of people believe in traditional medicine hence there is no need of paying for NHIF yet they can get medication from traditional healers. This statistic was determined to be significant by the ANOVA test at 95% confidence interval, which generated a p value of less than 0.05. Finally, 88.3% of the respondents either strongly disagreed or disagreed that the family

members are not exposed to NHIF scheme because they believe that doing so is inviting the diseases into the family. This was found to be statistically significant by the ANOVA test at 95% confidence interval which yielded a p value of 0.016.

Table 4.8: Cultural Practices on Retention of Individuals Voluntarily Enrolled on the NHIF

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	P value (95% C.I.)*
Majority of my family members don't have confidence on the scheme and prefer paying through cash	16.4%	56.9%	10.4%	12.3%	4.1%	<0.05
The benefit of NHIF to cater for my large family size has made me to stick to it	11.0%	8.2%	0.0%	69.8%	11.0%	0.008
Majority of people here believe in traditional medicine hence there is no need of paying for NHIF yet I can get medication from traditional healers	27.4%	49.7%	14.5%	8.5%	0.0%	<0.05
The family members are not exposed to NHIF scheme because they belive that doing so is inviting the diseases into the family	31.4%	56.9%	7.2%	0.0%	4.4%	0.016

*These are p values pertaining to the ANOVA Test of Statistical Significance at 95% Confidence Interval

4.3.4 Quality of Service on Retention of Individuals Voluntarily Enrolled to the NHIF

Table 4.9 illustrates the results relating to the descriptive statistics of the influence of quality of service on retention of individuals voluntarily enrolled to the NHIF. Accordingly, "the delay in NHIF to respond to medication payment has led me to opt for cash payment than delay in medication" had a mean score of 2.1920 indicating that only about 43.8% of the respondents were in disagreement with this assertion. This was proven to be statistically significant by the ANOVA test at 95% confidence interval which produced a p value of 0.003. Additionally, "the NHIF services are affordable as compared to cash payment hence always pay monthly charges" had a mean score of 2.7736 indicating only a moderate approval amongst the respondents. As a result, the intended benefits of the reforms were not

felt by the intended beneficiaries. The associated ANOVA test at 95% confidence interval generated a p value of 0.938 indicating that this was not statistically significant.

"The friendly staff at the NHIF office encourage me to use the scheme" had a mean score of 3.1824 indicating that approximately 63.6% of the respondents agreed with this. This was found not to be statistically significant by the ANOVA test at 95% confidence interval that yielded a p value of 0.415. "There is equity in NHIF scheme services hence it encourages me to use it" had a mean score of 3.0849 indicating that the majority of respondents were in agreement with this. This was proven not to be statistically significant by the ANOVA test at 95% confidence interval that produced a p value of 0.955.

Given that all the standard deviations were so low, it is clear that all the responses were concentrated tightly around the average responses indicating a low variation in the responses. Further, the relatively high mean scores for three of the indicators of quality of service are a reflection that quality of service plays a very significant role in the enrolment and retention of individuals to the NHIF.

Table 4.9: Quality of Service on Retention of Individuals Voluntarily Enrolled to the NHIF

	N	**Mean**	**Std. Deviation**	**P value (95% C.I.)***
The delay in NHIF to respond to medication payment has led me to opt for cash payment than delay in accessing medication	318	2.1950	.95961	0.003
The NHIF services are affordable as compared to cash payment hence I always pay monthly charges	318	2.7736	1.06225	0.938
The friendly staff at the NHIF office encourage me to use the scheme	318	3.1824	1.21430	0.415
There is equity in NHIF scheme services hence encourage me to use it	318	3.0849	1.04279	0.955
Valid N (listwise)	318			

*These are p values pertaining to the ANOVA Test of Statistical Significance at 95% Confidence Interval

4.3.5 Enrolment and Retention to NHIF

The results pertaining to the enrolment and retention to NHIF are presented in table 4.10. According to the results, 73.3% either agreed or strongly agreed that they would be willing to recommend other people for enrolment on NHIF. The associated ANOVA test at 95% confidence interval generated a p value less than 0.05 showing that this was statistically significant. Further, 92.8% of the respondents either agreed or strongly agreed that they were aware of many people who have continued with their NHIF enrolment. This was also found to be statistically significant by the ANOVA test at 95% confident interval that produced a p value less than 0.05.

Additionally, the results showed that 82.1% of the respondents either agreed or strongly agreed that the continued enrolment on NHIF is dependent on the type of illness or nature of health service needed. This was found to be statistically significant by the ANOVA test at 95|% confident interval that provided a p value less than 0.05. Lastly, 66.4% of the respondents were neutral regarding whether they have faced financial challenges which have made them default on monthly payments on NHIF and even incur penalties. This was also determined to be statistically significant owing to the ANOVA test at 95% confidence interval that produced a p value less than 0.05.

Table 4.10: Enrolment and Retention to NHIF

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	P value (95% C.I.)*
I would be willing to recommend other people for enrolment on NHIF	0.00%	0.00%	26.70%	54.70%	18.60%	<0.05
I am aware of many people who have continued with their NHIF enrolment	0.00%	0.00%	7.20%	56.30%	36.50%	<0.05
The continued enrolment on NHIF is dependent on the type of illness or nature of health service needed	0.00%	0.00%	17.90%	46.90%	35.20%	<0.05
I have sometimes faced financial challenges which have made me default on monthly payments of NHIF and even incur penalties.	0.00%	0.00%	66.40%	33.60%	0.00%	<0.05

*These are p values pertaining to the ANOVA of Statistical Significance at 95% Confidence Interval

4.4 Inferential Statistics

4.4.1 Pearson Correlation Coefficient Analysis

The Pearson's Correlation Coefficient (*r*) refers to the ratio of the covariance of two variables signifying a set of numerical data, and normalized to the square root of the variances (Hall, 2015). The Pearson Correlation coefficients for the variables of the study are presented in Table 4.11. The correlation test was conducted at 5% level of significance with a two-tailed test. According to the results, all the independent variables, Economic Status, Individual Awareness, Cultural Practices, Quality of Service had positive correlations of r = 0.891; r = 0.757; r = 0.712; and r = 0.789, respectively with the independent variable, Enrolment and Retention with NHIF. Accordingly, a change in Economic Status by a value of 1 leads to a corresponding change of 0.891 in the Enrolment and Retention with NHIF. Additionally, a change in Individual Awareness by a value of 1 results in a corresponding change of 0.757 in the Enrolment and Retention with NHIF. Further, a change in Cultural Practices by a value of 1 leads to a corresponding change of 0.712 in the Enrolment and Retention with NHIF. Lastly, a change in Quality of Service by a value of 1 leads to a corresponding change of 0.789 in the Enrolment and Retention with NHIF.

The results also showed that all the p-values of the independent variables were well below 0.05 indicating a statistically significant relationship between each independent variable and the dependent variable. This is consistent with Dahiru (2008) who found that given intervals of 95%, p-values of less than 0.05 indicate that observed differences between groups are unlikely to be due to chance and, as such, are statistically significant. This reflects the relevance of the p-value as an acceptable test of statistical significance.

Table 4.11: Pearson Correlation Coefficient Analysis

Correlations

		Economic Status	Individual awareness	Cultural practices	Quality of service	Enrolment and retention to NHIF
Economic Status	Pearson Correlation	1				
	Sig. (2-tailed)					
Individual awareness	Pearson Correlation	.444**	1			
	Sig. (2-tailed)	.000				
Cultural practices	Pearson Correlation	.099	.202**	1		
	Sig. (2-tailed)	.078	.000			
Quality of service	Pearson Correlation	-.132*	.534	-.275**	1	
	Sig. (2-tailed)	.018	.547	.000		
Enrolment and retention to NHIF	Pearson Correlation	.891**	.757	.712	.789**	1
	Sig. (2-tailed)	.001	.001	.000	.004	

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

4.4.2 Multiple Regression Analysis

According to Mooi and Sarstedt (2014), regression analysis is a technique that analyses relationships between an independent variable and a dependent variable by fitting a line-of-best-fit through a series of observations. This helps to offer insights into: whether the independent variables have a significant relationship with a dependent variable; test the relative strength of different independent variables' effect on a dependent variable; and make predictions. The model summary, ANOVA and coefficients of regression were generated to

provide explanations of the nature of the relationships that existed between the variables of the study.

4.4.2.1. Multiple Regression Model Summary

The multiple regression model summary for the study is illustrated in table 4.12. According to the table, the R Square value for all the variables was 0.779 indicating that the results explained 77.9% of the variation in the Enrolment and Retention with NHIF whenever there was a one percent change in the four independent variables which is in agreement with Hamilton, Ghert and Simpson (2015) who found that in order for R square values to be significant they should be higher than 0.7. In other words, whenever this model is used in future research it will be able to explain any variations in the dependent variable 77.9% of the time. This also shows that there is only a 22.1% difference between all the observed values and their fitted values in the examined data set indicating a strong Goodness-of-fit of the regression model.

Table 4.12: Multiple Regression Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.888[a]	.779	.671	.50074
a. Predictors: (Constant), Quality of service, Individual awareness, Cultural practices, Economic Status				

4.4.2.2. Multiple Regression Analysis of Variance

Analysis of Variance (ANOVA) is defined as a statistical technique used in the detection of differences between experimental group means when there is one dependent variable and one or more independent variables (Sawyer, 2009). Table 4.13 shows the findings pertaining to the ANOVA statistics for the research study. The results indicate that the ANOVA F-test score, calculated value F_{cal} at 5% level of significance is equivalent to 7.071 which is greater than the F critical value (F_{crit}) of 2.37 indicating that there is a significant relationship between all the independent variables and the dependent variable of Enrolment and Retention with NHIF; while the p-value of 0.000 is less than 0.05 indicating that there is a statistically significant relationship between each of the independent variables and Enrolment and

Retention with NHIF in keeping with Kao and Green (2008). This demonstrates the goodness of fit of the model.

Table 4.13: **Analysis of Variance**

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.092	4	1.773	7.071	.000[b]
	Residual	78.483	313	.251		
	Total	85.575	317			

a. Dependent Variable: Enrolment and retention with NHIF

b. Predictors: (Constant), Quality of service, Individual awareness, Cultural practices, Economic Status

4.4.2.3 Multiple Regression Beta Coefficient Analysis

Peterson and Brown (2005) posited that Beta Coefficients refer to unknown constants that are estimated from the data which are attached to given predictors or independent variables. The beta coefficients of the study are illustrated in table 4.14. The values of the constant and coefficients facilitated the generation of the multiple regression model below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$= 5.039 + 0.257X_1 + 0.070X_2 + 0.011X_3 + 0.131X_4 + 0.235$$

Where, Y refers to the dependent variable (Enrolment and Retention with NHIF), X_1 refers to the Economic Status variable, X_2 refers to the Individual Awareness variable, X_3 refers to Cultural Practices variable, and X_4 refers to the Quality of Service. β_0 is the constant while ε is the error term.

According to the equation, taking all the independent variables to be zero (Economic Status, Individual Awareness, Cultural Practices and Quality of Service), Enrolment and Retention with NHIF will be a constant equivalent to 5.039. A review of the findings also shows that a unit increase in Economic Status will lead to a 0.257 increase in Enrolment and Retention with NHIF when all other independent variables are held constant; a unit increase in Individual Awareness will lead to a 0.070 increase in Enrolment and Retention with NHIF when all other independent variables are held constant; a unit increase in Cultural Practices

will lead to a 0.011 increase in Enrolment and Retention with NHIF when all other independent variables are held constant; finally, a unit increase in Quality of Service will lead to a 0.131 increase in Enrolment and Retention with NHIF when all other independent variables are held constant. Lastly, the p-values for all the variables are all below 0.05 which indicates that they are all statistically significant.

Table 4.14: **Beta Coefficient Analysis**

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.039	.235		21.438	.000
	Economic Status	.257	.058	.272	4.432	.000
	Individual awareness	.070	.035	.125	2.007	.006
	Cultural practices	.011	.048	.014	.236	.000
	Quality of service	.131	.037	.203	3.539	.000

a. Dependent Variable: Enrolment and Retention to NHIF

4.5 Conclusions Based on the Findings

A number of conclusions can be made from the descriptive statistics of economic status. Firstly, the household incomes of the respondents are adequate to enable them to enrol to the NHIF. Secondly, the household sizes are not too large to prevent them from getting the extra money to pay for the NHIF. Thirdly, the respondents were unsure about whether the standard of living was prohibitive to their enrolment to the NHIF on account of other pressing priorities such as food and shelter. The implication is that most of them did not understand the question. Lastly, the occupations of the respondents could only enable them to live from hand to mouth, thereby making it difficult for them to enrol to the NHIF.

As far as individual awareness is concerned, the following conclusions can be made. Firstly, there has been a lack of communication regarding the merits of NHIF which has prevented most of the respondents from being aware of the scheme. Secondly, the authorities have not done enough to communicate the health benefits of NHIF to beneficiaries even after enrolment. However, most of the respondents have been influenced by advertisements

regarding the NHIF scheme to enrol accordingly. Lastly, the majority of respondents are positively predisposed towards enrolment with the scheme given its benefits during medication.

The descriptive results of the influence of cultural practices on voluntary enrolment of individuals to the NHIF have shown that the majority of respondents prefer using the NHIF rather than paying for health services in cash. Further, given that the majority of respondents have large families, they have been compelled to enrol and remain on the NHIF. Additionally, majority of respondents have not been hampered by beliefs in traditional healing from enrolling with the NHIF. Finally, they are also not influenced by beliefs that enrolling to health insurance can invite diseases to the home.

An assessment of the descriptive statistics of quality of service has led to the drawing of the following conclusions. Firstly, the NHIF scheme is not adversely affected by delays in the delivery of its services. Secondly, the NHIF services are somewhat affordable given that a modern majority of respondents felt so. Thirdly, the NHIF management has ensured that their staff are friendly and this has acted as a catalyst for higher voluntary enrolment. Lastly, equity has also been incorporated into the NHIF services and this has contributed to increased enrolment and retention to NHIF.

The following conclusions can be drawn from the descriptive statistics of enrolment and retention to NHIF. Enrolled members are willing to recommend others for enrolment onto the scheme. A majority of enrolled members are aware of other individuals who have continued with their enrolment to NHIF. The continued enrolment of individuals on NHIF is dependent on the type of illness or nature of health service needed. Finally, there was a breakdown in communication regarding the meaning of defaulting by a majority of the respondents thereby leading to an uncertainty regarding their defaulting status.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and Discussion of Findings

5.1.1 Socio-Demographic Characteristics

This study focused on a number of socio-demographic characteristics of the respondents including gender, age, level of education, employment status, and family size. According to the results, women comprised 57% while men were 43% indicating a slightly higher proportion of women who voluntarily enrol to the NHIF. The results of the age distribution indicated that the majority of the respondents were above the age of 51. As far as the level of education was concerned, the majority of the NHIF members had only primary level of education. An assessment of the results relating to the employment status showed that most of the NHIF members were self-employed. Finally, the vast majority of the members had 4-6 children.

The socio-demographic characteristics were correlated to the NHIF registration/ enrolment. Accordingly, males were keener on NHIF registration than females in the study area, which contradicted the findings of Nsiah-Boateng, *et al.* (2019). Additionally, the need for NHIF enrolment gradually reduced as the population in the area aged, which concurred with Namuhisa (2014) who found that there was a direct associated between age and enrolment onto the NHIF. Further, NHIF enrolment is not dependent on the level of education of an individual, which was in agreement with Karuiki, Mavole and Okuku (2018) who were not able to establish any linkage between the level of education and NHIF enrolment. Given that the majority of respondents were self-employed, it also follows that they are the most enrolled category of employees as well as the most unregistered individual. Finally, the majority of enrolled respondents were those that were in their prime of life having started parental responsibilities for a considerable time but not too long ago. Kapologwe, *et al.* (2017) corroborated the findings on the correlation between family size and NHIF enrolment.

The socio-demographic characteristics were also correlated to the knowledge of NHIF and a number of observations can be made. Most respondents, regardless of the gender, felt that

NHIF pays hospital bills, however, most of the respondents who felt that NHIF is a medical insurance cover were females, which was partially corroborated by Suchman, Appleford, Owino and Seefeld (2020) who found that gender disparities have adversely affected women's knowledge of NHIF. As individuals advanced in age they increasingly adopted the view that NHIF pays hospital bills while the younger generation individuals felt that NHIF is a medical insurance cover, however, this finding has not been supported by any literature. The vast majority of individuals who felt that NHIF pays medical bills were at primary level of education while those that felt that it is a medical insurance cover were mainly at graduate level. This was corroborated by Kituku *et al.* (2016) who found that insurance education plays a significant role in determining NHIF uptake. The majority of individuals who felt that NHIF pays hospital bills were predominantly self-employed, those that felt that it is a medical cover were mainly contracted workers. Since that the majority of respondents had 4-6 children, these were the individuals mostly held either view of NHIF.

The socio-demographic characteristics were further correlated to the length of NHIF enrolment. The results showed that: there have been more males enrolled with the NHIF for 5 years or more than females which contradicted Ndung'u (2015) who established that the majority of NHIF members were female. The majority of respondents who had been enrolled with the NHIF for less than 5 years are between the ages 21-30 years while those that had been enrolled with the NHIF for more than 5 years were mainly between the ages of 31-40 years. This was supported by Ndung'u (2015) who found that members became more aware of their vulnerability to sickness with age so older people were more inclined to take up health insurance. There is no correlation between the level of education and the length of enrolment with the NHIF given the lack of a clear pattern in the data, which contradicted Wanjiru, Yitambe and Chomi (2019) who found a significant correlation between the level of education and NHIF enrolment. The individuals who had been enrolled with the NHIF were mainly self-employed regardless of the length of enrolment. The size of the family was not necessarily a determinant of the length of enrolment with the NHIF, which was inconsistent with Mwinuka and Chacha (2020) who found that the larger the family size, the higher the enrolment with health insurance.

The socio-demographic characteristics were finally correlated to the NHIF defaulting status. The results showed that: whilst the majority of people have not defaulted on their payments, a considerable majority of those who have not defaulted were female, thus, females appear to be more responsible in terms of honouring their NHIF payment commitments. This was inconsistent with Oraro and Wyss (2018) who found that owing to family commitments, female-headed households were more likely to default on their insurance payments than male-headed households were. The commitment to honouring NHIF payments tends to improve with the advancement of the years of the enrolled members. There is no direct correlation between the level of education of individuals and their defaulting status. This was inconsistent with Wanjiru *et al*. (2019). There is no direct correlation between the employment status and the NHIF defaulting status but rather it is just a question of numbers, that is, the more a given category of employees, the higher the likelihood of either defaulting or not. There is no direct correlation between the size of an individual's family and the NHIF defaulting status, which contradicted Muiya (2017) who found that there was an inverse relationship between the size of the family and the ability to meet financial obligation related to health insurance.

5.1.2 Economic Status and Voluntary Enrolment of Individuals to the NHIF

There were a number of findings pertaining to the influence of economic status on voluntary enrolment of individuals to the NHIF. Firstly, majority of respondents disagreed with the assertion that the household income is little hence they were not able to enrol to the NHIF. This was consistent with Ogundeji *et al*. (2019) who determined that 82% of the household heads were willing to pay insurance premiums for their households. Secondly, the majority of respondents also disagreed that the household size depending on them was large thus making it difficult to have extra amount to pay for NHIF. This was inconsistent with Ogundeji *et al*. (2019) who found that larger family sizes put a strain on household incomes and made it more difficult to afford the insurance premiums. Thirdly, majority of the respondents were neutral towards the assertion that the standard of living is high which make them to have other priorities on food and shelter than enrolling in NHIF. This did not support the findings of Adebayo *et al*. (2014) that high out-of-pocket payments have made it difficult for community members working in the informal sector to afford healthcare expenses due to

their low standards of living. Lastly, most of the respondents agreed that their occupation allows them to live from hand to mouth, which makes it hard to enrol to NHIF which corroborated Muketha (2016).

5.1.3 Individual Awareness Effect on Voluntary Enrolment of Individuals to the NHIF

There were a number of findings relating to the influence of individual awareness on voluntary enrolment of individuals to the NHIF. Firstly, most of the respondents were not aware of how to enrol to the NHIF because no one had informed them. This was inconsistent with Setswe *et al.* (2015) who found that 80.3% of respondents were aware of the NHI in South Africa. Secondly, there is no awareness on the health benefits after enrolling to NHIF. This was inconsistent with Ariga (2018) who found that most (59%) of the informal sector members who voluntarily enrolled with NHIF were aware of the health benefits. Thirdly, the advertisement made on the importance of National Hospital Insurance Fund has encouraged most of the respondents to enrol to the scheme. This contradicted Mbau *et al.* (2018) who determined that the use of mass communication media such as TV and radio advertisements in the main media houses as well as billboards on major roads to convey information regarding NHIF, have left out critical members of the community including the elderly, poor, uneducated, rural communities making them unaware of the benefits of the scheme. Fourthly, most respondents personally prefer enrolling to National Hospital Insurance Fund because it is helpful during medication. This corroborated Setswe *et al.* (2015).

5.1.4 Cultural Practices on Retention of Individuals Voluntarily Enrolled to the NHIF

The results pertaining to the influence of cultural practices on retention of individuals voluntarily enrolled to the NHIF indicated that that majority of their family members have confidence on the scheme and prefer paying through cash. This was corroborated by Mulupi *et al*. (2013) who found that some members felt that their contributions were just aiding others particularly if they never became sick and so expected their contributions to be refunded at the end of the year or forwarded to the following year thereby leading to loss of confidence in the scheme. Additionally, the benefit of NHIF to cater for their large family size has made them to stick to it. This contradicted Brinda *et al*. (2014) who determined that

cultural practices in rural areas which foster the growth of larger household sizes lead to high out-of-pocket health expenses since these individuals choose to use traditional healers or only seek healthcare whenever a family member is sick given that they have more pressing economic concerns. Further, the respondents disagreed with the assertion that majority of people believe in traditional medicine hence there is no need of paying for NHIF yet they can get medication from traditional healers. This again was inconsistent with Brinda *et al*. (2014). Lastly, most of the respondents disagreed that the family members are not exposed to NHIF scheme because they believe that doing so is inviting the diseases into the family. This contradicted Niyinyumva (2019) who found that some people believed that setting money aside for health insurance would be inviting diseases or evil into the home so they ended up not enrolling with the NHIF.

5.1.5 Quality of Service on Retention of Individuals Voluntarily Enrolled to the NHIF

The results relating to the influence of quality of service on retention of individuals voluntarily enrolled to the NHIF show that most respondent disagreed that the delay in NHIF to respond to medication payment has led them to opt for cash payment than delay in medication. This was inconsistent with Obadha *et al*. (2020) who found that the decision by health care providers to delay payments in favour of higher, albeit infrequent repayments has been popular with members. Secondly, a marginal majority of respondents felt that the NHIF services are affordable as compared to cash payment hence always pay monthly charges. This corroborated Mbau *et al*. (2020) who posited that despite the best intentions of NHIF reforms which included an upward revision of premium contribution rates, an expansion of the benefit cover to include outpatient services as well as specialized services, and an introduction of provider payment methods and rates for new outpatient and specialized benefit packages; these reforms were poorly communicated and not affordable for some critical population groups, and there were gaps in the service delivery infrastructure. Thirdly, the friendly staff at the NHIF office encourage respondents to use the scheme. This is consistent with Spieker (2020) who found that in response to quality assurance limitations on the part of the NHIF, the Ministry of Health launched a strategic collaboration with PharmAccess, a Dutch NGO, in 2013 to institutionalize accredited clinical and business quality standards as a part of a national quality assurance system whose scope included

patient care. Lastly, most respondent agreed that there is equity in NHIF scheme services hence it encourages them to use it. This tallied with Abuosi *et al*. (2016) who found that that health insurance has enhanced equity in healthcare in Ghana with respect to finance access to healthcare although this is adversely affected by the fact that there are some healthcare providers who engage in corrupt practices such as collection of unofficial/informal fees.

5.1.6 Enrolment and Retention to NHIF

There a number of findings pertaining to the enrolment and retention to NHIF. Firstly, most of the respondents would be willing to recommend other people for enrolment on NHIF. This was consistent with Kimani *et al*. (2012) who found that whilst many of the respondents in the study expressed a willingness to encourage others within their circles to also enrol with the NHIF, they felt that the inability to pay would be an impediment to their voluntary enrolment. Secondly, most respondents were aware of many people who have continued with their NHIF enrolment. This contradicted Musungu *et al*. (2021) who affirmed that despite the best efforts of the Government of Kenya through its Ministry of Health, initiatives aimed at the expansion of the coverage of NHIF, particularly among the informal sector, have not led to yielded the intended results with an estimated 73 percent not renewing their membership in 2017 reflecting a very high rate of attrition. Thirdly, the continued enrolment on NHIF is dependent on the type of illness or nature of health service needed. This was consistent with Mukhwana *et al*. (2015) who found that the continued enrolment of individuals in the informal sector in Kakamega County in NHIF was dependent upon a number of factors including the cost of the services, the domain of services and illnesses covered by the scheme, and the harshness of penalties levied for late payment. Lastly, most respondents were neutral regarding whether they have faced financial challenges, which have made them default on monthly payments on NHIF and even incur penalties. This was not consistent with Suchman (2018) who determined that reforms within the NHIF, which led to increased affordability of the scheme to members of the informal sector created the perception of enhanced accessibility of health services for the poor and reduced the previous out-of-pocket payment concerns.

5.2 Conclusions

A breakdown of findings from the socio-demographic characteristics of the study shows that more women were generally willing to enrol to the NHIF than men; people were less willing to voluntarily register with the NHIF the older they got; most people were knowledgeable about the purpose of the NHIF scheme regardless of the socio-demographic characteristics; there is no clear correlation between the socio-demographic characteristics of respondents and their enrolment to the NHIF; and the more mature a member, the more likely that the individual will honour their payment obligations to the NHIF.

As far as the economic status indicators such as household income, household size and standard of living are concerned, respondents were generally, not adversely affected by their economic status in voluntarily enrolling to the NHIF, however, their occupation limited their ability to voluntarily enrol with NHIF. Additionally, whilst advertisements have informed a number of people about the NHIF, a considerable number were still not aware of how to enrol as well as the associated health benefits. Further, it is apparent from the findings that the respondents have not been adversely influenced by cultural practices in voluntarily enrolling to the NHIF. The quality of services has been good enough not to act as an impediment to the respondents' voluntary enrolment with the NHIF. Finally, it is clear that the NHIF has made a positive impression on the respondents given that most of them would be willing to recommend it to others, they were also aware of others who have continued with their enrolment with the scheme, and financial challenges have not influenced most respondents' voluntary enrolment with the NHIF.

The theoretical framework was well chosen given that it provided appropriate support for the study variables while the conceptual framework enabled the development of the structure of the paper including the research objectives, problem statement, empirical review, and articulation of research findings.

5.3 Recommendations

5.3.1 Recommendations for Policy

The policy makers of the NHIF should do more in coming up with incentives to lure younger individuals to enrol with the scheme by introducing health plans that are more affordable for individuals in the lower age brackets such as tax deductions for younger insured members. Further, subsidies should be offered to the informal sector such as a 50 percent subsidy bundled with SMS reminders where vouchers can be offered to cover 50 percent of the insurance premiums for a given period of time so as to boost the voluntary enrolment to the scheme. The NHIF should engage in more awareness campaigns to raise the level of awareness about the method of registration and the associated benefits that accrue to someone upon registration. These campaigns can include house to house visits with leaflets, mobile public announcements with PA systems, and SMS marketing.

5.3.2 Recommendations for Practice

The Government of Kenya needs to explore and scale up innovative financing and co-financing mechanisms such as the inclusion of a benefit package for community health in NHIF. This will ensure the increment of the utilization and coverage of health services provided at community level where the majority of the informal sector are domiciled so as to enhance health outcomes for the communities. The NHIF needs to improve the registration process, which is presently too long, complicated and demanding by easing off on some of the documentation required such as the requirement for birth certificates for children which has proven to be an impediment for parents who lack birth certificates for their children.

The NHIF should also reconsider its decision to review upwards the NHIF premium payment contribution from KES. 160 to KES. 500 since this will act as a further deterrent to the voluntary uptake of the NHIF by members of the informal sector. Rather than a flat rate, a pro-rated premium should be considered by factoring into consideration the varying income levels of the informal sector workers. Additionally, new subsidy programmes should be introduced by the NHIF to factor into considerations the needs of the poor, orphans and vulnerable children, disabled and elderly so as to make it more equitable.

5.4 Areas for Further Research

The study has exposed a number of gaps in the existing body of knowledge including: the scarcity of research on the influence of the economic factors on voluntary retention and enrolment to universal health coverage; little research coverage on the influence of awareness practices on benefits of undertaking the health insurance cover as well as the effect of income and education on the awareness of the benefits of health insurance.

Additionally, researchers should focus on the correlation between specific sociodemographic factors such as income and gender with particular aspects of the uptake of NHIF such as knowledge of benefits, length of enrolment and defaulting status since this has not been addressed adequately.

5.5 Limitations of the Study

The study encountered a number of limitations. Firstly, a number of respondents were uneasy about participating in the study so the researcher assured them that their participation was totally confidential and anonymous and that the exercise was purely for academic purposes. The study was also limited by the advent of the Covid-19 restrictions on movement and social interaction which meant that the intention to collect data using focus group discussions and key informant interviews had to be cancelled. The study, therefore, only relied on information collected using structured questionnaires.

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APPENDICES

APPENDIX I CONSENT FORM

My name is Frankie Gweya Akute and I am a master student at Strathmore university business school. My master's studies entail conducting an original research on a particular topic. My chosen topic is titled '**Factors Influencing Voluntary National Hospital Insurance Fund Enrolment and Retention: A Case of Busia County.'**

I would like to invite you to participate in this research. Your participation in this research is voluntary. If you choose to participate, you can answer the questions presented to you which touch on the topic above. If you change your mind about taking part in this research, you have a right to withdraw at any time. The researcher will respect your decision at all times: Your withdrawal will not have any negative consequences. There will be no economic benefit to your participation in this study.

Please understand that you have the right to decide not to answer any question if you so wish. The researcher will keep all the information given as part of this research confidential at all times. No name will be asked on the research instrument.

The results of this research will be presented at a forum at Strathmore university business school. When reporting the results, the names of the sub counties will be used. Final results will also be shared with you.

Please read the statements below and tick the boxes if you agree with them. Signing your name at the bottom of the page means that you agree to take part in this project.

	TICK IF YOU AGREE
I have read the information sheet about this project and give consent for Frankie to interview me	
I have had time to think about the information.	

I understand that I am choosing to be involved and I can leave the project at any time without giving a reason. I can do this by contacting Frankie Gweya Akute on 0725402778	
I understand that the things I talk about in this project will be written in a report. My name will not be used so no one will know who said what. The only thing that I'm not able to keep confidential would be if you let me know that you or someone else had been harmed, or are in danger of being harmed, or have broken the law- then I will have to share this information with another adult and I'll let you know.	
I understand that the session will be audio taped so that there is a good record of what was said.	
I agree to take part in this project investigating the factors influencing voluntary national hospital insurance fund enrolment and retention: a case of Busia County	

(Please print your full name)

---   ----------------

(Please sign your name)   (Date)

Please keep this information sheet in a safe place in case you want to read it again in the future.

Yours truly,

Frankie Gweya Akute

APPENDIX II SURVEY QUESTIONNAIRE DESIGN

I kindly request you to participate in my study and your responses to the items in the questionnaire will be treated with utmost confidentiality. The questionnaire is made up of six sections A, B, C, D. E, and F.

SECTION A: DEMOGRAPHIC INFORMATION

(Please tick your answers in the boxes provided)

1) What is your gender?

   Male [ ]

   Female [ ]

2) What is your age bracket?

   21-30 years [ ]

   31-40 years [ ]

   41-50 years [ ]

   Over 51 years [ ]

3) What is your level of education?

   Diploma [ ]

   Undergraduate [ ]

   Masters [ ]

   PhD [ ]

4) For how long have you enrolled in NHIF?

   Less than 5 years [ ]

   Between 6-8 years [ ]

   Between 9-11 years [ ]

   Over 12 years [ ]

SECTION B: Economic status

To what extent do you agree to the following statements on influence of economic status on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia county? Use the following scale to tick only one options in each question 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Statements	5	4	3	2	1
1. The household income is little hence am not able to enrol to National Hospital Insurance Fund					
2. The household size is large depending on me making difficult to have extra amount to pay for National Hospital Insurance Fund					
3. The standard of living is high which make us to have priorities on food and shelter than enrolling in National Hospital Insurance Fund					
4. My occupation allows me to have hand to mouth amount which is hard to enrol to National Hospital Insurance Fund					

SECTION C: Individual awareness

In your own opinion do you agree to the following statements on influence of individual awareness on voluntary enrolment of individuals to the National Hospital Insurance Fund in Busia County? Use the following scale to tick only one options in each question 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Statements	5	4	3	2	1
5. Am not aware of how to enrol to the National Hospital Insurance Fund because no one have informed me					
6. There is no awareness on the health benefits after enrolling to National Hospital Insurance Fund					
7. The advertisement made on the importance of National Hospital Insurance Fund has encouraged me to enrol to the scheme					

8. I personally prefer enrolling to National Hospital Insurance Fund because it is helpful during medication					

SECTION D: Cultural practices

To what extent do you agree to the following statements on influence of cultural practices on retention of individuals voluntary enrolled with the NHIF in Busia County? Use the following scale to tick only one options in each question 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Statements	**5**	**4**	**3**	**2**	**1**
9. Majority of my family members don't have Confidence on the scheme and prefer paying through cash					
10. The benefit of NHIF to cater for my large family size has made me to stick to it					
11. Majority of people here beliefs in traditional medicine hence there is no need of paying for NHIF yet I can get medication from traditional healers					
12. The family members are not exposed to NHIF scheme because they belief that doing so is inviting the diseases into the family					

SECTION E: Quality of service

In your own opinion do you agree to the following statements on influence of quality of service on retention of individuals voluntary enrolled with the NHIF in Busia County? Use the following scale to tick only one options in each question 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Statements	5	4	3	2	1
13. The delay in NHIF to respond to medication payment has led me to opt for cash payment than delay in medication					
14. The NHIF services are affordable as compared to cash payment hence always pay monthly charges					
15. The friendly staff at the NHIF office encourage me to use the scheme					
16. There is equity in NHIF scheme services hence encourage me to use it					

SECTION F: Enrolment and Retention to NHIF

In your own opinion to what extent are the following enrolment and retention to NHIF ? Use the following scale to tick only one option in each question. (Key: (Very Small Extent=1, Small Extend =2, Average =3, Large Extent=4 and Very Large Extent=5)

Statements	5	4	3	2	1
17. The number of clients enrolled per year has increased					
18. NHIF have been able to retained many clients per year					
19. The enrolment rate change per season of the year					
20. There are months which clients fail to pay monthly fee hence leading penalties					

APPENDIX III BUDGET PLAN

The budget for the research study is as below;

FACILITATION					
Name	**Night outs**	**Days**	**Total**	**Transport**	**Totals**
Frankie Akute	2,500.00	8	20,000.00	15,000.00	35,000.00
			Totals		**35,000.00**
	Participants	**Number**	**Lunch**	**Transport**	**Totals**
	Interviewees	396	100	100	79,200.00
	NHIF Staff	1	250	500	750.00
					79,950.00
		Item	**Participants**	**Average**	**Total**
		Airtime	397	50	19,850.00
NACOSTI Permit	-	-	-	-	1,000
TOTAL					**135,800.00**

APPENDIX IV SU-IERC0854_20 APPROVAL

21st July 2020

Mr Akute, Frankie
francoakute@gmail.com

Dear Mr Akute,

RE: Factors Influencing Voluntary National Hospital Insurance Fund Enrolment and Retention: A Case of Busia County

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0854/20.** The approval period is **21st July 2020 to 20th July 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

for: Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC

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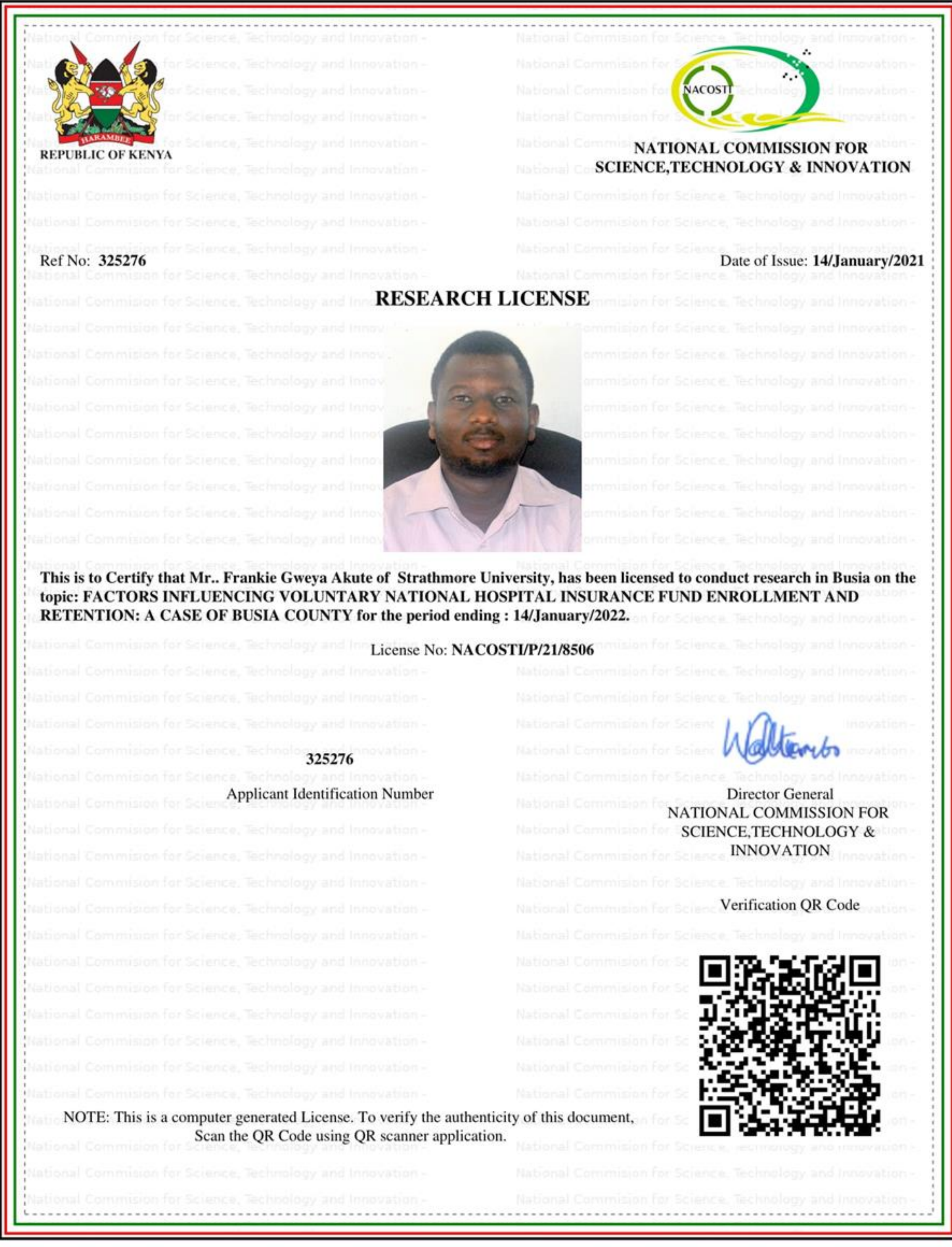
APPENDIX V RESEARCH PERMIT - NACOSTI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RESEARCH LICENSE

This is to Certify that Mr.. Frankie Gweya Akute of Strathmore University, has been licensed to conduct research in Busia on the topic: FACTORS INFLUENCING VOLUNTARY NATIONAL HOSPITAL INSURANCE FUND ENROLLMENT AND RETENTION: A CASE OF BUSIA COUNTY for the period ending : 14/January/2022.

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