INFLUENCE OF REGISTRATION PROCESS IN HEALTH INSURANCE UTILIZATION AMONG NHIF MEMBERS IN ISIOLO COUNTY

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DECLARATION

This research project is my original work and has is presented for a degree at any other university.

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"This research project has been submitted for examination with our approval as university supervisors".

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DEDICATION

I dedicate this project to my dear families of PHJC and Biological. My friends for prayers, moral support and motivation they offered. May God bless them.

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ABSTRACT

Registration for the health insurance is a critical process in the uptake and subsequent utilization of the health insurance and low enrollment leads to poor service utilization and this increases household health expenditure on health (OOP) and there is the need to assess the actors that affects registration process. The study objective was to establish the role of registration in health insurance on utilization of healthcare services among NHIF members in Isiolo County. Specific objectives included: to assess the influence of accuracy of data captured, knowledge of registration details, communication about registration process and the time taken to complete the registration process on utilization of healthcare services in Isiolo County, Kenya**.** This was cross-section study design. The target population were all NHIF insured households in Isiolo County. The study sample size 384 households who had NHIF health insurance participated and who had resided in Isiolo County for at least 12 months. The study used purposive sampling technique hereby only those respondents that had national health insurance were included int the study. A semi-structured questionnaire was used to collect data. The tool was pre-tested in the same county and Cronbach alpha of 0.7 as obtained and an ethical approval was obtained from KeMU Science, Ethics, and Research Committee and a permit for the research from the NACOSTI and the Isiolo County Health Office respectively. Quantitative data was coded, entered and analyzed using SPSS v25. Results revealed that these socio-demographic factors, marital status, occupation status and number of the member of households were all-significant and they influenced utilization of healthcare services using the NHIF insurance cover. Majority 357(93.5%) and 339(88.7%) knew how to select health facility and the benefits entitled to them respectively. Nearly all 361(94.8%) cited that their personal data was correctly captured in the NHIF database. Error in personal included wrong date of birth / age, wrong name. Majority 283(74.1%) pointed that it took them less than one hour to register for their NHIF insurance while most 303(79.3%) indicated that they got their membership cards on time. knowledge of the registration details, communication of registration process and time taken for registration were significant in determining the utilization of healthcare services among the respondents and was significant($p<0.1$). Knowledge of registration details (requirements) a great role in the enrollment to the of health insurance programmes and thus NHIF should emphasize on the mass education on the necessity of enrollment in health insurance schemes (public or private) and the various requirements that are required to complete the process through the use of effective channel of communication to the end users/beneficiaries of those health schemes. Parastatal such as NHIF Isiolo branch and other private insurance firms should carryout mass sensitization frequently through various channels such as newspaper, TV and radio adverts on importance of enrollment and registration and their associated insurance package benefits advantages and as this would increase their health insurance utilization. Health services providers such as Isiolo County Referral hospital management team should communicate to their clients on importance of enrollment and registration information details to the end consumer in order to enroll for the insurance programmes on entails contents, time and place of registration as this would greatly reduce the consumers OOP.

ABBREVIATIONS AND ACRONYMS

CBHIS	Community-based Health Insurance Schemes
CGI	County Government of Isiolo
CHF	Community Health Fund
EHIF	Estonian Health Insurance Funds.
EHRs	Electronic health records
ID card	Identity Card
KCBHFA	Kenya Community-Based Health Financing Association
MoH	Ministry of Health
NACOSTI	National Commission for Science Technology and Innovation
NGO	Non-governmental organization
NHIF	National Health Insurance Fund
NID	National ID
OOP	Out of Pocket
PHI	Private Health Insurance
SHI	Social health insurance
SHIB	Social Health Insurance Benefit
SSPH	System of Social Protection in Health
TIKA	Tiba kwa Kadi
UINs	Unique Identification Numbers
UNDP	United Nation Development Program
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Healthcare suppliers need to understand a patient's profile to get to relevant clinical and therapy measures and assurance that they are giving dependable and legitimate treatment. Patients in like manner need documentation to show enrollment in insurance programs or other security nets that cover clinical costs (Abraham et al., 2017). Researchers and administrators need an exceptional patient identifier to have the option to total records and divide information among discrete health data sets (e.g., health data systems) to create measurements and different data for organizing, evaluation, emergency response, and further created medications and disorder the leaders. Health back up plans ought to have the alternative to perceive patients to ensure that those for whom cases are submitted are truly secured and to work with the intervention of cases subject to the patient's set of experiences. A competent and comprehensive, and capable strategy for particularly distinguishing and confirming healthcare clients over the long haul and across offices is integral to each of these requirements and the objective of accomplishing general healthcare. In numerous nations, nonetheless, patient ID and data systems have truly been weak (Gelb & Clark, 2013).

Healthcare facilities records are regularly paper based, and mostly are independent data systems that cannot convey, move information or records, or total information between or inside offices. This lessens observing and arranging limit and can prompt second-rate care for existing patients. Different clients and patients - including a portion of the assessed billion worldwide who need legitimate character reports (World Bank, 2017) - cannot demonstrate their qualification or inclusion and consequently get no administrations by any means. Governments additionally face difficulties expanding or defending insurance programs in health especially during instance s when hard to build up the character of existing or prohibited recipients. Therefore, healthcare suppliers and authorities in numerous nations have attempted to work on public health and contact the three and a half billion individuals overall who don't have access great and basic fundamental and essential health administrations (World Health Organization & World Bank, 2017).

According to Kim et al. (2017), in their study in USA asserted that they over the past years have started to see significant changes in the healthcare area that have permitted nations to defeat a portion of these shortcomings. This incorporates, for instance, the expanded reception of computerized data systems, for example, electronic health records (EHRs) and "e-Health" stages. As indicated by the WHO, for instance, nearly 47% of nations currently have an EHR framework, while somewhere in the range of 83% have taken on something like one versatile health application known as mHealth (Evans, 2016). These overhauls are regularly enabled by the creation of free, or viable, ID systems in the health region, for instance, a unique patient ID number and card made by the Ministry of Health or the general health underwriter and used by all workplaces in the country. Such valuable ID

systems offer different possible benefits to patients, healthcare providers, and diverse government services (Paek et al., 2016). By considering secure and precise ID and validation of patients and empowering data trade, they can build the productivity of patient administration, work on the nature of treatment, lessen authoritative weights for patients, work with admittance to insurance, decrease extortion, and further develop information assortment. Notwithstanding, useful recognizable proof systems, for example, an ID card for the patients can be exorbitant to work and add to an expansion of area explicit identities and data sets that might be oppressive towards clients.

A few nations have rather selected to utilize existing essential recognizable ID systems, for example, populace registers, Unique ID card numbers (UINs) or national identity cards, as the reason for the patient's identity for patient ID, check, and verify and this is done at the lawful age, and requires enrollment and a similar NID are utilized by health insurance organizations to register their customers as the instance of NHIF. Utilizing a primary framework in this manner might make extra advantages past those offered by a practical framework.

According to Kang et al. (2018), in their study in Asia, the healthcare systems and health insurance companies require the distinguishing proof of clients (patients) for an assortment of purposes. Incorporating treatment of patients and dealing with their health records, confirming insurance or advantages inclusion, and collecting information to advance execution, further develop asset assignment, and work with research. By empowering exact and nonstop record keeping of patients' clinical chronicles after some time and across offices, one of a kind, computerized

distinguishing proof systems offer enormous additions in proficiency and viability over divided and paper-based health systems.

The manner by which a basic recognizable proof is incorporated into the healthcare framework will shift by country. Many countries and their welfare schemes requiring individuals to present their ID no's cards. The cards they first used for treatment or registering in a health insurance or advantages programmes for countries such as the Kenya, India Botswana and Korea as well as utilizing existing fundamental ID data sets to create or refresh arrangements of health program recipients e.g., Estonia, Thailand, Korea (Saluse et al., 2010).

Unique identification, a strategy for confirming or verifying people, and the capacity to total individual-level information are additionally significant for insurance and advantages programs inside the healthcare framework. To get to health offices or medicines, people in numerous nations should have the option to demonstrate their insurance coverage or another privilege; inability to give suitable documentation might reject them from administrations. In addition, where distinguishing proof of recipients is feeble, insurance and advantages suppliers might see higher occasions of misrepresentation. What's more, where health data systems are divided and patients look for care at different offices, there might be cases of twofold charging, twofold installment, or patients not being as expected repaid (Alotaibi & Federico, 2017).

Importantly, health financing and insurance schemes also need complete and accurate records on service usage and data on system performance in order to correctly bill patients and care providers and to inform budgeting and management decisions. With many countries seeking to scale their health systems and achieve

universal coverage, we have seen a proliferation of new insurance schemes. Integrating a foundational identifier into such insurance programs has the potential to improve their effectiveness and efficiency while increasing inclusion. In Thailand, for example, the national population registry serves as the baseline list of beneficiaries for the universal healthcare scheme, allowing for rapid coverage and eliminating the need for a duplicate enrollment campaign. In Estonia, the linkage between the country's health information system and population register—underpinned by its unique eID and X-Road integration layer—has enabled every child to be automatically listed as a beneficiary in the health insurance fund from birth (World Bank, 2017). Furthermore, Estonia's e-Services infrastructure allows patients and providers to check instantly insurance coverage online using their national eID.

The internet-based access and incorporation given and provided by the Estonian Identity framework have additionally made the mandatory public insurance program Estonian Health Insurance Funds (EHIF) more comprehensive, worked on the portion of assets, decreased the authoritative weight of specialists, and streamlined invoicing and this has been duplicated by Kenya's NHIF and enrollment factors that obstruct it should be evaluated. Similarly, as with e-Prescriptions, the EHIF utilizes the eID to work with e-Services identified with insurance and advantages inclusion, for example, permitting patients and specialists to check insurance data through online verification. The EHIF likewise depends on X-Road to refresh its Health Insurance Registry of recipients.

According to a study by Thomson et al. (2020), different regions of the world have different levels of uptake of health insurance. In the United States of America, Private Health Insurance (PHI) is one of the major sources of health financing and accounts for approximately 35% of total health expenditure, public expenditure accounts for 44.9% while out of pocket (OOP) is at 13.5%. There is a tax-based system in United Kingdom, which provides universal health care through the country's National Health Service, which covers 86% of overall health expenditure, while PHI accounts for 2.9%and OPP accounts for 11.1% (Thomson et al., 2020).

A study by Kirigia et al. (2015) in South Africa showed that approximately 30% of respondents had at least one person enrolled in a health insurance scheme while Carrin et al. (2005) concluded in his study that Rwanda had achieved 90% health care coverage through implementation of Community Based Health Insurance scheme.

Health insurance programs in Kenya can be categorized three distinct to through three health plot programs: general health insurance, private insurance firms and somewhat community-based health insurance (health insurance cover) associations. Private health insurance is overwhelmingly open to the center and higher-pay gatherings (Kimani et al., 2004). A huge test has been coordination of the expanding easygoing region and joining of needy individuals (Mathauer et al., 2008). Another test is that health insurance is generally restricted to metropolitan districts, where the private appropriate region is concentrated, thusly not working on geographical access (Jacobs et al., 2012). The problem of low level of health insurance literacy, issues related to insurance scheme in Kenya and in particular, Isiolo County and the

subsequent lack of the study on the role of registration and thus uptake of health insurance cover among patients in the location of the study is a gap that the researcher wants to fill.

1.2 Statement of the Problem

Out of pocket, payment is unjust and wasteful in financing healthcare administrations. This has affected on usage of healthcare administrations in Kenya (Mathauer et al., 2008). The measure of OOP spending on healthcare in Kenya stays high. At present, twenty-six percent of complete health use in Kenya OOP. This resulted in many needy patients and representing an obstruction to admittance to healthcare facilities as it drives the poor patients and their families effectively into destitution (Munge, 2018).

The Ministry of Health estimates that 15% of the poor do not seek health care due to financial constraints while 38% of them always sell assets or borrow in order to pay medical bills. This has further pushed 1.5% of the households below poverty line (Wamai, 2009). Uptake of health insurance is slowly progressing from 9.8% in 2009 to 46% of the total Kenyan population in 2018. Approximately 3% of the least poor have form of health insurance cover contrasted with forty-one percent of the well to do and there is the need to factors that influence enrollment for health insurance cover. And the three percent is quite low considering that health insurance is one of the plan geared to financing health. This is set to direct the country towards acknowledging Universal Health Coverage and according to (Mwaura et al., 2015). The instance of Isiolo County where UHC pilot study was attempted as health

insurance is one of the plan in health financing changes that are set to guide the country towards acknowledging Universal Health Coverage (Mwaura et al., 2015).

In Isiolo County, the health consumption remains at over 10%, higher than the national's normal do but NHIF inclusion is low notwithstanding the area being test site for UHC. The present circumstance is aggravated by the way that greater part of the respondents lives beneath neediness line (Owino et al., 2020). Indeed, even among these that are selected with NHIF, there is hole on information on the degree of usage and regardless of whether NHIF addresses its issues of the safeguarded. Low insurance enrollment combined with helpless usage holds individuals back from utilizing the administrations they need, or they stand a danger of being ruined through high out of pocket payment. This low enrolment and usage are influenced by different components. Recognizing the variables that influence people to register for health insurance is vital in considering the accomplishment of health finance through the health insurance, and in lessening too much reliance on out-of-pocket payment for healthcare. The current investigations center on either NHIF as the lone health insurance, or private insurance. In contrast to the past examinations, this investigation centers on the cycle of health insurance enrollment among all people in the Isiolo County. This examination, hence, intends to explore the impact of enlistment measure on families' usage of healthcare benefits under NHIF in Isiolo County.

1.3 Purpose of the Study

The main aim of the study was to enumerate the factors that affect the registration process for the utilization of healthcare services in Isiolo County.

1.4 Objectives of the Study

1.4.1 Main Objective

To assess the influence of registration process in health insurance utilization among NHIF members in Isiolo County.

1.4.2 Specific Objectives

i. To examine the influence of accuracy of data captured on utilization of healthcare services among NHIF members in Isiolo County.
ii. To determine the influence of knowledge of registration details on utilization of healthcare services among NHIF members in Isiolo County.
iii. To assess the influence of communication about registration process on utilization of healthcare services among NHIF members in Isiolo County.
iv. To establish the effect of time taken to complete the registration process on utilization of healthcare services among NHIF members in Isiolo County.

1.5 Research Questions

i. What is the influence of accuracy of data captured on utilization of healthcare services among NHIF members in Isiolo County?
ii. What is the influence of knowledge of registration details on utilization of healthcare services among NHIF members in Isiolo County?
iii. What is the influence of communication about registration process on utilization of healthcare services among NHIF members in Isiolo County?

iv. How does the time taken to complete the registration process affect utilization of healthcare services among NHIF members in Isiolo County?

1.6. Justification for the Study

Registration process for new membership includes factors such as communication process, awareness of such programmes, health benefits/packages among others. In Kenya, most studies are focused on the overall uptake of health insurance and none of the studies in Isiolo County focused on the registration process itself.

1.7 Significance of the Study

This study may contribute variable knowledge on role of registration in health insurance and utilization of healthcare services and uptake of health insurance cover in general. This study may bring to fore the role of registration in health insurance. It revealed various roles of registration process in utilization of health insurance cover in Isiolo County.

The study is relied upon to propose critical arrangement proclamations through its suggestions. The investigation may make projects on role of registration in health insurance and utilization of healthcare services. Such recommendations may be useful to the Ministry of Health (MoH) in developing policies that will encourage the take up and register for health insurance among poor and average Kenyans. This information is important in relation to achieving Kenya's vision 2030 goals on health care for all.

The study may benefit the County Government of Isiolo (CGI) and the various hospitals as well as insurance cover providers in that it was an insight into why there is very low uptake of health insurance cover in the area. The findings may also benefit the county government and the national government in making appropriate policies to expand the take-up of health insurance cover. The after effects of this investigation will likewise profit analysts and researchers, as it may shape the reason for additional examination. The consumers and researchers may utilize this examination as a reason for conversations on role of registration process in uptake of health insurance cover.

1.8 Study Assumptions

The current study made several assumptions. The first assumption was based on the willingness of respondents to participate in the study and secondly that they provide honest and reliable responses and thus credibility was good. On the study instrumentation, the study made assumption that the research instruments were valid and reliable, and the sampled population was a representative of the larger population in Isiolo County and that the respondents involved provided trustworthy and truthful responses when filling the data collection tools.

1.9 Limitations of the Study

According to Polit and Beck (2006), limitations are problems or constraints encountered by a researcher in a study. This research was in Isiolo County and was based on data collected from households in Isiolo County. Data collection challenges

was due to accessibility issues on the local terrain in some areas which were remote. language may be a potential barrier/limitation in affecting the quality of responses.

1.10 Delimitation of the Study

The study collected data from those clients/household registered with NHIF, data on factors that affected NHIF registration were enumerated in the way easily assessed and collected as households are scattered. The researcher collected data in three weeks. The data collection was researcher assisted due to language barrier for some areas participants could neither communicate in English or Swahili.

1.11 Operational Definition of Key Terms

Utilization of healthcare services:	Refers to the access and use of healthcare services by the households in Isiolo County.
Accuracy of data:	In this study, it will refer to the preciseness of NHIF demographic data during registration process.
Knowledge of registration:	This will refer to the awareness of NHIF registration process by the insurers.
Registration process:	It will refer to the process of data capture/collection for the new members or updating existing members bio info.
Communication:	Communication will refer to the passing of registration for the insurance by the insurers.
Time taken in registration:	In this study, it will refer to the amount of time for the full registration process by the NHIF representatives.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents reviews of the literature related to role of registration in healthcare insurance and utilization of healthcare. The literature review was collected from different sources books, document analyzed from hospital, journals and internet.

2.2 Utilization of Healthcare Services

2.2.1 Utilization of healthcare services

According to Manzoor et al. (2009), utilization with regards to healthcare service refers to utilization of health services by patients for the assistance is provided by the healthcare facilities (Manzoor et al., 2009). Avan and Fatimi (2017) sees that utilization of health administrations is typically an outcome of the health looking for practices of people locally and these practices are influenced by a factor that are political physical social and financial in nature.

Ager and Pepper (2015) did a study on Patterns of health service utilization and perceptions of needs and services in rural Orissa and examined patterns of service utilization across the rural population of four districts of Orissa, with special reference to perceptions of the availability and quality of state services at the primary care level. Households reported utilizing a wide range of health care providers,

although hospitals constituted the most frequently–and primary health care centres (PHCs) the least frequently accessed services. Key factors guiding patterns of utilization were reputation of the provider, cost and physical accessibility. Local health provision through assistant nurse midwives and male health workers was generally perceived of poor quality, with the lowest rates of resolution of health problems of all service providers.

Grustam et al. (2020) carried out a study to ascertain factors that were associated with utilization of primary and secondary healthcare services by elderly in Serbia. They performed univariable and multivariable logistic regression analysis to assess the correlation between the healthcare system utilization and identified demographic, geographic, socio-economic, and self-rated factors. The most important factor for the utilization of the primary and the specialist healthcare services by elderly CVD patients is the region where one lives (Southern and Eastern Serbia OR = 2.44, 95% CI = 1.58–3.77/Belgrade OR = 1.75, 95% CI = 1.32–2.30). Age is another factor, where the 65 to 74 years old CVD patients utilize healthcare services the most. Higher education (OR = 1.80, 95% CI = 1.31–2.47), being a part of the highest Wealth Index group (OR = 1.62, 95% CI = 1.10–2.40), having very poor health status (OR = 3.02, 95% CI = 1.41–6.47), and presence of long-term illness (OR = 1.49, 95% CI = 1.16–1.92), play an important role in the utilization of the specialist care only.

Adam and Awunor (2019) did an investigation on discernment's and elements influencing the utilization of health administrations in country networks in southern Nigeria. They tracked down that Over 3/4 of respondents i.e., seventy-six-point eight

percent used the health services. There was not factual huge relationship in the utilization of health administrations as to sexual orientation, education level and age. Local area impression of low quality and deficiency of accessible not set in stone generally the degree of utilization of the essential health care office. Further healthcare services utilization essential health office was acceptable, local area impression of low quality and insufficiency of accessible administrations were distinguished hindrances to agreeable utilization of essential health administrations

Umunna (2018) completed an examination to investigate the variables that add to helpless utilization of essential health care benefits: an investigation of two essential health care centers in Nigeria. Two significant subjects arose following information examination; these were insight and encounters of office clients and boundaries to use and utilization of health services in health facilities. Clients those that had decent impression of the administrations they got and are sensibly fulfilled however certain lacks in the health care systems that had compromised their methods of services delivery. A few components were anyway ruining the utilization of these administrations and these incorporate essentially institutional factors like absence of framework, hardware and staffing imperatives; family factors like expense of administration and obligation of dynamic and different factors like demonization and convictions.

Oladipo (2018) conveyed an examination on utilization of healthcare administrations in rustic and metropolitan regions in Uganda. It was uncovered that need factors were the main indicators of utilization. This is steady with discoveries in various experimental settings. As per Oladipo (2018) hindrances presented by actual

detachment, inaccessibility of administrations especially in the country regions and monetary barriers to utilization.

2.2.2 Utilization of Healthcare Services with the NHIF Card

Around eighty-three among Kenyans population do not have sufficient monetary assurance to cater for their health needs, and about approximately one and half million Kenyans being driven destitution every year because of consumption on health (Jattani & Ochieng, 2021). While Luoma et al. (2010) estimated sixteen percent of sick people don't stand out enough to be noticed on account of monetary restrictions and thirty eighty percent are compelled to either get or dispose their possessions to accommodate of cater for their health needs (Luoma et al., 2010).

Utilization refers to both registration with health insurance and the extent to which it is used to meet the health service demands of the enrollee (Wang et al., 2013). Studies have shown that coverage does not necessarily translate to utilization of insurance. For instance, Wang et al. (2013) state that despite high health insurance coverage in China, it is not used in all instances that require health services.

Fang et al. (2012) announced the effect that families and households that were insured inclusion caused significant cash-based expenses, on occasion in any event, beating the purpose in being guaranteed in any case. This prompts biased admittance to health administrations. According to Nguyen et al. (2012) pointed that use of health insurance have been displayed to give a superior proportion of viability of health insurance more than mere inclusion (Nguyen et al., 2012). Ideal use of insurance for health can possibly remove down of-pocket consumption and along

these lines increment admittance to health care just as alleviate monetary ruin on families (Fan et al., 2019).

Another examination by Namuhisa (2014) researched the determinants of take-up of NHIF in the casual area in Nairobi County. The consequences of the examination demonstrated that just 32% of the absolute respondents were enrollee of the health conspire. What's more, the examination uncovered that 33.5% of the respondents did not know about the ailments covered by NHIF conspire. The examination uncovered that the degree of pay affects the take-up of NHIF scheme. This was ascribed to absence of cash to pay the month-to-month charges and low trust in the adequacy of the plan. In light of the discoveries, the investigation suggested that the public authority ought to make mindfulness about the NHIF scheme to build take-up and utilization of the scheme.

In Ghana, Bossman (2017) evaluated the impact of capitation on cost and utilization of health services. The study adopted convenience-sampling technique to draw a sample from 43 administrative districts. The study revealed that there has been a decrease in utilization of health care services in the outpatient department as a result of the capitation policy. Moreover, the study revealed that enrollees of the insurance medical scheme accessed less health services per member. Furthermore, the study revealed that inpatient utilization of the health service decreased since the primary health provider have become more efficient and subscribers are able to receive treatment early before the disease progresses.

2.2.3 Household utilization

Indeed, even among the individuals who selected NHIF as their choice of insurance, it indicated lack of information on the degree of health insurance utilization and regardless of whether it addresses issues of those insured. Poor registration for insurance and enrollment combined with little utilization holds individuals back from utilizing the health services they need, or they stand a risk through high OOP expenditure. Süssmuth-Dyckerhoff and Wang (2010) announced likewise significant degrees of cash-based installments even among those under China's health insurance conspire. Several studies are in in line with WHO declaration in that insurance that relates to health ought to, yet does not generally ensure monetary assurance (World Health Organization [WHO], 2018b). The present circumstance is probably going to moderate advancement towards UHC. As it has been shown that cash-based installments of whatever structure for the most part thwart individuals from looking for health services (Malonza, 2009; Nguhiu et al., 2017). Further researchers as Spaan et al. (2012) likewise revealed that partaking in a health insurance plot doesn't generally prompt further developed admittance to required administrations, to some degree due to extra cash-based installments.

Ombiro and Otieno (2019) study tracked down that in Embu Kenya, from those enlisted and registered for health insurance, approximately thirty-seven were prevalently utilizing the asset to meet their health administration needs, with the rest actually having to also cause cash-based use or even utilize elective intends to fulfill their health administration needs.

Mukhwana et al. (2018) did an investigation on assessing determinants of uptake of and utilization of NHIF in Kakamega County and found that individuals in the casual area with higher pay (> Kshs.10, 000) are bound to select contrasted with those with low salaries and likewise, more elevated level of schooling was essentially connected with registered in NHIF scheme. Unbending plan configuration highlights make challenges for individuals in casual area to take part. Taking everything into account, strategy choices should zero in on mediations coordinated at instructing helpless populaces, individuals with low instructive levels and those working external conventional livelihoods on the advantages of buying in to the NHIF scheme in Kenya

Kipaseyia (2016) looked to determine the elements affecting participation take-up of NHIF among lower class citizens and a pastoralist' viewpoint. Their discoveries show that the populace in the most extravagant abundance quantile announced higher inclusion (41.5%) contrasted with those in the least fortunate quantile (2.9%). Essentially, a similar overview revealed wide variety in inclusion with most noteworthy inclusion being in Kiambu that were thirty four percent , Nyeri was thirty three percent, Nairobi thirty two percent and Kericho thirty-one point five however was least among provinces with overwhelmingly peaceful networks for example Samburu (6.7%) Turkana (three percent) and Marsabit (1.8%). A similar revealed low assistance utilization especially among the uninsured. For outpatient administrations, both insured and uninsured people detailed practically similar number of per ca-pita visits (3.2 and 3.0 visits separately). Nonetheless, for inpatient benefits, the insured had a higher utilization rate (75 affirmations for every 1,000

populace) contrasted and those who were uninsured showing that in certain examples insurance upgrades admittance to healthcare (Jattani & Ochieng, 2021).

As per Malonza (2009) it is assessed that NHIF gauges 30% of all individuals are latent with altogether more significant levels of idleness among the casual area. The more elevated levels of idleness are compounded by the way that the casual area individuals devour 33% of the advantages paid out and contribute about 5% of commitments.

2.2.4 Type of services IP or OP

In Thailand Universal Coverage Scheme (UCS) was implemented in 2001 and according to (Paek et al., 2016)Health Insurance System Research Office (Paek et al., 2016), the number of outpatient visits per member per year rose from 2.45 in 2003 to 3.22 in 2010 whiles the number of hospital admissions per member per year rose from 0.094 in 2003 to 0.166 in 2010. They however cautioned that, increase in utilization could not be solely attributed to the UCS since they could not get reliable household level data on healthcare utilization before the UCS (Merianos et al., 2021).

A study done in Taiwan by Shou-Hsia and Tung-Liang (2018) conveyed an examination on the impact of UHC and Healthcare utilization and asset that get-together presentation of widespread insurance in health the recently insured burned-through several times the measure of outpatient doctor visits and medical clinic confirmations than before the execution of the UHC.

2.3 Socio Demographic Data Accuracy and Insurance Utilization

2.3.1 Name in the registration Card

Obwocha et al. (2016) carried out a study on usage and utilization of HIMS among HCWs in Kisii County. They tracked down that right names of dependents and cardholder influenced utilization of NHIF in the locale and further found that information and data were overseen by nonprofessionals because of lacking health data subject matter experts, thusly this reduced the quality and utilization of HMIS in service delivery. Accessibility and openness were profoundly hampered because of deficiency of preparing and electronic systems being used

Miller and Sim (2018) did an investigation in Tanzania that focused on HMIS and they uncovered that information quality and exactness on names were not adequately guaranteed through basic approval or confirmation methods. That data was largely not adequately utilized for neighborhood dynamic, and information show, examination and input are for the most part exceptionally frail prompting failures in the framework and this prompted underutilization of the health administrations in the Tanzania.

2.3.2 Age indicated in the Card

Bhat and Jain (2006) in a study investigating the factors affecting the registration of low- and middle-income groups in the Kupra health insurance scheme in Anand district in India found that the age was one of the key demographic factors influencing demand for health insurance. Higher age groups had a higher probability of purchasing, but at lower age groups, the age of the respondents was not

significant. The researcher attributed this to the aged being more mature and able to understand their risks and therefore using health insurance to minimize their risks and vulnerability.

Edward (2009) in a study on uptake of health insurance among women in Ghana by women aged over 40 years. They were more likely to enroll to compare to those in lower age ranges, the reason being that as people advanced in age their health stock depreciates at an increasing rate thus inducing increased investment in health, which may include health insurance. According to Harmon and Finn (2006), age may act as an important determinant of the propensity to insure because it is associated with high indirect vulnerability, higher medical consumption and possible increased stock of wealth.

Mhere (2013) while investigating the non-participation in health Insurance schemes registration in Gweru urban area in Midlands's province in Zimbabwe found that age was a significant determinant of registration and suggested that as people aged, they had a better sense of responsibility, had more knowledge and may also have acquired earthly treasures and wealth that may trigger responsibility which may include the need to take care of their health needs. However, the researcher observed that as age further increased, the likelihood of uptake was lower, suggesting that as people got past their productive years, and became less careful about their health and may have acquired more wealth to take care health needs. Aged parents may also have had grown-up children who had taken over the responsibility of health care for their aged parents. In a study on registration into Nigeria's National Health Insurance Service (NHIS),

According to Oyekale (2012) carried a study that tracked down that adult's pastoralist in Osun state had a lower likelihood of registering/enlistment. Adults that were household heads that were probably going to have big family sizes estimates and many partners who were insured with health insurance scheme. Besides, the adults many come up short on the monetary assets, schooling and inspiration to empower them buy in into the health scheme. In Kenya, all persons aged over 18 years and in possession of a national identify card can register in the National Hospital Insurance Fund, with the membership card covering the principal contributor, one spouse and all children in the family aged below 18 years. Children over 18 years and in a full-time educational institution are eligible for coverage under parent's cards. Unlike in private health insurance organizations, NHIF does not have an upper age limit, implying that aged in rural and urban areas can enroll irrespective of their health status as long as they can afford the monthly premiums of Ksh160 per month

2.3.3 Gender

Serceau (2017) in a study of Indias Rasthriya Swashya Bima Johana (RSBY) health insurance scheme reported that male members' enrolment was at 60% compared to 40% women. Low enrolment was attributed to disadvantaged position of women since husbands, were heads of households and made decisions in registration. The women who had low literacy and lacked information on RSBY continued to rely on their husbands for decisions on enrolment and utilization of their insurance cards.

In a study carried out by Boateng & Awunyo-Vitor (2013) in the Volta region in Ghana gender was significant determinant of registration into Ghana's National

Health Insurance Services with females being more likely to renew their health insurance compared to the males in the region. In explaining the possible reasons possible reasons for the differences, the researchers argue that women's' psychological makeup, vulnerability and their role as care-givers for their children and sick members of the family makes them have a positive attitude on health Insurance decisions compared to the males.

Cheryl (2018) carried out a study to inspect factors related with sex contrasts access and utilization of healthcare services NYC, USA. The discoveries were that estimated eighty-six of women had private or general health Insurance while just seventy-four among men were covered; there were no critical distinction in extents with private insurance with women selected at 37% while men were at thirty three percent. The insured in Harlem would in general be more youthful men and of lower wages and higher inclusion for women who worked from 9-5. In addition, conjugal status and having youngsters did not influence the likelihood of awareness of health insurance schemes. The scientist noticed that the sexual orientation contrasts in enlistment were because of financial boundaries since women in the low pay networks were more probable than men for regular positions that offered health insurance inclusion. Expanding insurance inclusion for men in low pay was lauded as an approach to decrease sexual orientation differences in admittance to healthcare.

2.3.4 Type of member Principal/other

Bourne and Kerr-Campbell (2010) found that social standing, income, marital status, retirement and benefits, living conditions and the number of males in the household

influenced registration in health insurance in Jamaica. Married respondents were found be more likely to purchase health insurance.

Kirigia et al. (2015) in a study of health insurance in South Africa also found that: - marital status had a positive effect on ownership of health insurance. The researchers noted that the higher demand by married people explained by the need to protect the children, being more concerned about high health expenditures and higher combined incomes. On households' size, there was a negative effect on the likelihood of health insurance. Household size may have the effect of reducing the incomes.

2.3.5 Residence of the member

Fang et al. (2012) in their examination in Taiwan detailed that family size and home (metropolitan versus country) were fundamentally connected with health insurance inclusion. Sanusi and Awe (2009) in Nigeria demonstrated that 87% of the respondents knew about the public health insurance and about 83% registered in the scheme. Factors, for example, business and spot of home were altogether connected with consciousness of enlistment while sexual orientation, pay level, family size, conjugal status and training level were not huge components affecting mindfulness and enrollment of the respondents about the scheme.

There are 31 completely computerized NHIF branches in Kenya, extra 82 assistance focuses that exist in emergency clinic, and public venues, to which recipients can pay charges, update enrollment and get different types of client care administrations (Namuhisa, 2014). NHIF is condemned for having larger part of its administrations conveyed through private offices, which shows its inclination of salaried laborers

who make up most of its supporters of look for administrations from private suppliers as opposed to public organizations (Nguhiu et al., 2017).

2.3.6 Dependents and Household Size

Panda et al. (2014) examined the health insurance uptake in households, which were involved in Community based health insurance schemes in northern India, focusing on socioeconomic, demographic details, household consumption, asset holdings, health status and membership of self-help groups. Larger households were more likely to purchase health insurance, attributed to the practice of multiple nuclear family units living together in single dwellings and therefore having multiple independent decision-making units. Younger household has been also more likely to take up health insurance compared to household heads who were over 55 years and educated household heads who had attended at least primary school were more likely to join, compared to those with no formal schooling.

Doiron and Kettlewell (2018) investigated the role of family formation, focusing on young women under 30 year and the effect of children decisions to registration into health insurance in Australia. It was found that: -women who desired additional children in the future were more likely to have register for health insurance compared to women who already had the desired number of children. Wanting more children raised the probability of insurance by 3-percentage point for those without recent children and closer to 5 percentage points for those who had children in earlier years. Households, which desired additional children in future, were 7.4 percentage points more likely to register compared to 5.6 percentage points for the women who

had finished the family formation. Other factors that influenced the registration were marital status, perceived access to hospitals and location.

Fang et al. (2012) in their study on health Insurance coverage and medical expenditure in Taiwan observed that households with smaller family sizes and higher incomes were more likely to have higher coverage in both public and private health insurance schemes. However, households with chronic diseases are more likely to have private and public health Insurance that was associated with higher out-of-pocket expenditure

A study done by Njogu (2019) sought to ascertain assess the factors that affect the uptake of Social Health Insurance, a move towards financial protection, a case of Nyeri County, Kenya and found household size or number of dependents led registration for the health insurance schemes. Thornton et al. (2010) finds that in Nicaragua, both the health status of household members (specifically, whether the head of household is chronically ill), and the probability of future health events occurring (e.g., the number of children in the household) are significantly and positively associated with uptake of health insurance. In the Rwandan Project Study, large households with more than five members had a greater probability to enroll in the health insurance cover schemes (Schneider & Diop, 2001). Explanation was that contributions were a flat rate, irrespective of household size up to seven members. Bendig and Arun (2016) and Msuya et al. (2007) found that uptake of micro insurance is positively related to household income and size. This is consistent with rational decision-making behavior of the households since the amount of contribution is independent of the family size.

2.3.7 Type of healthcare Service used

All NHIF members have to fill a form selecting a medical facility where they would want to receive outpatient care. According to the NHIF website, health facilities have been contracted country wide to provide the services under the national scheme. Members are restricted to one hospital (Eisert & Gabow, 2002), surveying the impact of youngster health insurance plan (CHIP). Enlistment/enlistment on utilization of health care administrations by kids utilizing a public security net framework, and they tracked down that those kids who tried out CHIP are more averse to utilize crisis care bound to get preventive consideration administrations than uninsured ones. This is while in any event, when stressing the advantages of public insurance programs for youngsters inside a security net organization.

2.4 Knowledge of Registration details

2.4.1 Knowledge of Registration

Lagomarsino and Kundra (2008) researched the challenges of introducing insurance among needy individuals and easygoing region masses in low compensation countries and saw that structure trust in the target organizations to convince then that health insurance offers financial security. On care, they see that relaxed region peoples are generally new to the possibility of health insurance and may be questionable of insurance due to experience of others with various types of insurance and are in like manner off-kilter paying blunt. For organizations they may not need while not getting any benefits themselves, consequently the need to work with trusted neighborhood and use fitting correspondence instruments to manufacture data

and trust in the affiliation giving the proposed health insurance thing. At the neighborhood, neighborhood affiliations, microfinance affiliations used as section centers while introducing health insurance in the urban region.

Prinja et al. (2012) in an attempt to understand the factors underlying low registration and renewal rates of health insurance in Maharashtra State in India conducted a study understanding of insurance concepts and the level of information that people had on insurance registration. The findings of the study where: low enrolment and renewal was influenced by deficient information on the functioning of the scheme and poor understanding of insurance concept with most respondents citing lack of information on how to use the insurance. Also noted was that when enrolled members received benefits that were lower than the insurance premiums paid, they were less inclined to renew their insurance. The study demonstrated the need for continuous communication and the importance of the physical presence of insurance agents in the field to provide information on Insurance products through sustained awareness campaigns.

Reddy and Mary (2013) in his study on the assessing the awareness of health insurance in Hyderabad in Andry Pradesh India and they determined that approximately sixty six percent of the residents were unaware about health insurance and registration, estimated twenty two percent knew about it and mere even point five of the female respondents knew about health insurance. On business status, independently employed individuals were less mindful about health insurance contrasted with government and privately owned businesses. Those with elevated levels of training were bound to know about health insurance. The specialist called

for broadening powerful data and correspondence exercises to work on people groups' understanding about insurance.

Khan and Ahmed (2013) investigated impact of offering education on health insurance using weekly group discussion on health expenditure health insurance and health insurance. Key focus of the study was to know whether literacy gaps and lack of knowledge influenced the willingness of informal sector workers to pay (WTP). After educational intervention period was 33.8 percent higher among the informal sector workers joined the education sessions compared to those who had not joined the session. The general conclusion of the study was that educational interventions are a vehicle to increase demand for health insurance by offering comprehensive modules and covering health pooling, health insurance, benefits packages and the strength of solidarity.

In Kenya, Mathauer et al. (2008) study on the role of awareness on registration to NHIF found that the most basic boundary to NHIF enlistment was discovered by Mathauer et al. (2008) to be absence of information on casual area laborers on its enlistment alternatives and methods. Those in this area have for the most part utilized correspondence and advertising techniques by the scheme in focusing on those in the proper area as numerous benefactors prompting conceivable underutilization have consistently seen NHIF as a legal allowance with no quick advantages.

2.4.2 Choice of health facility

Ombiro and Otieno (2019) study found that the choice and the distance to authorized health offices likewise impacted the degree they had selected utilization of NHIF

services really used the asset to meet their health cost needs and eventually maintenance to the asset (Ombiro & Otieno, 2019). In the event that the licensed office was far, endorsers detailed they liked to incur OOP use in a close by office or self-medication, with some in the FGDs and they indicated that they never found the purpose for enlistment with NHIF under those conditions.

Nketiah-Amponsah (2009) did an investigation in Ghana and tracked down that the individuals who found that distance to the closest certify health office was conversely identified with interest for health insurance in Ghana. A study in Ghana by Dalaba et al. (2014) carried out a descriptive and household survey study through a family overview showed that the favored wellspring in health administrations affected their enrollment and usage of health insurance. Masengeli et al. (2017) tried to decide factors that affect the take-up of health insurance cover among grown-up clients and patients attending Bungoma County referral Hospital in western Kenya. They stated that distance to authorize health offices (Duku, 2018) have been displayed additionally to impact in enlistment and degree of utilization of health insurance administrations in Ghana, Nigeria and Kenya.

2.4.3 Benefits Package and the health insurance

The NHIF benefits bundle is the absolute of health benefits that a part is qualified for the expense paid to the Fund (Namuhisa, 2014). Information alone on health advantage bundle doesn't get enrolment (Carrin et al., 2005). This investigation proposes that information on benefits remains basically an engaging device in keeping up with high enrolment. For instance, the investigation has called attention to the misconception of the advantages of the NHIF the couple of enlisted family's

gripe that they have never profited with scheme since they have been well. In a connected report on local area health reserve in Tanzania, the unsaid discoveries were generally evident.

A study in Ghana by Alhassan et al. (2016) on National Hospital Insurance Fund showed that both the insured and uninsured populations held positive perceptions on the benefits of the scheme included economic, psychological and social benefit of insurance. However, Jehu-Appiah et al. (2012) indicated that those who are uninsured and previously insured were less positive on the schemes benefits and concluded that this may be associated with their decision not to enroll and renew membership and recommended further qualitative research to explain the phenomena

According to Lagomarsino and Kundra (2008), underline the significance of setting charges taking into the thought the objective populace's ability to pay and the genuine expense of the proposed advantage bundles. Not based on actuarial computations as neglecting to get the right cost might prompt future expansion in expenses, which may thusly prompt diminish in enlistment and doubt among the scheme's recipients. Embracing assortment instruments to suit casual area laborers, for instance by gathering expenses during harvest periods when country farmers have cash to pay the charges and banding together with self-improvement gatherings, cooperatives and microfinance association to help with affecting allowances from ranchers and educators' income.

As indicated by WHO (2010), the variables considered in deciding expenses in health insurance schemes include anticipated expense of advantage bundles, regulatory expense, anticipated utilization, market costs and moderateness of the

charges to the customers. In evaluating the eagerness of expected enrollees to pay, center gatherings and family overviews utilized to find out the interest of a populace and the amount they are prepared to pay. Moreover, reasonableness of premium is impacted by the recurrence and timing of installment, henceforth requesting yearly installments might restrict investment across different pay gatherings. Because of women, reasonableness' of the expenses restricted by their restricted control on how family pay is spent.

In Kenya, in Embu County, A quarter (25%) of those who were not enrolled with NHIF reported they did not know how to enroll or how the fund works nor benefits, 17.6% reported they did not find NHIF to be useful and 3.7% were not interested. Further, from FGDs it was noted that limited knowledge on eligibility and the scope of services offered under NHIF influenced the extent of its utilization. Similar to the findings of Mathauer et al. (2008) some thought NHIF was only for those in the formal sector. Mathauer et al. (2008) similarly found inadequate knowledge about the registration options and procedures, especially for informal sector workers to be a barrier for demand for NHIF. Ackah and Owusu (2012) also reported inadequate knowledge of basic insurance concepts, particularly on insurance products and premiums in Ghana. Khan and Ahmed (2013) found a significant increase in willingness to pay for health insurance after an educational interventional that involved training on basic concepts, rationale for health insurance and registration procedures in Bangladesh.

The results of a study by Ngatia (2008) indicated that NHIF should enhance their scope to cover indigents and orphans and that NHIF should diversify to offer a range

of health insurance products. It was set up that the greatest difficulties looked by NHIF clients were: long lines during installment, workplaces are packed and not many around" moderate tasks, a few medical clinics are not covered for example private clinics, kids over 18 who are dependents are not covered. In Kenya, a member of the National scheme is required to register their dependents as beneficiaries of NHIF. The number of dependents is limited to unlimited own children and one spouse. This process is voluntary and a dependent may only receive treatment on registration by the principal member. A study by Mohammed et al. (2014) on client experience with a health insurance inclusion and benefits package access in Nigeria found that including dependents is limited to four biological children and a spouse every client. Exclusion of relatives thwarted powerful inclusion by the scheme.

The National Health Insurance Scheme (NHIS) found in Ghana, many investigations done on the eagerness and agreeableness of the National Health insurance Scheme, the factors or determinants that affected enrollment to the state funded scheme (NHIS), and the degree of information on the worth of health insurance cover. For example, an examination by Osei-Akoto and Adamba (2017) found over 90% of the respondents had the information on the worth of cover and were consenting to take on the National Health insurance Scheme. About sixty four percent were willing to pay a month-to-month charge of $3.03. Kiplagat (2011) completed as study on determinants of health insurance take-up in Kenya and set up that instruction builds the likelihood of taking up insurance of various kinds with more taught people meaning to insure.

2.5 Communication on Registration

In this study, communication refer to the passing on registration information details to the end consumer in order to enroll for the insurance programmes and this entails contents, time and place of registration as well as the channels used. According to WHO (2019) it perceives that successful, incorporated and facilitated correspondence is basic to doing WHO's objective to construct a superior, healthier future for individuals everywhere.

2.5.1 Time and Content of Registration

Greising et al. (2006) in their study found that factors to think about when focusing on channels incorporate their compass (number of individuals that will hear, see, or read a message), and how the channel upholds crowds' capacity to review the message and effect (regardless of whether the message brings about activity). Exposure to the message and reiteration are vital to crowd expanded, the probability that crowds will follow up on the data gave. For instance, government strategy producers might be affected by different news media reports about the requirement for inoculation crusades however; banners on local area sheets can be more viable at empowering occupants to be immunized and guiding them to neighborhood health facilities.

Greising et al. (2006) study indicates that ability to obtain consent results due to communication challenges. Subsequently, other areas negatively affected by communication challenges include capacity for health experts to meet their moral commitments and take an interest in preventive measures, admittance to therapy,

nature of care including clinic affirmations, nature of emotional wellness care, symptomatic testing, clinical blunders, patient development and patient security. The impacts of correspondence challenges on health care conveyance have been considered in different nations. The Institute of Medicine of the National Academies in the United States found health disparities, adverse health outcomes and reduced quality of care because of communication challenges. Subsequently, there was evidence that utilization of costly symptomatic tests expanded, utilization of crisis administrations expanded, utilization of essential consideration administration diminished and patient subsequent when such follow-up is decreased. All these were contributed by communication challenges (Greising et al., 2006).

2.5.2 Media Communication Channel

On the communication channels, the WHO (2018a) study cited that indicated that insurance communicators need dependable channels for arriving at chiefs, spreading messages and appropriating materials. To recognize the best accessible informing pathways communicators ought to examine the crowd's admittance to various channels and its inclinations.

When creating correspondences procedures, Munge et al. (2017) noted that there is no policy guideline in Kenya to inform patients on their entitlement and obligations to NHIF. NHIF individuals need to tell the scheme within 24 hours of admission to an emergency clinic, and to introduce legitimate ID archives and their NHIF participation card. The NHIF Act does not make explicit arrangement for an objections system or the assortment of perspectives and impressions of

individuals/residents. The authority site anyway has joins for reaching the asset, including a complementary telephone number.

The study by Ongiri and Kubani (2015) further reveals that the NHIF shows its advantages and rundown of certify suppliers on its site and has taken out paper, TV and radio adverts fully intent on expanding attention to its items. It likewise has gatherings with partners including suppliers and bosses. Likewise, its consistence officials draw in with managers to guarantee that they know about what NHIF offers. How this reaches out to representatives inside these associations is not clear, anyway, NHIF individuals should use their card to get to privileges. Outpatient administrations are gotten to at the supplier offices chosen by the individuals

2.5.3 Language Used

A study by Prince Edward Island French Language Health Services Network (PEIFLHSN, 2007) found compelling evidence that introductory admittance to health administrations is influenced by correspondence challenges. Lower utilization of numerous preventive and screening programs, restricted experiences with doctors and clinic care, hindrances to health advancement, restricted first contact with an assortment of suppliers and disease prevention programs were other challenges faced by those facing language barriers.

Naish et al. (1994) found that language and organization supposedly was hindrances to cooperation by customers as detailed by doctors. It likewise came about to absence of interest in avoidance programs. Language capacity likewise anticipated the utilization of screening administrations (Solis et al., 2000). These two investigations

recommended the various effects and impact language used for screening awareness and transmitting messages were entrance factor as there was expanded utilization of screening programs and English language was used.

2.6 Time Taken for Registration

According to a study by Hughes (2008), delays in registration and long waiting periods to obtain the card hinders the uptake of life insurance associated with seeking and receiving health care behavior. In 2012, scientists looked at the presentation of private and public healthcare systems in low-to-center pay nations like Kenya. Stand by times were reliably more limited in private area than in open area offices as displayed in their assessed of the writing. A similar examination found undeniably bound to encounters in restricted accessibility of gear, meds and prepared laborers in open healthcare administrations than their private partners hence lower quality assistance.

In Ghana, Mulupi et al. (2013) study showed that clients that were seeking to register for the insurance had longer waiting time at the insurance offices and at health facilities. They were discriminated by providers than the non-insured and asked to buy drugs at private duka la dawa met or incurred extra costs or they were receiving low quality drugs and this affected the subsequent registration by other clients. At the same time, verbal abuse was also a vice they reported subjecting to Negative discernment's sway on trust in the general health framework and prevent progress towards all-inclusive health inclusion. Mulupi et al. (2013) presumed that it was significant that the worries raised in regards to low quality of care are tended to especially in the public area before execution of the NHIS in Kenya.

2.7 Theoretical Framework

A theory refers to set of connected and interrelated abstract ideas, and arguments that present a systematic perspective of phenomena by specifying the type of relationship that exists between the DV and IVs among variables for explanation to the phenomena. The theoretical framework explains the concepts together with their definitions. It also establishes the relationship with the relevant empirical literature for the relevant study. The theoretical framework provides information about the theories and concepts that relate to the broader perspective of the study topic (Suarez & Marshall, 2014).

2.7.1 Expected Utility Theory

This theory of EUT put forward by Louise Sommer in 1954 was utilized to educate the examination factors in this investigation. The theory initially started by Daniel Bernoulli in 1738, yet later adjusted by Louise Sommer in 1954 (Einhorn & Hogarth, 1981). EUT recommends that decisions are intelligently and reliably made by gauging results (gains or misfortunes) of activities (choices) by their probabilities (with settlements thought to be autonomous of probabilities). The elective with greatest utility is chosen (Einhorn & Hogarth, 1981). Expected utility theory depends on three key fundamentals about the cycles that happen during choices made under hazard and vulnerability: Consistency of inclinations for choices.

EUT predicts an inclination for prevailing other options. Choices, which produce more noteworthy utility, will consistently be picked over those, which give less utility. Chiefs are accepted to rank their inclinations and dispose of options offering

lower utility. The EUT can be applied in this examination since health insurance enlistment by shoppers is made by gauging results (gains or misfortunes) of registering to the scheme and the elective, which has the extreme utility, is chosen (Einhorn & Hogarth, 1981). Largely, insurance request considers utilize expected utility theory to clarify people's choice of whether to be insured through enrollment, which they would later use through the installment of beneficiary emergency clinic bills. This theory expresses that insurance request is a decision between a dubious misfortune that happens with a likelihood when uninsured and a specific misfortune like payment an expense. EUT does not consider impacts on decision because of attributes of the setting of the choice.

2.7.2 Theory of Change

This theory explains how the implementation of a certain programme would produce the intended impact. It draws clearly the series of activities followed by results that are expected. This allows the assessment to determine the extent to which the series of activities brought the result expected to occur. The theory originates from the theory of evaluation and the theory focuses on the results or the outcomes of registration and utilization of National Health Insurance Fund in Kenya. Acharya et al. (2012) developed this theory. It suggests that enrolment and utilization of health insurance depend on how clients perceive their own risk and an understanding of the National Health Insurance Fund (NHIF) benefits package in terms of the medical services offered to clients in Isiolo through accredited health facilities and pharmacies.

This theory is relevant in the current study as it provides information on how the utilization of NHIF clients' scheme influences the change of clients' health status. When clients are enrolled/registered in the scheme and utilize the health services, the likely result is improved community health and consumption smoothing through enabling enrollees to continue supplying an appropriate amount of labour due to good health. The health services, however, financed without a large sudden increase in expenditure. According to the theory of change, the enrolment into the NHIF clients' scheme depended on the insurance fee and capability of clients to pay, the initial health conditions, and cultural factors. The theory explains further that once the clients enrolled and are utilizing the health-care services, factors as copayments or top-up payments and health providers induced services should be critically managed (Acharya et al., 2012)

2.7.3 Health Utilization Theory

The health utilization theory was developed to demonstrate the community option to demand and utilize SHI medical care. As per this theory, utilization and use of health services is determined by several factors and dynamics and this includes the needs, enabling factors and predisposing factors. The predisposing part is characterized by the race, ages of the insured and even health beliefs. For example, the community member who believes that the healthcare services offered by health, facilities are of high standard and that the health workers provide the satisfactory healthcare services increases the willingness of the community members to enroll into SHI. The enabling factors include enrolment and utilization of health insurance. A need stands

for community demands for health-care services and the real health-services offered by the health facilities.

The goal of this theory was to develop a behavioral model that would measure the level of utilization of healthcare. For the community to access the healthcare services there should be enabling resources that would allow the community members to seek the health-care when they fall sick. Realized access would be accessed through determining the actual utilization of healthcare services.

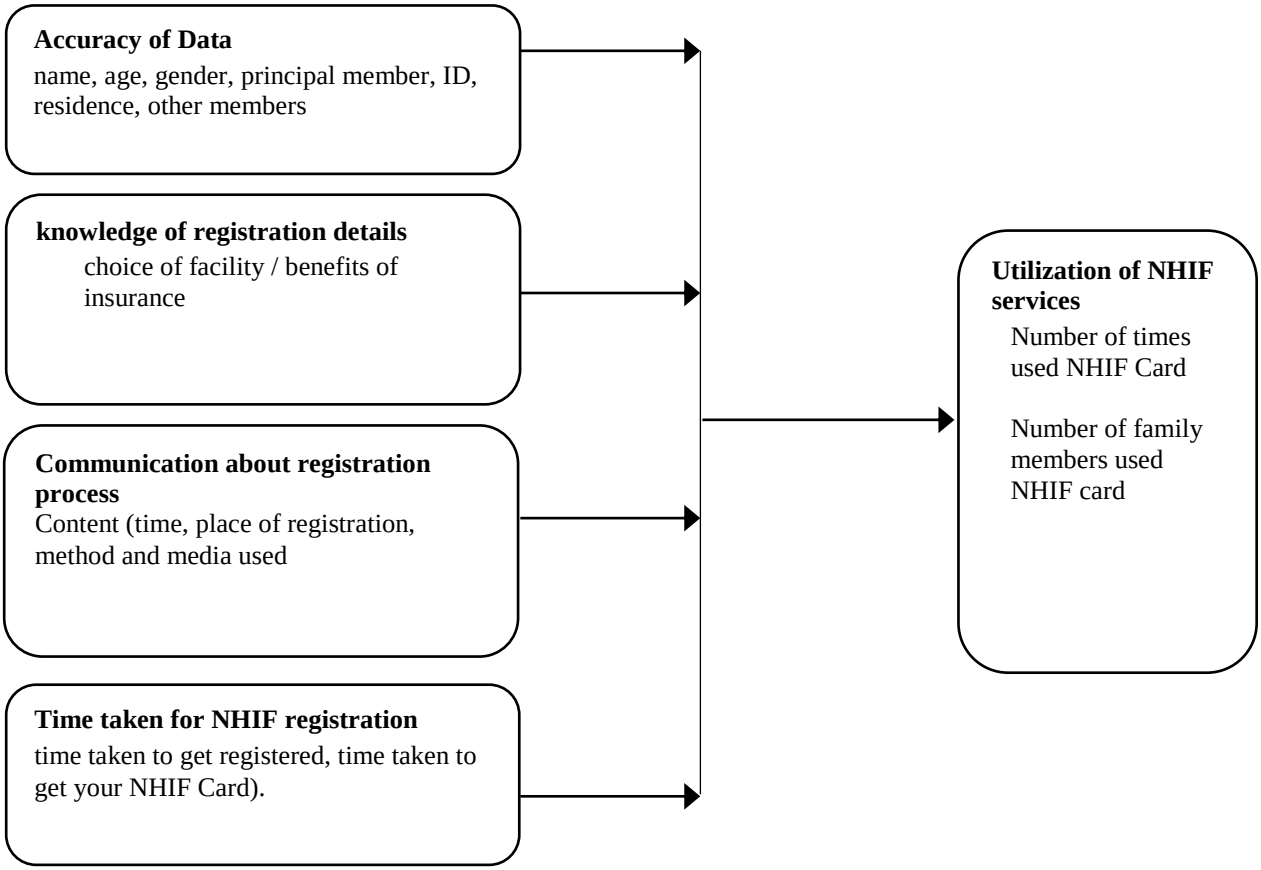
The health utilization theory guides the NHIF client's scheme by determining how the insured clients demand and utilize the medical services when the clients fall sick. According to Aday and Andersen (1974), the health seeking behaviour had an effect on the social and cultural learning in the particular community. He further emphasized the importance of sociocultural and psychological determinants in explaining the utilization of health-care by physicians.

Health utilization theory is useful in understanding health seeking and utilization of health-care services behaviour among clients since it accommodates the enabling resources and predisposing characteristics showing how the sociocultural factors influence the enrolment and uptake of health-care services. From the theory, it is obvious that the enrolment and use of NHIF services is influenced by enrollees' perceived health status after utilizing the health services. The perception is based on whether the enrollees were cured of the diseases they had and whether the services offered were of good quality in terms of qualified medical personnel, the doctor-patient relationships, availability of medical investigations, and drugs.

2.8 Conceptual Framework

Figure 2.11

Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This section or chapter focused on methodology that the study followed and used. Specifically, the chapter presents research paradigm, research design that was used, study area, the study population, sampling procedures, data generation instruments, piloting of instruments, reliability and validity of instruments, data generation as well as the analysis processes.

3.2 Research Design

The study employed cross section descriptive survey design to establish the role of registration in health insurance and utilization of healthcare services among NHIF members. A cross-sectional investigation is one-time research, or an examination bound to a solitary time frame (Kothari, 2005). The plan was considered proper for this examination as it included gathering information at one point on schedule and the scientist does not control the factors or organize the occasions that follow. Additionally, a descriptive study selected as it allowed the researcher to capture specific point in time and this is in terms of registration in health insurance and utilization of healthcare services among NHIF members.

3.3 Target Population

The study population is a sub-set of the target population and forms the basis from where the sample was taken from (Cormack, 2010). Target population were insured

households in Isiolo County. The total number of insured households according to the Kenya National Bureau of Statistics (KNBS, 2019), were 58,072.

3.4 Study Sample Determination

The study sample size was computed using a formula by Kish Leslie as follows (Singh & Masuku, 2014);

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

n=sample size required for the study.

Z- Standard deviation value corresponding to 95%confidence interval (1.96)

e-Absolute error between the estimated and true value= 5% (0.05)

n = the desired sample size (when population is greater than 10,000).

p = the proportion in the target population estimated to have a characteristic. There is no reasonable estimate; the researcher used 50 percent (.50).

q= 1.0 - p.

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2}$$

$$n = 384.12$$

$$n = 384$$

Thus, a total of 384 clients with health insurance participated in the study to assess the study variables.

3.4.1 Sampling Frame and Technique

Table 3.11

Sampling Frame and Technique

Place/ Facility	Sampling Frame %	Total
ICRH	45	172
Mater care	10	38
Camp gabra dispensary	5	19
Isiolo Market	15	57
Prisons	5	19
Kekima Primary	5	19
Bishop Locati Politechnic	5	19
Elementaita village	2	7
Kula Mawe	2	7
Kambi juu	2	7
Bulat	2	7
Mwangaza	2	7
Total	100%	384

The study used purposive sampling technique hereby only those respondents that had national health insurance were included int the study.

3.5 Inclusion and Exclusion Criterions

3.5.1 Inclusion parameters

The study included households who were willing to participate in the study and were residents of Isiolo County for at least 12 months and must be insured or registered with the NHIF.

3.5.2 Exclusion Criteria

The study excluded those clients who were not willing or did not provide consent to participate in the study as well as other non Isiolo County residents.

3.6 Instrumentation

The questionnaire is a research instrument comprising of series of inquiry and different prompts for motivation behind social occasion data from a respondent. Questionnaire method was great in the collection of data because it allowed the respondent to give answers without being influenced. The study used questionnaires as they are a practical strategy for getting data particularly from an enormous or meagerly found gathering of respondents (Mugenda & Mugenda, 2003). The questionnaire contained both open-ended and closed ended questions. The researcher used research assistants to administered the instruments in order to ensure return rates. The study also used Kiswahili version of the questionnaires for those respondents who could not understand English. Translation help was there too for those who could not communicate in the other two languages.

3.7 Validity and Reliability of Instruments

3.7.1 Pre-test Study

Before the survey, the researcher pre-tested data collection instruments to test their reliability and accuracy in addressing the research questions. The pre-test enabled the researcher revise the instruments to ensure their validity and reliability. The researcher also addressed any logistical challenges identified during the pre-test before collecting data for the main study. Mulusa (1988) suggests the utilization of 10% respondents, which addresses objectivity populace in every one of the significant perspectives for a pre-test, and the subjects included in the pre-test study

were not involved in the subsequent data collection. The study was undertaken in Meru County on 20 respondents and they did not participate in the subsequent study.

3.7.2 Validity of Instruments

Validity is the accuracy in measurement, for example in this study, making sure that questionnaires and interview guides actually measure what it meant to measure. It also means the degree to which conclusions drawn from the data or inferences are justified and reasonable. Reliability is the measurement of consistency, e.g., making sure that certain data collection instrument, a questionnaire in this case and informant key guide produces the equal or similar answer if put under conditions which is similar. (Mugenda & Mugenda, 2003). Done through pretesting to determine the questionnaire clarity of items, and items that were inadequately found, were modified for the improvement of the quality of the research instruments.

The researcher administered pre-test study to guarantee that the instruments were appropriate in the investigation and substantial to gather the information required. In light of the outcomes and perceptions from the pilot study, instruments were refined by adjusting or taking out unseemly things or by adding more things to catch more data.

Creswell and Creswell (2018) says that legitimacy in a quantitative report implies that the analyst checks for exactness of the instruments and discoveries. In the present study, this was done through the piloting of instruments and expert validation make projects for improvement. Creswell and Creswell (2018) points out that in qualitative research validity was ensured through trustworthiness, authenticity and

credibility. The researcher addressed this by being honest in data collection and using credible and trustworthy participants.

3.7.3 Reliability of Instruments

With regard to reliability of instruments, Creswell and Creswell (2018) recommends that a quantitative researcher should check the instruments and transects to make sure that they do not contain errors. Dependability implies consistency of an action. Moreover, unwavering quality alludes to the scope of consistency towards measures wherein the outcomes got ought to be practically same or precisely the same outcomes are steady in continued testing. Cronbach's Alpha was utilized in the inside consistency unwavering quality test to clarify and decipher the dependability among the things studied. The study applied the Test-retest reliability to measure the consistency of the questionnaire. The reliability results indicate Cronbach's Alpha of .720, indicating that the instruments were within the acceptable levels as per the findings of (Mugenda & Mugenda, 2003).

3.8 Data Analysis and Presentation

The collected data entered and coded in SPSS v25. Data analysis involved, cleaning, coding and demonstrating the gathered information determined if the variables assessed in the study affected registering/enrollment and utilization of health insurance. Data management was done to ensure proper handling of the collected data. This included; validation, storing and protection of the data collected. Validation of the data done by going through the data collected to ascertain their completeness. Data was stored in a safe place with only the researcher having access

in order to protect the data from any destruction or interference. Descriptive statistics was computed using SPSS and involved mean computation and SD to assess normality and skewness of the dataset. Inferential statistics involved correlations matrix and Chi square.

3.8.1 Correlations

The study used Persons' Product Moment correlational statistics, which to test this relationship between registration in health insurance and utilization of healthcare administrations among NHIF individuals. Relationships structure the establishment for a portion of the center factual techniques depended upon for distinguishing designs in information. Most oftentimes, it is the Pearson item second connection that is being referred to when the term is utilized, however there are different sorts of relationships that fill various needs. Pearson correlation captures the strength of the linear relationship between two data fields hence its preference.

3.8.2 Non-parametric Test (Chi Square)

A test used to determine whether there is a significant difference between the expected observations and the observed frequencies in one or more categories. Pearson's correlation used to test the independence variable while the Phi and Cramer's used to test the strength of the association between variables. To make a conclusion about the hypothesis with 95% confidence, the value of significance, that is the p-value of the Chi-Square statistic should be less than .05 (which is the alpha level associated with a 95% confidence level). If the p-value < .05 and the critical chi-square value is less than the computed value, then conclusion is the variables

are dependent in the population and that there is a statistical relationship between the categorical variables.

3.9 Ethical Considerations

According to Creswell and Creswell (2018), "researchers need to ensure their examination members; foster trust with them; advance the respectability of exploration; guard against offense and inappropriateness that may think about their associations or establishments; and adapt to new, testing issues." Necessary licensing and authorization from the necessary bodies was obtained since the study will entail working with human individuals. Ethical approval from Kenya Methodist University, Ethics, and Research Committee permit from NACOSTI and the Isiolo County Health Office respectively. Respondents provided with information about the study to enable them decide whether to participate or not. Respondents assured of their right to confidentiality and freedom to refrain from participation at any point in the study.

The study informed them that participation in the study was voluntary through informed consent after explanation on the purpose of the study. During data assortment, the respondent was guaranteed of privacy and confidentiality of data given. Security was ensured by not recording the names of the respondents. They were informed that data assembled was exclusively for scholastic purposes only. The respondents hesitant to provide honest information, the researcher ensured respondents of utilization and secrecy of the data given as it was for the academic purpose only. The study included only those participants who signed the consent

form. Lastly, the researcher notified respondents they had a right to withdraw from the study at any point without any consequence.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents data findings and discussion based on the findings. The main aim of the study was to assess the influence of registration process in health insurance utilization among NHIF members in Isiolo County. The variables studied included the accuracy of data captured, knowledge of registration details, communication about registration process and the time taken to complete the registration process.

4.2 Response Rate

Primary data was collected by the use of structured questionnaire, 384 questionnaires were collected and checked for completeness and consistency, 382 questionnaires were well filled, and this made response rate of 99.47%.

4.3 Reliability Test

Table 4.11

Reliability Test

Items	Cronbach's Alpha
Utilization of HI	.749
Knowledge of registration details	.823
Accuracy of details	.837
Communication of registration documents	.741
Time taken for registration	.747
Overall	.779

The Table 4.1 presents the reliability test using the Cronbach Alpha of each variable and a cutoff threshold of 0.7 chosen for the study. All of the variables were found sufficient provided with a threshold of 0.7.

4.4 Socio-demographic Characteristics

Table 4.22

Socio-demographic Characteristics

Characteristics		n	(%)
Gender of the respondents	Male	183	(47.9)
	Female	199	(52.1)
	Total	382	(100.0)
Age Band	Less than 20 years	45	(11.8)
	Between 21-30 years	110	(28.8)
	Between 31-40 years	143	(37.4)
	Between 41-50 years	48	(12.6)
	More than 50 years	36	(9.4)
	Total	382	(100.0)
Marital status	Single	74	(19.4)
	Married	291	(76.8)
	Divorced/Separated	13	(3.4)
	Widowed	2	(0.5)
	Religious (nun)	2	(0.5)
	Total	382	(100.0)
Highest education attained	No formal education	29	(7.6)
	primary level	48	(12.7)
	Secondary level	99	(26.3)
	College level	129	(34.2)
	University level	77	(20.4)
	Total	382	(100.0)
Occupation Status	Unemployed	53	(13.9)
	Self-employed	97	(25.7)
	Employed	212	(56.2)
	Student	18	(4.8)
	Others (nun and retired nurse)	2	(.6)
	Total	382	(100.0)
Monthly income	Less than Ksh 10,000	124	(32.5)
	Between Ksh10,001-20,000	120	(31.4)
	Between Ksh20,001-30,000	61	(16.0)
	Between Ksh 30,001-40,000	27	(7.1)
	Between Ksh40,001-50,000	17	(4.5)
	More than Ksh 50,000	33	(8.6)
	Not indicated	36	(9.4)
	Total	382	(100.0)

Table 4.2 presents the socio-demographic characteristics of those who participated in the study in Isiolo County. Most 37598.2%) were insured with NHIF and slightly more than half 199,(52.1%) were females and this indicated higher utilization of HI among them. Age wise, the study noted that approximately 143 (42.3%) indicated they were between 31-40 years followed by a third 110,(32.5%) who were between 21-30 years. Assessing the marital unions, it was noted that those that were married comprised most 291(76.8%) of the study participants while approximately 74(19.4%) indicated they were single. A third 129(34.2%) of the study participants had college level education slightly more than a quarter 99(26.3%) had secondary level education and 20.4% indicated that they had university level education and this indicated that the county had an average literacy rates and the information provided was reliable. Slightly more than half 212(56.2%) were employed while a quarter 97 (25.7%) were self-employed and this indicated their affordability of NHIF premium payment and this further was indicated by the fact that most 120(34.7%) earned monthly income of between Ksh10001-20,000 while and a quarter 88(25.4%) earned less than Ksh10,001.

4.5 Utilization of health Insurance (NHIF)

The Table 4.3 presents the responses to which respondents utilized their NHIF services in Isiolo County. Among the respondents, majority 309(80.9%) were the principal member of the NHIF insurance indicating that high significance in utilization of health insurance services and slightly more than half 191(50%) indicated they had between 3-5 members insured on their insurance cards while those with more than five members constituted 70(18.3%). These findings are in line with

the Luoma et al. (2010) who indicated that most of the patients roughly 38% use other monetary measures to pay for their hospital bills as well use of health insurance. This finding agrees with Wang et. al. (2013) on inclusion in the health insurance schemes does mean degree to which they have utilized the health insurance services.

Table 4.33

Utilization of health Insurance (NHIF)

		n	(%)
Principal member of the NHIF insurance	Yes	309	(80.9)
	No	73	(19.1)
	Total	382	(100.0)
Number of dependents insured in the card	None	43	(11.3)
	Less than 2	78	(20.4)
	Between 3-5	191	(50.0)
	More than 5	70	(18.3)
	Total	382	(100.0)
Have other types of HI covers	Yes	63	(16.5)
	No	319	(83.5)
	Total	382	(100.0)
Other HI covers	None	325	(85.1)
	CBHI	1	(0.3)
	PHI	26	(6.8)
	UHC	30	(7.9)
	Total	382	(100.0)
Have you or any member of your family been sick in the past 12 months	Yes	203	(53.1)
	No	179	(46.9)
	Total	382	(100)
Used the NHIF card to pay for the health services received	Yes	189	(49.5)
	No	193	(50.5)
	Total	382	(100.0)
Other methods used to settle hospital bill	Using family savings	19	(5.0)
	Borrowed money to pay	6	(1.6)
	Sold property to pay	1	(0.3)
	Used health insurance to pay	20	(5.2)
	NHIF Card	336	(88.0)
	Total	382	100.0

Assessing if the respondents had other types of health insurance covers other than NHIF, majority 313(81.9%) of the respondents had none. This could be attributed to the fact that Isiolo County was one of the pilot counties for UHC and highly significant and among those with other policy covers, 7.9% cited UHC, while 6.8% cited private health insurance. It was noted that slightly more than half of the respondents 203(53.1%) indicated that they or their family members had fallen ill in the past one year and the number of outpatient services used were more than inpatient services. It was noted that most 189(49.5%) had used NHIF to settle their hospital bills. These findings agree with Fang et al. (2012) and Süssmuth-Dyckerhoff and Wang (2010) announced the effect that families and households that were insured inclusion caused significant cash-based expenses, on occasion in any event while findings by Namuhisa (2014) agrees with the current findings.

The Table 4.4 present the cross tabulation between the sociodemographic factors and those that had utilized their NHIF to pay for their health services in the county to assess significant demographic factors that led to the utilization of health insurance services. It was found that among the factors cross-tabulated, marital status (x^2 =10.46, P<0.05), occupation status (x^2 =14.77, P<0.05), and number of dependents (x^2 =10.1, P<0.05), of the respondent were all significant and tended to affect NHIF utilization. These findings further agree with the Namuhisa (2014) who indicated that poor registration for insurance and enrollment combined with little utilization holds individuals back from utilizing the health services they need. On the other hand, they stand a risk of ruin through high OOP expenditure and further Süssmuth-Dyckerhoff and Wang (2010) announced likewise significant degrees of cash-based installments even among those under China's health insurance conspire. The study agrees with the

Mukhwana et al. (2018) who found that individuals in the casual area with higher pay (> Kshs.10,000) are bound to select contrasted with those with low salaries and likewise, more elevated level of schooling was essentially connected with registered in NHIF scheme.

Table 4.44

Socio-Demographics Characteristic and HI Utilization

		Use the NHIF card to pay for the health services received			Chi Square	P-value
		Yes	No	Total		
Age band	Less than 20 years	18	27	45	5.872	.209
	Between 21-30 years	50	60	110		
	Between 31-40 years	75	68	143		
	Between 41-50 years	23	25	48		
	More than 50 years	23	13	36		
	Total	189	193	382		
Marital status	Single	29	45	74	10.462	**.033**
	Married	153	138	291		
	Divorced/Separated/ Widow	7	10	17		
	Total	189	193	382		
Education level	No formal education	15	14	29	6.207	.184
	Primary level	30	18	48		
	Secondary level	48	51	99		
	College level	55	74	129		
	University level	41	36	77		
	Total	189	193	382		
Occupation Status	Unemployed	30	25	55	14.777	**.0 44**
	Self-employed	53	44	97		
	Employed	99	113	212		
	Student	7	11	18		
	Total	189	193	382		
Monthly income	> Ksh 10,000	64	60	124	2.995	.701
	Ksh10,001-20,000	53	67	120		
	Ksh20,001-30,000	30	31	61		
	Ksh 30,001-40,000	16	11	27		
	Ksh40,001-50,000	8	9	17		
	>Ksh 50,000	18	15	33		
	Total	189	193	382		
Number of Dependants	None	14	29	43	10.077[a]	**.018**
	> 2	39	39	78		
	3-5	92	99	191		
	> 5	44	26	70		
	Total	189	193	382		

4.6 Knowledge of Registration Details

One of the objectives was to assess the influence of knowledge of registration details on utilization of healthcare services among NHIF members in Isiolo County and the Table 4.5 presents the responses to address the same. It was found that most 366(95.8%) knew where to register for the NHIF health insurance services and further majority 360(95%) knew that they could change their facility of choice under the NHIF insurance services. It was established that majority 357(93.5%) knew how to select health facility to go to.

Table 4.55

Knowledge of Registration Details

Statements		**n**	**(%)**
Knew where to register for the NHIF health insurance	Yes	366	(95.8)
	No	16	(4.2)
	Total	382	(100.0)
Knew that you can change your choice of health facility	Yes	360	(95.0)
	No	22	(5.8)
	Total	382	(100.0)
Knew how to select a health facility to go to	Yes	357	(93.5)
	No	25	(6.5)
	Total	382	(100.0)
know the benefits you are entitled to	Yes	339	(88.7)
	No	43	(11.3)
	Total	382	(100.0)
Types of Benefits aware of	Inpatient	153	(40.1)
	X-ray services	4	(1.0)
	Ultra-Sound services	1	(.3)
	Malaria test	27	(7.1)
	Stool test	2	(0.5)
	Blood tests	2	(0.5)
	Malaria and Stool Tests	36	(9.4)
	Malaria, Stool and Blood sugar	35	(9.2)
	Most of above	79	(20.7)
	None	43	(11.3)
	Total	382	(100.0)

Most of the respondents 339(88.7%) knew the benefits that they were entitled to and this included 153(40.1%) who indicated they knew inpatients services package under the NHIF health insurance, 79(20.7%) indicated most of the outlined services and indicated they were well informed on the NHIF benefit packages. These findings agree with Lagomarsino and Kundra (2008) that having the right information can structure trust in the target organizations to convince that health insurance offers financial security. The findings agree with the Platteau and Ontiveros (2013) that level of information have on insurance affects their registration and low enrollment and renewal rates were dependents on or influenced by information on the operations of the insurance schemes. The study agrees with Platteau and Ontiveros (2013) that information on the benefit packages also plays a great role in enrollment through sustained awareness campaigns.

The Table 4.6 presents the cross tabulation on the effects of knowledge of registration details and Healthcare insurance utilization among the respondents. Among those that had used their NHIF card either for inpatient or outpatient services, majority 181 (95.8%) knew where to enroll and register for their NHIF covers and 174(92.1%) could change their facility of choice and further 174(92.1%) attested that they knew how to select the health facility. Assessing the role of their knowledge on the registration, it was noted that most 166(87.8%) agreed that they knew the various benefits they were entitled to such as the inpatient service 82(43.4%), tests that concerned malaria, stool and blood sugar test 19(10.1%) while 39(20.6%) indicated most of the services (x^2 =15.38 *P<0.10).* These findings agree with Reddy and Mary, (2013) that employed individuals were less mindful about health insurance contrasted with government and privately owned businesses. Level

of education and training led to consumers aware of the benefits they are entitled to in their health insurance schemes and thus enroll. The study findings agree with Mathauer et al. (2008) that the most basic boundary to NHIF enlistment discovered by Mathauer et al. (2008) to be absence of information while the advertisement channels and medium and other advertising techniques by the scheme can lead to higher utilization of NHIF services.

Table 4.66

Knowledge of registration Details and HI Utilization

		Use the NHIF card to pay for the health services received				Total	%	Chi Square	P value
		Yes		No					
		n	%	n	%				
Did you know where to register for the NHIF health insurance	Yes	181	95.8	185	95.9	366	95.8	0.002	0.96
	No	8	4.2	8	4.1	16	4.2		
	Total	189	100.0	193	100.0	382	100.0		
Do you know that you can change your choice of health facility	Yes	174	92.1	186	96.4	360	94.2	3.268	0.07
	No	15	7.9	7	3.6	22	5.8		
	Total	189	100.0	193	100.0	382	100.0		
Know how to select a health facility to go to	Yes	174	92.1	183	94.8	357	93.5	1.185	0.27
	No	15	7.9	10	5.2	25	6.5		
	Total	189	100.0	193	100.0	382	100		
Know the benefits you are entitled to	Yes	166	87.8	173	89.6	339	88.7	0.312	0.57
	No	23	12.2	20	10.4	43	11.3		
	Total	189	100.0	193	100.0	382	100.0		
Types of benefits aware of	Inpatient	82	43.4	71	36.8	153	40.1		
	X-ray services	2	1.1	2	1.0	4	1.0		
	Ultra-Sound services	1	0.5	0	0.0	1	0.3		
	Malaria test	6	3.2	21	10.9	27	7.1		
	Stool test	0	0.0	2	1.0	2	0.5		
	Blood tests	0	0.0	2	1.0	2	0.5		
	Malaria and Stool Tests	16	8.5	20	10.4	36	9.4		
	Malaria, Stool and Blood sugar	19	10.1	16	8.3	35	9.2		
	Most of above	39	20.6	40	20.7	79	20.7		
	None	24	12.7	19	9.8	43	11.3		
	Total	189	100.0	193	100.0	382	100.0		

4.7 Accuracy of data on health service utilization

Table 4.77

Accuracy of Data on Health Service Utilization

Statements		n	(%)
Visited the health facility was your personal data well captured	Yes	361	(94.8)
	No	21	(5.5)
	Total	382	(100.0)
Items that were wrongly captured	None	374	(97.9)
	Ages/DOB	3	(0.9)
	Names/ surname	5	(1.3)
	Total	382	(100)
All dependent's personal data well captured	Yes	360	(94.2)
	No	22	(5.8)
	Total	382	(100.0
Items captured wrongly on dependents	None	372	(97.4)
	Children names missing	1	(0.3)
	Dependants age	1	(0.3)
	DOBS	1	(0.3)
	Facility of choice	1	(0.3)
	Names	3	(0.8)
	Surname	3	(0.8)
	Total	382	100.0
facility of choice correctly captured	Yes	361	(94.5)
	No	21	(5.5)
	Total	382	(100.0)
If NO to Q20, how did you end up in that health facility	None	377	(98.7)
	NHIF	5	(1.3)
	Total	382	(100.0)
Been denied services due to inaccurate information such as names or other entered in the system	Yes	116	(30.4)
	No	266	(69.7)
	Total	382	100.0

The Table 4.7 presents the responses to address the second objective, which was to assess the influence of accuracy of data captured on utilization of healthcare services among NHIF members in Isiolo County. From responses it was evident that the majority 361(94.8%) cited that their personal data was well captured and among those that indicated that theirs were not well captured, most related to ages/DoB

3(9%) and names of the respondents 5(1.3%). It was noted that on query if all dependents' personal data were well captured, most agreed that they were 360 (97%) while among those who disagreed with the statement indicted that their dependents names/surname were not well captured 7(1.9%), DoBs/ages were 2 (0.6%).

It was evident that most agreed that their facility of choice was well captured 361(94.5%) while 6(2.6%) of the respondents indicated that they were allocated their facility by their health insurance provider (NHIF). The responses on the denial of service due to due to inaccurate information such as names or other entered in the system was evident by a third 116(30.4%) who agreed that they had been and this indicated some patients to use OOP to settle hospital bills. These findings agree with the Obwocha et al. (2016) that right names of dependents and cardholder influenced utilization of NHIF in the locale and further found that information and data were overseen by nonprofessionals because of lacking health data subject matter experts, thusly this reduced the quality and utilization of HMIS in service delivery. The study echoes the same findings as Bhat and Jain (2006) that higher age brackets tended to utilize health insurance services while Edward (2019) indicated that health insurance utilization increased with age. The study agreed with the According to Oyekale (2012), that adults that were household heads that were probably going to have big family sizes estimates and many partners who were insured with health insurance scheme. Further, the study carried a bivariate cross tabulation to assess the effects of accuracy of data on health insurance utilization and the responses are provide in the Table 4.8

Table 4.88

Accuracy of Data and HI Utilization

Statements		Use the NHIF card to pay for the health services received				Total	%	Chi Square	P value
		Yes		No					
		n	%	n	%				
Personal data was well captured	Yes	176	93.1	185	95.9	361	94.5	1.373	0.241
	No	13	6.9	8	4.1	21	5.5		
	Total	189	100	193	100.0	382	100.0		
Items that were incorrecty captured	None	181	95.8	193	100.0	374	97.9	8.344	0.138
	Ages/DoB	3	1.6	0	0.0	3	0.8		
	Names/ Surnames	5	2.6	0	0.0	5	1.3		
	Total	189	100	193	100.0	382	100.0		
All dependents' personal data well captured	Yes	176	93.1	184	95.3	360	94.2	.863[a]	0.353
	No	13	6.9	9	4.7	22	5.8		
	Total	189	100	193	100.0	382	100.0		
Items incorrectly captured on dependents' data	None	179	94.7	193	100.0	372	97.4	10.486[a]	0.106
	Names/ Surname	6	3.2	0	0.0	6	1.6		
	DoBs/ Ages	3	1.6	0	0.0	3	0.8		
	Facility of choice	1	0.5	0	0.0	1	0.3		
	Total	189	100	193	100.0	382	100.0		
Health facility of choice correctly captured	Yes	178	94.2	183	94.8	361	94.5	.075[a]	0.784
	No	11	5.8	10	5.2	21	5.5		
	Total	189	100.	193	100.0	382	100.0		
If not your heatlh facility of choice, how did you end up in that health facility	Yes (previous)	184	97.4	193	100.0	377	98.7	5.174	0.075
	NHIF assigned	5	2.6	0	0.0	5	1.3		
	Total	189	100.	193	100.0	382	100.0		
Been denied services due to inaccurate registration information	Yes	51	27.0	65	33.7	116	30.4	3.105	0.212
	No	138	73.0	128	66.3	266	69.6		
	Total	189	100	193	100.0	382	100.0		

Nearly all 176(93.1%) of the respondents among those that had used their NHIF card in the past one year, had their personal data well captured while 13(6.9%) patients personal data were not well captured despite using the services and further wrong information captured concerned the names 5(2.6%) and ages 3(1.6%) of the respondents. The same trend observed as thirteen (13) respondents indicated that their dependents personal data were not well capture but had used NHIF services items captured wrongly on the dependents' personal data included the surname/name (6) while wrong ages/DoBs were three.

4.8 Communication about registration process

The Table 4.9 presents the study's findings to address the third objective of the study, which was to examine the influence of communication about registration process on utilization of healthcare services among NHIF members in Isiolo County.

Table 4.99

Communication about Registration Process

Statements		n	(%)
Had received sufficient information to help you decide to join NHIF insurance	Yes	341	(89.2)
	No	41	(10.8)
	Total	382	(100)
Items that were missing in the information	none	366	(95.8)
	Card Usage	1	(0.3)
	Employer Requirement	1	(0.3)
	NHIF benefits	24	(3.8)
	Total	382	(100.0)
information on where to register for NHIF insurance cover clear	Yes	357	(93.5)
	No	25	(6.5)
	Total	382	(100.0)
NHIF provided all the information required to make decisions on health services covered under NHIF	Yes	295	(77.2)
	No	87	(22.8)
	Total	382	(100.0)
NHIF always provides you with adequate information on the benefit package	Yes	285	(74.6)
	No	97	(25.4)
	Total	382	(100.0)
receive regular updates on NHIF insurance	Yes	247	(64.7)
	No	135	(35.3)
	Total	382	(100.0)

The first query sought to probe if the respondents had received enough and sufficient information to assist them in joining/enrollment of the insurance scheme. from the general responses, most 341(89.2%) had received enough information for proper decision making while among those that indicated that they received insufficient information on NHIF insurance covers included the overall benefit packages 24 (3.8%). The responses indicated that most 35(93.5%) had the information on where

to register for their NHIF insurance covers. NHIF provided them with the relevant/all information required to make decisions on health services covered under NHIF. majority of the respondents 295(77.2%) as well as most 285(74.6%) were well equipped with adequate information on the benefit package while approximately 65% indicated that they received regular updates on the NHIF insurance and overall there is a sizeable percentage of patients that did not get enough information to warrant their registration/enrolment in the NHIF insurance schemes. These findings are with the WHO (2018b) on the spreading messages and appropriating materials. Further findings by Munge et al. (2017) are in line with the current findings that to recognize the best accessible informing pathways communicators ought to examine the crowd's admittance to various channels and its inclinations. Findings by Ongiri and Kubani, (2015) agree with these study findings that NHIF shows its advantages and rundown of certify suppliers on its site and has taken out paper, TV and radio adverts fully intent on expanding attention to its items.

The Table 4.10 presents the cross tabulation to assess the significance of the role of communication process about the registration process and HI Utilization amongst the NHIF clients in Isiolo County.

Table 4.1010

Correlation between Communication about Registration Process and Health Insurance Card Utilization

Statements		use the NHIF card to pay for the health services received				Total		Chi-Square	P value
		Yes		No					
		n	%	n	%		%		
Did you receive sufficient information to help you decide to join NHIF insurance	Yes	171	90.5	170	88.1	341	89.3	1.861	0.394
	No	18	9.5	23	11.9	41	10.7		
	Total	189	100.0	193	100.0	382	100.0		
Information missing	None	177	93.7	189	97.9	366	95.8	11.075	0.086
	Card Usage	1	0.5	0	0.0	1	0.3		
	Employer Requirement	1	0.5	0	0.0	1	0.3		
	NHIF packages	9	4.8	4	2.1	12	3.1		
	Total	189	100.0	193	100.0	382	100.0		
Was information on where to register for NHIF insurance cover clear	Yes	173	91.5	184	95.3	357	93.5	12.257	0.033
	No	16	8.5	9	4.7	25	6.5		
	Total	189	100.0	193	100.0	382	100.0		
NHIF provided you with all the information required to make decisions	Yes	143	75.7	152	78.8	295	77.2	.520[a]	0.471
	No	46	24.3	41	21.2	87	22.8		
	Total	189	100.0	193	100.0	382	100.0		
NHIF always provides you with adequate information on the benefit package	Yes	135	71.4	150	77.7	285	74.6	1.995[a]	0.158
	No	54	28.6	43	22.3	97	25.4		
	Total	189	100.0	193	100.0	382	100.0		
Do you receive regular updates on NHIF insurance	Yes	122	64.6	125	64.8	247	64.7	13.965	0.002
	No	67	35.4	68	35.2	135	35.3		
	Total	189	100.0	193	100.0	382	100.0		

It was found that among those that had utilized NHIF services, 171(90.5%) of the respondents had received sufficient information to assist them to join the insurance scheme compared to 18(9.5%) who had not received enough information on NHIF

benefit packages. Among those that had used NHIF to settle their hospital bills, most 173(91.5%) knew where to register (x^2 =12.25, *p=0.033*), 143(75.5%) admitted they had received information on NHIF benefit packages (135) and 122(64.6%) cited that they received regular updates on the NHIF benefit packages (x^2 =13.96, *p=0.002*).

4.9 Time Taken for NHIF Registration

The fourth objective of the study was to establish the time taken to complete the registration process on utilization of healthcare services among NHIF members in Isiolo County. The Table 4.12 presents the respondents responses to address the same.

Table 4.1111

Time Taken for NHIF Registration

Statements		n	(%)
It took me less than 1 hour to register for my NHIF insurance	Yes	283	(74.1)
	No	99	(25.9)
	Total	382	(100.0)
After registration I received my NHIF Card within the stipulated time	Yes	303	(79.3)
	No	79	(20.7)
	Total	382	(100.0)
The time taken to register my dependents was adequate	Yes	324	(84.8)
	No	58	(15.2)
	Total	382	(100.0)
Overall the registration time taken for NHIF insurance was adequate	Yes	336	(88.0)
	No	46	(12)
	Total	382	(100.0)

It was observed that majority 283(74.1%) pointed that it took them less than one to register for their NHIF insurance compared to 99(25.9%) who disagreed with the statement while most 303(79.3%) indicated that they got their membership cards on

time as per their insurance provider. Approximately 324(84.8%) indicated that they had enough and adequate time to register their dependents and a mere 15.2% indicated they did not have enough time. Their overall the registration time taken for NHIF insurance was inadequate to approximately 12% of the study participants and this number includes those with the inaccurate personal data and thus were denied health insurance services. These findings echo the same sentiments/findings by Hughes (2008) that delays in registration and long waiting periods to obtain the card hinders the uptake of life insurance associated with seeking and receiving health care behavior. The study agrees with Mulupi et al. (2013) study showed that clients that were seeking to register for the insurance had longer waiting time at the insurance offices as well as at health facilities; they were being discriminated by providers than the non-insured. Mulupi et al. (2013) presumed that it was significant that the worries raised in regards to low quality of care are tended to especially in the public area before execution of the NHIS in Kenya.

The responses above presents the cross tabulation between time taken for NHIF registration and its subsequent utilization. it was found that among those that had utilized the NHIF insurance, most of respondents agreed to all statements that related time ie 135(71.4%) had taken less than one hour to register and thus enough time, 149(78.8%) had received their NHIF card on time. Most 157(83.1%) indicated that time to register their dependent(s) was adequate and on assessing the adequacy of time on the overall registration for the NHIF, the study noted that most 165 (87.3%) agreed that the time was enough for the registration exercise.

Table 4.1212

Crosstabulation between Time Taken for Registration and Health Insurance Card Utilization

Statements		Use the NHIF card to pay for the health services received				Total	%	Chi-Square	P value
		Yes		No					
		n	%	n	%				
It took me less than 1 hour to register for my NHIF insurance	Yes	135	71.4	148	76.7	283	74.1	1.374	0.241
	No	54	28.6	45	23.3	99	25.9		
	Total	189	100.0	193	100.0	382	100.0		
After registration I received my NHIF Card within the stipulated time	Yes	149	78.8	154	79.8	303	79.3	0.053	0.817
	No	40	21.2	39	20.2	79	20.7		
	Total	189	100.0	193	100.0	382	100.0		
The time taken to register my dependents was adequate	Yes	157	83.1	167	86.5	324	84.8	0.888	0.346
	No	32	16.9	26	13.5	58	15.2		
	Total	189	100.0	193	100.0	382	100.0		
Overall the registration time taken for NHIF insurance was adequate.	Yes	165	87.3	171	88.6	336	88.0	0.152	0.696
	No	24	12.7	22	11.4	46	12.0		
	Total	189	100.0	193	100.0	382	100.0		

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the conclusion of the study findings and the recommendations of the study based on the study's variables.

5.2 Summary

Most insured with NHIF and slightly more than half were females and this indicated higher utilization of HI among them. Age wise, the study noted that approximately 42.3% indicated they were between 31-40 years followed by a third who were between 21-30 years.

Assessing the marital unions, it was noted that those that were married comprised most of the study participants while approximately 18.7% indicated they were single. A third of the study participants had college level education, slightly more than a quarter had secondary level education and a fifth indicated that they had university level education and this indicated that the county had high literacy rates and the information provided was reliable. Slightly more than half had employed while a quarter were self-employed and this indicated their affordability of NHIF premium payment.

5.2.1 Utilization of health Insurance (NHIF

Majority were the principal member of the NHIF insurance indicating that high significance in utilization of health insurance services and slightly more than half indicated they had between 3-5 members insured in their insurance cards while those with more than five members constituted majority. Majority of the respondents had none. This could be attributed to the fact that Isiolo County was one of the pilot counties for UHC and highly significant and among those with other policy covers, 7.9% cited UHC, while 6.8% cited private health insurance. Slightly more than half of the respondents indicated that they or their family members had fallen ill/been sick in the past one year and the number of outpatient services were more than inpatient services. Most had used NHIF to settle their hospital bills while 45.8% had not utilized the NHIF insurance services.

5.2.2 Knowledge of Registration Details

Most knew where to register for the NHIF health insurance services and further majority knew that they could change their facility of choice under the NHIF insurance services. Majority knew how to select health facility to go to. Most of the patients/respondents knew the benefits that they were entitled to and this included 45.1% who indicated they knew inpatients services package under the NHIF health insurance, approximately 23.3% indicated most of the outlined services and this indicated a well-informed flock on the NHIF benefit packages. Among those that had used their NHIF card for inpatient or outpatient services, majority 168(43.9%)knew where to enroll and register for their NHIF covers and they could 163(42.6%) change their facility of choice and further attested 163(43.6%)that they knew how to select

their health facility to go. Assessing their role of their knowledge on the registration, it was noted that most 158(41.3%) agreed that they knew the various benefits they were entitled to such as the inpatient service 79(20.6%) tests that concerned malaria, stool and blood sugar test 18(4.7%) while 37(9.6%) indicated most of the services.

5.2.3 Accuracy of data on health service utilization

Majority cited that their personal data was well captured/entered and among those that indicated that theirs were not fully/well captured, most related to ages/DoB 3(9%) and names of the respondents 5(1.3%). All dependents' personal data were well captured, most agreed that they were while among those who disagreed with the statement indicted that their dependents names/surname were not well captured 7(1.9%), DoBs/ages were 2(0.6%). Most agreed that their facility of choice was well captured 361(96.8%) while 6(2.6%) of the respondents indicated that they were allocated their facility by their health insurance provider (NHIF). The responses on the denial of service due to due to inaccurate information such as names or other entered in the system was evident by a third 116(30.9%) who agreed that they had been and this indicated some patients to use OOP to settle hospital bills.

Most 163(43.1%) of the respondents among those that had used their NHIF card in the past one year, had their personal data well captured. while (5) patients personal data were not well captured though using the services compared to (4) patients/respondents who used the NHIF services to settle their hospital bills partially due to poorly captured data and further wrong information captured concerned the names (2) and ages (2) of the respondents. The same trend was observed as seven respondents indicated that their dependents personal data not well captured and it

was further noted that items captured wrongly on the dependents' personal data included the surname/name (4) while wrong ages/DoBs were (3).

5.2.4 Communication about registration process

Most had received enough information for proper decision making while among those that indicated that they received insufficient information on NHIF insurance covers included the overall benefit packages. Most had the information on where to register for their NHIF insurance covers. NHIF provided them with the relevant/all information they required to make decisions on health services covered. To majority of the respondents as well as most were well equipped with adequate information on the benefit package while most indicated that they received regular updates the NHIF insurance. Overall, there is a sizeable percentage of patients that did not get enough information for their registration/enrolment. Among those that had utilized NHIF services, 160(41.8%) of the respondents had received sufficient information to assist them to join the insurance scheme, compared to (9) who had not received enough information. on NHIF benefit packages while the same responses was replicated to all queries on the role communication about registration process and this indicated that communication of enrollment/registration is key in NHIF utilization.

5.2.5 Time Taken for NHIF Registration

Majority pointed that it took them less than one to register for their NHIF insurance compared to a fifth who disagreed with the statement while most indicated that they got their membership cards on time as per their insurance provider. Most indicated

that they had enough and adequate time to register their dependents and a mere 12.0% indicated they did not have enough time. Overall registration time taken for NHIF insurance was inadequate to approximately 10% of the study participants and this includes those with the inaccurate personal data and were denied health insurance services. Among those that had utilized the NHIF insurance, most of respondents agreed to all statements that related time ie 128(33.5%) took them less than one hour to register and thus enough time, 142(37.%1) had received their NHIF card on time, time to register their dependent(s) was adequate 148(38.7%). Assessing the adequacy of time on the overall registration for the NHIF, the study noted that most agreed that the time was enough for the registration exercise.

5.3 Conclusions

All the respondents were insured with the NHIF and majority had no other health policies apart from the NHIF and this is due to the fact that Isiolo County was one of the pilot counties for UHC. Slightly more than half of the respondents indicated that they or their family members had fallen ill/been sick in the past one year and the number of outpatient services were more than inpatient services. It was found that among the factors cross-tabulated, marital status, dependents size and, occupation status were all-significant and they tended to increase NHIF utilization.

5.3.1 Knowledge of Registration Details

Most knew where to register for the NHIF health insurance services and further majority knew that they could change their facility of choice under the NHIF insurance services. Majority knew how to select health facility to go to. Most of the

patients knew the benefits that they were entitled to, this included inpatients services package under the NHIF health insurance and most of the outlined services, and this indicated were well informed on the NHIF benefit packages.

5.3.2 Accuracy of data on health service utilization

Majority of the respondents indicated that their personal data was well captured/entered and among those that indicated that theirs were not fully/well captured, most related to ages/DoB and names of the respondents. Most agreed that their facility of choice was well captured while estimated 3% of the respondents indicated their health insurance provider (NHIF) allocated them their facility. Most of the respondents among those that had used their NHIF card in the past one year, had their personal data well captured while (5) patients personal data were not well captured though using the services compared to (4)patients/respondents who used the NHIF services to settle their hospital bills partially due to poorly captured data (and further wrong information captured concerned the names and ages of the respondents.

5.3.3 Communication about registration process

Most had received enough information for proper decision making while among those that indicated that they received insufficient information on NHIF insurance covers included the overall benefit packages. Most had the information on where to register for their NHIF insurance covers and the NHIF provided them with the relevant/all information they required to make decisions on health services covered under NHIF and overall there is a sizeable percentage of patients that did not get

enough information to warrant their registration/enrolment in the NHIF insurance schemes. It was found that among those that had utilized NHIF services, (160) of the respondents had received sufficient information to assist them to join the insurance scheme compared to (9) who had not received enough information on NHIF benefit packages while (7) used NHIF services partially to settle hospital bills.

5.3.4 Time Taken for NHIF Registration

Majority pointed that it took them less than one hour to register for their NHIF insurance compared most who indicated that they got their membership cards on time as per their insurance provider. Most of the patients/NHIF clients indicated that they had enough and adequate time to register their dependents. Most of respondents agreed to all statements related to time i.e., most took them less than one hour to register enough time, most had received their NHIF card on time, time to register their dependent(s) was adequate. Assessing the adequacy of time on the overall registration for the NHIF, the study noted that most agreed that the time was enough for the registration exercise.

5.4 Recommendations of the Study

1. NHIF should emphasize on the mass education on the necessity of enrollment in health insurance schemes (public or private) and the various requirements that are required to complete the process through the use of effective channel of communication to the end users/beneficiaries of those health schemes.

2. Isiolo County Referral hospital management team should communicate to their clients on importance of enrollment and registration information process.
3. NHIF should improve on members' data capture for accuracy and completeness to reduce denial of services.

5.5 Suggestions for further studies

The study sought to study sought to investigate the influence of registration process in health insurance utilization among NHIF members in Isiolo County and it used a sample of size of 382 from the Isiolo County and similar studies should be undertaken in other 3 counties where the piloting of UHC was done to assess if similar results will be achieved. Future studies should use a higher number of respondents to increase the reliability of the data.

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APPENDICES

Appendix I: CONSENT FORM

Kenya Methodist University

Department of Health Systems

Dear Respondent

My name is Jacqueline Museti Injete, a Master's of Science student at *Kenya Methodist University.* Am undertaking a study on the '***Influence of registration in health insurance and utilization of healthcare services among NHIF members in Isiolo county'***. This research proposal is critical to strengthening service utilization in line with the public health insurance (NHIF) as it will generate new knowledge in this area that will inform decision makers to make decisions that are research based.

Procedure to be followed

Participation in this study will require that I ask you some questions. The information from you will be recorded. You have the right to refuse participation in this study. You will not be penalized nor victimized for not joining the study and your decision will not be used against you nor affect you at your place of employment. Please remember that participation in the study is voluntary.

You may ask questions related to the study at any time. You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to the services you are rendering.

Discomforts and Risks

Some of the questions are on intimate subject and may be embarrassing or make you uncomfortable. If this happens, you may refuse to answer if you choose. You may also stop the interview at any time. The interview may take about 20 minutes to complete.

Benefits

If you participate in this study, you will help us to strengthen service utilization of healthcare services among NHIF members in Kenya and other Low-in- come countries in Africa. This research is critical to strengthening service delivery, as it

will generate new knowledge in this area of burden of service and quality of care that will inform decision makers to make decisions that are research based.

Rewards

There is no reward for anyone who chooses to participate in the study.

Confidentiality

Your name will not be recorded on the questionnaire and the questionnaires will be kept in a safe place at the University.

Participant's Statement

The above statement regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions answered to my satisfaction. My participation in this study is voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will not be victimized at my place of work whether I decide to leave the study or not and my decision will not affect the way I am treated at my work place.

Name of Participant: ……

Date…….

Signature……

……

Investigator's Statement

I, the undersigned, have explained to the volunteer in a language s/he understands the procedures to be followed in the study and the risks and the benefits involved.

Name of Interviewer……

Date…….…….

Signature……

Appendix II: Research Questionnaire

Please (tick) where appropriate or fill in the required information on the spaces provided. The questionnaire is divided in the following segments.
Date _____ Participant's serial no._____

Filter information:
Are you insured with NHIF?

a) Yes ☐ b) No ☐

Demographic Information

1. Sex

a) Male ☐ b) Female ☐

2. Age of the respondents (in years) ……

3. Marital status:

a) Single ☐
b) Married ☐
c) Divorced /Separated ☐
d) Widowed ☐
e) Other specify …….

4. Highest level of education:
a) Primary ☐ b) Secondary ☐ c) Middle college ☐
d) University ☐ e) None ☐

5. Occupation,
a) Unemployed ☐ b) Self-employed ☐ c) Employed ☐
d) Student ☐

6. What is your household monthly income?
Less than KES.10, 000 ☐
10,001-20,000 ☐
20,001-30,000 ☐
30,001-40,000 ☐
40,001-50,000 ☐

50,001 and above ☐

7. Are you the principal member of the NHIF insurance?

a) Yes ☐ b) No ☐

8. How many dependents are also insured in your card? _____

9. Do you have other types of health insurance cover?

a) Yes ☐ b) No ☐

10. If yes, which one(s) ? _____
_____
_____

Knowledge of registration Details

11. Did you know where to register for the NHIF health insurance?

a) Yes ☐ b) No ☐

12. Do you know that you can change your choice of health facility?

a) Yes ☐ b) No ☐

13. Do you know how to select a health facility to go to?

a) Yes ☐ b) No ☐

14. Do you know the benefits you are entitled to?

a) Yes ☐ b) No ☐

15. If yes in Q14), which ones?

- Inpatient ☐
-Outpatient services included?

X-ray ☐
Ultrasound ☐
Malaria test ☐
Stool test ☐
Blood sugar ☐

Accuracy of data on health service utilization

16. When you visited the health facility was your personal data well captured?

a) Yes ☐ b) No ☐

17. If NO to Q16, what was missing or wrong? _____
_____
_____

18. When you visited the health facility were all dependants personal data well captured?

a) Yes ☐ b) No ☐

19. If NO to Q18, what was missing or wrong? _____
_____
_____

20. Was the health facility of choice correctly captured?

a) Yes ☐ b) No ☐

21. If NO to Q20, how did you end up in that health facility? _____
_____
_____

22. Have you been denied services due to inaccurate information such as names or other entered in the system.

a) Yes ☐ b) No ☐

Communication about registration process

23. Did you receive sufficient information to help you decide to join NHIF insurance?

a) Yes ☐ b) No ☐

24. If NO to Q23 what was missing? _____
_____
_____

25. Was information on where to register for NHIF insurance cover clear?

a) Yes ☐ b) No ☐

26. Does NHIF provide you with all the information required to make decisions on health services covered under NHIF?

a) Yes ☐ b) No ☐

27. NHIF always provides you with adequate information on the benefit package?

a) Yes ☐ b) No ☐

28. Do you receive regular updates on NHIF insurance?

a) Yes ☐ b) No ☐

Time Taken for NHIF Registration

29. It took me less than 1 hour to register for my NHIF insurance.

a)Yes ☐ b) No ☐

30. After registration I received my NHIF Card within the stipulated time.

a)Yes ☐ b) No ☐

31. The time taken to register my dependents was adequate.

a)Yes ☐ b) No ☐

32. Overall the registration time taken for NHIF insurance was adequate.

a)Yes ☐ b) No ☐

Utilization of health insurance

33. Have you or any member of your family been sick in the past 12 months?

a) Yes ☐ b) No ☐

34. If yes, how many times? IP _____ OP_____

35. Did you use the NHIF card to pay for the health services received?

b) Yes ☐ b) No ☐ c) Partially ☐

36. If **Partially** to Q34), what extra was were required to pay directly? _____

_____

_____

37. If **NO** to Q34), how did you pay the hospital bill?

a) Using family savings ☐
b) Borrowed money to pay ☐
c) Sold property to pay ☐
d) Used health insurance to pay ☐
e) Used Harambee contributions (fund raising) ☐
f) Do Not Know /Not Sure

Thank you for cooperation!

Kiambatisho III: Hojaji ya Utafiti

Tafadhali (weka alama) pale inapofaa au jaza habari inayohitajika kwenye nafasi zilizotolewa. Hojaji imegawanywa katika sehemu zifuatazo.

Tarehe _____ Namba ya mshiriki ._____

Sehemu A: Habari ya Idadi ya Watu

1. Jinsia

a) Mwanaume ☐

b) Mwanamke ☐

2. Umri wa wahojiwa (kwa miaka) ……

3. Hali ya ndoa:

a) Mseja ☐

b) Kuolewa ☐

c) Kuachana / Kutengwa ☐

d) Mjane ☐

e) Nyingine taja …….

4. Kiwango cha elimu:

a) Msingi ☐

b) Sekondari ☐

c) Chuo cha kati ☐

d) Chuo Kikuu ☐

e) Hakuna ☐

5. Kazi

a) Kutokuwa na ajira ☐

b) Kujiajiri ☐

c) Kuajiriwa ☐

d) Mwanafunzi ☐

e) Nyingine taja ----------

7. Wewe ndio mlipia Bima

Ndio ☐ Hapana ☐

8.Wanafamilia wangapi waliosajiliwa kwa Kadi yako?…….

9. Hivi sasa una Bima ingine ya Afya Ndio ☐ Hapana ☐

10. Kama ndio, ipi ama zipi?

UJUZI WA MAELEZO YA USAJILI

11. Je! Ulikuwa unajua mahali pa kujiandikisha na Bima ya NHIF?

a) Ndio ☐

b) Hapana ☐

12. Je unajua unaweza kubadilisha kituo cha Afya cha kuhudumiwa?

Ndio ☐ Hapana ☐

13. Je unajua vile kuchagua kitua cha afya cha kutibiwa?

Ndio ☐ Hapana ☐

14. . Je Ulijulishwa juu ya kifurushi cha faida ya bima ?

Ndio ☐ Hapana ☐

15. Ikiwa ndio, kwa (14) ipi/zipi

-Kulazwa kituoni cha afya

- Huduma ya kutolazwa – Kupigua picha(X-ray)--------☐

Picha ya viungo (U/S)…… ☐

Kipimo cha Malaria……..☐

Kipimo cha Mavi…….☐

Kipimo cha sukari…….☐

USAHIHI WA DATA JUU YA MATUMIZI YA HUDUMA YA AFYA

16. Je ulipoenda kituo cha afya kwa matibabu, kusajiliwa kwako kulikuwa kumefanywa taratibu?

Ndio ☐ Hapana ☐

17. Kama hapana kwa (16) ni habari gani iliyokosekana?_____

18. Ulipoenda kituo cha afya kwa matibabu, je kusajiliwa kwa wanafamilia wako kulikuwa kumefanya taratibu? Ndio ☐ Hapana ☐

19. Kama hapana kwa (18) ni habari ipi haikuwa ama ilikosekana._____

20. Je, kituo cha afya ulichosajiliwa kilikuwa sahihi?

Ndio ☐ Hapana ☐

21. Kama hapana ,uliezaje kusajiliwa katika kituo hicho?_____

22. Je umewahi kukosa matibabu kwa ajili ya kukosekana kwa utaratibu wa majina ulikosajiliwa?

MAWASILIANO KUHUSU UTARATIBU WA USAJILI.

23. Je ulipata habari ya kutosha ili uweze kujisajili na Bima ya NHIF ?

Ndio ☐ Hapana ☐

24. Kama hapana (23), ni habari ipi ilikosekana?_____

25. Je ulipata habari ya kutosha ya kukuwezesha kujisajili na bima ya NHIF?

Ndio ☐ Hapana ☐

26. Je, bima ya NHIF yakupa habari yote unayohitaji kukuweza kuamua juu ya huduma za bima ya afya ya NHIF?

Ndio ☐ Hapana ☐

27. Je NHIF hukupa habari unayohitaji juu ya faida ya Kadi?

Ndio ☐ Hapana ☐

28. Je wewe hujulishwa kila wakati juu ya bima?

Ndio ☐ Hapana ☐

MUDA UNAOHITAJIKA KUSAJILIWA NA BIMA YA KADI YA NHIF.

29. Je ulichukuw muda chini wa saa moja kusajiliwa kwa bima ya NHIF?

Ndio ☐ Hapana ☐

30. Baada ya usajili, nilipokea kadi ya NHIF kiwango cha muda nilioambiwa.

Ndio ☐ Hapana ☐

31. Muda uliotumia kusajili wanafamilia ulikuwa wa kutosha.

Ndio ☐ Hapana ☐

32. Kwa jumla, muda uliotumiwa kusajiliwa kwa bima ya NHIF ulikuwa wa kutosha.

MATUMIZI YA BIMA YA AFYA

33. Je, mwanafamilia yeyote amawahiugua kipindi cha miezi 12 iliyopita?

Ndio ☐ Hapana ☐

34. Kama ndio mara ngapi? Kulazwa -IP_____Kutibiwa na kurudi nyumbani -OP

35. Je ulitumia kadi ya NHIF kulipia matibabu?

Ndio ☐ Hapana ☐ Kiasi ☐

36. Kama Kiasi kwa (35) ni ngapi uliyoweza kulipia ?_____

37. Ikiwa hapana (35) uliwezaje kulipia malipo ya huduma?

a) Kutumia akiba ya familia ☐

b) Fedha zilizokopwa kulipa ☐

c) Kuuzwa mali kulipa ☐

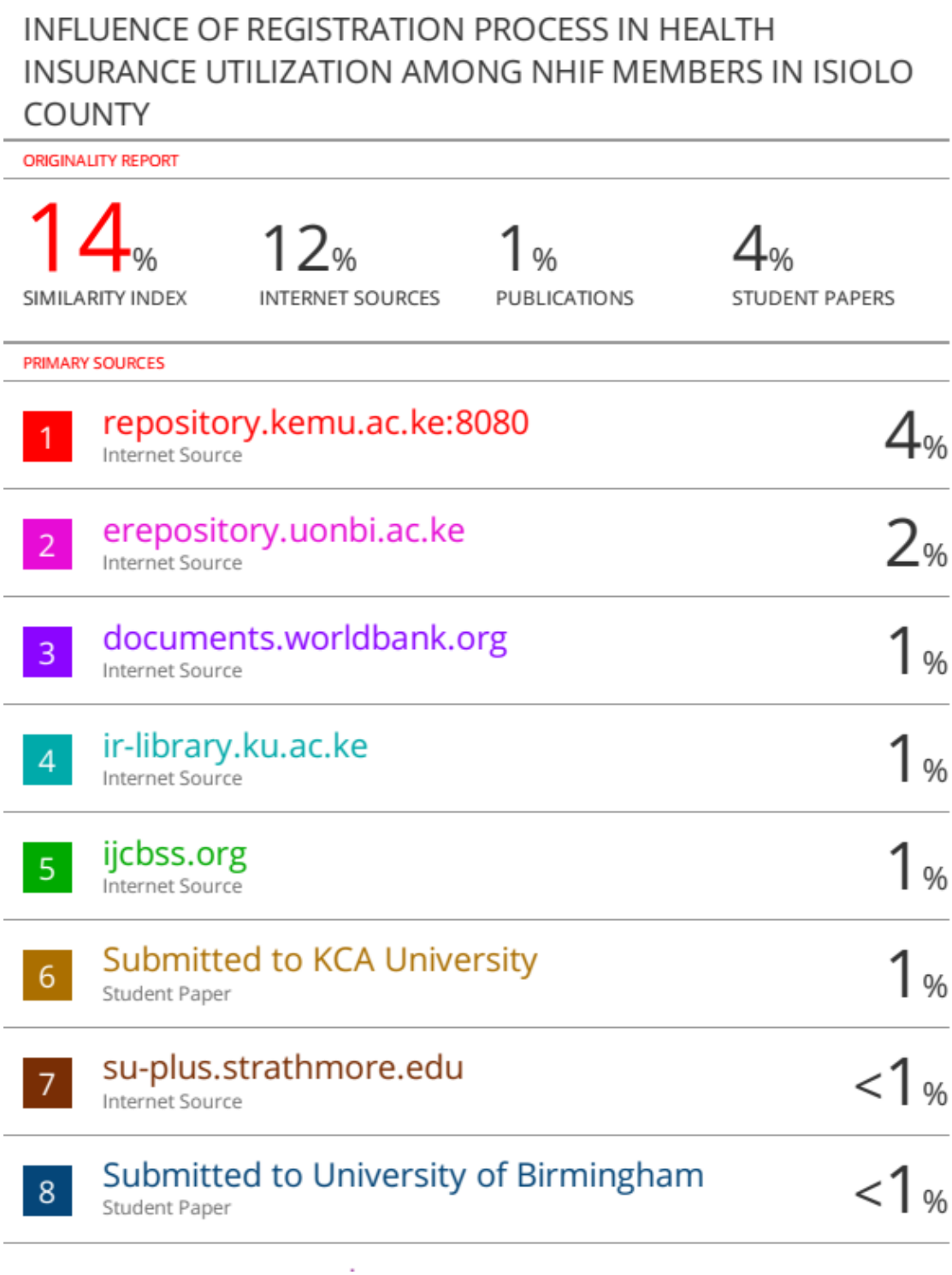
d) Bima ya afya iliyotumika kulipa ☐

e) Michango ya Harambee iliyotumiwa (kukusanya fedha) ☐

f) Do Not Know /Not Sure ☐

Asante kwa kushiriki

Appendix IV: Antiplagiarism Report



INFLUENCE OF REGISTRATION PROCESS IN HEALTH INSURANCE UTILIZATION AMONG NHIF MEMBERS IN ISIOLO COUNTY

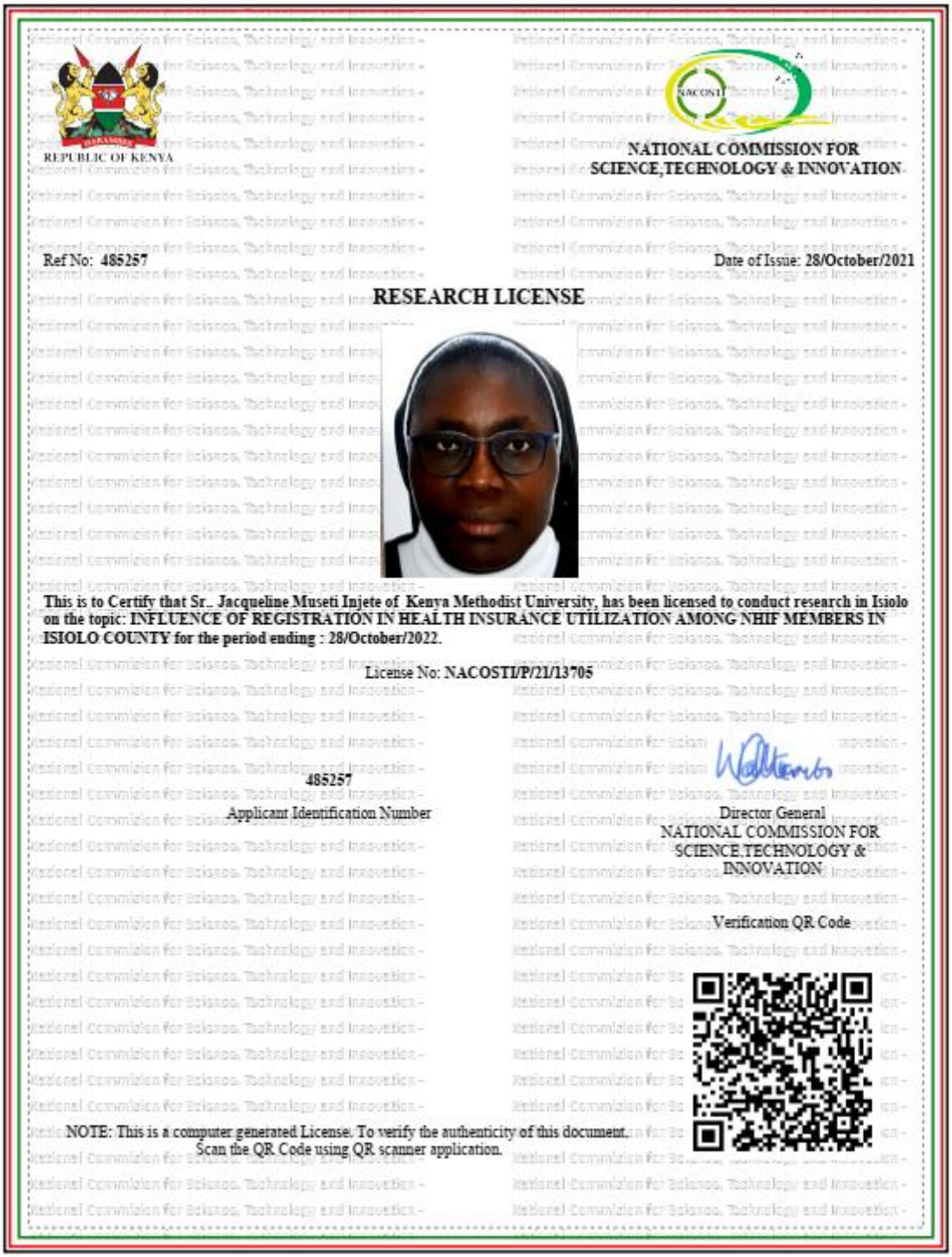
ORIGINALITY REPORT

14%	12%	1%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	repository.kemu.ac.ke:8080 Internet Source	4%
2	erepository.uonbi.ac.ke Internet Source	2%
3	documents.worldbank.org Internet Source	1%
4	ir-library.ku.ac.ke Internet Source	1%
5	ijcbss.org Internet Source	1%
6	Submitted to KCA University Student Paper	1%
7	su-plus.strathmore.edu Internet Source	<1%
8	Submitted to University of Birmingham Student Paper	<1%

Appendix V: Letter of Authorization/ Research License



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 485257

Date of Issue: 28/October/2021

RESEARCH LICENSE

This is to Certify that Sr.. Jacqueline Museti Injete of Kenya Methodist University, has been licensed to conduct research in Isiolo on the topic: INFLUENCE OF REGISTRATION IN HEALTH INSURANCE UTILIZATION AMONG NHIF MEMBERS IN ISIOLO COUNTY for the period ending : 28/October/2022.

License No: NACOSTI/P/21/13705

485257

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VI: County Research Permit

COUNTY GOVERNMENT OF ISIOLO
OFFICE OF COUNTY DIRECTOR
HEALTH SERVICES

County director for Health
P.O. BOX 673 – 60300
ISIOLO

When replying Please quote
ISO/CONT/CDH/ADM/06/2021

8th November, 2021

Jacqueline Museti Injete
Kenya Methodist University
P. O. Box 267 – 60200
MERU - KENYA

Dear Jacqueline,

RE: APPROVAL TO UNDERTAKE STUDY IN ISIOLO COUNTY: INFLUENCE OF REGISTRATION IN HEALTH INSURANCE UTILIZATION AMONG NHIF MEMBERS IN ISIOLO COUNTY

The study on influence of registration in health insurance utilization among NHIF members in Isiolo County will be critical to informing policy and resource mobilization including appropriate allocation of funds from the County. This is therefore a timely and relevant study that we fully support and look forward to the findings.

It is hereby noted that you have obtained ethical Clearance from Kenya Methodist University Ref:KeMU/SERC/HSM/48/2021. You have also been granted research licence (NACOSTI/P/21/13705) by the National Commission for Science, Technology and Innovation. Consequently, your request to undertake Influence of Registration in Health Insurance utilization among NHIF Members study in Isiolo County is approved.

Thank you.

Yours sincerely,

COUNTY GOVERNMENT OF ISIOLO
DIRECTOR OF HEALTH

Dr. Abubakar A. Hussein
Director, Health Services,
MINISTRY OF HEALTH-ISIOLO COUNTY

Appendix VII: University Research Permit

KENYA METHODIST UNIVERSITY
P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: serc@kemu.ac.ke

September 22, 2021

KeMU/SERC/HSM/48/2021

Jacqueline Museti Injete
Kenya Methodist University

Dear Jacqueline,

SUBJECT: INFLUENCE OF REGISTRATION IN HEALTH INSURANCE UTILIZATION AMONG NHIF MEMBERS IN ISIOLO COUNTY

This is to inform you that Kenya Methodist University Scientific Ethics and Review Committee has reviewed and approved your above research proposal. Your application approval number is KeMU /SERC/HSM/48/2021. The approval period is 22nd September 22, 2021 – 22nd September 2022.

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 Kenya Methodist University Scientific Ethics and Review committee.

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 KeMU SERC 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 KeMU SERC 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 KeMU SERC.

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,

Dr. A. WAMACHI
Chair, SERC