SOCIO–ECONOMIC DETERMINANTS OF NAT'IONAL HEALTH INSURANCE FUND MEMBERSHIP IN THE INFORMAL SECTOR:A CASE STUDY OF KITUI WEST SUB-COUNTY, KENYA

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DECLARATION

This project is my original work and has not been presented for award of degree in any other university.

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This project has been submitted for review with my approval as university supervisor.

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DEDICATION

This research is dedicated to my sons Kennedy Kavulu Jr, Kayden Kamusyi and Kellan Kamusyi. This work should inspire them to go for greater heights in their academic pursuits.

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LIST OF ABBREVIATIONS / ACRONYMS

BHI: Basic Health Insurance

CDI: Center Of Intergrated Development

DRC: Democratic Republic Of Congo

GDP: Gross Domestic Product

GoK: Government Of Kenya

HCP: Health Card Program

HISP: Health Insurance Subsidy Program

HP+: Health Policy Plus

ILO: International Labour Organisation

ISED: Institute Of Health And Development

KANU: Kenya African Natonal Union

KCPE: Kenya Certificate Of Primary Education

KES: Kenya Shillings

KHHEUS: Kenya Household Health And Utilisation Survey

KNBS: Kenya National Bureau Of Statistics

NARC: National Rainbow Coalition

NG-CDF: National Government Costituency Development Fund

NGOs: Non-Government Organisations

NHIF: National Health Insurance Fund

NHIS: National Health Interview Survey

NSSF: National Social Security Fund

OOP: Out Of Pocket

OPSD: Old And Persons With Severe Disabilities

OVC: Orphans And Vulnerable Children

SACCOs: Savings And Credit Cooperative Organisations

SDGs: Sustainable Development Goals

SPSS: Statictical Package For The Social Sciences

WHO: World Health Organisation

WHT: Willingness To Pay

ABSTRACT

Most nations have failed to provide their citizens with accessible and high-quality health care. National and international treaties have been ratified with little if any success as a result of this. In Kenya, against the expectations of successive governments –KANU, NARC, Grand coalition and Jubilee - the implementation of health insurance program for the mostly poor and vulnerable populations has been challenging. Registration into the state health insurer of this population of Kenyans has been discouraging and low. This study has been motivated by the desire to establish why NHIF since opening, its doors to informal sector workers 50 years ago has not been able to make significant impact in bringing these workers on board. The objective of the study was to establish the influence of socio-economic factors on NHIF membership in the informal sector. The study narrowed on four variables i.e income level, education level, age and gender. A cross sectional study was implemented to systematically sample primary data. Structured questionnaire for the self-employed population in Kitui west sub-county were utilised. Stratified sampling was used to collect data from 100 respondents. The four wards of the sub-county were used to build strata, each ward was viewed as a stratum. The data collected was analysed using SPSS to transform it from raw to usable information with the primary goal of establishing facts and imparting knowledge.

The study established that health insurance coverage varies significantly across income groups. It was found that a respondent‟s level of education was significant in influencing their decision to enrol. Age is a significant determinant of NHIF registration. However, this is confounded by other variables such as education and income which are likely to increase with age. Gender plays a role in determining NHIF membership. As is the case

with age variable, this is confounded by other variables namely; Income and education. This is because men are more likely to be more educated and also have a higher income compared to women. Women are also disadvantaged by power hierarchy within the households as enrolment decisions are made by the husbands as the head of households. Overall, the study revealed that income level and education level are the major determinants of enrolling into a health insurance scheme.

CHAPTER ONE
INTRODUCTION

1.1 Background Information to the study

Most countries have failed to provide their people with accessible and high-quality healthcare. National and global policies have been ratified with little, if any, progress as a result of this. According to International benchmarks for public health spending, each government is expected to devote 15% of its national budget to health-care provision (WHO, 2021). Kenya is very far from achieving this requirement to date. Only 4.8 percent of the 2019/2020 Kenya national budget was allocated the health sector , which is a Paltry 2.2 percent of Gross Domestic Product (GDP) of the country (HP +, 2021).

The goal of universal health insurance coverage has been realized in some countries. Countries have devised different strategies to realize this goal. Developed countries have realized universal coverage by applying some form of statutory schemes (Duhlop and Marius, 1997). Rich nations that have realized universal coverage for both the formal and informal sector through some form of statutory schemes include Germany, United Kingdom, Canada, France, Japan and Sweden. Developing nations which have realized universal coverage are Costa Rica and Korea. Universal health coverage is only accomplished when all those who work in formal and informal sector are registered and remain active members of the insurance schemes. This implies that inclusion in the insurance scheme of the workers in the informal sector may be a challenging endeavor but not an impossible government policy target (Normand and Weber, 1995).

Compulsory health insurance started in Germany in 1883. Despite his opposition to social democracy and illegalized social democratic organisations, chancellor Bismark (nicknamed "the Iron Chancellor" by admirers) was astute enough to respond to their concerns. The World's First Health Insurance Statute was enacted on May 29, 1883, and went into effect in 1884. The scheme was limited to the formal sector workers basically in factory and did not include public sector (ILO, 2012). Administration of the funds was decentralized with employers organized on industry lines or localities. Contributions were not based on the health needs or family size of the contributor but according to their income. Employers paid 66.6% and employees 33.3% of the member contributions (Goldner, 2012).

Those who were originally protected in the early twentieth century were skilled workers, not self-employed farmers, fishermen, or others with low incomes. With most of the skilled labor force in the formal sector insured the concern focused on extending the same healthcare rights to the informal sector workers. As a result some parts of the developed world (Scandinavia) witnessed the emergence of highly subsidized public hospitals of reasonable quality. This also resulted in subsidization of statutory health insurance with budgetary allocations for only the self-employed or other government programs cross-subsidized the low earners in the informal sector (Abel –Smith, 1992).

Public Health Insurance in Africa continent is inchoate and in many nations it is not present at all. The problem of National insurance schemes in Africa is designing a program that takes into consideration the poor who are the majority. Legislating for a

public insurance scheme is not a panacea for universal health coverage (for example Nigeria). Formulating health insurance policies is not a challenge. The devil is in the details during the implementation stage of the policy Success or failure of national health insurance schemes is not dependent entirely on formulation of excellent or extremely clever ideas. Rather, it is the capacity to implement the policies successfully and manage client and political expectations (Husain et al 2012).

In Kenya, efforts have been made to realize universal health care goal. The introduction of health-care provision clauses in Kenya's 2010 constitution exemplifies this. Article 43 of the Bill of Rights, which deals with economic and social rights, specifies that everyone has the right to the best possible health and that everyone is entitled to health care with care for reproductive health included. It continues to say that emergency medical care should not be refused to anybody, and that the state should provide adequate social security to those who are unable to support themselves and their dependents (Constitution of Kenya,2010). The National Health Insurance Fund (NHIF) is among the Kenya's most important pillars of quality health care. Since this is a social insurance scheme, it should be readily available and affordable to the majority of Kenyans. However, the majority of Kenyans have yet to sign up for the insurance plan.

The National Hospital Insurance Fund (NHIF) was founded in 1966 by a Parliament Act (Cap 255, Kenyan laws), primarily to correct a previous policy that appeared to be discriminatory against Africans(GOK,1966). This was in accordance with Sessional Paper No. 10 on African socialism and its application in Kenyan planning (GOK, 1965).

The new scheme was open to Kenyans aged 18 and up who earned more than KSH 1000. In order to make inpatient health care more affordable and available to the majority of the population, the voluntary National Hospital Insurance Fund (NHIF) was introduced in 1972 with the aim of getting those who were unemployed or earning less than 1,000 shillings on board (Njeru et al, 2004).

The NHIF Act No. 9,1998, transformed the NHIF from a government department to an autonomous state corporation with a wider representation and a broadened mandate to enable majority of Kenyan citizens to access healthcare that is of quality and inexpensive (NHIF, 2021)

Kenya has a dual economy, with a broad and increasing informal sector and a tiny but modern formal sector (Kaane, 2014). The informal sector in Kenya is broad and competitive. Here are 95 percent of the country's companies and entrepreneurs (Amenya 2007). According to the government, 76.5 percent of Kenyan workers are employed in the informal sector, which continues to expand each year (Kenya National Bureau of Statistics, 2009). As a result, it's critical to identify and evaluate the socio-economic factors that influence NHIF membership in this segment of Kenya's population. The primary aim of this research is to identify the socio-economic factors that are preventing the implementation of this health insurance system in Kenyan society, with an emphasis on the self-employed.

Recent reforms have seen NHIF design products targeting various groups. The products provide for the underprivileged in the society via sponsored programs. These

programs include, Linda Mama program, a health insurance cover for expectant mothers and their new born children with no other forms of insurance. The program provides ante-natal, delivery care, postnatal care and infant care; Edu afya, the Secondary School cover which is a free all-inclusive health cover for every student in Public Secondary Schools sponsored by government; Health Insurance Subsidy Program (HISP) which covers the poor, orphans and vulnerable children (OVC) and the HISP (OPSD) that target the old and persons with severe disabilities (NHIF, 2021).

Linda Mama and Edu afya Programs are relatively successful, although government delays in disbursing funds to pay hospital claims results in reluctance to treat patients in this category of membership particularly by private hospitals. The HISP for the poor, orphans and vulnerable children (OVC) is sponsored by a few National Government Constituency Development Funds (NG-CDF), a few county governments and non-governmental organizations (NGOs). Most of the time these contributions are not submitted and members in this category don‟t always enjoy the benefits of membership. HISP for the old and persons with severe disabilities (OPSD) is taken care by the National Government (labour and social protection), a few NG-CDF and a few county governments. Updating the accounts of this membership is a big challenge to the government agencies mentioned above and members are forced to pay to benefit (NHIF, 2021).

The National Hospital Insurance Fund (Amendment) Act No.1 Of 2022 Came into force on the 28th January 2022 after assent by president of Kenya on the 10th of January 2022. The National Hospial Insurance Fund changed to National Health

Insurance Fund. The new name reflects the true mandate of NHIF which must be broader than just payment of hospitalisation costs in order to sustain and support UHC and incorporates the expansion of the types of health care providers NHIF can empanel. The mandate now provides for empanelment and contracting which enables the fund to be a strategic purchaser rather a passive purchaser. Under the new Act, employers shall contribute jointly with employees. An employer cannot deduct the matching contribution from their employees pay. Exemption is made for employers with a cover that is equal to or superior to that offered by NHIF. Self-employed Members‟ premiums will be determined based on whether they are sole beneficiaries or have a spouse/dependants as provided by the regulations (yet to be implemented) NHIF must review contribution premiums every two years(NHIF 2023).

1.2 Statement of the Problem

When the government expanded the mandate of NHIF it was expected that an overwhelming number of informal sector workers would register for the insurance scheme. However, implementation of the program for the self- employed has not been successful. The government‟s objective was to have those not making statutory contributions benefit from the state insurer by saving them from out of pocket (OOP) payment of their hospital bills. An overwhelming majority of Kenyan workforce is in the informal sector and most are not in any insurance scheme. When faced with hospital expenses these workers are forced to do OOP payment to clear their bills. These being

mostly low income earners results in borrowing beyond their capacity to payback and selling of valuable property like land leading to sliding deeper into poverty.

Against the expectation of successive governments – KANU, NARC, Grand coalition and Jubilee- the implementation of health insurance program for these mostly poor and vulnerable populations has been difficult and challenging. Registration into the state insurance scheme of this population of Kenyans has been discouraging and low. This study is motivated by the desire to establish why NHIF since opening its doors to informal sector workers 50 years ago has not been able to make significant impact in bringing these workers on board. In Kenya, 90 percent of the population is without health insurance (Ministry of medical services and ministry of public health and sanitation, 2009). Just 7 percent of women and 11 percent of men between the ages of 15 to 49 years are insured by health insurance (KNBS, 2010). The 90 percent Kenyans without any form of medical insurance are either unemployed or working in the informal sector. Whereas those unemployed cannot simply afford any form of health insurance, those in the informal sector should at least afford NHIF contributions which are the cheapest premiums in the market. In the recent past the NHIF board of management has prioritized the registration of workers in the informal sector (NHIF, 2016). The negligible number of workers registered with the NHIF from this sector, however, points to serious disconnect between the state insurer and this largely untapped market segment. The negligible membership of NHIF in the informal sector implies that there are factors hindering NHIF penetration into the informal sector.

The expected role of the renewed fund has not been realized to date, as majority of Kenyans still cannot access the scheme and/ or are unable to meet the costs of medical care. So far, the NHIF has succeeded in ensuring that those in formal employment are enlisted with the insurance scheme. However, a big chunk of Kenyan population is not enlisted with the insurance. The group comprises the unemployed Kenyans of working age estimated to be 40 percent of the population and those in the informal employment estimated to be 76.5 percent of the labour force (KNBS 2009). Registration into the insurance scheme among those in the informal sector has been very low yet they are the majority of the working population. In 2015, only 39 percent of the 5.2 million workers who were contributing members of NHIF came from the informal sector despite constituting approximately 80 percent of the 15.2 million workers in Kenya (KHHEUS, 2015). With the about 20 percent of total labour force in the formal sector covered by NHIF and other insurance schemes, policy makers ought to be concerned about the 80 percent workers in the informal sector, majority of whom do not contribute or are active members of NHIF or any other health insurance scheme. Most informal sector workforce is not even aware of the benefits of NHIF membership like the fact that the coverage is for the entire family and not the principal member only (KHHEUS, 2015).

The NHIF (Amendment) Act, 2022, Section 14A states that: A person who has attained the age of eighteen years and is not a beneficiary shall register as a member of the Fund (GoK, 2022). This may sound an excellent public policy on paper . But reinforcement of the policy is not realistic. The NHIF Act No. 9 of 1998 Section 15(1) states that : Any person who is ordinarily resident in Kenya and who has attained the age of 18 years and whose income is derived from

salaried or self-employment shall be liable as a contributor to the Fund (NHIF, 1998). 25 years later no significant progress has been realized in enrolling informal sector workers. Thus the problem is not formulating ambitious Public Policies on health insurance coverage but implementation of the policies.

A CASE STUDY OF KITUI WEST SUB-COUNTY

1.3 Research Questions

The study asks one broad question, what is the relationship between socio-economic factors and NHIF membership in the informal sector? A number of observations inform this question. There are possibly a dozen socio-economic factors influencing NHIF membership in the informal sector. However, this study is motivated and will be guided by the following specific questions.

(i) How does income level determine NHIF membership in Kitui West sub-County?

(ii) How does education level determine NHIF membership in Kitui West sub-County?

(iii) How does gender determine NHIF membership in Kitui West sub-County

(iv) How does age determine NHIF membership in Kitui West sub-County??

1.4 Study Objectives

The research will have main objective and specific objectives.

1.4.1 Main Objective

The study seeks to establish the influence of socio-economic factors on NHIF membership in the informal sector.

1.4.2 Specific Objectives

(i) To establish the influence of income levels on NHIF membership in Kitui West sub-County.

(ii) To establish the influence of education level on NHIF membership in Kitui West sub-County.

(iii) To establish the influence of gender on NHIF membership in Kitui West sub-County.

(iv) To investigate the influence of age on NHIF membership in Kitui West sub-County.

1.5 Study Justification

Study justification is categorized into policy justification and academic justification.

1.5.1 Policy Justification

It will provide policymakers at the parent Ministry of Health, the parliamentary departmental committee on Health, and the NHIF Board of Management the important factors that would help or hinder the inclusion of informal sector staff in the current NHIF program. The findings will also help in the formulation of strategies towards the achievement of universal healthcare coverage goals set out in the Sustainable Development Goals (SDGs). The county government will too find the study useful in enhancing the health of its population. This can be realized by mobilizing the local

community towards the rectification of the various factors that impede the progress of the insurance scheme among them.

As a state Corporation, NHIF has a ready market of those in the formal employment. Most of the employers have complied with NHIF Act No. 9 of 1998 by remitting contributions deducted from their employees because it is a statutory requirement. As such, NHIF can only raise additional revenue by registering members of the informal sector, who form a big chunk of the Kenyan population. The study findings will assist the state corporation formulate marketing strategies and tactics to penetrate this largely untapped market segment. The study will help the state corporation in tailoring products that are attractive to the target market (i.e. the informal sector population). It will also provide information that could be used in designing a scheme for the informal sector.

If education level turns out to be an hindrance to membership especially in rural areas, then NHIF should enhance its public education program by way of sensitization on the registration processes, payment procedures, penalties for defaulting and benefit packages. This can be achieved by targeting the rural populations using a language they can easily understand. In this regard the utilization of vernacular television and radio stations will be highly recommended.

1.5.2 Academic justification of the study

Academics are expected to be intrigued by the results of this research, which are anticipated to offer insights into and increase interest in the topic of social health

insurance. This is especially true in the developing world, where the majority of countries still lack universal health coverage. Social health insurance for the informal sector in rural areas would be of great interest to academics. This is important since rural areas are home to the most of the population in unindustrialized nations, particularly in Africa. Social health insurance scholars should be concerned about the success of such bold programs in a continent where social democracy is the standard rather than the rule.

Scholars of social health insurance in Africa and Kenya in particular should find the study intriguing to the extent of developing interest in factors hindering informal sector membership in agriculturally well-endowed rural counties. Interest in factors impending membership should also develop in counties where pastoralism is the way of life and the only means of economic survival.The study will make significant contribution to the existing body of knowledge by providing insight into the intricacies on the nexus between public policy formulation and public policy implemention. It will illuminate the challenges of implementing a public policy after legislation. The study will also magnify the critical role played by street- level bureaucrats (In this case NHIF registration and compliance officers) In implementing public policy by identifying the challenges they face in enrolling categories of the population like the least educated and the youngest.

1.6 Scope and Limitations of the Study

The study was limited in scope by the time period of the data collection. The data collection exercise took less than a month. This period is too short and the data collected can be diluted by subsequent events, for example, a new government in August can come up with new policies concerning NHIF and healthcare in general. Willingness to give

accurate information can be a problem. Most people are uncomfortable with revealing sensitive information like age and income and can actually lie about their age, income and education.

The researcher overcame this by taking time to interact with the respondents to detect any signs of dishonesty. The study was also limited by the socio-economic variables of interest i.e. income, education, age and gender. Other socio-economic factors affecting NHIF participation in the informal sector include family size, marital status, expectations about the design and coverage of illness in health insurance policies, facts, and awareness about health insurance.

The researcher considered Kitui West Sub-county /constituency ideal for this study because it represents semi-arid Kenya population whose economic main stay is subsistence farming with no major cash crop or pastoral activities. Health insurance for the informal sector studies have usually focused on the urban population in Kenya. Constituencies like Kitui central and Mwingi Central were not considered because they have urban wards in Kitui town and Mwingi town. Drier constituencies like Mwingi North and Kitui South engage partially in subsistence farming and also partially in pastoral activities. Driest constituencies like Balambala and Banissa engage predominantly in pastoral economic activities. Therefore Kitui West represents a unique segment of the Kenyan rural economy.

1.7 Definition and operationalization of key concepts

Income- The concept of income which is the most common is that of „money income", common usage considers income as a gain above acquisition cost that is *net earnings* (Howett 1925). In this study this variable is net earnings, but excludes savings, insurance, Pension, loan repayment and licenses or taxes paid.

Education level - In this study education level is the highest academic certificate achieved in a person"s life. It refers to the most recent level reached and successfully completed based on passing formal exams.

Age - In this study age will refer to the number of years of the person on the last birth day marked or celebrated.

Gender - In the context of this study gender refers to the culturally and psychologically formulated features of women and men.

Informal sector- informal sector has been defined as comprising self-employed workers, family workers and temporary workers. Informal sector has workers with employment contracts and working conditions that are unregulated by the state (Swaminathan, 1991). In this study it is economic activities taking place in an environment where there are not much state regulations like statutory NHIF and NSSF contributions. For the purposes of this study informal sector workers" income lies between Kshs 3000 and 50,000 per

month. Below Kshs 3000, one is considered un employed or under employed. Above kshs50,000 one is considered an employer and therefore a business organization.

Universal Health care- is there a legal requirement for universal health-care coverage and proof that the vast majority of the population has meaningful access to these services (Stuckler *et al*., 2010). In this study universal health care is the provision of affordable, accessible and quality health services, both inpatient and outpatient, to all the citizens of the Republic of Kenya.

1.8 Research Hypotheses

1.8.1 Main Hypothesis

Socio-economic factors influence NHIF membership in the informal sector.

1.8.2 Specific Hypotheses

i.) The higher the income, the greater the chances of joining NHIF.

ii.) The higher the educational level the greater the chances of joining NHIF.

iii.) The number of men joining NHIF is higher than women.

iv.) The older one is, the higher the chances of joining NHIF.

1.9 Methodology

1.9.1 Research Design

This study adopted cross sectional research design, that is a form of observational study that entails the examination of collected data from a population, or a representative subset, at a single point in time. Since the target group varied in the variables of interest but shared other characteristics, such as race, faith, and political party affiliation, the study used cross sectional analysis. Some of the advantages of using a cross-sectional analysis included the ability to confirm and/or disprove conclusions, the ability to include several variables at the time of the data snapshot, and the fact that it is comparatively less costly to conduct and did not take a long time.

1.9.2 Data Collection

The research was conducted in Kauwi, Mutonguni, Matinyani and Kithumula wards of Kitui West sub-county in Kitui County. These areas are predominantly rural population with no major urban centre. As such, they represent the rural informal sector in Kenya and provided a population with variant of variables to investigate.

This study depended on primary data. Structured questionnaires for the self-employed population in the sub-county was included in this report. Since it can include original data for defining a large population, the questionnaire was the best method for collecting information from this target population (Babbie & Mouton, 2002). The researcher used the questionnaire because it enabled him to reach a greater number of people in a short amount of time.

In this analysis, stratified sampling was used. This is a method of random sampling in which a sample is drawn at random from many sampling frames, each representing a different segment of the population (Neuman, 2008). As compared to random sampling, stratified sampling yields a significantly more representative sample. Stratified sampling yields more accurate and informative data. Simple random sampling was utilized in selecting survey participants for each stratum.

Mutonguni, Kauwi, Matinyani, and Kithumula/Kwamutonga are the four wards/divisions in Kitui West sub-county. These four wards were used to build strata. For the purposes of this review, each ward was viewed as a stratum. The proportional allocation method was used in this study, in which the sample sizes from different strata were kept proportional to the strata sizes.

Kitui West sub-county has a population of 102,314 people (KNBS, 2009). This population is spread into its four wards as follows: Mutonguni 34,140, Kauwi 25,385, Matinyani 24,081 and Kithumula/ kwa Mutonga 18,708. The study used a sample size of 100 respondents. To calculate the percentage in each ward, each ward size was multiplied by the sample size (100) and divided by the total population size (102, 314).

Table 1: Sample Size

Category of Population	Population Size	Sample Size
Mutonguni	34, 140	33
Kauwi	25, 385	25
Matinyani	24, 081	24
Kithumula / Kwamutonga	18, 708	18

Total	**102, 314**	**100**

1.9.3 Data Analysis

The data collected was analyzed using SPSS to transform it from raw to usable information with the primary goal of establishing facts and imparting knowledge. This research used SPSS to generate the much needed output. The current version of the software was employed.

1.9.4 Data Validity And Reliability

Validity is defined as the accuracy to which a test can measure what it is intended to measure (Borg&Gall,1986).The questionnaires used were very specific and clear to the respondents .Microsoft excel spread sheet latest version of the software was utilized to compare for any contradiction or non-uniformity with the SPSS output.

Reliability is defined as the ability of a research instrument to obtain similar or acceptably near similar research result after repeated trials. Questionnaires have been proven to be acceptably accurate as data collection tools most of the time providing results with minimal error margin(Mugenda,2003) Therefore this made them reliable research tools for the study. Computer software SPSS is known to be very accurate and reliable data analysis tool for research(Mugenda,2003). However, to assess reliability of the instrument, a Cronbach‟s alpha reliability test was run on a sample size of 18 respondents and the result indicated the study instruments had a high rating of internal consistency (strong reliability).

1.10 Chapter Outline

Chapter 1 Covers introduction to the study. **Chapter 2** presents literature review and theoretical frame work . **Chapter 3** provides data analysis and presentation. It illuminates whether socio-economic factors influence NHIF membership in the informal sector. **Chapter 4** summarizes the main arguments of the study, conclusions and proposes recommendations. An effort is also made to see if the research questions have been answered in this study. Areas for future research are pointed out.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

To demonstrate facts about this subject, this research will undertook a thorough review of the existing literature. In this section literature is organized based on the following topics: the influence of income on Health Insurance Membership; the influence of education level on Health Insurance Membership; the influence of age on Health Insurance Membership; the influence of gender on Health Insurance Membership; and Theoritical Framework.

2.2 The Influence of Income on Health Insurance Membership

Lewis (1989) concluded that the amount of a country‟s income was the most significant determinant in easily understanding the amount of a country‟s life and medical insurance purchase. The more a nation‟s income other factors being constant, the higher its expenditure on all categories of insurance. At the microeconomic level, the more a house hold income, the more the life insurance purchase. At the microeconomic level his study covered household income influence on life insurance purchase and excluded medical insurance purchase. This study endeavored to fill that gap by interviewing individuals of different levels of income.

Diamond (1992) discovered that several people do not buy insurance since they misunderstand the risk or consequences of their choice, others as a result of poverty, and still others as a result of the premiums are too high in comparison to the anticipated

benefits. The missing information is that he does not specify at what level of poverty or income level one is unable to subscribe to social health insurance. Another vacuum is what income level is susceptible to misunderstanding the danger or results of the decision. By interviewing people of different levels of income, this study filled that gap.

Schneider (2004) concluded that higher income levels; cheap contributions and expensive medical bills; likelihood of sickness occurring; avoiding falling into the trap of poverty; confidence in hospitals quality standards and state health insurer‟s management were factors that could encourage demand for medical insurance. Factors that discouraged people from registering with insurance schemes were cheap medical bills, unfamiliarity with insurance policies, the inability to insure against unseen future danger because of the need to meet basic requirements like food and shelter, lack of confidence in the workings of the insurance industry, their past experience on feelings of regret and disappointment and expensive contribution rates forcing them to seek other risk sharing methods. Schneider does not state at what income level is demand for medical insurance stimulated and the depth of poverty that makes an individual unable to register for medical insurance. This study endeavored to fill that gap by investigating individuals of different income capacities.

Olusoji (1990) examined explanations for enrollment to Health Card Programme (HCP) in Thailand and concluded there was no relationship between social economic status and HCP registration . He established that willingness to register is the most significant consideration and this depends partly on health care services offered and the consumer‟s

perception of their likely needs for services. The gap in Olusoji‟s analysis is that income is not demonstrated as a factor hindering willingness to enroll alongside the quality of health services and the consumer‟s perception of their likely needs for service. This research looked at how income impacts people's ability to sign up for social health insurance.

In his study, Vogel (1990) suggest that health insurance largely favors the comparably tiny middle class in sub-Saharan Africa. As he compared his results to the more prosperous countries in North America and Europe, he came to the conclusion that the middle and upper classes have a monetary and regional benefit when it comes to medical care, including public health insurance. He discovered that improvement in medical insurance in Sub-Saharan Africa has not resulted in more opportunity or fairness in health coverage for the disadvantaged. Vogel's study from 33 years ago mentions a small middle class. In 2023, the middle class in Sub-Saharan Africa has increased tremendously. A big proportion of the new middle class is in the informal sector and this warrants further research. This study demonstrated that more and more people are moving from being poor to low middle class and therefore can benefit from medical insurance.

Eklund and Staven (1990) did a study on the Abota village Insurance program in Guinea-Bissau which involves payment in advance for necessary medicine and the supply of basic medical concern at the lowest administrative unit by medics. The Abota plan consists of several independent Abota programs at lowest unit. Research on the Abota

scheme does not give details on ability to pay but since the premium was arrived at by the villagers, it is possible that most could be able to pay the premium set. The fact that most villagers were able to raise their payments further supports this supposition. Unlike the Abota Village Insurance program in Guinea-Bissau where premiums were set by the villagers at the several independent villages, NHIF contribution by informal sector workers was decided by NHIF Board of management without direct participation or consultation with informal sector workers. It is likely that most workers in the informal sector would have negotiated for a lower premium than the current Kshs. 500(GOK, 2015.) In the NHIF Scheme ability to pay is unlikely to be the case. This study sought to investigate ability to pay in the Kenyan case.

In Ghana, Atim and Sock (2000) studied Nkoranza community financing medical insurance program which began in 1992. The contribution is tabulated per individual varying with the size of the family. By offering free admissions to the medical, surgical, and maternity wards at St. Theresa Hospital in Nkoranza District (Ghana), the program ensures access to care. Only families who reside in the Nkoranza District are eligible for the program, and each family member must enroll. Enrollment is renewable once a year, only in November and December. According to 72% of field staff and 65% of family heads, enrolling in the first year of service is challenging because they do not have enough money by the end of the year. More people will enroll if enrollment took place between January and March, according to 65% of field staff and 75% of family heads. Subsequent evaluations of the program, including one conducted in mid-1999, also show a mismatch between the enrollment cycle and the period when district households have

more cash available. The NHIF registration/premium is set at Kshs. 500 and does not change depending on the family size (GOK, 2015). As a result of the financial restrictions of paying the premiums, a rise in family size will have little effect on membership. Since NHIF registration takes place throughout the year, there is no risk of a mismatch between the registration period and the time when more money is available, as is the case in Ghana's Nkoranza District.

Criel and Kegels (1997) investigated the Bwamanda Insurance scheme in the Democratic Republic of Congo (DRC), which is related to a development initiative named the Center for Integrated Development (CDI), which began in 1969. The zone's health staff pushed for the Insurance fund because they were worried regarding the obstacle to access created by hospital bills and the poor recovery of medical bills via OOP. Absolute inability to pay did not appear to be a concern. When calculating the fees, the medical employees utilized the price of 2 Kgs of soya beans as a determinant of willingness to pay. Furthermore, only 16 percent of the 21 non-members said they had not participated in the program due to a lack of funds. Unlike the Bwamanda Insurance scheme in the Democratic Republic of Congo, which determined willingness to pay based on the price of two kilograms of soya beans, the NHIF did not consider the income of Kenya's informal sector employees when determining the current premium. Therefore, it is likely that the premium is too high for most informal sector workers. In this case, income could be an impediment to joining the insurance program. This study investigated the income factor as a possible hindrance to NHIF membership.

In his study, Owando (2006) found income as a determinant of wealth has a positive correlation with medical insurance scheme membership. Personal income was positively correlated to medical insurance scheme membership. Normally an increase in income of Ksh.5000 increases the probability that a person purchases medical insurance by 4.6%. Inflation has rendered the study by Owando (2006) less relevant. An increase in income of Kshs. 5, 000 certainly has less probability of the person purchasing medical insurance than the stated 4.6%. This study updated the figures and percentages to reflect the current value of Kenya shilling.

In her study, Kanenje (2009) participants who had not registered for NHIF medical scheme were requested to state why they had not. According to the study's findings, 60% of respondents said the monthly contribution was unaffordable, 20% said they planned to register in the near future, and the remaining 20% said they had not received details about how to register. If 60% of the respondents in Kanenje‟s research (2009) could not afford the NHIF monthly contribution when it was Kshs. 160, the percentage is likely to go up with the increase of the contributions to Kshs. 500 in 2015 (GOK, 2015). This study investigated the likely effect of the increase of the contributions from kshs. 160 to ksh 500.

In her studies, Nderitu (2002) found that the lower the income, the more people were willing to enroll for a medical cover. Of those earning less than Ksh.2000 per month, 87% were willing to enroll whereas only 80% of those earning more than ksh15000 were willing. This most likely because those earning relatively good income felt could pay for their hospital expenses out of their pockets. Those who had no other source of income

were more willing to enroll for a medical cover than those with another source. Nderitu (2002) found that the lower the income, the more people were willing to enroll for a medical cover. The introduction of the out-patient cover with an increased monthly premium of Kshs. 500 up from Ksh. 160 (GoK, 2015), has made the NHIF program unreachable to those with very low incomes. This study investigated the likely effect of the new premiums being unaffordable to those with low incomes. The study also found out if those with relatively higher incomes have been enticed to enroll for NHIF membership because of the enhanced benefit of outpatient cover.

2.3 The Influence of Education Level on Health Insurance Membership

According to Burnett and Palmer (1984) the educational level of a nation or a family determines insurance purchased. The expectation is that the more educated or literate a nation or family the greater the likelihood of comprehending the need for insurance. This is likely to be true, even after allowing for the higher incomes related to higher education. The study by Burnett and Palmer focused on insurance industry more generally. This research investigated the influence of education level on health insurance specifically on NHIF membership.

Brown and Churchill (2000) discovered that low-income households' reluctance to participate in insurance is due to poor understanding and acceptance of the principles of insurance, which they see as akin to paying for a membership that they will never use. Brown and Churchill do not specify at what level of education the principles of insurance become too complex to comprehend, resulting in poor families‟ reluctance to enroll in an

insurance scheme. Is a lack of understanding a problem for those who never finished elementary school? Those who just have a primary school diploma or even those who have a high school diploma? By segmenting various levels of education, this study attempted to fill the void.

A higher education level is understood to be linked positively with the consumption of any type of life insurance product, according to Drior et al (2007), because it may increase an individual's capability to comprehend the advantages of managing risks and and savings as well as increasing the eversion of risks. Inadequate comprehension of insurance products, as well as variances in their mental capacity to comprehend such products, is frequently identified as a barrier to retailing insurance to low income families in unindustrialized nations. Drior et al do not specify at what level of education are poor households‟ capacity to comprehend insurance products wanting. Is it a problem with those who never completed primary school? Those who attained primary school certificate and below or even secondary school leavers? This research sought to fill those gaps by segmenting diverse levels of education.

According to Chankova et al. (2008), educated families are more likely to take part in health insurance. This leads to the conclusion that, as opposed to their less educated peers, highly educated family heads have a higher likelihood of understanding such products and be more likely to participate in such an insurance scheme. In the case of social health insurance, the poor do not only lack a detailed understanding of the concept, still their medical understanding is also limited, making it impossible for the family head

to comprehend what is and is not protected by the program. In comparison to their less educated counterparts, Chankova et al (2008) argue that highly educated household heads have higher likelihood of understanding insurance policies and higher likelihood of participating in such insurance schemes. The question is, at what degree of education are household heads considered more or less educated? By segmenting various levels of education, this study attempted to fill the gap.

According to Kirigia et al. (2005), people with at least a secondary education level have higher likelihood of having a medical insurance policy than those with less education. Kirigia and colleagues focused on the secondary and lower levels of education. What about those with a higher degree of education? Are they more likely to have a medical insurance package than someone with just a high school diploma? Furthermore, Kirigia et al focused on South African women's medical insurance ownership. This study was more inclusive, covering all gender and higher education levels.

A Study by Alesane and Anang(2018) reveals that insurance uptake increases with level of education but decreases with households size. The study concludes that even though the premium on health insurance coverage in Ghana is arguably low, socio-demographic characteristics such as literacy level, age, sex and households size affect the decision to enrol. Adequate public sensitization on the benefits of the scheme and decreasing the statutory age for exemption from premium payment, especially in rural localities, are some of the measures suggested to enhance health insurance uptake in Ghana and other developing countries.

In her study, Muhia (2011) found that education level of household head determines the decision to register for NHIF. Specifically, household heads with primary, secondary and tertiary education have .0369,0481 and .0821 respectively more likelihood of being members of NHIF compared to heads with no education. Education thus influences registration into NHIF. However, in reality the decision maker may be enabled or limited by other influencing factors such as incomes, information or supply side aspects like insurance contributions. Muhia (2011) discovered no significant variations in the likelihood of entering the NHIF at the primary, secondary, or tertiary education stages. Furthermore, with the introduction of the outpatient cover in 2015 (NHIF,2015), more enlightened workforce in informal sector are likely to see the rationale of NHIF membership. This study sought to fill that void by interviewing individuals of different education levels.

Wasike (2019) found education was an important determinant of having insurance coverage. Those who were highly educated were more likely to enrol with health insurance compared to those without formal education. The positive relation between education and ownership of health insurance cover is linked to purchasing power increase and higher access to health insurance information.

2.4 The Influence of Age on Health Insurance Membership

In a micro hospital insurance fund environment, Bhat and Jain (2006) investigated the factors that influence both the decision to buy insurance and the amount of hospital insurance purchased. The study's primary data was obtained in the Amand district of Gujarat. Age, family income, health expenditures, assumptions regarding the design and

cover sickness in medical insurance policies, experience, facts, and knowledge about medical insurance, and the number of children were all discovered to be significant determinants of hospital insurance consumption decision and spending. The study by Bhat and Jain focused on health insurance in general. The National Health Insurance Fund, in particular, was the focus of this investigation.

Gius (2010) used data from the 2008 National Health Interview Survey to investigate the factors that influence medical insurance ownership among young adults in the United States (NHIS). Age, sex, race, career, residence area, insurance rate, and medical insurance beliefs, they claim, all have a significant effect on medical insurance consumption. Gius (2010) studied the factors that affect young adults' decision to buy medical insurance. The study may have only included young adults aged 18 to 35, leaving out a significant portion of the population. This analysis filled in the gaps by analyzing people of all ages.

Amponsah (2009) examined the factors influencing state health insurance fund membership among women aged 15 to 49 utilizing primary data collected in three Ghanaian districts in 2008. The results indicate that marital status, income, age, faith, and access to television and newspapers are the most important factors influencing women's insurance use. Additionally, healthcare inputs such as hospital personnel and basic hospital services augment demand for hospital insurance and medical treatment.

Amponsah (2009) investigated the factors that influence women aged 15 to 49 in Ghana's state hospital insurance fund membership. Women over the age of 50 were removed from

this age group because they were not childbearing women. Furthermore, men of all ages were omitted from the study. This analysis attempted to fill the gap using a cross-sectional research design.

Lutinah (2020) Discovered being in the age group 35-54 years increase likelihood of purchasing a health insurance compared to the age group 15-34 years by 27% holding other factors constant. Individuals in age group 55-74 years had stronger possibility of participating in a health insurance unlike those in age group 15-34 years by 18.6% holding other factors constant. Individuals in the age group of 75-94 years had an increased probability of participating in a health scheme compared to the age group 15-34 years by 19.9% holding other factors constant. Increase in age brings greater sense of responsibility and people become more aware of their health. Possible higher income can be linked to these groups and that older people are seen to have accumulated enough wealth to invest in health care. Hence affordability of the premiums. Age is also associated with increased medical consumption due to lifestyle diseases hence individuals take up insurance to cover additional healthcare needs.

According to the study by Mpuuga (2019) carried out in Uganda age has a very significant impact on the demand for health insurance. The result implied that the probability of an individual to utilise health insurance increases by 0.348 points for each year of age. This is because as individuals grow, they eventually join the employment pool, start earning more money which enables them to afford health insurance. However,

individuals have the optimal age for example the retirement age when the story is expected to change into a negative direction.

According to Kiplangat (2011) the effect of age on demand for health insurance is positive across all forms of health insurance schemes indicating that purchase of health insurance relative to being un-insured increases with age. Older individuals tend to increase their investments in health (health insurance included) in order to decrease the rate of health depreciation. This could be confounded by other variables such as education and income which are likely to increase with age.

Muiya (2017) Discovered as age increases, enrolment into health insurance increases to a certain point and then decreases. High enrolment were observed for those aged between 30-34(43%), 35-39(28%) and 40-44(16%). Low enrolment were observed for respondents aged between 20-24(1.7%),25-29(39%) and 45-49(8.6%). None of those aged 50 and above had a health insurance cover. Younger and older people were likely to have fewer or no dependants and therefore did not consider having a health insurance cover necessary.

2.5 The Influence of Gender on Health Insurance Membership

Baemighausen et al. (2007) conducted research in Wuhan, China, to examine the maximum willingness to pay (WTP) for Basic Health Insurance (BHI) among workers in informal sector, comprising the un-registered rural-to-urban migrants. The research

established that being a man, a migrant, or without a permanent job reduced BHI's WTP significantly. Income and health-care expenses were established to be important predictors of ability to pay for basic health insurance, but education was not. China's sociocultural and traditional environments are vastly different from Kenya's. The economic conditions vary as well. This research attempted to fill the void by looking at NHIF membership for both men and women.

In Senegal, Jutting (2001) used data from the Institute for Health and Development's (ISED) household survey from 2000 to estimate the factors that influence mutual participation. The paper concluded that religion, income and ethnicity determine decisions to register or not. Women were found to register more than men and younger people. The study by Jutting (2001) was carried out in Senegal, a West African Country very different from Kenya economically, socially and traditionally. This study sought to fill that gap by investigating both gender NHIF membership.

In her studies, Nderitu (2002) found the gender of the juakali artisan to be a significant determinant of the decision to enroll for medical insurance fund. About 83.1% of the men were willing to enroll into a medical insurance fund, whereas only 60.9% of the women were willing to enroll. Gender had effect on average income in determining willingness to enroll making it less meaningful in this correlation. Nderitu (2002) was concerned with the entire health insurance industry. This research bridged those gaps by narrowing on NHIF membership in the informal sector.

According to Nahumisa(2014) gender was significantly associated with uptake of NHIF scheme. Female were significantly more likely not to enrol in NHIF scheme unlike male respodents. There are various factors such as high premium rates, power hierarchy within households, class structure, political and geographical factors which cause women to be excluded from health schemes (Hattordze, 2006)

2.6 Theoretical Framework

2.6.1 Rational Choice Theory

The research will follow a theoretical framework based on Rational Choice Theory. Cesare Beccaria's work in the late 18th century led to rise of rational choice theory. Rational choice theory is a social science theory that claims that human actions could be interpreted in terms of individual rational choices. According to rational choice theory, people make rational decisions based on a collection of personal interests, aiming to maximize benefit while minimizing loss (Grimsley, 2017).

The rational choice theory is founded on the idea that an individual acts rationally in her own self-interest rather than in the interests of others. People try to maximize their profits while minimizing their losses. A person has enough information to determine her interests and conduct her logical analysis (Grimsley, 2017). Humans have a number of hierarchically ordered priorities, or utilities.

2.6.2 Application of the Rational Choice Theory

This theory is relevant to this study because when a self-employed Kenyan decides voluntarily to register for NHIF, it is in her own best interests, not in the best interests of others. The self-employed Kenyan measures the annual premium of Kshs 6000 and the

probability of a family member being ill in a given year, and decides that it is reasonable to pay the Ksh 6000 because of the anticipated benefits. The dependent variable, that is, registration for NHIF membership is a result of a rational decision made after considering the information available on NHIF in-patient and out-patient services. The prospective member does not project to utilize the Ksh 6000 contribution for the year. In their calculation the family covered is likely to spend ten to twenty times the contribution in both in-patient and out-patient services thus eating into other members contributions. The prospective member also considers all the other alternative insurance schemes in the market, premiums to be paid and expected benefits before arriving at NHIF program as the best in the market (NHIF, 2017).

The rational choice theory concept that states an individual has sufficient information upon which to establish her preferences and perform rational analysis is applicable to the decision to register for NHIF membership in the sense that a prospective member has to be properly sensitized about NHIF products and their benefits. This in essence means public education by NHIF marketing function and the capacity of the individual to understand the complex nature of insurance. This capacity can vary according to the target market level of education. On gender, men are conventional heads of families in Kenya and other cultures. They are likely to join NHIF to avoid a situation where they are viewed as irresponsible by their spouses and other members of the family. Unlike others members of the family, they are forced by unavoidable circumstances to make rational calculations primarily based on rational choice theory concepts. Young men and woman below age 25 are unlikely to

join NHIF because most of them have not started raising families and they rarely fall sick. In their rational analysis they gain by avoiding unnecessary contributions to NHIF which they consider losses thus subscribing to rational choice theory. On the contrary older people are likely to contribute because of family obligations and the fact that people tend to get health challenges as they grow old.

CHAPTER THREE

STUDY FINDINGS AND DISCUSSIONS

3.1 Introduction

This chapter presents findings and discussions on influence of socio-economic factors on NHIF membership in the informal sector. The chapter is divided into two broad parts, the first covers the demographic characteristics of the respondents while the second part covers the specific socio-economic factors that influence NHIF membership in the informal sector.

3.1.1 Demographic characteristics

A total of 100 respondents were interviewed for the study. Of the total participants, male constituted 61% of respondents interviewed while the female respondents were 39%. Higher representation of male respondents was due to the unwillingness of female to participate in the interview claiming insurance issue is the work of the males since it involves finances. Fifty (59%) of the respondents were 39 years old and below, 72% of the respondents were married. A majority 78% of the respondents earning a living from small scale farming or petty trade while 74% of the respondent have been in self-employment for over 10 years and 87% of the respondents having an average monthly income of between Ksh 6,000 to 20,000. This period was considered ideal for establishing the socio-economic determinants that influence NHIF membership in informal sector. A majority (54%) of the respondents had an academic qualification higher than KCPE, however, 78% had registered to NHIF with only 46% having paid their NHIF contribution up to date. This was in line with Kitui County Integrated development plan 2013-2017 that majority of rural and in informal sector lacked NHIF

cards where 23% were unaware of the cards, and 12 percent did not believe they were significant. A further 16% stated that they could not afford the card. There is a significant knowledge gap regarding the NHIF card and healthcare payment systems. It would be advantageous to conduct a County-wide campaign regarding the NHIF health care payment system.

3.2 Influence of social-economic factors on NHIF Membership

3.2.1 Influence of Income Level on NHIF Membership

The most significant social and economic determinant of health is income as it affects overall conditions of living, psychological functioning, and health-linked behaviors like food security, housing, and engagement in cultural and educational activities, all of which have a detrimental effect on individuals‟ health and capability of living a successful life (Auger & Alix,2009). Recent and previous studies have found a positive correlation between household income and the likelihood of purchasing health insurance in both developed and developing countries, with level of income having a significant effect on the amount of health insurance bought (Osei-Akoto & Adamba, 2017).

From the findings, the vast majority of the respondents (75%) agreed strongly that poor economic status of informal sector was the main challenge they faced. This was in line with the findings of Kitui County Integrated development 2013-2017 that pointed that majority of the residents of Kitui County did not pay for the NHIF cards and they used to seek for the health from the local health facilities where they consider the cost of the services to be fair. The findings conform to Kitui County Integrated Development Plan

2013-2017 where the report acknowledged that higher poverty intensities and low intensities of disposable income limit access to health care. The findings also corroborate the Ministry of Health's (2016) assertion that individuals in the informal sector, unlike the very poor, have some income, albeit low and unequal, and could thus contribute to the NHIF scheme. Given the unpredictable nature of illness and injury, those working in the informal sector are frequently unprepared to cover the costs of health care and thus they would wish to have their cards updates for eventuality.

The majority of these people were receiving health care services from public hospital and dispensaries where charges were affordable. The Kitui County Integrated Development Plan 2013-2017 report indicated that more than 85% of people in the informal sectors receiving services at Level 2 and Level 3 facilities did not pay. According to interviews conducted throughout the county, consultation fees range between Kshs 1 and Kshs 30, with the majority of costs incurred in specialized follow-up services and the purchase of medicine. 22.1 percent of those polled paid for the services they received. The majority of these expenses were under KES 300, and nearly all of them (98%) paid in cash. The majority of the expenses were incurred at District and Sub-District Hospitals. From the study that was conducted by the county government 57% of the residents were receiving health services from sub-district hospitals and 25% from a health center where they were exempted from paying for their medical services. Provision of the health care services at an affordable charge contributed largely to low contribution of the NHIF premiums among the citizens.

3.2.2 Influence of Education Level on NHIF Membership

The current study aimed to investigate how level of education influence membership of the NHIF in Kitui west Sub-county. From the results, most (68%) of the participants strongly agreed that low level of education contributed to low enrollment and payment of the NHIF premium greatly in the informal sector. These results agree with those of several other studies, which found that education level was a significant predictor of health insurance ownership in a variety of study populations. A higher education level is presumed to have a positive correlation with buying of any type of life insurance products, as it increases a person‟s capability to comprehend the advantages of managing risks and savings, but also their risk aversion. A frequently identified barrier to insurance sales to poor households in rural and informal sectors is inadequate comprehension of insurance products and disparities in their intellectual capability to comprehend these products. Additionally, households with more educated members have a likelihood of buying an insurance. This implies that heads of families with higher level of education have higher likelihood of understanding these products and thus higher likelihood of participating in these insurance schemes as compared to their counterparts with lower level of education.

Mathauer (2018) noted that the most significant hinderance to NHIF enrollment was workforce in informal sector have inadequate information about the funds enrollment options and procedures. The scheme's communication and marketing strategies have primarily targeted workers in the formal sector, since NHIF has historically been perceived to be a legal deduction without instant benefits by most beneficiaries, resulting in likely underusage by the ones in the sector. Mukhwana, Ngaira and Mutai (2015)

found that individuals with a higher education level have higher likelihood of owning health insurance under the NHIF scheme than those with a lower level of education. Mulupi et al. (2013) pointed out that low household participation in the NHIF was linked to various factors which include inaccessible outlets of NHIF, low levels of literacy, and inadequate awareness regarding the benefits of the scheme, all of which are not adjustable to needs and cultural preferences of the people.

3.2.3 Influence of Gender on NHIF Membership

The study aimed to investigate how gender influence NHIF membership at Kitui West Sub-county. From the findings, most (64%) of the respondents strongly agreed that males are more likely to join NHIF than women. The findings concur with Muhia (2011) in that households headed by males have high chance of being NHIF members as compared those headed by females. However, the findings contradict Jutting (2017), who found that women enroll at a higher rate than men and younger people. Additionally, having a higher education and being male increases the amount people indicate they are willing to pay.

Additionally, the study discovered that households with NHIF members have a higher proportion of single-parent heads, while households without NHIF members have a higher proportion of married heads. There is no distinction between divorced and separated heads in the two groups; thus, the study observed an equal number of household members and non-members with divorced or separated heads. Additionally, the study established that male members enrolled at a rate of 60%, compared to 40% for female members. The low enrollment rate was attributed to women's disadvantage, as enrollment decisions were made by husbands, as head of households. Women with low

literacy and a lack of information about the NHIF continued to rely on their husbands for decisions regarding enrollment and use of their insurance cards.

3.2.4 Influence of Age on NHIF membership

In terms of age, the study found that 62% of the respondent agreed older people are more likely to enroll for NHIF membership. The study discovered that the majority of respondents in the 46 years and over age bracket had a higher enrollment rate of 44 percent, and none of the seven age groups studied had an enrollment rate greater than 50 percent. Older respondents are more likely to be married and have children or other dependents who require medical care, and thus are more willing to enroll in an insurance scheme that would facilitate access to high-quality healthcare. With increasing age, individuals may feel more compelled to take charge of their family members' welfare. Additionally, older respondents are more likely to understand that they face increased health risks and have higher likelihood of using health insurance to eliminate or mitigate those risks. Respondents aged 18-24 years had the lowest enrolment rate of 14 percent. One possible explanation for this result is that some of the younger respondents lacked sufficient income or did not have children requiring health care. The findings of this study corroborate those of Edward (2019) and Akwasi and Joshua (2016), who discovered that the likelihood of being insured decreased with respondents' age. The findings of this study contrast with those of Aboyomi (2017), who discovered that older farmers in Nigeria's Osun state who lacked education and financial resources also had a lower likelihood of enrolling in health schemes.

3.2.5 Theoretical Contribution

The current study adds to the current knowledge in the field of Socio-economic factors on NHIF Membership by investigating influence of income levels, education level, gender and age. The primary objective of the supporting study was to examine the socio-economic factors on NHIF membership in the informal sector. Most of the studies done have been done on the uptake of NHIF insurance and socio-economic factors in formal sectors. However, the current study aimed to investigate the socio-economic factors and how they influence NHIF membership in the informal sector with specific focus on Kitui West sub-county.

The most significant implication of the findings for rational theory was on age variable. 62% of the respondents agreed older people are more likely to register for NHIF membership. Those aged 46 and above had an enrolment rate of 44%. Those aged 18-24 years had the lowest enrolment rate of 14% . The older people subscribed to rational choice theory by considering the cost and benefits of NHIF membership. At their advancing age they had occasionally used out-of-pocket to cater for their medical needs and thus wanted to avoid such a situation . Also middle aged people and older people have families and it makes a lot of economic sense to contribute Kshs 500/= to take care of medical needs of five or more family members. On the contrary, younger people aged below 25 years considered registering for NHIF membership a wastage of scarce resources because they rarely get sick. Many in the age group have not started families and if they have the family size is relatively small. These two considerations made those in the age group conclude that the cost of registering for NHIF scheme outweigh the expected benefits.

3.2.6 Practical implications

The current study not only provides the implications to Ministry of Health and NHIF Board of management but also gives guidelines to policymakers and particularly support the institution NHIF and health practitioners. The findings demonstrate that NHIF ensures access to health services by the poor and those in the informal sector. Because our results suggest that poor economic status of informal sector was the main challenge they faced. Thus, high wealth index is related to augmented NHIF uptake as a consequence of more non-refundable income, hence if there is a right economic environment there will be augmented uptake of NHIF. When designing the Universal Health Insurance Scheme, the government should ensure that those in informal sector are full incorporated because very few are registered for the NHIF scheme yet as a result of their standards of living and the kind of environment they are operating in they are at high risk of deveoping health problems. Thus, the study suggests to policymakers and government to create awareness about NHIF membership and its benefits to the members.

The result of the study revealed that low level of education contributed to low enrollment and payment of the NHIF premium greatly in the informal sector. Level of education is an unemployment rate determinant in the economy founded on opportunities of jobs, that is an income determinant. Education is a significant barrier to NHIF enrollment because of informal sector workers lack of knowledge about the funds enrollment options and procedures. This in turn results to most members in informal sector to defy registration with NHIF. The level of education was discovered to be connected with improved awareness, and those with higher education levels were found

to be more exposed to news and information on the benefits of participating in the program as well as the possibilities accessible in the plan. In order to increase membership to NHIF, the government need to offer education through seminars, and civic education about NHIF to informal sector players since they form a significant population that cannot be underestimated.

On gender, the study revealed men are more likely to enroll for NHIF than women. This can be attributed to the fact that conventionally, men are the heads of the family. Men are also likely to be more educated and to earn higher incomes than women. Women are also disadvantaged by early pregnancies before establishing income streams. The result of the study revealed that older people are more likely to join NHIF than younger people. This is because younger people have little or no income at all. Another plausible explanation is that most have not yet started families. Young people also lack wisdom , knowledge and understanding associated with past life experiences.

CHAPTER FOUR
SUMMARY, CONCLUSION AND RECOMMENDATIONS

4.1 Introduction

This chapter presents the summary, conclusion and recommendation of the study based on the finding of the study.

4.2 Summary of the Study Findings

4.2.1 Influence of Level of Income on NHIF Membership

To the influence of level of income on enrollment of NHIF Membership, the study found that Health insurance coverage varies significantly across income groups. The increased enrollment of those engaged in small scale farming and small scale business indicates that they had greater income earning opportunities and thus the ability to pay the NHIF monthly premiums. In terms of household incomes, the study discovered that the majority of respondents (73.3 percent) earned less than kshs 5,000/= per month, with only 2% earning more than kshs 20,000/=. The study discovered that those earning Kshs 20,000/= and above had a 57.14 percent enrollment rate, compared to 26.59 percent for those earning less than Kshs 5,000. Increased incomes enable families to meet basic household expenses, such as food and clothing, while also having some extra money available to pay premiums.

4.2.2 Influence of Level of Education on NHIF Membership

On the influence of level of education, it was found that a respondent‟s level of education was significant in influencing their decisions to enroll. Those with University, college, secondary, primary and below primary level of education had an uptake rate of 26.5

percent, 4.1 percent, 1.5 percent, 0.9 percent, and 0.6 percent, respectively. This demonstrates unequivocally that obtaining some form of formal education has an effect on enrollment. The most likely explanation for this is that literate individuals are better able to comprehend health information messages and have access to more lucrative employment opportunities than those with no formal education. One of the most striking findings is the relatively low proportion of respondents in the area who have completed a college or university education. Low education levels have a significant impact on people's ability to access higher incomes and employment, which would ideally enable them to afford insurance premiums. Additionally, individuals with low educational attainment may be unable to comprehend basic health insurance concepts and the role of health insurance as a critical component of health care financing. However, the fact that the majority of respondents in Kitui Sub-County had at least a primary level of education indicates that they may be able to comprehend basic insurance concepts, and with increased awareness generated through print and electronic media, some residents may enroll.

4.2.3 Influence of Gender on NHIF Membership

Based on gender, females were less aware of NHIF than males. In terms of employment status, it was discovered that self-employed individuals were less aware of health insurance than those employed by the government or private sector. Higher educated individuals were more likely to be aware of health insurance. Additionally, the study discovered that inadequate information regarding the enrollment procedures and basic principles of insurance was a significant hinderance to enrollment. Most of the participants were never aware of health insurance and seemed to anticipate being

reimbursed for their premiums if they remained healthy for an extended period, illustrating their inadequate comprehension of health insurance as a way of risk pooling and sharing.

4.2.4 Influence of Age on NHIF Membership

The study found that older people are more likely to enroll for NHIF membership. Older respondents are more likely to be married and have children or other dependents who require medical care, and thus are more willing to enroll in an insurance scheme that would facilitate access to high-quality healthcare. With increasing age, individuals may feel more compelled to take charge of their family members' welfare. Older respondents are more likely to understand that they face increased health risks and are more likely to use health insurance to eliminate or mitigate those risks.

CONCLUSION

On income as a determinant of NHIF membership both literature review and study findings reveal economic status as a major determinant of joining NHIF or any other health insurance scheme. Low income earners are willing to register but are unable because of financial constraints. The amount of country‟s income is the most significant determinant of achieving maximum registration to NHIF and other insurance programs. A robust economy will ensure all informal sector workers are enlisted with NHIF.

Education level also comes out strongly as a determinant of NHIF registration in both literature review and study findings. Intellectual capability to understand the complex nature of health insurance makes many informal sectors workers reluctant to enrol to the NHIF scheme. A higher education level is presumed to have a positive correlation with buying of any type of life insurance products as it increases a person‟s capability to comprehend the advantages of managing risks and savings. Literate individuals are better able to comprehend health information messages and have access to more lucrative employment and business opportunities than those with no formal or little education.

Literature review and study findings largely show age as a significant determinant of NHIF registration. However, this is confounded by other variables such as education and income which are likely to increase with age. What is perfectly plausible is that older respondents are more likely to understand that they face increased health risks and have a higher likelihood of using health insurance to eliminate or mitigate those risks for example lifestyle diseases.

Both literature review and research findings largely show gender plays a role in determining NHIF membership. As is the case with the age variable, this is confounded by other variables, such as income and education. This is because men are more likely to be more educated and also have a higher income compared to women. Women are also disadvantaged by power hierarchy within households as enrolment decisions were made by husbands as head of households.

4.4 Recommendations

Enrolling and retaining workers in the informal sector using a voluntary mechanism of contributions remains a challenge for several reasons. A substantial number of informal workers have little income in comparison to those in formal sector and hence have a low capability of paying for health insurance. Having in mind that there are no sizeable organized groups in the informal sector, it is managerially hard to enroll, register, and amass consistent contributions in a cost- efficient manner. Becoming a member and making premium contributions are thus often voluntary, resulting in to low uptake as well as poor retention. The income of the workers in the informal sector are regularly unforeseeable, making it hard to collect regular premiums and augment rates of attrition among this population. In order to increase the number of NH1F membership in the informal sectors, members should be encouraged to form Organized groups based on their sectors or subsectors and contribute amount that is sustainable. For instance, Boda Boda riders or vegetable sellers can register an organized group and get NHIF code just like employers. These organized groups should prioritize contributing to NHIF to avoid fundraising whenever their colleagues face huge hospital bills. Peer pressure alone will

have a positive influence on NHIF registration and retention. It is crucial that any initiatives to revise the design of NHIF premiums should guarantee progressiveness is sustained.

Workers in the informal sector usually operate in deplorable, below-par working conditions and are exposed to different hazards with no appropriate knowledge regarding the use of personal protective equipment, and are in higher risk of getting injured. These are the individual that needs to be targeted for benefit of the scheme program because despite being very poor, they have some income though low and unequal. Because outpatient services have only lately become accessible to other sectors beyond the civil service, this more recent access to health insurance among poor populations may describe researches which reveal limited comprehension of how insurance operates both among insured and uninsured Kenyan populations. This problem of inadequate knowledge as well as limited comprehension of NHIF coverage might be aggravated by variable and unpredictable communication about these schemes from the government. To enhance utilization of NHIF, there is need to create awareness among the citizen for them to understand the concept of NHIF as well as the packages contained in the insurance.

Most of the young generations tend to ignore uptake of NHIF, this is a risky trend since the young generation is the seniors of tomorrow. There is need for advocacy on the need of the NHIF to young generation for them to understand the benefits associated with being a member. If this does not happen, the trend will extend to even older generation as the young generation grow old and the number of NHIF membership will reduce. This will be attributed to the culture that will be developed by the young generation.

According to the study findings, those with university, college, secondary, primary and below primary level of education had an uptake rate of 26.5 percent, 4.1 percent, 1.5 percent, 0.9 percent and 0.6 percent, respectively. Based on the study findings, it is imperative to come up with strategies to lift the levels of education among poor households. This can be realized by increasing the recurrent expenditure budget on bursaries and scholarships by the county government and NG-CDF.

Based on the study findings, women are disadvantaged by many factors. One of the major challenges is low levels of income. This can be attenuated by the county government promoting income generating projects like poultry farming among women in rural Kenya.

4.5 Areas for Further Study

A study should be conducted on the retention and drop-out of the registered members: to examine the reasons why some workers in the informal sector register and later pull out from the insurance scheme. Comprehending the reasons for dropouts might be of benefit in reviewing procedures of registration, mechanisms of pricing, benefit packages and enhancing delivery of services to the beneficiaries.

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APPENDICES

Appendix I: Questionnaire

The purpose of this questionnaire is to accord you an opportunity to tell how you feel about the challenges facing NHIF membership in the informal sector in Kitui West sub-county.

Part A: Biographical Data

1. Gender

   Male [ ]

   Female [ ]

2. How old are you?

   18-24 years [ ]

   25-29 [ ]

   30-34 [ ]

   35-39 [ ]

   40-49 [ ]

   50-59 [ ]

   60 and above [ ]

3. What is your marital status?

   Married [ ]

   Single [ ]

   Windowed [ ]

   Separated [ ]

   Divorced [ ]

4. How long have you been self – employed?

   Below 1 year [ ]

   1- 2 years [ ]

   3 – 5 years [ ]

   6 – 10 years [ ]

   Above 10 years [ ]

5. What is your average income (profit) per month?

3000 - Kshs. 4000 [ ]

4001 - Kshs. 5000 [ ]

5001 – Kshs.10,000 [ ]

10001 – Kshs.20,000 [ ]

20,001 – Kshs.30,000 [ ]

30,0001 – Kshs.40,000 [ ]

40,001 – Kshs. 50,000 [ ]

Above Kshs.50,000 [ ]

6. What is your highest educational qualification?

Below CPE/KCPE certificate [ ]

Primary school certificate [ ]

Secondary school certificate [ ]

College certificate [ ]

College Diploma [ ]

Bachelor‟s degree or Higher [ ]

7. Are you‟re a registered NHIF member?.....

Yes [ ]

No [ ]

8. Are your contributions up to date?

Yes [ ]

No [ ]

Part B: Challenges Facing NHIF Membership in the Informal Sector

Please indicate your opinion regarding challenges facing NHIF membership in the informal sector by reacting to the statements in the table. Tick the appropriate number or response after each statement. Use the scale provided.

5. Strongly agree 4. Agee 3.undecided 2. Disagree 1. Strongly disagree

Challenges hindering NHIF membership in the informal sector	**5**	**4**	**3**	**2**	**1**
1. Poor economic status of informal sector workers					
2. Low level of education among many informal sector workers					
3. Older people are more likely to enroll for NHIF membership					
4. Men are more likely to join NHIF than women					

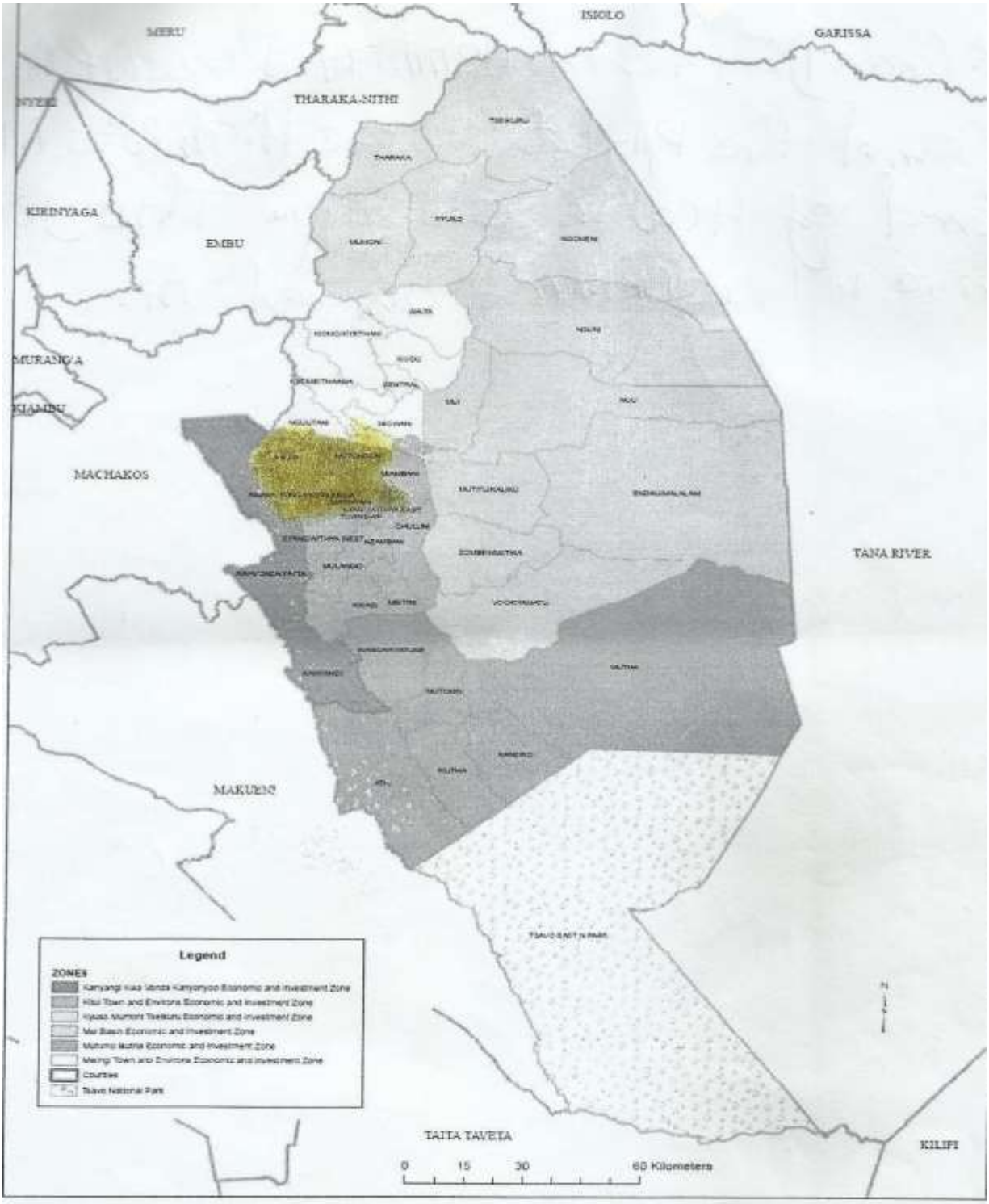
……

……

……

Thank you for your cooperation

Appendix II: Map of Kitui County with Kitui West Highlighted



Source: Kenya National Bureau of Statistics, 2013