ASSESSMENT OF UTILIZATION OF NATIONAL HEALTH INSURANCE FUND STUDENTS' HEALTH SCHEME: A CASE OF SELECTED INSTITUTIONS OF HIGHER LEARNING IN ARUSHA REGION, TANZANIA

by

Bernard Katerengabo

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APPROVAL

ASSESSMENT OF UTILIZATION OF NATIONAL HEALTH INSURANCE FUND STUDENTS' HEALTH SCHEME: A CASE OF SELECTED INSTITUTIONS OF HIGHER LEARNING IN ARUSHA REGION, TANZANIA

by

Bernard Katerengabo
16-1337

In accordance with Daystar University policies, this thesis is accepted in partial fulfilment of the requirements for the Master of Arts degree.

Date:

_____ _____
Philemon Yugi, PhD,
1st Supervisor

_____ _____
Jane Kositany-Cheruiyot, MA,
2nd Supervisor

_____ _____
Philemon Yugi, PhD
HOD, Development Studies

_____ _____
Kennedy Ongaro, PhD,
Dean, School of Human and Social Sciences

DECLARATION

ASSESSMENT OF UTILIZATION OF NATIONAL HEALTH INSURANCE FUND STUDENTS' HEALTH SCHEME: A CASE OF SELECTED INSTITUTIONS OF HIGHER LEARNING IN ARUSHA REGION, TANZANIA

I declare that this thesis is my original work and has not been submitted to any other college or university for academic credit.

Signed:  Date: _____

Bernard Katerengabo
16-1337

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TABLE OF CONTENTS

APPROVAL ii
DECLARATION iv
ACKNOWLEDGEMENTS v
TABLE OF CONTENTS vi
LIST OF TABLES viii
LIST OF FIGURES ix
LIST OF ABBREVIATIONS AND ACRONYMS x
ABSTRACT xi
CHAPTER ONE 1
INTRODUCTION AND BACKGROUND TO THE STUDY 1
Introduction 1
Background to the Study 2
Statement of the Problem 5
Purpose of the Study 7
Objectives of the Study 7
Research Questions 7
Justification for the Study 8
Significance of the Study 8
Assumptions of the Study 9
Scope of the Study 9
Limitations and Delimitations of the Study 10
Definition of Terms 11
Summary 13
CHAPTER TWO 14
LITERATURE REVIEW 14
Introduction 14
Theoretical Framework 14
General Literature Review 19
Empirical Literature Review 28
Conceptual Framework 42
Discussion 43
Summary 45
CHAPTER THREE 46
RESEARCH METHODOLOGY 46
Introduction 46
Research Design 46
Population 46
Target Population 47
Sample Size 47
Sampling Techniques 48
Data Collection Instruments 49
Data Collection Procedures 50
Pretesting 50
Data Analysis Plan 51
Ethical Considerations 51
Summary 52

CHAPTER FOUR....53
DATA PRESENTATION, ANALYSIS AND INTERPRETATION....53
Introduction....53
Analysis and Interpretation....53
Summary of Key Findings....65
Summary....66
CHAPTER FIVE....67
DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS....67
Introduction....67
Discussions of Key Findings....67
Conclusion....76
Recommendations....77
Recommendations for Further Research....78
REFERENCES....79
APPENDICES....85
Appendix A: Consent Form....85
Appendix B: Students' Questionnaire....86
Appendix C: Key Informant Interview Guide for University Administrators....89
Appendix D: Ethical Clearance....90
Appendix E: Research Permit by Arusha Regional Administrative Secretary....91
Appendix F: Research Permit by Tanzania Commission for Science & Technology....92
Appendix G: Plagiarism Report....93

LIST OF TABLES

Table 3.1: Target Population 47
Table 3.2: Sample Size 48
Table 4.1: Distribution of Respondents by Age 54
Table 4.2: Distribution of Respondents by University 55
Table 4.3: Students Enrolled under NHIF Students' Health Scheme 55
Table 4.4: Reasons for Students not Visiting the Health Facilities 58
Table 4.5: Utilization of NHIF Health Scheme (Socio-demographic characteristics) 59
Table 4.6: Factors Influencing the Utilization of NHIF Student's Health Scheme among Enrollees (n=220) 60

LIST OF FIGURES

Figure 2.1: Conceptual Framework *43*
Figure 4.1: Distribution of Respondents by Gender (n=220) *54*
Figure 4.2: Students Visits to Health Facilities for Treatment - the past 12 Months .. *56*
Figure 4.3: Respondents' Visits to Health Facilities for Treatment - the past 12 Months (n=198) *57*
Figure 4.4: Health Services offered under NHIF Students' Health Scheme *61*
Figure 4.5: Suggestions to Improve NHIF Students' Health Scheme Utilization *64*

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CBE	College of Business Education
CBHI	Community Based Health Insurance
HIV	Human Immunodeficiency Virus
IAA	Institute of Accountancy Arusha
IHL	Institutions of Higher Learning
MoHCDEC	Ministry of Health, Community Development, Gender, Elderly and Children
MOHSW	Ministry of Health and Social Welfare
NHIF	National Health Insurance Fund
NHIS	National Health Insurance Scheme
NHI	National Health Insurance
OOP	Out-of-Pocket
PHI	Private Health Insurance
SPSS	Statistical Package for the Social Sciences
SHI	Statutory Health Insurance
TCU	Tanzania Commission for Universities
TUMA	Tumaini University Makumira
UHC	Universal Health Coverage
WHO	World Health Organization

ABSTRACT

The study assessed the utilization of National Health Insurance Fund (NHIF) students' health scheme in Arusha, Tanzania, with a focus on selected institutions of higher learning (IHL) in Arusha Region, Tanzania. The study objectives were to determine the level of utilization, examine the factors influencing utilization, analyze the challenges faced by IHL in enrolling students into the NHIF, and suggest strategies to improve the National Health Insurance Fund (NHIF) students' health scheme. The study adopted a descriptive research design. The sample for the study comprised 220 students identified through both probability and non-probability sampling techniques. A semi-structured questionnaire was used to collect quantitative data and a tape recorder to record qualitative data. The quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS), while the qualitative data was analysed through coding. Out of the total respondents, 90% had visited the health facility once in the previous 12 months. Some of the respondents (10%) did not utilize the health facilities, giving the reason that they were not sick and hence did not need medical attention. The majority of the students were knowledgeable about the health services offered under the NHIF students' health scheme. According to the administrators, NHIF had not established a communication system for dealing with health issues. The student respondents recommended that creating awareness should be undertaken twice a year. The recommended areas towards influencing students' enrolment into NHIF included the availability of laboratory tests and drugs in the health facilities, and adoption of monitoring and evaluation by the NHIF accredited health facilities to ensure that they deliver quality healthcare.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

Introduction

The establishment of the students' health scheme by the National Health Insurance Fund (NHIF) in 2001 was a bold initiative to augment the fund's range of packages offered to Tanzanian citizens. The other health insurance schemes provided by NHIF are for public and non-public employees with their dependants and community groups engaging in economic empowerment activities. NHIF also offers health insurance coverage to private individuals with their dependants and equally important is the scheme for children less than 18 years old (NHIF, 2016).

In an effort to include diverse community groups and ensure that 50% of the Tanzanian population is not only enrolled but also utilizes the health insurance by 2020, NHIF devised a students' health scheme. The scheme was purposefully introduced to ensure that all students from institutions of higher learning (IHL) are provided with health insurance services. The NHIF health services for IHL can be accessed countrywide because all the government and public owned health facilities entered into contracts with NHIF to provide medical services to insured students. It is worth noting that the contracts are renewable and last for three years (NHIF, 2017).

The registration of students for the health scheme is on an annual basis and is usually done at the beginning of each academic year. The duration of active membership is one academic year and is renewable annually for the entire duration of the members' study programmes. To facilitate smooth identification, NHIF offers each student an identity card which is valid throughout the student's respective study duration. However, beneficiaries can renew their membership by paying the

premiums annually to redeem their membership cards. The identity cards are used when the students visit the accredited health services facilities to access and utilize medical services whenever they fall sick. The main objective of introducing the NHIF students' health scheme was to ensure that students' health issues were taken care of during their studentship without using any top-up or out-of-pocket (OOP) payments (NHIF, 2016).

This chapter introduces the background to the study regarding the university students' utilization of the NHIF students' scheme; and gives the study problem, purpose, objectives, and research questions. The chapter also discusses the rationale, significance, and scope of the study; and the study limitations and delimitations. At the end, significant terminologies in the study are defined.

Background to the Study

According to Doetinchem, Carrin, and Evans (2010), the NHIF students' health scheme falls under the innovative financing systems that collect and pool funds to pay healthcare costs for the insured. In a good structured Statutory Health Insurance (SHI), employers and their employees, individuals and students pay the enrolment fees according to the set premiums. Different governments in developing countries with established SHI set the laws that mandatorily require the public employees pay the premiums while for other insured groups, payment of premium is optional. The other source of fund for SHI comes from the governments.

In pursuit of achieving wide coverage, NHIF and other SHI systems in Africa provide a reliable system of protection to people by replacing OOP spending with the SHI which is a prepayment system. The SHI, therefore, caters for basic and comprehensive packages of health-care services. This financial protection allows

more groups of insured clients to receive health-care services and avoid OOP expenses (Doetinchem et al., 2010).

Apart from being useful in developing countries, students' health plan has been used in the IHL in the United States of America as well. This is because the plan was very critical for students as it promoted independence and provided security. Furthermore, it provided preventative health measures to students, enhanced academic performance, hence leading to the successful completion of their degree programmes. The plan was essential as the colleges inevitably faced such perpetual health risks due to frequent athletic injuries and rampant communicable diseases, especially the flu, mononucleosis, and meningitis (United States Government Accountability Office, 2008).

More importantly, the plan provided special health needs to students who highly needed health insurance for medical care. The students obtained health insurance which was particularly designed for them. The plan assisted students in avoiding the high costs of specialized healthcare. To provide health insurance to students with special needs, colleges signed contracts with health insurance providers or established their own health insurance systems (United States Government Accountability Office, 2008).

According to Mossialos, Wenzl, Osborn, and Sarnak (2016), the health insurance system in France also covered students, among other groups. The French SHI provided comprehensive coverage with its mandatory enrolment to all citizens. Members registered either as employees or as unemployed with their families. The formerly employed or retirees were also included in the comprehensive scheme. In the French health insurance system, citizens could not decide to drop out of SHI.

The package for SHI in France included the healthcare services in hospitals which comprised inpatient and outpatient services from the general practitioners and specialists. The package also covered the diagnostic services, medicine, medical appliances, and transport services for patients (Chevreul, Brigham, Durand-Zaleski, & Hernandez-Quevedo, 2015).

In Australia, the health insurance arrangement known as Medicare, insured all citizens as well as people who were not Australians but were legally living in the country. All international students were enrolled in a health cover specifically designed for them: Overseas Students Health Cover (Australia Institute of Health and Welfare, 2014).

In the United Kingdom, there was a low-income health scheme: the National Health System. This scheme exempted young people, students, pregnant mothers, prisoners, and low-income households from co-payments for dental health. Optometry services were also free for young people, the elderly (over 60 years of age), and low-income earners. This exemption ensured that the young and the low-income earners were able to meet the cost of corrective lenses (Mossialos et al., 2016).

According to Huang (2014), in China, there was an urban resident basic medical insurance, which was established to ensure that the unemployed population got into a health insurance system. Under urban resident basic medical insurance, people with financial hardship were insured through different health insurance plans. From 2007 onwards, many urban residents, including students, were insured.

In Tanzania, an inclusive health insurance task was entrusted to NHIF. The goal of this public institution was to provide healthcare through the accreditation of health facilities, pharmacies, specialized clinics, and diagnostic centers. The

accredited health facilities offered medical treatments to the insured, and the medical bills were reimbursed monthly (NHIF, 2017).

In line with its broader objectives, the mission of the NHIF is to cater to its beneficiaries in acquiring health services all over Tanzania through a vast system of acknowledged excellent health facilities. Likewise, its vision is becoming the primary selection of health insurance in terms of sustaining high standard health services across the Sub Saharan region. The NHIF commitment is to provide quality health-care to its beneficiaries who range from public and private employees with their legally acceptable dependents to retirees, private individuals, entrepreneurial groups, and students (NHIF, 2017).

As stated earlier, the NHIF students' health plan started in 2009 as a result of efforts to enrol and benefit more members. Right from its inception, the scheme aimed to ensure that all students from IHL are enrolled and benefit from NHIF health services through annual registration. According to the Tanzania Commission for Universities (TCU, 2017), the annual number of students' admission in universities was 240,000 and NHIF had strategized to enrol all these students. However, according to NHIF (2017), the annual average number of students enrolled was 85,000.

Statement of the Problem

It is worth noting that students in the IHL pay annual medical capitation fee of TZS 100,000 (equivalent to USD 44), which was twice the NHIF students' registration fee of TZS 50,400 (equivalent to USD 22). Despite the high medical fee charged by universities, students could only access basic healthcare at the universities owned dispensaries only. Referral cases for students of each IHL were directed to specific contracted referral hospitals. Additionally, health services would only be

accessed during the semesters teaching periods. Students were required to use OOP payments to receive medical services during holidays or practicum training sessions.

Contrastively, the NHIF designed the students' health scheme that would ensure students receive reliable health-care services annually. The health scheme for students was made accessible all over the year when the students were either on studies or holidays. The NHIF ensured that students could visit more than 7,000 (equivalent to 60%) health facilities in Tanzania (NHIF, 2016).

In terms of the enrolment rate in the student's scheme, the data is unconvincingly low. According to TCU (2017), the average number of students admitted annually was 240,000. The NHIF designed the students' health scheme that would ensure all admitted students are enrolled and that they would be utilizing the health services. However, NHIF had enrolled the average of 45,000 students from 2009 to 2013. The number of students enrolled in 2014 and 2015 was 81,000 and 86,240 respectively. In the year 2016, NHIF had enrolled 78,600 students. The enrolment of the year 2017 was 99,654, and that of 2018 was 86,240 students. The NHIF reports showed that on average, NHIF annual enrolment was as low as 35% of all students admitted.

The unjustified reasons for the low rate of students' enrolment into NHIF motivated this study to specifically gather information on the factors influencing students' utilization of NHIF students' health scheme from the selected IHL in Arusha Region (NHIF, 2017).

Despite the introduction of NHIF students' health scheme two decades ago, there has been insufficient information describing the factors influencing the enrolment and utilization of the health-care. The low enrolment of students implies vividly that NHIF had not managed to achieve the goal of introducing the NHIF

students' health scheme as a product to the market. This is due to the fact that the objective of introducing the NHIF students' health scheme was to ensure that all the students from the IHL are enrolled and start utilizing the health-care services from accredited health facilities.

Purpose of the Study

The purpose of the study was to assess the utilization of NHIF university students' health scheme in Arusha, Tanzania using two selected universities as the case study.

Objectives of the Study

The study was guided by the following objectives:

1. To determine the level of utilization of NHIF students' health scheme among selected universities in Arusha, Tanzania.
2. To examine the factors influencing utilization of the NHIF students' health scheme in selected universities in Arusha, Tanzania.
3. To analyze the challenges faced by universities in enrolling students into the NHIF students' health scheme in selected universities in Arusha, Tanzania.
4. To suggest strategies to improve the NHIF students' health scheme in selected universities in Arusha, Tanzania.

Research Questions

The study was guided by the following research questions:

1. What was the level of utilization of the NHIF students' health scheme among selected universities in Arusha, Tanzania?
2. What factors influence utilization of the NHIF students' health scheme in selected universities in Arusha, Tanzania?

3. What challenges do universities in Tanzania face in enrolling students into the NHIF students' health scheme?
4. What strategies can be used to improve the NHIF students' health scheme in selected universities in Arusha, Tanzania?

Justification for the Study

The study on the universities utilization of the NHIF students' scheme was necessary because there was little documentation on students' health insurance scheme in Africa, specifically on students of IHL. Surprisingly, the only one relevant study was found under Nigeria students' health scheme (National Health Insurance Scheme [NHIS], 2012). Very little information on establishing the factors influencing the enrolment, utilization, and perception of the healthcare insurance for students of IHL was found. In East Africa, for instance, not much research has been done on students' scheme. In Tanzania, particularly, there was no published study found on universities' utilization of NHIF students' health scheme.

Due to little documentation on the universities' utilization of NHIF students' schemes in Africa, and in Tanzania specifically, there was a gap in the literature. This study, therefore, sought to gather evidence and suggest recommendations that would be used to positively influence enrolment and utilization of the NHIF students' scheme.

Significance of the Study

The information collected in this work would provide important evidence to NHIF management with regard to the utilization of universities NHIF students' scheme. These findings of this study could empirically enable the NHIF management and government policymakers to come up with innovative approaches that would

influence registration of more students to access quality and affordable health services through the NHIF students' scheme.

The findings of this study make way for further studies on the subject given the fact that students' health insurance plan is new in Tanzania and the same has been implemented in fewer African countries such as Nigeria that implement the social health insurance scheme (NHIS, 2012). Likewise, the study could be adopted by SHI stakeholders from other countries intending to establish the improved students' health scheme.

The study also serves as a guide to other countries which could be interested in introducing students' health scheme in their health insurance systems.

Assumptions of the Study

This study assumed that respondents would be available and accessible to provide the data needed for the study. Further, the study assumed that students and administrators would be willing to engage in data collection after being informed clearly on the significance of the collection of information to IHL and the policymakers.

Scope of the Study

This study was conducted in Arusha in the United Republic of Tanzania. Arusha has a total of eight universities that offer degree, diploma, and certificate programmes (TCU, 2017). The universities were Arusha Technical College, Tengeru Institute of Community Development, Eastern and Southern African Management Institute, and Institute of Accountancy Arusha (IAA). Others are Mount Meru University, MS Training Centre for Development Cooperation, Tumaini University Makumira (TUMA), University of Arusha, and St. Augustine University Arusha.

In order to limit the scope of the study, the IAA, which is a public-owned IHL, and TUMA, a private-owned IHL were purposely selected because all students from both IHLs had been enrolled in the NHIF students' health scheme.

The IAA is a public IHL that was established according to the IAA act of 1990. The institute offers a total of 33 business-related academic programmes from basic technician certificate, ordinary diploma, bachelor degree, postgraduate diplomas and master's degrees. IAA also conducts short-term programmes and seminars, depending on the clients need (TCU, 2017).

An institution of the Evangelical Lutheran Church in Tanzania, TUMA, lives to its vision of being a Christ-centred university in teaching, research, and community outreach. The university offers 10 non-degree programmes, seven bachelor degree programmes, and three post-graduate degree programmes. The academic programmes are categorized into theology, law, business, and education specializations (TCU, 2017).

Limitations and Delimitations of the Study

The researcher had an interest in the study because he is an employee of NHIF and the topic under study is an assessment of utilization of the NHIF students' health scheme: a case of selected IHL in Arusha Region, Tanzania. Therefore, being an employee of NHIF, direct engagement could have influenced the responses. To overcome this limitation, research assistants were used in data collection in order to ensure that there was no conflict of interest in regard to the information collected.

Another limitation was that students were busy attending classes; hence there was the possibility that it would take a little longer to meet the respondents. To overcome the limitation, the data collection approval was sought from the university management and the approval was granted. Additionally, students' leaders were

requested to sensitize students on the importance of participating in this study. Fortunately, the students' leaders of the selected IHL complied with the request and arranged a specific time for students to participate in this study. The IHL leaders, however, allowed the activity of data collection to be undertaken when students had no lectures. Data collection was then done accordingly.

The other limitation was financial constraints. In order to successfully accomplish the process of data collection, analysis, and reports preparation, financial resources were required. To solve this limitation, NHIF approved the funds for data collection and preparation of reports.

The last but not least limitation was the delay to secure a study permit. After the issuance of approval letter from Daystar University for data collection, approval for collection of data from students was requested from the IHL. The study, at this juncture, faced the limitation of delay of approval letters to undertake the study in the field. The reason was the regulation that it was required to obtain the study permit from the Arusha Regional Administration Authority. Having waited for the permit for two months in vain, an appointment with the Regional Commissioner was requested. After the meeting, the Arusha Regional Commissioner directed the respective officers to grant the data collection permit. The permit was then issued within a week. The delay in the permit issuance greatly affected the timeframe for the accomplishment of the thesis.

Definition of Terms

National Health Insurance Fund: A health financing alternative that raises fund through members' premiums and government subsidies to insure the enrollees (Organisation for Economic Co-operation and Development, 2004). For the purpose of the study, NHIF is the public institution that insures its beneficiaries through

payment of premiums. The premiums are collected through the employers' contributing 3% of employees' basic salaries, and the other 3% is deducted from the employees' basic salary. Therefore, each month, the employers submit 6% of the basic salary of their employees to NHIF. The beneficiaries include the public and private employees with their dependents. The dependants constitute of employees with their spouses, parents of the employees, and the employees 'children less than 18 years. The NHIF covers private individuals, children of unemployed parents, and students under the students' health scheme.

Health-care services: These are the medical or remedial services delivered to patients who visit the hospitals for curative purpose. Healthcare services are intangible products and cannot be touched physically, counted, or measured like industrial products. These services are offered in hospital environments or through the medical consultancies for patients needing special care. The purpose of healthcare services is ensuring that the community members are free from illness or any injury (World Health Organization [WHO], 2010). For the purpose of this study, all the hospital services available for students who are insured by NHIF, according to the contracts, entered between NHIF and the health providers. These services are provided to members under NHIF students' health scheme, and they are entitled to hospital visits to any registered health facilities and acquire healthcare annually by using their valid membership cards.

Utilization of healthcare: Refers to the uptake of health-care services or supplies, the patients' visits rate to healthcare facilities, the number of drugs taken, or the number of days a person was admitted (Utilization, 1995). For the purpose of the study, utilization means access to medical services from NHIF accredited health facilities by students who are covered by NHIF students' health scheme. Specifically,

students utilize medical services from accredited health facilities by using valid membership cards. The health services include outpatient and inpatient health services from the dispensaries to super-specialized hospitals. The aforesaid health services are offered to the students' members without any top-up payments.

Students' health insurance scheme: This is the health system designed to ensure the enrolled students pool the money which is used to pay for the medical bills. The SHI set the monthly or the annual contribution for each student depending on the health-care package of choice. It is a plan devised for students in ensuring they access quality healthcare service with a view of creating a more conducive environment for learning (NHIS, 2012).

For the purpose of the study, it means scheme that was established in Tanzania in 2008 to enroll all students of the IHLs through payment of annual membership fee of TZS 50,400 (equivalent to USD 22). Upon completion of the registration process membership cards are issued. The valid membership cards would enable students to visit 7,000 accredited health facilities for consulting the clinicians and utilizing the health services annually all over Tanzania.

Summary

This chapter has provided the background to the study and addressed the rationale of students' utilization of the NHIF students' health scheme. In addition, the chapter has outlined the research purpose, objectives, and questions together with the significance of the study, assumptions, limitations, and delimitations. Finally, the chapter has addressed the operational definition of terms commonly used in this study. The following chapter will introduce the literature review.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter focuses on the theoretical framework that guided the study on the assessment of the utilization of NHIF students' health scheme in Arusha, Tanzania using two IHL as the case study. The chapter further reviews the general literature under the following sub-themes: the level of utilization of NHIF students' health scheme, factors influencing utilization of the NHIF students' health scheme, challenges faced by universities in enrolling students into the NHIF students' health scheme, and strategies to improve the NHIF students' health scheme. Additionally, the chapter covers detailed empirical literature review, conceptual framework, and discussion of the relationship between the independent, dependent, and intervening variables.

Theoretical Framework

A theory is a set of interrelated abstract ideas, definitions, and arguments that present a systematic perspective of phenomena by specifying the relationships 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). This study was based on two theories: a theory of change due to health insurance and health utilization theory.

A Theory of Change due to Health Insurance

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 that was expected to occur. The theory is relevant and applicable when testing the success of the implemented programme in terms of impact (Treasury Board of Canada Secretariat, 2012).

The theory originates from the theory of evaluation. It focuses specifically on the outcome of enrolment and utilization of Social Health Insurance schemes. Acharya et al. (2012) developed this theory. It suggests that enrolment and utilization of health insurance depend on how students perceive their own risk and an understanding of the National Health Insurance (NHI) benefits package in terms of the medical services offered to students through accredited health facilities and pharmacies.

It was suggested that, in order to measure the impact of SHI effectively, one needs to consider the enrolled members who would have access to health-care and to the degree of reduction of the SHI OOP expenditure. The impact of SHI is measured in terms of the level of utilization of health-care for treatment, take-up of preventive care, avoidance of large expenditures, and improvement in health through the community being able to receive the standard health-care (Wagstaff, 2010).

The theory of change due to health insurance is ideal to the study topic as it provides information on how the utilization of NHIF students' scheme influences the change of students' health status. When students are enrolled 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, would be financed without a large sudden increase in expenditure.

According to the theory of change, the enrolment into the NHIF students' scheme depended on the insurance fee and capability of students to pay, the initial health conditions, and cultural factors. The theory explains further that once the students are enrolled and are utilizing the health-care services, factors like co-payments or top-up payments and health providers induced services should be critically managed (Acharya et al., 2012).

Health Utilization Theory

The health utilization theory was developed to demonstrate the community option to demand and utilize SHI medical care. According to the theory, usage of health services is determined by three dynamics, namely predisposing factors, enabling factors, and needs. 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 enrol 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 model originates from Professor Ronald M. Andersen, who was at the University of California in 1968. The model was improved to its most recent form that introduces the health outcomes (Andersen, 1995). The framework outlines the enablers and inhibitors for the utilization of healthcare. The goal of this theory was to develop a behavioral model that would measure the level of utilization of healthcare

services. The development of the framework started in 1960 and there were four phases of improving it: predisposing, enabling, perceived need, and healthcare utilization (Andersen, 1995).

The model was developed based on the need to measure the community degree of access to healthcare. Andersen discussed four concepts insisting on the access, and that forms part of the study conceptual framework. 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. Andersen's framework also makes a clear difference between equitable and inequitable access. Equitable access was the result of the nature of the community and their characteristics and need while inequitable access resulted from the social structure, health beliefs, and enabling resources (Andersen, 1995).

Understandably, the health utilization theory guides the NHIF Students' scheme by determining how the insured students demand and uptake the medical services when the students fall sick. According to Andersen (1995), the health-seeking behaviour had an effect on the social and cultural learning in the particular community. He further emphasized the importance of socio-cultural and psychological determinants in explaining the utilization of health-care by physicians (Tanner, Cockerham, & Spaeth, 1983). The model is relevant in explaining health utilization among students who use NHIF cards to visit the health facilities and consume health services. This is largely because the uptake of health-care services has an effect on personal, family, or community influence depending on demographics, the social structure, and students' belief.

Additionally, the behavioural model is useful in understanding health seeking and utilization of health-care services behaviour among students since it accommodates the enabling resources and predisposing characteristics showing how the socio-cultural factors influence the enrolment and uptake of health-care services.

From the theory, it is obvious that the enrolment and use of NHIF services are 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.

The other factors to consider in order to determine if the NHIF students scheme improves student health status focus on the time spent to access medical services include the distance to reach health facilities and reimbursement of medical bills to accredited health facilities without unnecessary delays. In influencing the utilization, it is important to exercise equity in the health sector regardless of patients' economic status, religion, tribe, or community groups, such as the aged, students, and children.

On the other hand, critics argued that the model does not give information on how culture and social interaction among community members influence the access of health-care services. However, culture and social structure are part and parcel of the predisposing characteristics. Another criticism was overemphasis of need being influenced by the health beliefs and social structure. However, Andersen (1995) argues that the need itself is a social construct and that the need can be perceived and evaluated. Evaluated need represents a more measurable/objective need; the perceived need is partly determined by health beliefs, such as whether or not community

members believe their health condition is serious enough to seek health-care services (Guendelman, 1991).

The two theories were used because they complement each other in providing the explanations to the study topic. The theory of change addresses the impact of NHIF students' health scheme in terms of enrolment rate and the level of students' utilization of the health-care. Despite the impact of NHIF students' health scheme, it was important to explain the factors that influence students to enroll and utilize the health-care services. Therefore, health utilization theory explains how those factors such as the awareness creation on NHIF students' health scheme and the assurance of accredited health facilities to provide quality health-care services contribute to students' enrolment and utilization of health-care services under NHIF students' healthcare membership.

General Literature Review

Prevalence of NHIF Students' Health Scheme Utilization

A study done at the Canadian University of Dubai by Usman, Sisson, Tavakoli, and El Khatib (2015) revealed that 62.2% of the students who were utilizing the healthcare services in every 6 months were above 25 years old. This was influenced by the knowledge on the importance of preventive healthcare. Most of the students who utilized the healthcare services monthly were below 18 years old. This age factor was attributed to the prevalence of younger adults in emergency rooms as a result of injuries associated with risky behavior. In the study finding, 41.6% of age of the survey participants who had visited the health facilities within six months ranged between 18 and 25 years. The conclusion drawn from the study findings was that the interviewees' rate of utilization was low despite being knowledgeable enough about the package offered in the health benefit policy of that IHL (Usman et al., 2015).

According to a survey that was undertaken at the American College Health Association, among 162 respondents utilizing the students' health services, 1.2 median of students had visited the health facilities demanding health-care services. The utilization was higher in privately owned universities compared to public owned universities. In the universities where the survey was conducted, about 49% of private institutions were eligible to utilize the health services compared to 43% for public institutions (McBride, Van Orman, Wera, & Leino, 2010).

The utilization of students was found to be low due to a small number of students enrolling for accessing medical services. The study found that 16% of all registered students visited the health facilities once a year and mainly for preventive-related health-care services. That number would increase up to 35% for the youngest students. Respondents from private schools accessed preventive health-services more often compared to public schools. A higher number of female students accessed medical facilities owing to their need for contraceptive and preventive services compared to males (Turner & Keller, 2015).

Factors Influencing the Utilization of NHIF Students' Health Scheme

In developing countries, unfortunately, there are very few studies specifically that focus on the impact of SHI. Many scholars studied the impact of Community Based Health Insurance (CBHI), especially enrolment rate, the way financial resources are collected and pooled, and ways to sustain the insurance. Recent studies on SHI have given priority to assess the background and rationale of health insurance in third world countries. Many studies of such nature are found in China, Ghana, Rwanda, India, and Senegal. The determination of impactful SHI looked at the number of people recruited in the whole population, the health-services offered to insured, and the reimbursement rate to health facilities (Spaan et al., 2012).

In accordance with the studies, SHI had enabled the individuals to access the hospitals and avoid the risk debt for financing their healthcare-services. In colleges, health insurance is helpful because it played a vital role in aiding students to graduate on time. About 69% of interviewees who had not graduated on time pointed out one of the major reasons for the delay was that they did not have any health insurance hence were affected by the higher medical costs (Postolowski & Newcomer, 2013).

A study on the awareness of the consumption health-care services in the SHI of Nigeria showed that the insured had not received more education of health insurance than those who only got sick and visited the health facilities for utilizing the health-care services. The community members had no knowledge about the health insurance of Nigeria. With these findings, the community would enrol in large numbers if they would have been reached and educated on health insurance (Okaro, Ohagwu, & Njoku, 2010).

Another study on the enrolment into health insurance services revealed that the community decision to enroll into the health insurance depended on the perceived health-care services they receive from the health facilities and the benefit package offered by the SHI. The perception of the community members concerning the health insurance was negative because they were not involved at the stage of its establishment. It was suggested that the SHI would be shaped by the social, cultural, and even economic practices of the respective community for it to be firm acceptable and sustainable in providing the health-care services (Jehu-Appiah, Aryeetey, Agyepong, Spaan, & Baltussen, 2012).

The study on establishing the relationship between health behavior and education achievement revealed that although health-seeking behaviour was not directly associated with academic performance, it was somehow associated with

determinants of good academic grades. It was found that the performance of students is associated with a combination of factors including health; therefore, it was very necessary to establish health promotion on health insurance for students for ensuring many enroll (El Ansari & Stock, 2010).

According to a study that was done at the University of Benin, short distance to reach the health facilities, the time spent waiting for the services resulted in the low recruitment and complaints on unsatisfactory health-care. The respondents were also unhappy with the customer care of the clinicians and most of the time when they visited the hospitals, they faced the challenge of essential drug stock out (Obiechina & Okenedo, 2013).

The students' health scheme is introduced by NHIF since the access to reliable and affordable health positively influenced students' performance, and they remain fit to attend lectures and practicum. Besides, students' ownership of NHIF cards influences health-seeking behaviour and enables students to avoid severity and chronic diseases due to early cure. The scheme ensures that universities are attaining their goals of producing excellently academic performing students who are marketable in the employment sectors. The services offered include drugs and laboratory services, inpatient services, surgery and procedures, and non-communicable diseases. In contrast, the services not offered among others include immunization, Antiretroviral for Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), tuberculosis, leprosy, and cosmetic surgery (NHIF, 2017).

Among the challenges facing NHIF was the recruitment of new members, including students. There were two areas of consideration in assessing health insurance schemes, especially in Tanzania. First, the identification of potential

prospective members and the second was identifying the best mechanism of collecting the remittances. How much money to collect from each member could be the main point here, but it is usually ignored. It was possible to identify the contributing population and could even be simpler to fetch funds from them, but to what extent? That was the origin of the problem. With most expensive standards of living, especially when catering basic requirements - food, shelter, children's education, clothes, and other related to these NHIF contributing members - thinking of the amount to collect from each one would be helpful (NHIF, 2016).

An argument was raised by the insured that it was very critical to ensure that participatory approach was applied in introducing the NHIF in Tanzania. Community involvement would create a sense of ownership of the NHIF because they could participate in setting an affordable registration fee. The involvement would create a platform to discuss and come up with the benefits package, which would be sustainable. Reaching such a decision would be possible if and only if members' views and suggestions were included in the implementation (NHIF, 2016).

Mtei and Mulligan (2007) revealed that for the effective establishment of SHI and its benefits package, it was critical to be strategic when undertaking the sensitization to the community. If a large number of the community members would be sensitized and made aware of the benefits, they could be easily influenced to enroll. SHI was voluntary and therefore, the decision for the community to enrol would depend on their level of knowledge and awareness.

In light of the above, Mtei and Mulligan (2007) came up with the recommendation that public and private institutions could consider to include the SHI into the community programmes so as to encourage different economic groups to enrol. The involvement of community creates transparency, accountability, and

capacity of the community to promote the program themselves. It was suggested that the NHI could be decentralized to local authorities for them to promote it and ensure the SHI is sustainable due to enrolment of large numbers.

Moreover, among the issues that involved the recipient of the health insurance health-care services, was the premium rate. The premium rate would provide a systematic dialogue on the readiness and capability to pay the premium and increase the rate of members enrolled. Dialogue between the recipient and the health insurance provider would provide a clear understanding of NHIF students' health scheme and its advantages for students to negotiate and choose to enrol after comparing the scheme with the other Private Health Insurance (PHI) schemes. Mtei and Mulligan (2007) suggested that the SHI should set the membership fee which is flexible and that the community members could be allowed to pay twice a year due to the existing poverty which causes many people to fail to pay in a lump sum. That would allow every client access to a health insurance scheme which is most suitable and appropriate to enrol in. It was also insisted to NHIF to launch different types of premiums depending on gender, age, sex, and even size of the family to provide the opportunity for each member to have the insurance package of his choice.

The communities in both rural and urban areas all over the country are offered NHIF health-care services. In the year 2003, the Ministry of Health and Social Welfare (MoHSW) studied the reasons for low enrolment into the NHIF plan. Among the reasons for low enrolment, the recipients mentioned lack of seriousness by the public officers responsible for NHIF in the regions and districts. The other reason was minimal monitoring and evaluation of the NHIF operations by the MoHSW to assess the success and the challenges. The members also reported that the referral system of

patients was not adequately defined to show who was eligible for referrals from dispensaries to referral hospitals and the criteria set for that (MoHSW, 2011).

Challenges Faced by Universities in Running NHIF Students' Health Scheme

According to Alhassan et al. (2015), there were challenges in managing the SHI, especially regarding the failure of the hospitals to provide quality medical care to the enrollees. The NHIS of Ghana entered a business agreement with clinics and health centers all over the country reaching more than 1,900 households. However, the insured complained of delay of the health services compared to the OOP patients who received the health-care services within a short time and left. The main challenge the insured people requested the insurer to address was the long duration it took to receive services whenever they visited hospitals. The insured reported that customer care from the staff of the health facilities and the absence of a clear system of reporting their complaints were causing frustrations to them. Students expected to access medical services within a short waiting time and a welcoming attitude from the staff. Absence of these two was likely to compromise their chances of enrolling into the scheme.

According to Obiechina and Okenedo (2013), the time the insured patients spent waiting to see the clinicians was too long, and it slowed down the enrolment of the community members into NHI in Nigeria. The tendency of doctors to take too long to attend to clients was more prevalent in the public health facilities compared to private. The long wait before receiving the health-care services was also evident in the laboratories and in the pharmacies. The long waiting hours to receive health-care interfered with the students' class schedules. The complaints were sent to university administrators who could then inform the health insurance employees and advise

them on taking measures to improve their service delivery. The improvements would reduce the students' resistance to enroll in the insurance schemes.

According to Anetoh, Jibuaku, Nduka, and Uzodinma (2017), students had a specific SHI package for the IHL in Nigeria. In assessing its performance, the students raised two main challenges: unavailability of essential drugs and mistreatment from the health facilities staff. At the health facilities, students were disregarded and kept waiting for the health-care services for long. These factors, to a great extent, inhibited the enrolment and utilization of health insurance. The role of tertiary institutions leaders is, therefore to discuss with health insurance management on ways of improving the services and reducing students' resistance to enrolling.

In Uganda, Daniel (2019) found that students of Makerere University were reluctant to register for health insurance owing to lack of sensitization regarding the related benefits. According to Gichuru, Muturi, and Wawire (2015), students' awareness of the health package affected the uptake of health insurance. The College of Business Education (CBE) highlighted the delays of NHIF to issue the membership cards to students affected the students from visiting the accredited health facilities and utilize the health-care services (CBE, 2017).

Strategies to Improve the NHIF Students' Health Scheme

According to Marwa (2016), the NHIF was not taking the education programmes on the health services offered and how to access them to enrollees. This study, therefore, recommended that NHIF should promote and carry out strong public awareness and education programmes to its beneficiaries/members and health service providers on their rights and obligations. The author also recommended that training of health facility staff should be undertaken with an emphasis on the health-care cycle from receiving the patients to the preparation of clean monthly bills for payments. The

training should be done by the NHIF staff to ensure they help the health facilities to reduce the errors that would result in the deduction of the amount claimed to the monthly bills for NHIF to pay. Further, the study recommended that the staff from the health facilities accredited by NHIF should be involved in the expenditure of the revenue collected from the treated NHIF patients as a way of motivating them.

A study on the perception of the insured on the NHI carried out by Umeano-Enemuoh, Onwujekwe, Uzochukwu, and Ezeoke (2014) showed that the higher percentage of interviewees complained of unsatisfactory health-care services because whenever they visited the health facilities, it took long before they could be attended to. Many hours were wasted as patients waited to be registered at the clinics and consequently to be attended to by the clinicians. Therefore, among other reasons, the main factor that discouraged people from enrolling was the long waiting hours. This study found that the delay was caused by a shortage of staff in the hospitals. The study, therefore, recommended that the health facilities should employ more staff so that they can comfortably manage the health insurance patients who were more compared to the OOP. If the delays are curbed, more students from the IHL could get encouraged to enrol for health insurance services. The successful reduction of waiting time could also encourage patients to stick to the NHI.

In their study, Mgbe and Kevin (2014) found out that dissatisfaction with the whole process of treating insured patients was a dominant drawback. The bureaucratic bottlenecks mainly brought about the dissatisfaction of the health services. People were hesitating to register and utilize the NHIS services because of unavailability of drugs in the health facilities. The patients were attended to, but when they visited the hospital pharmacies the stock of drugs was finished, thus forcing them to go to the street pharmacies to buy. To solve this problem, this study recommended that the

hospitals should improve the patient-provider relationship and reduce bureaucracy. For the NHIS to provide quality medical services, the study recommended that NHIS should build hospitals specifically for the insured people. Furthermore, the community members did not have adequate information on the NHIS health-care services offered and this affected enrolment since the community was unaware of the advantage and significance of SHI.

Another study by Adei, Amankwah, and Mireku (2015) showed that the community members were not willing to register into the NHIS because they had not received the advocacy on health insurance. It was the responsibility of the NHIS to ensure that the consumers of the insurance are aware of what they would consume. It was also recommended that the health facilities had to design the awareness creation programmes on NHIS and disseminate that to the community and on national radios. The drive would ultimately lead to an increasing number of enrollees (Adei et al., 2015).

Empirical Literature Review

To ensure community utilization of health-care is improved as well as ensuring that the community households are protected against the higher OOP spending, SHI is given higher priority in developing countries. This system of financing was introduced to overcome the high cost of user fees that was in place in the 1980s, that currently impinge the utilization of health-care, specifically for poor communities, and to sometimes result into health-care exorbitant expenditures. The WHO, therefore, regards the SHI as a promising alternative for reaching Universal Health Coverage (UHC) whereby the whole community members are to be insured hence discouraging the OOP which is both costly and unreliable (Spaan et al., 2012).

The UHC is a system of financing healthcare whereby all community members have access to health without top-up and getting into financial hardship. The UHC is taking the lead in the global health of this new century. The main objective of UHC is to ensure the availability of health services utilization on a need basis, protection of financial risks, and access to health. The objectives are ideal for developing countries, although the developed countries are also proceeding to look for ways to expand the coverage of the households in their nations. Currently, many developing countries are revamping their health systems so that they get into UHC. Reforms that are made provide more emphasis on creating new revenues through households' payments of premiums. Also, the reforms are based on discouraging the OOP payments towards prepayment of health funds so that the insured access and utilize the health-care services through the premiums and other sources of funds collected (Spaan et al., 2012).

There are different types of health insurance. The SHI is among the systems that are mandatory for individuals to pay remittance and enrol. In line with that, various developing countries such as Philippines, Thailand, and Vietnam had established SHI. The other health insurance systems are voluntary. This includes the PHI, which is operating in countries like Brazil, Chile, Namibia, and South Africa. The other one is called the CBHI. This type is operating in the Democratic Republic of Congo, Ghana, Rwanda, and Senegal. These different types of health insurance vary in the impact they make to the population they serve. For instance, PHI serves the small population but the CBHI serve the large communities of the informal employments who live in extreme poverty. The countries intending to introduce the health insurance should consider the appropriateness of the scheme for them to bring

the intended impact to the community. For effectives and wide coverage, the WHO suggests the NHI and CBHI (WHO, 2010).

Few African countries, while struggling with mismanagement of the governments regarding highly excessive user fee charges from the health facilities, decided to introduce the SHI mechanisms in the efforts to enable all income groups especially the poor to be insured. The SHI system has been proven to help peasants' household and their dependents to avoid higher expenditure resulting from the utilization of health-care. The common health challenge of peasants is the unreliable antenatal care attendance for pregnant mothers and financing healthcare to the old, children under five, and those above five years attending schools (Fenny, Yates, & Thompson, 2018).

The evidence from many countries of Sub-Saharan Africa shows that the communities living in poverty are highly vulnerable to diseases and the medical services are too expensive for them to access. The SHI plans are the best in providing the UHC hence ensuring the countries get the necessary financial security. SHI schemes have been successful in protecting community households from unnecessary expenditure by pooling the financial resources and ensuring there is cross-subsidization between healthy and sick people. The students in the universities are among the groups originating from the poor families who need reliable healthcare at the low cost to ensure them good health in the duration of undertaking their studies. Through the fee payments among the rich and the poor, the health insurance has been useful in financing both the rich and the poor, and it has been proven to help the poor who are more susceptible to diseases (Fenny et al., 2018).

A scheme which distributes financial risk among varied individuals by ensuring that all community members access health-care equitably and equally

through prepayments so as to pool risk is the SHI. The revenue is collected and used equally by all insured whenever they visit the health facility for accessing health-care services regardless of gender, economic status, or financial difference among different contributing members (Colombo & Tapay, 2004).

Similarly, the NHI mobilizes financial resources and pool risks. This newly mobilized resource is allocated to the less privileged who are more vulnerable to diseases to improve the health-care. Many developing countries rely on pooling risks through the establishment of NHI schemes. The scheme ensures fast and easy access to the medical care services for the less privileged. To the contrary, the absence of health insurance increases the catastrophic expenditures because the poor visit the health facilities when their diseases are already chronic hence needing higher costs (Hsiao & Shaw, 2007).

In addition, NHI pools the health risks of both the community members who are at risk of diseases and that of those who are healthy. The pooling of risks is organized by the governments (Carrin & James, 2004). In achieving its objectives, NHI devises different types of insurance schemes which collect resources from different sources, with the governments also contributing to the financial resources for the community members who cannot afford to pay. The contributions vary among the employees as per their basic salaries. The highly paid employees contribute more than the low salaried employees. However, the health services delivery to the members is based on equity and equality. Therefore, less privileged and their extended families benefit more than the rich from health insurance. Additionally, the less privileged families visited the health facilities more frequently than the rich (Dibaba, Hadis, Ababor, & Assefa, 2014).

Among the salient features of the SHI is operating as independent or quasi-independent systems, and the financial resources are obtained through remittance from employee payrolls. Enrolment for individuals in the workplace is mandatory. There are also various ways of providing subsidies to the SHI to encourage populations from different socio-economic levels to get insured (Acharya et al., 2012).

Historically, the concept of NHI originated from the health systems of Western Europe that have put the centralized system of ensuring all citizens are insured. It has borrowed the practice and experience from health systems from seven countries, namely Austria, Belgium, France, Germany, Luxembourg, Netherland, and Switzerland. SHI has been operational in the health system of Israel since 1995 (Saltman, Busse, & Figueras, 2004).

While operating in Austria for about 40 years from 1890 to 1930, the population grew from 7 to 60%, and it spent another 35 years from 1930 to 1965 to reach the coverage of 96%. The other country with the same health system was Costa Rica. The health system of Costa Rica operated for 20 years from 1941 to 1961 for the SHI to reach the 17% of population coverage. The health system then took another 5 years from 1961 to 1966 and doubled coverage to 34%, then another 12 from 1967 to 1978 years it doubled to 74%, and after another 13 years from 1979 to 1991, it reached 83% (Hsiao & Shaw, 2007). For the UHC to be financed through the health insurance, the risk pool is characterized by the following: remittance payments were mandatory otherwise, the rich who did not fall sick would have dropped. Also pooling of risk followed the law of large numbers because pools with low numbers diversified the risk effectively (WHO, 2010).

In developing countries, the criteria of smoothing the environment for the establishment of SHI vary. It is expected that things like low per capita income, the small number of formal sectors in the urban areas, the existence of high poverty, and high community dependence ratio would to a large extent affect the establishment and development of SHI. Ghana and Kenya are among the countries characterized by these factors. On the other hand, it was expected that the countries with smart per capita incomes, many formal sectors, low degree of poverty, and lower dependency rations, for example, of Colombia and Thailand provide a more conducive environment of initiation and expansion of SHI. The fact is that for Ghana and Kenya, SHI was introduced and has been in operation, unlike in Colombia and Thailand (Hsiao & Shaw, 2007).

To measure the impact of SHI, many community members should be accessing and utilizing the medical services in order to avoid OOP expenditure. The success of SHI is evaluated by measuring the utilization rate, uptake of preventive care, reduction of higher expenditure for health-care services, and improvement of community health resulting from receiving enough care. In many SHI schemes in Africa, few community members are enrolled and to boost the rate of utilization, the SHIs enrol various population groups, like the employees, the women associations, the students, and children below 18 years (Wagstaff, 2010).

The impact of SHI was well evaluated by looking at the following outcome variables. First, the utilization of medical services where the community should enrol in large number in fulfilling the law of large numbers in the SHI schemes for ensuring that revenue collected is enough to finance the healthcare. Secondly, measuring the extent of reduction of financial risk by looking at the degree of expenditure reduced. To facilitate this, a large number of the population is enrolled; hence they can visit the

health facilities and utilize the health services earlier when they fall sick rather than waiting to visit the health services when the diseases are already chronic. The third variable is based on health. In this variable when the NHI scheme members enrol and utilize the NHI scheme health services the expected impact is a reduction of mortality rate among the enrollees and increase in the longevity of living for enrolled members with non-communicable diseases like blood pressure, diabetes, and cancer (Wagstaff, 2010).

In measuring the utilization in the SHI, it was very critical to determine the patients' attendance in search for health services. The visits were further categorized into outpatient and inpatient services rendered to patients at a specified period of time. The other important criterion in measuring the visits is the duration of patient admission. This will be used as an indicator of the cost used, the severity of patients, and the existence of moral hazards (Acharya et al., 2012).

Success made in financial protection can also be used to measure SHI. Primarily the aim of all SHI is to protect the population from financial losses. SHI enables people to utilize the health-care services in order to reduce the cost of accessing medical services. Therefore, to assess the extent of financial protection, it is vital to examine if the consumption deduction happens. Measuring the extent of payment of OOP for accessing the health annually is regarded as a standard way for understanding the financial burden to the community (Acharya et al., 2012).

According to Obse, Hailemariam, and Normand (2015), SHI provides financial relief for the poor to access the health-care anytime when they fall sick. Ironically, in some countries where the SHI is to a large extent perceived as an intervention for people of low income, enrolment is lower compared to the projections.

Despite the importance of SHI in developing countries, communities hesitated to enrol because the enrolled people were disregarded and unattended when they visited the health facilities. This happened because the health providers had little understanding of the health insurance system. It was also revealed that community members who are not in the formal employment faced financial hardship due to poverty. There were other factors at play, such as low level of education and poor management of the SHI by the responsible institutions leading to lack of trust. Owing to this, for the community to enrol, advocacy on the health services and especially the benefit packages is of paramount importance (Obse et al., 2015).

Before the establishment of the SHI, patients paid a high amount of money in order to access services. That kind of expenditure is referred to as OOP. According to the latest report on Bangladesh National Health Accounts, the country uses a total of USD 2.3 billion, the finance health equivalent to USD 16.20 per person per year (Ministry of Health and Family Welfare, 2011). The WHO estimates showed that currently, Bangladesh spends USD 26.60 per capita in total. The public funds for financing health are the main prepayment plan for risk pooling, and they constitute 26% of the total expenditure on health. The other funders for health are the international development partners (Ministry of Health and Family Welfare, 2011).

Hamid, Ahsan, and Begum (2014) disseminated a study which showed that OOP burden led to about 3.4% households falling into poverty. The practise of allowing the OOP has been proved to be an ineffective and inequitable mechanism for financing health-care services. The OOP must be replaced by the financing plan that allows financial resources to be pre-paid and pooled. Many countries that took efforts towards UHC have gained success towards prepayment and risk pooling. Additionally, the heath sector of Bangladesh was crippled due to the obvious presence

of catastrophic illnesses which affected 3.8% of the population, and 5.7 million people were lapsing into poverty annually. World Bank (2008) indicated that health was the most serious challenge in Bangladesh as it is accounted for 22% of all challenges. From studies on SHI in many developing countries, the health challenge was found to be the main trigger of poverty.

Predominantly, in order to fulfil the second objective of UHC which is ensuring the financial risk protection is made when accessing health-care, risk pooling strategy of health insurance mechanism acts as a potential tool which is energized by maximum coverage. Pooling risk in the SHI is the collection of individuals' financial contributions to finance the health of all insured people (Lagomarsino & Kundra, 2008). The efficiency of pooling risk largely depends on the number of community members who are enrolled in SHI. The pooling aspect of health insurance is a key factor in the success of UHC (Chowdhury, Bhuiya, Phaholyothin, & Ahmed, 2011).

The uptake of SHI in Sierra Leone like in other Sub-Saharan African countries showed that patients utilized medication using both the traditional and hospital treatments while others relied on faith for healing. It was revealed that patients did not visit health facilities because of the cost and the perceived health service quality so they chose to rely on traditional medicine. The community members also sought health services depending on the nature of the illness they were facing. Findings also revealed that health seeking behaviour was influenced by the place of origin of the community members, the age, and the level of education especially for the males who are heads of households (Tomison, 2013).

According to a study done at Dhaka University, Bangladesh to determine the perceived reasons and attitudes regarding health insurance among a total of 500 people insured, a total of 124 students reported that the health insurance was a very

important plan for their health. A total of 314 students which is equivalent to 62.8% reported that the health insurance was necessary while only 14 respondents considered the health insurance as adding little value. A total of 116 respondents, which is equivalent to 23.2% showed a higher level of interest in health insurance scheme (Hamid & Abul, 2016).

The study of Dhaka University again showed that 61% of the respondents had shown interest in health insurance so as to reduce the cost of unexpected healthcare demands. From the findings from this study, it was evident that it was critical to put efforts to ensure that a total of 30,015 students of Dhaka University and students of all universities in Bangladesh got insured. Stakeholders were advised to prepare an innovative, sustainable, inclusive, and affordable health insurance to motivate students to enrol and access the health-care service (Hamid & Abul, 2016).

According to Spaan et al. (2012) the CBHI and SHI schemes were proven to provide financial protection to the insured community members in the form of reducing the OOP expenditures. For the CBHI and SHI to be a healthy and sustainable success, a large number of community members were supposed to enrol.

The insured people in the health insurance scheme complained of poor attitude and unsatisfactory customer care by accredited health facilities. The health workers seemed to prefer attending to patients who paid in cash to those who had enrolled for medical services (NHIF, 2016).

Consequently, the health services provided to insured people were perceived to be poor because of unsatisfactory health services and poor customer care from the health providers. The patients explained that the healthcare workers did not seem to abide by the standard treatment guidelines. In monitoring the quality of healthcare, the supervisory bodies should routinely inspect the health facilities in order to understand

patients' complaints and come up with ways of solving them. Close supervision of health facilities would improve the quality of healthcare and increase the satisfaction of the enrollees. It would also be evidence of adherence to the terms of the contract between the insured and accredited health facilities (NHIF, 2016).

In order to ensure enrollees were satisfied with the health services they received, NHIF suggested that monitoring of services rendered to beneficiaries should be an ongoing process. The monitoring process would enable identification of the areas that would need improvements and imparting skills to health facilities staff. For the update of the policies and guidelines to the health workers on how to keep improving the health services delivery, it was suggested that periodic trainings are key in order to bring a new look to the health services delivery look and then increase the number of students enrolled (NHIF, 2016).

In the countries where the rate of poverty is high, and access to healthcare was low, chronic diseases were rampant. As a result, SHI were of high priority because they prevented people from catastrophic health expenditures. Since the majority of the people lived in extreme poverty, they decided to use OOP health services and eventually when they fell sick with chronic diseases the risk of death was rather high because of the high hospital charges (Normand & Weber, 1994).

In East Africa, a literature search done by Odeyemi (2014) found out that SHI had not succeeded in recruiting a large number of community members because the people were unable to pay the insurance premiums. This happened because these people lived in poverty, the spread of HIV AIDS was high, and the governments' budget to finance the health system was low. In Uganda, for example, only 30% of the population is able to access SHI.

In Kenya, the government allocates low budget for health, so most Kenyans use OOP to finance health-care. Further, in Kenya, about 46% of the population live on less than a dollar a day. The challenge of the Kenyan National Hospital Insurance Fund is that it recruits more members from the urban areas as opposed to those in the rural areas. Secondly, a higher percentage of the clients are people working in the private sector because the employers pay for them (Deolitte, 2011).

As a remedy, some strategies should be created to ensure wider coverage of Kenyans since many people need the insurance. It is worth noting that to a great extent, the insurance helps the poor and marginalized groups more to access medical services and engage fully in social and economic activities. The fact that the NHIF of Kenya provided health-care to hospitalized patients and excluded the outpatient and preventive health services is a hindrance to enrolment. The benefits package that only covers beneficiaries who are in patient cannot influence enrolment because patients attend health facilities expecting to access all the health-care services. Therefore, it would not be an effective insurance if the sick can only access medical services when they have chronic diseases or other non-communicable diseases that need admission and close supervision of health workers (Jacobs, Ir, Bigdeli, Annear, & Van Damme, 2012).

Before 1993, the government of Tanzania financed the health system for all its citizens. However, the system was ineffective and unsustainable, and eventually it needed to be reformed. Reforms to counter the prevailing weaknesses were made, and then NHIF services for government employees together with cost-sharing arrangements for the people with no insurance cards was introduced. In an effort to discourage OOP, the government introduced another insurance scheme, namely

Community Health Fund, for the private sector population as well as the peasants' households (Ministry of Health, 2003).

Under the NHIF Act No. 8 of 1999, the Tanzanian NHIF was established as a contributory scheme. The operations commenced in 2001, and it covered only civil servants. Later in 2002, the fund expanded its operations and amendments were made to cover all public service employees. From 2001, several amendments were made to expand membership coverage and ensure that every Tanzanian, whether in the formal or informal sector, employed or not employed, could join NHIF (NHIF, 2016).

While providing health packages to its members, the NHIF operates on the internationally accepted health insurance principles and standards. Contributions from members are the main source of revenue. The NHIF pools financial resources to finance health-care for any member who falls sick. The health facilities provide health-care services to insured patients and submit monthly bills to NHIF. NHIF covers six people per family: the principal member, the spouse, children, and parents. Currently, NHIF has enrolled 30% of the Tanzania population, while the Strategic Plan 2015-2020 aimed at enrolling 50% of the population (NHIS, 2012).

Currently, the NHIF of Tanzania insures both public and private employees, the elected councilors, households from informal sector, and students from the IHL. When public and private employees reach the age of retirement, they are entitled to retirement insurance benefits. The law was signed in July 2001, then beneficiaries started to access medical services from 1st October, 2001 (NHIF, 2017).

In order to overcome the disequilibrium of demand and supply in the health sector, the NHIF pays the monthly medical bills according to the services accessed. Currently, NHIF faces the challenges of customer satisfaction on the healthcare services they access from the accredited health facilities. Additionally, NHIF takes up

the quality assurance monitoring and evaluation role to the accredited health facilities in order to reduce complaints (NHIS, 2012). By 2015 NHIF had accredited 6,371 health facilities. Out of the total facilities, 4,837(76%) were owned by the government, 580(9%) were owned by faith-based organizations, and 954(15%) were privately owned (NHIF, 2017).

Members who are in employment are obliged by law to contribute 3% of their basic salaries, and employers contribute another 3% for their respective employees. In contrast, private members pay an annual fee TZS 1,501,200. The health services provided by the fund include consultation fees, laboratory tests, inpatient and outpatient care, minor and major surgeries, ophthalmological care, and optical care (Ministry of Health, Community Development, Gender, Elderly and Children [MoHCDEC], n.d.).

In line with its vision, NHIF established a students' health scheme in the IHL. The scheme sought to increase its membership recruitment into the fund and ensure that students have access to reliable and quality health services throughout the academic year. The scheme covers students who are either on campus or off-campus throughout the study period (MoHCDEC, n.d.).

It was difficult for students in IHL to access medical services when they were off-campus before IHLs enrolled in NHIF. During off-campus periods students were obliged to self-finance medical services despite having paid medical capitation fee ranging from TZS 50,000 to 100,000, which resulted in double payment for medical services. Before being insured in the SHI scheme, students accessed health services through arrangements made by the respective universities. The institutions selected few health facilities which are within reach and can offer the expected medical services (MoHCDEC, n.d.).

The introduction of NHIF students' scheme came up with a benefits package that allows students to access medical services for the entire academic year from accredited health facilities all over Tanzania. Students can access the services while at the university or even during the holidays, or while practical training away from their universities. Thus, the fund is obliged to provide the students with the health package that includes consulting the clinicians, medicine and medical consumables, medical examinations, hospitalization services, surgery services, physiotherapy, reproductive and child health, and optometry services (MoHCDEC, n.d.).

Government owned, faith-based, and private health facilities which are spread all over the country entered a contractual agreement with the NHI. When the beneficiaries are unable to receive some medical examinations from one accredited health facility, they can choose any other health facility and access the medical services (MoHCDEC, n.d.).

When some healthcare services are not available in one health facility but are available in the nearby health facilities the NHIF allows referrals between and among health facilities. In a scenario where a facility runs out of drugs, a patient fills in a form which is signed by the respective clinician and the patient is sent to an accredited pharmacy to collect the drugs. These services are provided both in Tanzania mainland and Zanzibar. Patients access health from the accredited health facilities and pharmacies by use of the NHIF cards, which go through a verification system (MoHCDEC, n.d.).

Conceptual Framework

The conceptual framework provides a clear picture of all the variables used in this study. The left side of the diagram provides the list of the independent variables while the right side shows the dependent variable. Between the independent and

dependent variables, there are intervening variables. The study outcome variable is the utilization of NHIF students' health scheme. Figure 2.1 demonstrates this study's conceptual framework.

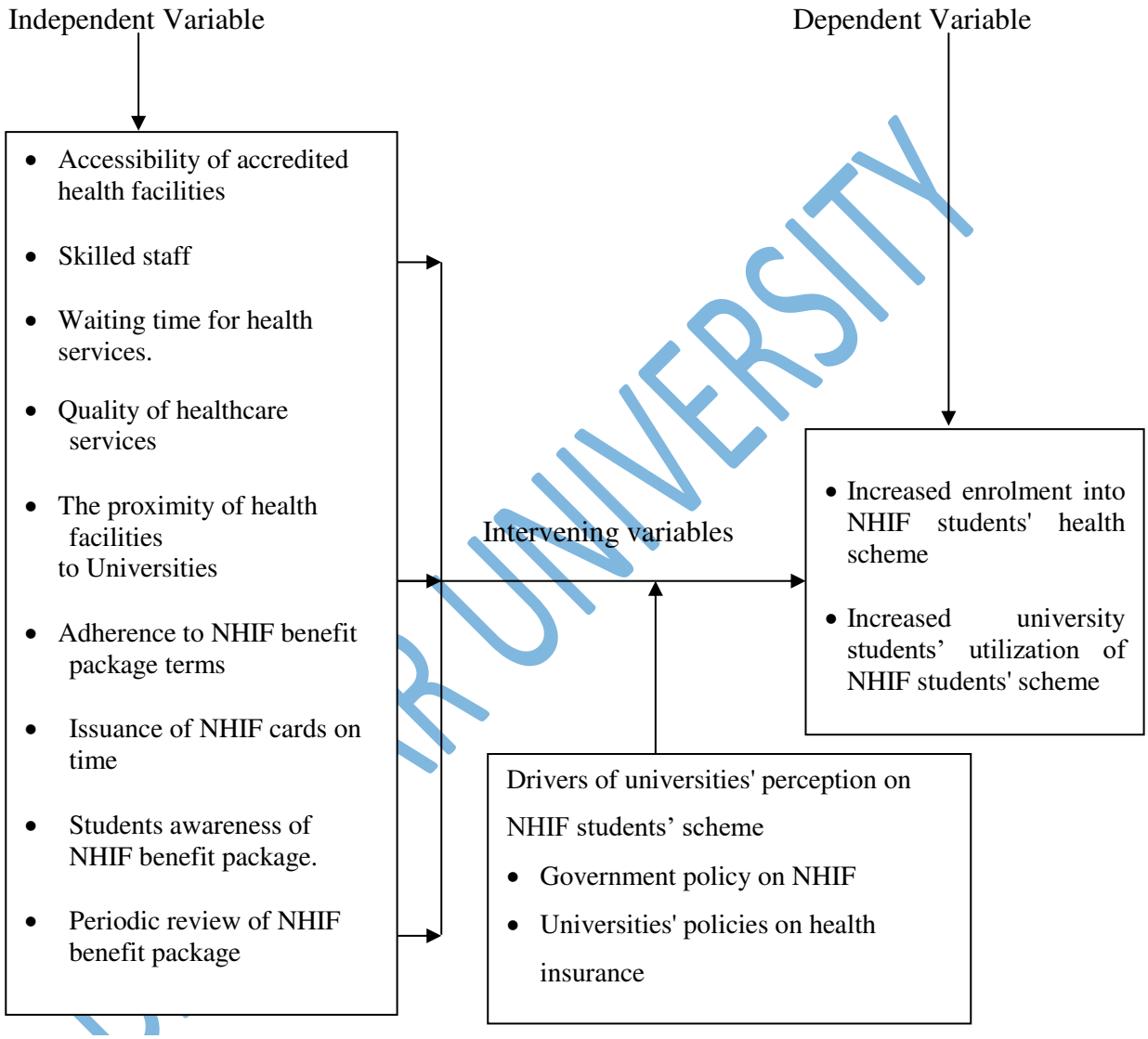

Figure 2.1: Conceptual Framework

Source: Author (2017)

Discussion

The conceptual framework shows the link between independent, dependent, and intervening variables. Regarding the independent variables, accessibility of

accredited health facilities and proximity of health facilities to universities can influence the students' utilization of health facilities. If the health facilities are easily accessible, then the proximity can influence the visits and utilization of the services. If the healthcare facilities provided high quality healthcare services, students would be motivated and positively influenced to enrol and utilize the health services.

The duration of waiting at the health facilities is likely to affect the enrolment and utilization as well. Students will enrol and access health services if they are assured of spending a shorter time whenever they visit the healthcare facilities. The long waiting duration is likely to affect class attendance; hence students may develop a negative attitude towards the enrolment and utilization of NHIF students' health scheme. Students are likely to get discouraged with the NHIF students' health scheme because of unsatisfactory quality of health services, hence enrollment will be low.

Additionally, adherence to the NHIF benefits package by providing the services as per contract and ensuring the benefit package is reviewed periodically for improvement is likely to ensure the health services are of high quality. This would influence the students to register and ultimately utilize the health-care services. If the health facilities render services as per the contract guidelines, the services will be high quality hence there will be no complaints from the students, and more universities will be influenced to enrol and utilize the services. Constant review of the services offered at the health facilities will address the new improvement raised by the health providers and students.

Creating awareness on NHIF students' health plan is a key factor towards the enrolment and utilization of NHIF students' health scheme. NHIF may have a good scheme, but if recipients of the scheme are unaware of what is entailed in the scheme, they are unlikely to buy the product. Education on the health services, procedures on

how to access the services, and the location of accredited health facilities will bridge the knowledge gap and positively influence students' enrolment and utilization.

There are also the intervening variables that are likely to associate with the dependent variable but not tested in the analysis. Due to their nature, intervening variables are also called the hypothetical variables. In this study, the intervening variables were university policies on NHIF students' health scheme that students were required to pay the enrolment fee as one of the requirements in order to be admitted. The second was government policy of making health insurance a compulsory scheme to all Tanzanians, and that would influence all students' enrolment.

Summary

Chapter two described the literature review. The chapter provided information on the theoretical literature review that introduced and explained the theories that guided the study, while the general literature review provided the general information relevant to study objectives. The empirical literature review was also elaborated. Lastly, it introduced a summarized conceptual framework with a discussion on study variables. The next chapter focuses on the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

Kothari (2004) defined research as the scientific, systematic collection of important information for a specific topic. The main aim of the research is to provide the answer to the unknown problems. The research scientist solves the problems systematically through a research methodology. The methodology in any research is systematic collection, analysis, and interpretation of information for providing the answer to specific problem studies (Mbui, 2012).

This chapter, therefore, discusses the methodology of selecting the study design and population as well as the study area. The chapter also explains the systematic method used to obtain the sample and the sampling procedure. In addition, the procedures of data collection, data analysis, and presentation are presented in this chapter.

Research Design

A research design is set up to decide on, among other issues, how to systematically collect the data for the study, analyse and interpret, and finally, provide the answer to the research problem (Sekaran, 2003). The study adopted a descriptive research design. The design enabled the collection of information using semi-structured questionnaires. The data collected would inform the students' utilization of NHIF students' health scheme in Arusha, Tanzania.

Population

These are objects or people with common characteristics where the sample is obtained (Kasomo, 2007; Musimba, 2010; Sekaran, 2003). Arusha region had eight

IHLs that offered courses from certificate level to masters (TCU, 2017). The population comprised four public-owned IHL and four private IHL. The public-owned IHLs were IAA, Tengeru Institute of Community Development, Nelson Mandela University of Science and Technology, and Arusha Technical College. The private-owned ones were TUMA, Eastern and Southern African Management Institute, University of Arusha, and St. Augustine University Arusha Branch.

Target Population

Target population is the total set of objects the study intends to make inferences from (Lavrakas, 2008). It is also all individuals in the group with similar distinguished features selected for study investigation (Mugenda & Mugenda, 2013). For the purpose of this research, the IAA and TUMA were the target population. The age of students ranged from 20 to 30 years out of which about 40% were females and 60% males. These two IHL were selected as the target population because both had entered a contract with NHIF in which all students from the two institutions are enrolled under the NHIF students' health scheme.

Table 3.1: Target Population

Names of Universities	Target population	Number
TUMA	Students	1,430
IAA	Students	770
Total		2,200

Source: Tanzania Commission for Universities (2017)

Sample Size

It is recommended that a sample of between 10% and 30% of the target population generates a suitable sample size (Mugenda & Mugenda, 2013). Based on the population 2,200, according to TCU (2017), 10% equivalent to 220 students was the sample size. Two administrators, one from the IAA and the other from TUMA

were purposively selected because of their direct involvement in the administration of NHIF students' scheme. In this study, gender was considered with the involvement of both males and females. The samples included students registered with NHIF students' health scheme, who held authentic NHIF cards for the past 12 months by the date of research and were eligible to access and utilize the NHIF students' health scheme. This criterion was to ensure that the sampled students were able to give a true picture of the scheme.

Table 3.2: Sample Size

Names of Universities	Target population	Number	Sample
TUMA	Students	1,430	144
IAA	Students	770	76
Total		2,200	220

Source: Selected Universities Records (2017)

Sampling Techniques

The study used both purposive and multistage sampling techniques. Purposive sampling was used in the selection of the IHL, and two administrators from two IHL, IAA and TUMA, whose students were registered with NHIF students' health scheme and the administrators were administering the NHIF students' health scheme at their respective IHL. The second stage was listing all study programmes in those selected IHL. The third stage was listing all students from the study programmes listed in those two IHL. The list of students was separated based on gender to ensure that both males and females were equally involved in the study. The fourth stage involved selecting the sample from all the programs in each IHL proportionally based on gender. The last was the selection of the study participants from each programme sample based on gender lists using simple random sampling. For the administrators, one from each IHL were selected using purposive sampling, whereby those who who

handled the NHIF students' health scheme were chosen from among the selected universities.

Data Collection Instruments

In undertaking this study, the need to adhere to the data collection methods and procedures was critical. Data collection is the technique of gathering and drawing up of data (Stringer, 2008). Data is categorized as primary and secondary data (Mugenda & Mugenda, 2003). Primary data is the information that has been collected straight from the selected sample while secondary data is the information that had already been collected, analysed, and reported (Kothari, 2004).

The primary data was collected from 220 respondents using a semi-structured questionnaire and key guide questions from two administrators. The questionnaire is mainly used to collect information from the literate respondents, hence need minimal or no supervision when writing down the information (Kothari, 2004; Mbui, 2012). According to Mugenda and Mugenda (2013), questionnaires save time, are convenient, and economically cheap. A well-designed questionnaire enables the collection of accurate data for analysis and interpretation (Mugenda & Mugenda, 2003). Therefore, in this study, a semi-structured questionnaire was used to gather data from the sampled students, and the interview guide questions were used to gather data from two administrators.

Types of Data

Data can further be classified as qualitative or quantitative. Data is regarded as qualitative when it explains the phenomena or qualities of the sample. Quantitative data is numeric in nature because it measures the sampled objects (Mugenda &

Mugenda, 2013). Therefore, both primary and secondary data were used in the research.

Data Collection Procedures

A semi-structured questionnaire was designed and administered by research assistants. The research assistants interviewed respondents regarding the utilization of NHIF students' health scheme specifically by capturing the information from the selected IHL in Arusha, the level of utilization, factors influencing utilization of the NHIF students' health scheme, and strategies to improve the NHIF students' health scheme in the two selected universities in Arusha.

The research assistants also provided clarification on open-ended questions for the respondents to answer the questions correctly. Research assistants were used for data collection in order to minimize bias since the researcher was the employee of NHIF. On the other hand, the study used research assistants to interview the key informants (administrators) on the challenges faced by universities in enrolling students into the NHIF health scheme and collected data using the tape recorder.

Pretesting

The pretesting determined the clarity of the questionnaires in terms of language and sequencing of questions and logical flow of questions. Further, pretesting enabled the study to identify potential errors due to poor questionnaire design hence improved data collection tools (Grimm, 2010). A total of 11 of students, equivalent to 5%, from the University of Arusha, were selected and confirmed the relevance of the tool in addressing the research study objectives.

Data Analysis Plan

Both quantitative and qualitative drawn from semi-structured questionnaires were analyzed. Data collected from closed-ended questions were tabulated and checked for any errors and omission. Quantitative data was analyzed using Statistical Package for Social Science (SPSS) version 22.0. The analyzed data was presented in frequency tables, charts, and percentages. Qualitative data from open-ended questions were coded and analyzed using SPSS.

Ethical Considerations

Adherence to the ethical issue in any research forms the basis for effective and acceptable research (Drew, Hardman, & Hosp, 2008). These considerations should be adhered in any study to meet the conditions set for any research to be considered that it meets all the standard criteria. This study adhered to the ethical issues including seeking consent from the respondents before interviewing them. The research assistants openly communicated the aims of collecting data, so the respondents willingly agreed to be interviewed. The respondents were required to fill in the consent form as acceptance to be interviewed. In adherence to confidentiality in the process of collection of information, the respondents were not required to write their names in the questionnaires.

The study was cleared by Ethical Review Board of Daystar University. Additionally, Daystar University issued the letter of introduction for data collection purpose. Approval for data collection was granted by both TCU and Arusha Regional Administrative Secretary.

Summary

The chapter has provided the research methodology that was used in this research. The selected population has been outlined. The chapter has also given the study sample size and data collection procedures, as well as the ethical aspects that were adhered to. The following chapter presents the analyzed data and key findings.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Introduction

This chapter focuses on the presentation, analysis, and interpretation of data. The main focus of this chapter is on respondents' demographic characteristics, level of utilization of the NHIF students' health scheme, factors influencing the utilization of the NHIF students' health scheme, challenges facing universities in enrolling students into the NHIF students' health scheme, and the strategies to improve the NHIF students' health scheme.

Analysis and Interpretation

Response Rate

The response rate was 100%. A total of 220 respondents, 144 from TUMA and 76 from the IAA were interviewed. Two purposively selected administrators: one from TUMA and the other from the IAA were also interviewed because they were directly involved with the administration of all the activities of NHIF students' health scheme.

Socio-demographic Characteristics

This section profiles the characteristics of respondents surveyed. The study documented the age, gender, level of study at the university, and study programmes of the participants.

Distribution of respondents by age

The respondents were asked to indicate their age bracket from the following categories: 15-20, 21-30, 31-40, and above 40 years. Table 4.1 shows the findings.

Table 4.1: Distribution of Respondents by Age

Age-group	n	%
15-20	35	16
21-30	154	70
31-40	29	13
40+	2	1
Total	220	100

From the findings presented in Table 4.1, 70% of respondents indicated that they were aged 21 to 30 years, 16% fell in the 15 to 20 years category, 13% were in the 31 to 40 years category, while 1% of the respondents were above 40 years. From the findings, many of interviewees fell in the 21 to 30 years bracket. This implies that most of study respondents were youths.

Distribution of respondents by gender

The study sought to establish the distribution of the respondents in terms of gender. The findings are presented in Figure 4.1.

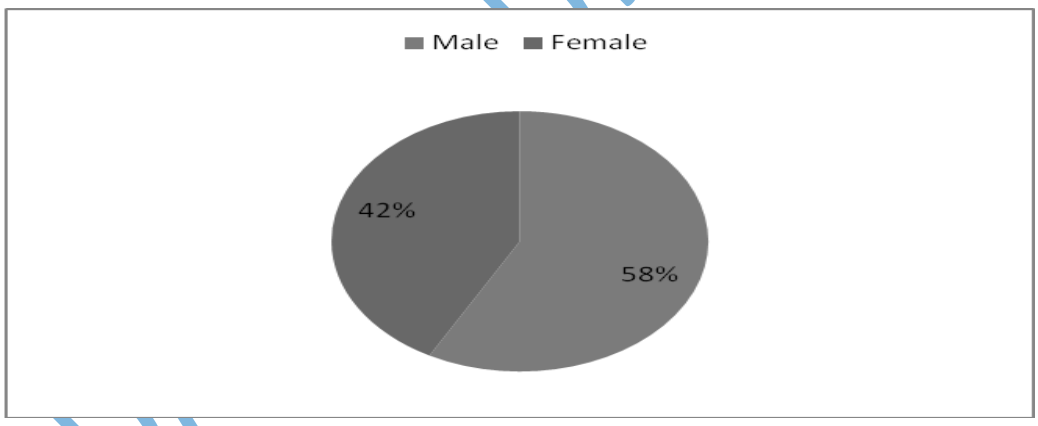

Figure 4.1: Distribution of Respondents by Gender (n=220)

From the findings shown in Figure 4.1, 58% were males while 42% were females. The results show a higher number of males because more male students were admitted in the IHL. This disparity was occasioned by high dropout rates for the females owing to early marriages and unwanted pregnancies.

Distribution of respondents by university

The research investigated the distribution of respondents by university level, as shown in Table 4.2.

Table 4.2: Distribution of Respondents by University

University	n	%
TUMA	144	65
IAA	76	35
Total	220	100

Findings from Table 4.2 show that 144(65%) respondents were from TUMA while 76(35%) respondents were from IAA. This implies that most of the respondents were from TUMA because it had a larger population of students. Additionally, TUMA had more study programmes than IAA and therefore admitted a higher number of students.

The Level of Utilization of the NHIF Students' Health Scheme

In this part, the study sought to get the total number of students enrolled under the NHIF students' health scheme, the number of students' visits to NHIF accredited health facilities, the health facilities visits in the past 12 months, and the reasons for not visiting the health facilities.

Students enrolled under the NHIF students' health scheme

This is shown in Table 4.3.

Table 4.3: Students Enrolled under NHIF Students' Health Scheme

Students enrolled under NHIF	n	%
Yes	220	100
No	0	0
Total	220	100

The findings in Table 4.3 reveal that all the 220(100%) respondents were enrolled into NHIF students' health scheme. NHIF had entered into an agreement with

those IHL so all students were expected to enrol as NHIF students' health scheme members by paying the annual membership fee. The membership fee was collected by the IHL administrators and later deposited to the NHIF bank account for processing of membership cards.

Students' visits to the NHIF accredited health facilities for one year

The study sought to determine the rate of insured students' visits to the NHIF accredited health facilities in one year. The results are shown in Figure 4.2.

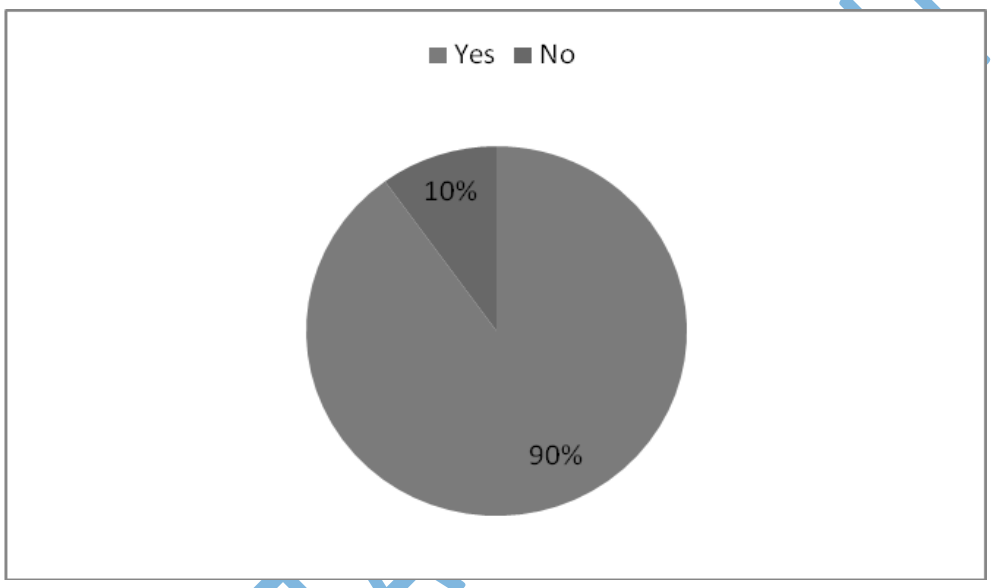

Figure 4.2: Students Visits to Health Facilities for Treatment - the past 12 Months

From Figure 4.2, it was evident that 90% of the respondents visited the accredited health facilities in the last one year while 10% did not. The findings indicate that a majority of the respondents had accessed the medical services under the NHIF students' health scheme. This shows that the NHIF students' health scheme was useful and that a large number of the enrolled students were visiting the accredited health facilities to utilize the medical services.

Number of times respondents visited health facilities in the past 12 months

The study also sought to find out the number of times the respondents had visited the health facilities in the past 12 months, and the findings are illustrated in Figure 4.3.

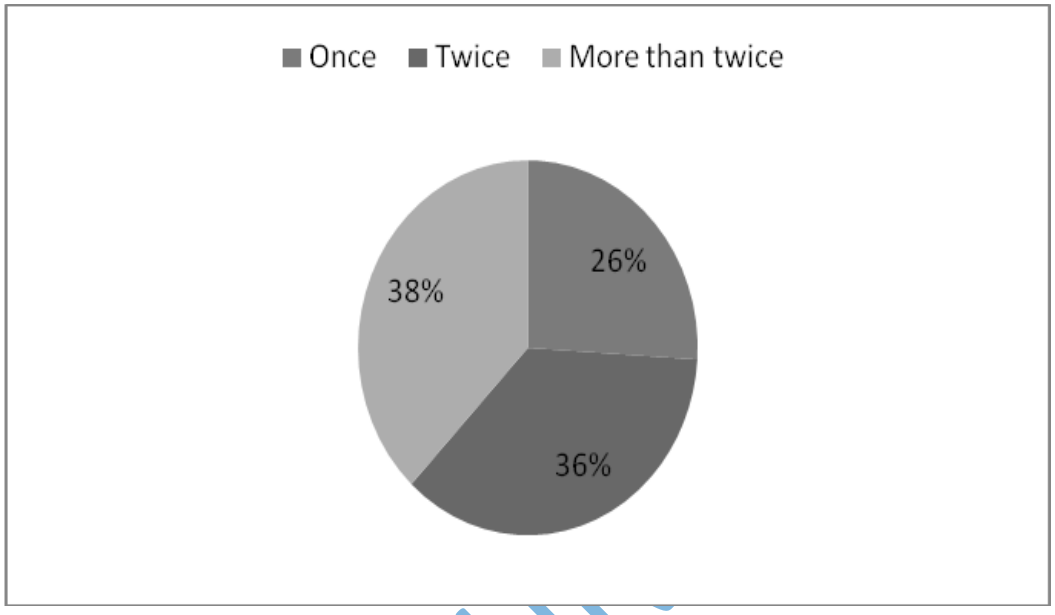

Figure 4.3: Respondents' Visits to Health Facilities for Treatment - the past 12 Months (n=198)

Findings from Figure 4.3 indicate that 198(90%) respondents visited the accredited health facilities as follows: 26% of them had visited once, 36% had visited twice, and 38% had visited more than twice, in the past 12 months. Within 12 months, a majority of the interviewees visited the health facilities more than twice and utilized the health services under the NHIF students' health scheme.

Respondents' reasons for not visiting the health facilities

A total of 22 respondents, equivalent to 10%, who had not visited the accredited health facilities in the past 12 months were interviewed to establish their reasons for not visiting the health facilities. The findings are shown in Table 4.4.

Table 4.4: Reasons for Students not Visiting the Health Facilities

Reasons for not visiting the health facilities (Multiple responses)	n	%
Did not get sick	9	54
Facilities are located far	5	23
Financial constraints	1	8
Long waiting hours	1	8
Unnecessary disturbance at the health facilities	1	8
Unaware of the health services provided	3	15
New health service available to the university	1	8

From the findings presented in Table 4.4, the respondents indicated their reasons for not visiting the health facilities as follows: 9(54%) had not fallen sick, 5(23%) claimed that health facilities were located far from their IHL, 3(15%) were not aware of the health services provided, 1(8%) mentioned financial constraints, another 1(8%) cited the long waiting hours, the other 1(8%) cited unnecessary disturbance at the health facilities while the last 8%(1) mentioned the availability of new health services in the university. These findings reveal that a majority of respondents who did not access the health-care services from the health facilities had not fallen sick. That is why it had not been necessary for them to visit the health facilities despite owning the valid membership cards.

Factors Influencing the Utilization of NHIF Students' Health Scheme

The study further sought to establish students' socio-demographic characteristics of utilization of NHIF health scheme as seen in Table 4.5.

Table 4.5: Utilization of NHIF Health Scheme (Socio-demographic characteristics)

Factors	Visited NHIF accredited health facilities			
	Yes		No	
	n	%	n	%
	198	90	22	10
Age-group				
15-20	33	17	5	22
21-30	139	70	15	67
31-40	24	12	2	11
40+	2	1	0	0
Gender				
Male	117	59	12	53
Female	81	41	10	47
Universities				
TUMA	129	65	13	59
IAA	69	35	9	41

From the findings presented in Table 4.5, 139(70%) respondents in the age bracket 21 to 31 years visited the health facilities while 15(67%) in the same age bracket did not visit the NHIF accredited health facilities. Further, 117(59%) respondents who visited and 12(59%) who had not visited the health facilities were males. Additionally, 129(65%) of respondents who visited and 13(59%) of those who had not visited the health facilities were from TUMA. Therefore, a majority of the respondents were male youths from TUMA.

Factors Influencing the Utilization of NHIF Student's Health Scheme among Enrollees

The study assessed the effect of the treatment received from the medical attendants, the minutes spent to access and receive the treatment among the respondents who visited the health facilities. The findings are illustrated in Table 4.6.

Table 4.6: Factors Influencing the Utilization of NHIF Student's Health Scheme among Enrollees (n=220)

Factors	Visited NHIF accredited health facilities	
	Yes	
	n	%
Treatment received from medical attendants		
Very satisfactory	40	20
Moderate satisfactory	99	50
Somehow satisfactory	45	23
Not satisfactory	14	7
Minutes taken to reach health facilities		
Less than 15 minutes	12	6
15 minutes	21	11
30 minutes	71	36
One hour	65	33
More than two hours	29	15
Time taken to receive medical services		
Less than one hour	67	34
Two hours	73	37
Three hours	33	17
Four hours and above	25	13

As captured in Table 4.6, 99(50%) respondents who visited the NHIF accredited health facilities reported that they were moderately satisfied, 45(23%) were somehow satisfied, 40(20%) were very satisfied, and 14(7%) were not satisfied. Regarding the minutes taken to reach the health facilities, 71(36%) respondents reported that they spent 30 minutes, 65(33%) spent one hour, 29(15%) spent more than two hours, 21(11%) used 15 minutes while 12 (6%) spent less than 15 minutes. The respondents were asked on the time they used to receive medical services they responded as follows: 73(37%) used two hours, 67(34%) used less than one hour, 33(17%) used three hours while 25(13%) used four hours and above. The findings imply that a good number of the respondents were moderately satisfied with the health services rendered and the possible reason is the long delays in receiving medication at the health facilities.

The Health Services Offered under NHIF Students' Health Scheme

The study wanted to collect the information regarding health-care services offered under the NHIF Students' scheme through multiple response questions. The findings are shown in Figure 4.4.

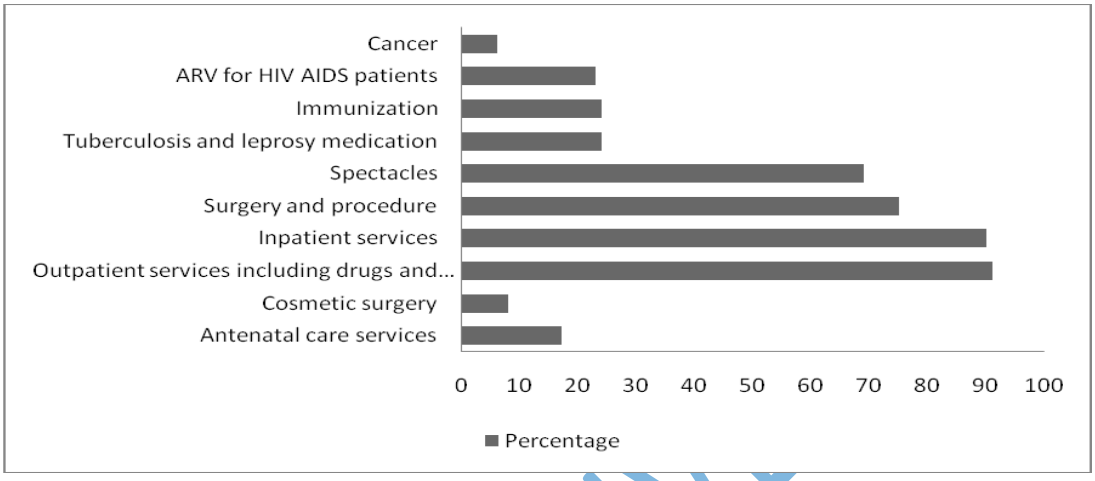

Figure 4.4: Health Services offered under NHIF Students' Health Scheme

From the findings shown in Figure 4.4, the majority (91%) of the respondents identified outpatient services including drugs and laboratory tests as one of the services offered at the health facilities, 197(90%) mentioned inpatient services; 166(75%) identified surgery and procedure services, and (151)69% mentioned spectacles. The other services mentioned below 25% were immunization services, tuberculosis, and leprosy medication at 52(24%); Antiretroviral for HIV AIDS patients were 51(23%), and antenatal care service were 38(17%). The services mentioned below 10% were cancer and cosmetic surgery at 6%(13) and 8%(17) respectively. The findings point out that the majority were aware of the services offered and not offered under the students' health scheme. It was only few who were not aware of the health-care services offered as they mentioned immunization, tuberculosis, and leprosy which are not offered to them.

Challenges Faced by Universities in Enrolling Students into NHIF Students' Scheme

The study sought to investigate the challenges IHL face in the process of enrolment of students into NHIF students' health scheme. The respondents reported that students were complaining that NHIF had not established the system of dealing with emergency patients' cases. The respondents were resisting renewing their membership because NHIF had not instituted the proper system of sending feedback regarding reported complaints as shown below by the respondents:

> *I have been receiving many complaints from our students who visited the health facilities and who needed the emergency healthcare using the NHIF cards. Students reported to me that when they visited different health facilities during night hours they were not attended because they were told NHIF patients were attended only during the day hours. Students reported to me that even when they reported the complaints direct to NHIF offices there was no feedback sent back to them on the complaints follow up* (Respondent 1).

> *NHIF staff visit our institute only during the registration of new and continuing students into their scheme. After issuance of cards they never show up again. Even when students reported to me the complaints of not accessing health services to health facilities during night hours, they never respond to our letters. This brings about the difficult environment for me to work with NHIF to solve students' complaints on time* (Respondent 2).

From these responses, it was evident that communication gaps existed between NHIF and the management of the IHL regarding the operations of NHIF students' health scheme. NHIF system of communicating with IHL during students' enrollment at the beginning of each academic year implied that NHIF collected the students' remittances and after that activity they never monitored the health services offered to them. Also, respondents mentioned low awareness on the NHIF students' health scheme benefit package and delays in receiving of students NHIF cards.

> *Despite recruiting the students, no efforts have been made by NHIF to call all the insured students and provide education on how to use the cards. The Institute always pays the remittances to NHIF at the beginning of academic year. However, it usually takes up to three months for NHIF to issue the cards to students and these delays students' access to healthcare* (Respondent 1).

> *My students have been asking me to inform NHIF to visit and provide education on how and where to use NHIF cards. If NHIF cards were produced for the whole academic duration the delay of issuance of NHIF cards could be minimized* (Respondent 2).

This response shows that the students did not receive adequate information on the health services offered and that NHIF did not adhere to the contract of insuring students for one year due to delay of cards for three months and that students used the cards for 9 months instead of 12.

The respondents suggested that NHIF should issue cards that expire after three years instead of annual expiration in order to reduce the monotony of annual membership cards production. The respondents also suggested that NHIF should hold awareness campaigns at least twice a year in order to sensitize students on the health benefits package and hence improve enrolment and utilization of health services.

> *In order to ensure students utilize the health services, I advise that NHIF should issue their cards once for the entire study duration and that they activate the cards annually after the payments of remittance are done. NHIF should visit the insured students and provide the education on the students' health product so that students understand the health services offered and the health facilities students can visit and access health services using NHIF cards* (Respondent 1).

> *The expired duration has been annually for NHIF cards; therefore, I suggest it be three years. Students highly need NHIF staff to be visiting our institute whenever needed for providing the health services updates and general education awareness dissemination* (Respondent 2).

These responses therefore implied that students wanted an extension of the expiry dates for NHIF cards and education on the health benefits of the scheme.

Suggestions to Improve NHIF Students' Health Scheme Utilization

The respondents were asked to suggest the ways to improve NHIF students' health scheme utilization. The findings are shown in Figure 4.5.

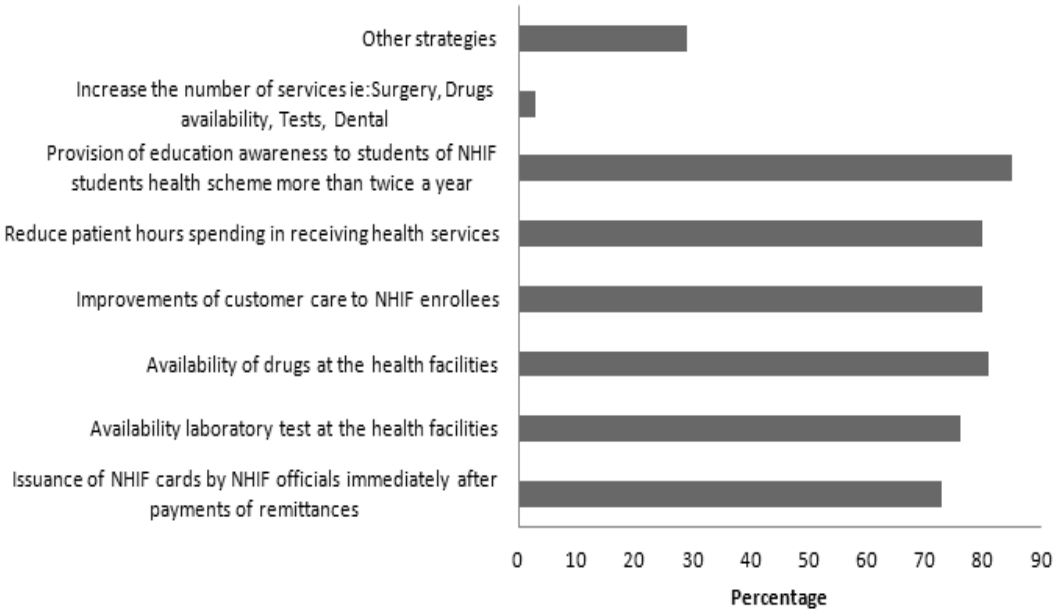

Figure 4.5: Suggestions to Improve NHIF Students' Health Scheme Utilization

From the findings in Figure 4.5, 186(85%) respondents reported that creating awareness on the availability of NHIF services to students should be done more than twice a year. Another set of 179(81%) respondents pointed out that the necessary drugs should be made available at the accredited health facilities. Another 175(80%) mentioned improvement of customer care to enrolled students as well as shorter waiting periods for clients at the health facilities. The other 168(76%) reported that laboratory tests should be done at the accredited health facilities while 160(73%) respondents mentioned that NHIF should issue the membership cards immediately after the payment of remittances.

These results implied NHIF needs to improve on its ways of disseminating information to students. The students, who are bona fide clients, need to know which services are inclusive in their medical scheme and which ones are exclusive. The findings also implied that the accredited health facilities should offer services to clients as per the agreement entered with NHIF.

Summary of Key Findings

This section presents a summary of the key findings of this study as listed below:

1. All the interviewees were enrolled under the NHIF students' health scheme.
2. A total of 198 students, equivalent to 90%, of all the interviewees had visited the accredited health services and had utilized the health services. The utilization rate was 90% while the non-utilization rate was 10%.
3. The 10% of the respondents who had not utilized the NHIF students' health scheme reported that they had not fallen ill in the previous year.
4. The factors of age group, gender, and the selected IHLs had no significant association with the utilization of the NHIF students' health scheme.
5. The utilization of students' health scheme was not influenced by factors like the kind of treatment received from the medical attendants or the time spent to receive the medical services.
6. A majority of the students knew about some health services offered under the NHIF students' health scheme. Through the multiple responses, more than 90% of the respondents were aware that NHIF provided both outpatient and inpatient services. More than 60% mentioned surgery procedures and optical services.
7. Very few students mentioned that NHIF insured diseases like tuberculosis, leprosy, and HIV while in actual fact, those diseases were not covered under the NHIF students' health scheme. This shows that, to some extent, the students did not have adequate information regarding the insured health services. It is possible that they could have mentioned the health services that they had accessed when visiting the health services without using the NHIF card.

8. University administrators identified an absence of feedback to students on the complaints that were reported to NHIF officials and a communication gap between NHIF and universities as the challenges facing NHIF students' health scheme.
9. NHIF was advised to issue identity cards that expire within the duration equivalent to the students' study programmes and not the annual expiration.
10. For improvement of NHIF students' health scheme, the majority of the students suggested creating awareness at least twice a year and ensuring the availability of laboratory tests and drugs. The other areas of improvement were customer care among the staff of health-care facilities and the issuance of NHIF cards to students within the shortest time after the payments of remittance.

Summary

This chapter has captured the presentation and interpretation of the study findings. The findings were summarised in tables and figures, with reference to the specific objectives. Chapter five comprises a summary of the key findings, conclusion and recommendations.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter presents the discussion of significant study findings, the conclusion, and the recommendations. This study assessed the utilization of NHIF students' health scheme in Arusha, Tanzania using the case of two selected IHL. The discussion was guided by the specific study objectives. The objectives were to determine the level of utilization of NHIF students' health scheme among selected universities in Arusha, examine the factors influencing utilization of the NHIF students' health scheme, and analyze the challenges faced by universities in enrolling students into the NHIF students' health scheme.

Discussions of Key Findings

The Level of Utilization of NHIF Students' Health Scheme

The study findings indicated that 100% of respondents were enrolled with NHIF students' health scheme. The findings further showed that 90% had accessed the health-care services once per year. 38% had visited the accredited health facilities three times and above in a year, and 10% had not visited the health facilities. The findings of this study differ significantly with views by Usman et al. (2015) who assessed the utilization of SHI among the undergraduate students at Canadian University in Dubai, whereby 200 students were sampled, and 62.2% of the respondents had accessed the health-care services every six months. The study went further and assessed the rate of utilization within six months, whereas this research assessed the uptake of health-care services within a year. Despite the difference in duration of the assessment of the utilization of the health-care services, both studies

revealed that above 50% of the interviewees utilized the health-care services for the set durations. This proves that the students' healthcare services were useful.

In the study done by Turner and Keller (2015), at the United States' College of Health Surveillance Network, a total of 2,809,686 students equivalent to 26% were selected for the study. The study revealed that 32% of students with health insurance utilized the health-care services within 12 months. The findings by Turner and Keller (2015) present a different picture from the findings of this study because 90% of the students who registered under the NHIF students' health scheme accessed the health services. The study further showed that more private students accessed the preventive health-care services compared to students from the public schools. This relates closely with the NHIF students' health scheme whereby 65% of the students from a private university, had visited the accredited health facilities compared to 35% from the IAA which is a public university. The study by Turner and Keller (2015) further showed that students between 18 and 22 years had highly utilized the health services.

Since this study revealed that 90% of the students had utilized the health services, it corresponds with NHIF (2011) which stated that students' health scheme sought to ensure that the students are healthy and that they would be able to attend their studies. Due to the paramount importance of health, it was rightly anticipated that many students would enrol in NHIF and access medical services earlier before the diseases become chronic.

Although the study by Postolowski and Newcomer (2013) revealed that 73% of the students were enrolled and using the health services, still the rate of enrollment was high as this study showed that 90% of the students were influenced to enrol into NHIF students' health scheme. These studies differed in the percentage of students enrolled, but both the NHIF report and the study by Postolowski and Newcomer

(2013) showed that the health insurance was quite useful and that is why students were enrolling and utilizing the health services.

The study by Wagstaff (2010) stipulated that access of health-care services in any SHI is among the key indicators of measuring of its impact because the higher the access to health-care services the higher the reduction of OOP expenditure. That impact is measured by counting the number of community members that utilize the health-care services hence improving the community health status. This finding agrees with this study in a sense that the NHIF students' health scheme utilization was as high as 90%, hence confirming that the students had accepted the scheme and it was used effectively to improve their health status so that they complete their studies on time.

The findings of a study by Okaro et al. (2010) revealed that for the community to enrol and utilize health services, health promotion is critical. The study further revealed that health promotion creates awareness to potential prospective enrollees on the process of enrolment, the health services offered and the areas to access the said health services. Their findings are similar to the findings of this study in that 90% of students who had utilized the health services complained that they did not have adequate information on the health services offered. Furthermore, the study by Okaro et al. (2010) showed that the level of utilization of health services was influenced by education on how to access health services. Consequently, the absence of such education negatively impacted enrolment and utilization. The 90% of respondents were utilizing the services because the management of IHL had entered into an agreement with NHIF that all students had to enrol in the NHIF students' health scheme.

The Factors Influencing Utilization of NHIF Students' Health Scheme

For the health insurance schemes to be effectively utilized, there are factors that are considered important: the ease of reaching the health facilities, the waiting time before accessing medical services, and availability of medical examination and drugs. This study revealed that among 198 students who accessed the health-care services, 50% were moderately satisfied. The findings further revealed that 36% of the interviewees took at least thirty minutes to arrive at the hospitals to access medical services while 33% spent an hour. The other 34% spent less than an hour before they could receive medical services, and 37% spent two hours waiting to receive medical services. Similarly, Obiechina and Okenedo (2013) established that easy access to health facilities, the time spent to receive the treatments, improved customer care relationship between the insured students and the clinicians, and availability of essential medicine encouraged the community members to register and utilize the medical services.

A study carried out by El Ansari and Stock (2010) addressed the comprehensive health programme and insurance scheme and how it influenced students' performance at the universities. This factor agrees with the NHIF students' health scheme as the findings showed that students were utilizing the services despite being moderately satisfied with the services. Further, one of the tenets of measuring the usefulness of any SHI is through the utilization. The moderate satisfaction with the NHIF students' health scheme was influenced by the low level of knowledge on where to access the medical services and the medical services offered under NHIF students' health scheme. The moderate satisfaction with the NHIF services was due to the distance and time spent when the students needed to utilize the health services. These factors were associated with a lack of information on NHIF students' health

scheme. A study by Okaro et al. (2010) agrees with the findings of this study in that information sharing through hospitals was there when patients were visiting for treatment. Actually, this was not an effective way of sharing information on the insurance scheme because the insured who were not attending the medical checkup remained uninformed.

According to the findings from the study by Okaro et al. (2010), only members who fell sick got access to information regarding where to access which type of health services. The findings concur with this study in the sense that relevant information on the NHIF students' health scheme was not disseminated to students; hence they were not fully aware of health services offered to them.

The respondents in this study perceived that the distance and time spent to access medical services influenced health services utilization. Additionally, they had no information on how many accredited health facilities were near their universities so that they could choose which one to visit and access health services. The implication here is that the respondents had little information that NHIF had accredited more than 70% of all health facilities in Arusha, so the enrollees had the option to select the health facilities of their choice and preference. The findings concur with the research findings by Alhassan et al. (2015) that students who enrolled into the students' health scheme were expecting to visit the health facilities and access medical services as well as good customer care from health workers. Unfortunately, the lack of these factors was likely to compromise the students' decision to enrol.

Significantly, this study revealed that the students were not getting the right information regarding NHIF students' health scheme, hence they could not easily identify which health services they could access. These findings stem from the observation that when students were asked about the services offered under the

scheme, they mentioned some health services which were not offered by NHIF suc as immunization, HIV/AIDS, Tuberculosis, and leprosy. The findings disagree with the NHIF (2017) report, which indicates that those health services were excluded because they were already accessible under the Ministry of Health hence offered for free under special ministry programmes.

Regarding these factors that were perceived to influence the students to utilize NHIF students' health scheme, the findings showed that the provision of education to students on SHI played a vital role. Those findings correlate with the research findings by Jehu-Appiah et al. (2012) that the enrolment and remaining NHIF members could be maintained if the health providers improved the health-care services, review of the insurance schemes design, updating of the packages to the insured through the periodic education on the health insurance. Eventually, enrollees would be knowledgeable and utilize the health services.

Challenges Faced by Universities in Enrolling Students into NHIF Students' Health Scheme

The respondents in this study reported that the NHIF did not have an established system of attending to patients who needed treatment on the spot, nor a system of giving feedback on students' complaints that had been reported. Lack of strategies to deal with emergence cases discouraged students from enrolling into NHIF. The findings of this study support a research by Anetoh et al. (2017) that poor quality of healthcare from the Tertiary Institutions' Social Health Insurance Programme was evidenced by the clinical staff keeping patients waiting for a long time. The patients, despite waiting for a long time, ended up receiving poor health services. These factors inhibited the enrolment and utilization of health insurance because students perceived the situation as mistreatment.

The study revealed that NHIF patients were not attended to promptly when they visited the accredited health facilities, even as emergency cases. They had to wait for long before they could receive the medical treatment and that resulted in students' perception of the health services as being moderate. This finding agrees with the study by Alhassan et al. (2015) whereby poor-quality health-care services were associated with the long duration of waiting to receive medical treatment, mistreatment of insured patients by the clinicians, and lack of a system for reporting the complaints. The community members who had already enrolled were not persuaded to continue registering with NHIF because their expectations with regard to healthcare were not met. The biggest challenge was that the healthcare facilities lacked clear structures for handling complaints. This finding disagrees with the study by Obiechina and Okenedo (2013) in which students' resistance to enrolling into the students' scheme was minimized because of the close communication between the university management and the health insurance in order to handle students' complaints.

The management of NHIF did not communicate regularly with the universities that entered into the agreement to enrol students into the NHIF students' health scheme. This communication gap led to students visiting the universities only at the beginning of academic years for registration. Owing to this discrepancy, students were not adequately educated on the medical services rendered to students under NHIF students' health scheme. This finding concurs with the study by Adei et al. (2015), which revealed that communities had little information on the SHI and the health-care packages offered hence enrollment was low. Lack of awareness on the NHIF benefit package and the services the students were entitled to negatively affected the rate of enrolment as well as utilization of the health services.

The enrolled students had little awareness of the NHIF students' health scheme benefit package which outlined the medical services offered to students, the registered health facilities providing medical insurance to students, and the levels of health services provision. This research finding concurs with Obse et al. (2015) that the challenges of poor health-care to insured patients and lack of awareness on the benefits of SHI were among the challenges facing NHIF students' health scheme. The NHIF students' scheme enrollees had a positive perception of health insurance except that they had no proper information about NHIF students' scheme and the health services offered. Daniel (2019) added that the lack of sensitization among students and their parents on health insurance and all related benefits negatively affected enrollment. A study by Gichuru et al. (2015) addressed how a lack of awareness of the contents of the health insurance package affected the uptake. Therefore, this shows that students perceived the NHIF students' health scheme as a plan that could benefit them but the questions on the process of enrollment and receiving medical services when they would need it remained unanswered because of the absence of public awareness education on SHI.

Another research that agrees with this study was done by Anetoh et al. (2017) and it maintains that the challenge of enrolment was affected by the absence of essential drugs at the health facilities. Therefore, the beneficiaries were not easily influenced to enrol because they knew they would not get the drugs when they visited the hospitals. This is a challenge in many SHI because if the community enrolment rate gets low then it affects the healthcare services delivery. SHI provides reliable healthcare when a large number of community members is enrolled. This is one of the very critical issues to discuss with the community when providing education so that they gain a clear understanding of how the SHI operates.

Respondents reported that the NHIF delayed the issuance of students' membership cards up to three months after payments of their premiums. It was reported that students would use the NHIF cards for only 9 months despite paying the premium for 12 months. The same challenge was reported by the CBE of Dar es salaam whereby delay of NHIF cards was a repetitive problem and if affected students to access the medical services at the beginning of academic years (CBE, 2017).

The Strategies to Improve the NHIF Students' Health Scheme

The NHIF students' health scheme would be improved by ensuring that the provision of awareness education to students on NHIF student's health scheme was done more than twice a year. The awareness education on NHIF students' scheme agrees with the study by Marwa (2016) which maintains that the fund should promote and carry out strong public awareness and education programmes to its beneficiaries/members and health service providers on their rights and obligations. Therefore, when the community members receive the awareness on SHI and develop the forum for discussing the process of providing the healthcare to the insured then it allows the community to discuss the challenges and suggest the solutions to improve the medical care provision at the accredited health facilities.

In addition, Marwa (2016) insisted on the provision of training to staff of the health facilities, specifically on the health-services delivery processes and the rules and regulations guiding the processes. If this is implemented, it will help the health facilities to increase their revenues from the monthly bills submitted to NHIF for payments. The study findings disagree on who should receive the awareness education. This study meant the awareness education to enrolled students while the study by Marwa (2016) insisted on awareness education to health facility staff.

Furthermore, the study by Marwa (2016) addressed the issue regarding decision-making on revenue collected from the enrollees. It suggested that in the planning and budgeting, there should be funds that would be used to motivate health facilities' staff. This study disagrees with the findings from the study by Marwa (2016) because it focused on education awareness on the NHIF students' health scheme benefit package that would enable them to access the NHIF students' health scheme.

The research findings evidenced that customer care was unsatisfactory; therefore, the respondents suggested improving customer care and minimizing the waiting time of NHIF members. This agrees with the study by Obiechina and Okenedo (2013), which showed that patients were disappointed with the long duration of waiting for medical treatments. The same was supported by Alhassan et al. (2015) on the need to minimize waiting time. Both studies suggested that for improvement of customer care, the health facilities should ensure patients are not overstaying when accessing the medical services.

Conclusion

The findings revealed that all the respondents were enrolled under NHIF student's scheme, and out of the enrolled, 90% had visited the health facility at least once in the last 12 months. Among the students who had visited the health facilities, more than one-third of students had visited the facilities three times a year. Out of 10% of the students who did not visit the health facilities, 7% did not visit because they did not experience any health problems. For the 3%, the health facilities were located too far from the IHL.

Students reported that despite paying the annual premiums to NHIF, their NHIF cards were delayed for up to three months. This delay made it difficult for the

enrolled students to visit the accredited health facilities and access medical services. Secondly, due to the delays, students used the cards for only nine months instead of the possible 12 months.

Whenever students fell sick at night, they could not access the appropriate medical services since the NHIF had no system of dealing with emergency cases. When such cases were reported to NHIF officials, no feedback was provided to students on how the cases were handled.

The NHIF had not established a proper system of communicating with university management and students regarding the NHIF students' health scheme operations. Officials of the NHIF appeared at the beginning of the new academic year as they recruited new and continuing students. After the enrolment of students into NHIF was complete, the officials would issue the membership cards to university administrators and sit in their offices to wait for the next academic year. This physical absence of NHIF officials compromised the students' awareness of the operations of the students' health scheme and the benefits package.

Recommendations

From the findings, the study makes the following recommendations:

1. NHIF membership cards should expire in line with students' study programmes durations. That is three years for degree programmes and two years for a diploma.
2. NHIF officials should visit the universities and collect information on the NHIF students' health scheme from both the university administrators and students. The administrators and students should provide information regarding the challenges faced by students in their attempt to access medical services using NHIF membership cards.

3. NHIF should ensure that medical services they offer are reliable and that their officials are available to answer the students' questions and provide guidance as well as capture data on any issues the students may find challenging. This will be possible if NHIF designs a structured way of capturing the students' visit details.
4. NHIF should ensure that students clearly understand the packages offered to them under the students' health scheme. Therefore, the officials should carry out education campaigns at least twice a year so as to ensure that students are well-acquainted students with the medical services they are entitled to. The campaigns can be carried out through periodic benefit package reviews.
5. NHIF should undertake Monitoring and Evaluation (M&E) of the medical services rendered to enrollees to ensure they provide quality healthcare. Occasional visits to the accredited health facilities will help the officers to get acquainted with challenges their clients face as well the limitations of the healthcare facilities in the provision of medical services to beneficiaries. The M&E will present an opportunity for the NHIF officials to discuss the challenges raised by students. The analysis of M&E data will give direction on the ways of countering the challenges and structuring a clear way of communicating the complaints.

Recommendations for Further Research

A similar study can be carried out in another country to determine the uptake of services provided by students' health schemes within their NHIS and a comparison made to see if the findings are similar so that appropriate interventions can be made. Another research can be conducted in IHLs which do not have contracts with a national health insurance fund scheme to establish why they have not taken up the services.

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APPENDICES

Appendix A: Consent Form

Dear Sir/ Madam

My name is Bernard Katerengabo, a final year Master of Arts in Monitoring and Evaluation student at Daystar University, Nairobi Campus. In fulfillment the degree requirements for attainment of Master's Degree, I am undertaking a study at Tumaini University Makumira and Institute of Accountancy Arusha. The topic is on an assessment of utilization of National Health Insurance Fund students' health scheme in Arusha, Tanzania: A case of selected Institutions of Higher Learning in Arusha, Tanzania.

This is to kindly request you to allow me to collect data from you by using the questionnaire. The information you provide will be used exhaustively for academic purposes. I assure you that the data you will give will be treated as confidential and will not be used against you as an individual. Please, do not include your names.

Please note that this exercise is voluntary and your participation or non-participation will have no adverse consequence on you. Kindly give a true and sincere account of your opinion. Your cooperation will be highly appreciated.

"I have read and understood your request, with my own will, without influenced by anyone; I consent to participate in this study'

Interviewee's name ……

Interviewee's signature …….

Date ……

Witness's signature ……..

"Sorry, I do not consent to participate in the study." ☐

Appendix B: Students' Questionnaire

AN ASSESSMENT OF UTILIZATION OF NATIONAL HEALTH INSURANCE FUND STUDENTS' HEALTH SCHEME: A CASE OF SELECTED INSTITUTIONS OF HIGHER LEARNING IN ARUSHA, TANZANIA.

Questionnaire Number …… Date ……

SECTION A: SOCIAL DEMOGRAPHIC DATA			
01	What is your age?	01) 15-20 02) 20-30 03) 31-40 04) Above 40	[ ]
02	What is your gender?	01) Male 02) Female	[ ]
03	Which University are you studying in?	01) TUMA 02) IAA	[ ]
04	What is your level of study?	01) Diploma 02) Bachelor	[ ]
SECTION B: PREVALENCE OF NHIF STUDENTS HEALTH SCHEME UTILIZATION			
05	Are you enrolled under NHIF students' health scheme? If the answer is [01=Yes] continue to question 06.	01) Yes 02) No	[ ]
06	Have you ever visited the health facilities which provide medical services under NHIF students' health scheme?	01) Yes 02) No	[ ]
07	If the answer is [02=No] for question 06, state the reasons for your visit(s).	....	
08	If your answer for question 06 is [01=Yes], how many times, in the last 12 months?	01) Once 02) Twice 03) More than three	[ ]
SECTION C: FACTORS INFLUENCING UTILIZATION OF NHIF STUDENTS HEALTH SCHEME			

09	Have you received health services under NHIF students' health scheme for the last 12 months?	1) Yes 2) No	[ ]
10	How was the treatment you received from medical attendants when accessing medical services?	01) Very satisfactory 02) Moderate satisfactory 03) Somehow satisfactory 04) Not satisfactory	[ ]
11	How many minutes does it take, on average, to access the accredited health facilities?	01) Less than 15 minutes 02) 15 minutes 03) 30 minutes 04) One hour 05) More than two hours	[ ]
12	How long does it take to receive outpatient medical services and leave the health facility?	01) Less than one hour 02) Two hours 03) Three hours 04) Four hours and above	[ ]
13	Please tick ONLY the services you know which are offered under NHIF students health scheme.		Tick [✓]
	Antenatal care services		[ ]
	Cosmetic surgery		[ ]
	Outpatient services including drugs and laboratory tests		[ ]
	In-patient services		[ ]
	Surgery and procedure		[ ]
	Spectacles		[ ]
	Tuberculosis and leprosy medication		[ ]
	Immunization		[ ]
	ARV for HIV AIDS patients		[ ]
	Cancer		[ ]
SECTION D: STRATEGIES TO IMPROVE NHIF STUDENTS HEALTH SCHEME			

14	From the list below, please tick ONLY those strategies you think can improve NHIF students' health scheme.	Tick [✓]
	Issuance of NHIF cards by NHIF officials immediately after payment of remittances	[ ]
	Availability laboratory tests at the health facilities	[ ]
	Availability of drugs at the health facilities	[ ]
	Improvement of customer care to NHIF enrollees	[ ]
	Reduced duration of waiting to access health services	[ ]
	Creating awareness to students on the NHIF students' health scheme more than twice a year	[ ]
15	Please mention other strategies you know that can improve NHIF students' health scheme.	1)..... ..... 2)..... ..... 3)..... ....

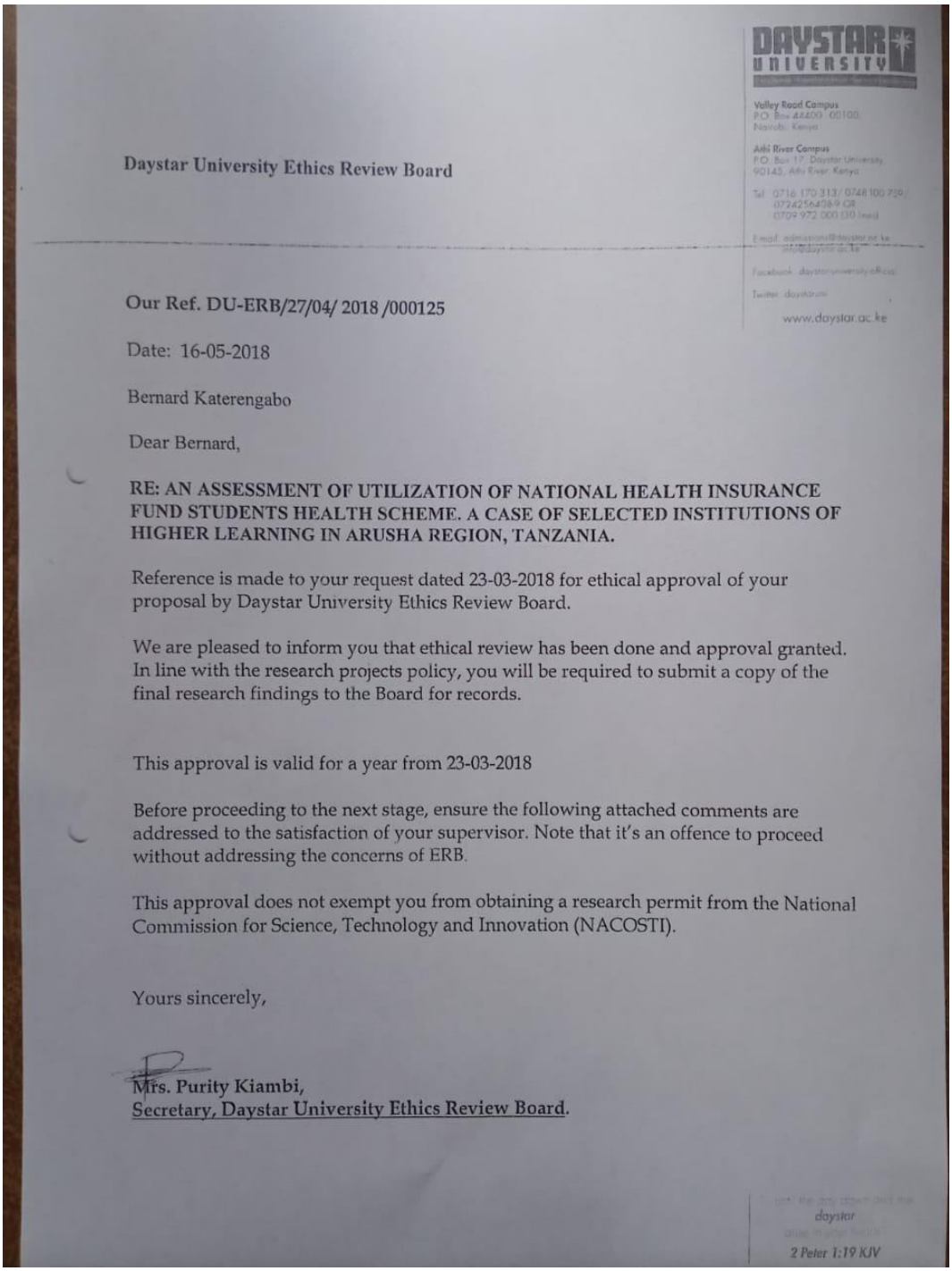
END

Appendix C: Key Informant Interview Guide for University Administrators

CHALLENGES FACED BY UNIVERSITIES IN ENROLLING NHIF STUDENTS HEALTH SCHEME

01	Which alternative option of insuring students after payments of fees and before receiving the cards that NHIF use?	01) No alternative option 02) Issuing temporary cards	[ ]
02	How does NHIF deal with emergency cases when students are accessing medical services?	01) ..... 02) ..... 03)	
03	What are the common challenges reported by students when accessing medical services?	01) ..... 02) ..... 03) ..... 04)	
04	Does NHIF provide feedback on how the complaints are managed?	01) Yes 02) No	[ ]
05	Does NHIF provide education on NHIF students' health scheme annually?	01) Yes 02) No	[ ]
06	If the answer for question 05 is [01] how often for the last 12 months?	01) Once 02) Twice 03) Thrice 04) Fourth	[ ]
07	Which areas need to be improved in the NHIF students' health scheme operation?	01) .... 02) .... 03)	

Appendix D: Ethical Clearance



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Valley Road Campus
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Nairobi, Kenya

Athi River Campus
P.O. Box 17, Daystar University,
90145, Athi River, Kenya

Tel: 0716 170 313/ 0748 100 759/
0724256408/9 OR
0709 972 000 (30 lines)

E-mail: admissions@daystar.ac.ke
info@daystar.ac.ke

Facebook: daystaruniversityofficial

Twitter: daystaruni

www.daystar.ac.ke

Daystar University Ethics Review Board

Our Ref. DU-ERB/27/04/ 2018 /000125

Date: 16-05-2018

Bernard Katerengabo

Dear Bernard,

RE: AN ASSESSMENT OF UTILIZATION OF NATIONAL HEALTH INSURANCE FUND STUDENTS HEALTH SCHEME. A CASE OF SELECTED INSTITUTIONS OF HIGHER LEARNING IN ARUSHA REGION, TANZANIA.

Reference is made to your request dated 23-03-2018 for ethical approval of your proposal by Daystar University Ethics Review Board.

We are pleased to inform you that ethical review has been done and approval granted. In line with the research projects policy, you will be required to submit a copy of the final research findings to the Board for records.

This approval is valid for a year from 23-03-2018

Before proceeding to the next stage, ensure the following attached comments are addressed to the satisfaction of your supervisor. Note that it's an offence to proceed without addressing the concerns of ERB.

This approval does not exempt you from obtaining a research permit from the National Commission for Science, Technology and Innovation (NACOSTI).

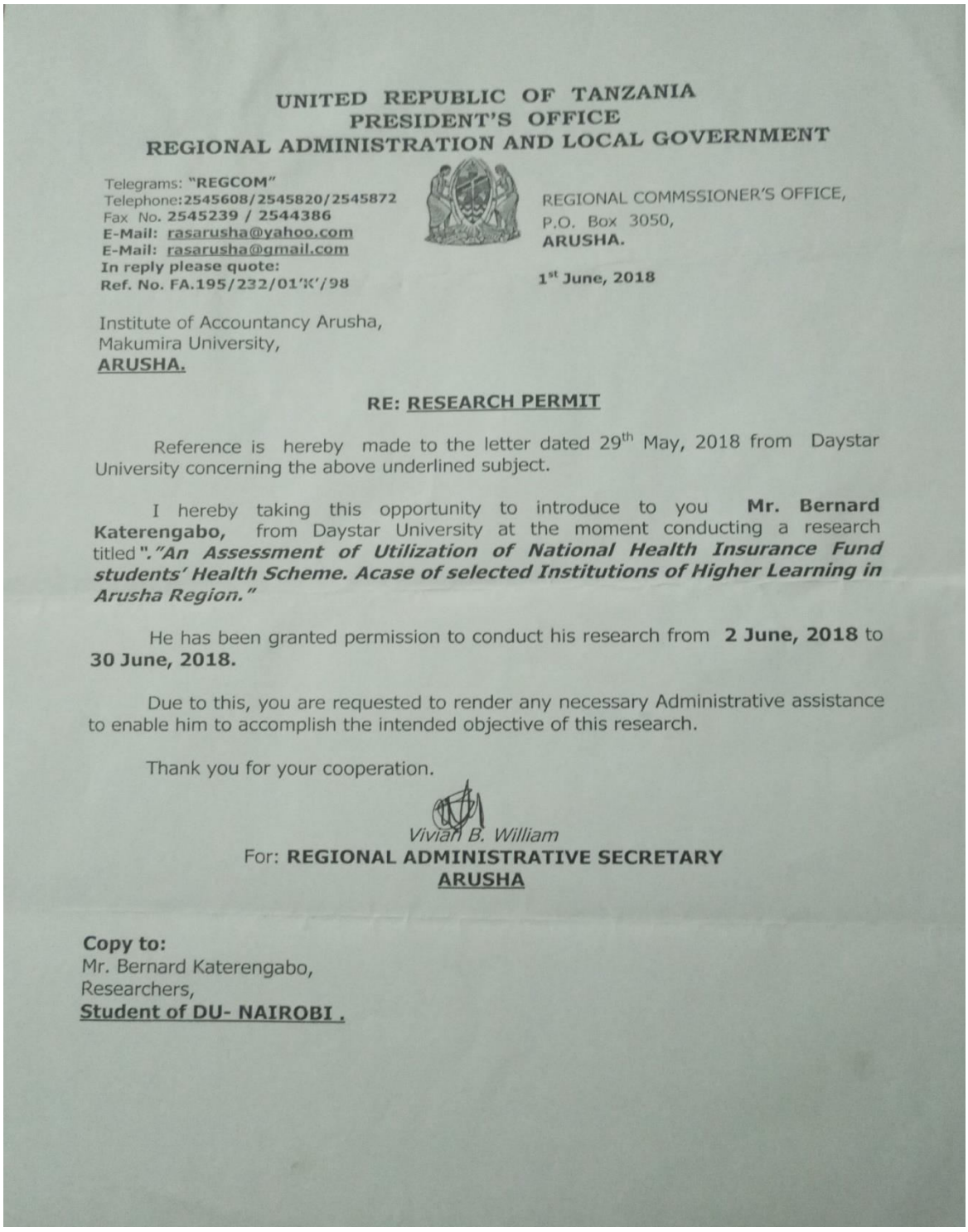
Yours sincerely,

Mrs. Purity Kiambi,
Secretary, Daystar University Ethics Review Board.

daystar

2 Peter 1:19 KJV

Appendix E: Research Permit by Arusha Regional Administrative Secretary



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PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

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Fax No. 2545239 / 2544386
E-Mail: rasarusha@yahoo.com
E-Mail: rasarusha@gmail.com
In reply please quote:
Ref. No. FA.195/232/01'K'/98

REGIONAL COMMSSIONER'S OFFICE,
P.O. Box 3050,
ARUSHA.

1st June, 2018

Institute of Accountancy Arusha,
Makumira University,
ARUSHA.

RE: RESEARCH PERMIT

Reference is hereby made to the letter dated 29th May, 2018 from Daystar University concerning the above underlined subject.

I hereby taking this opportunity to introduce to you **Mr. Bernard Katerengabo,** from Daystar University at the moment conducting a research titled "***"An Assessment of Utilization of National Health Insurance Fund students' Health Scheme. Acase of selected Institutions of Higher Learning in Arusha Region."***

He has been granted permission to conduct his research from **2 June, 2018** to **30 June, 2018.**

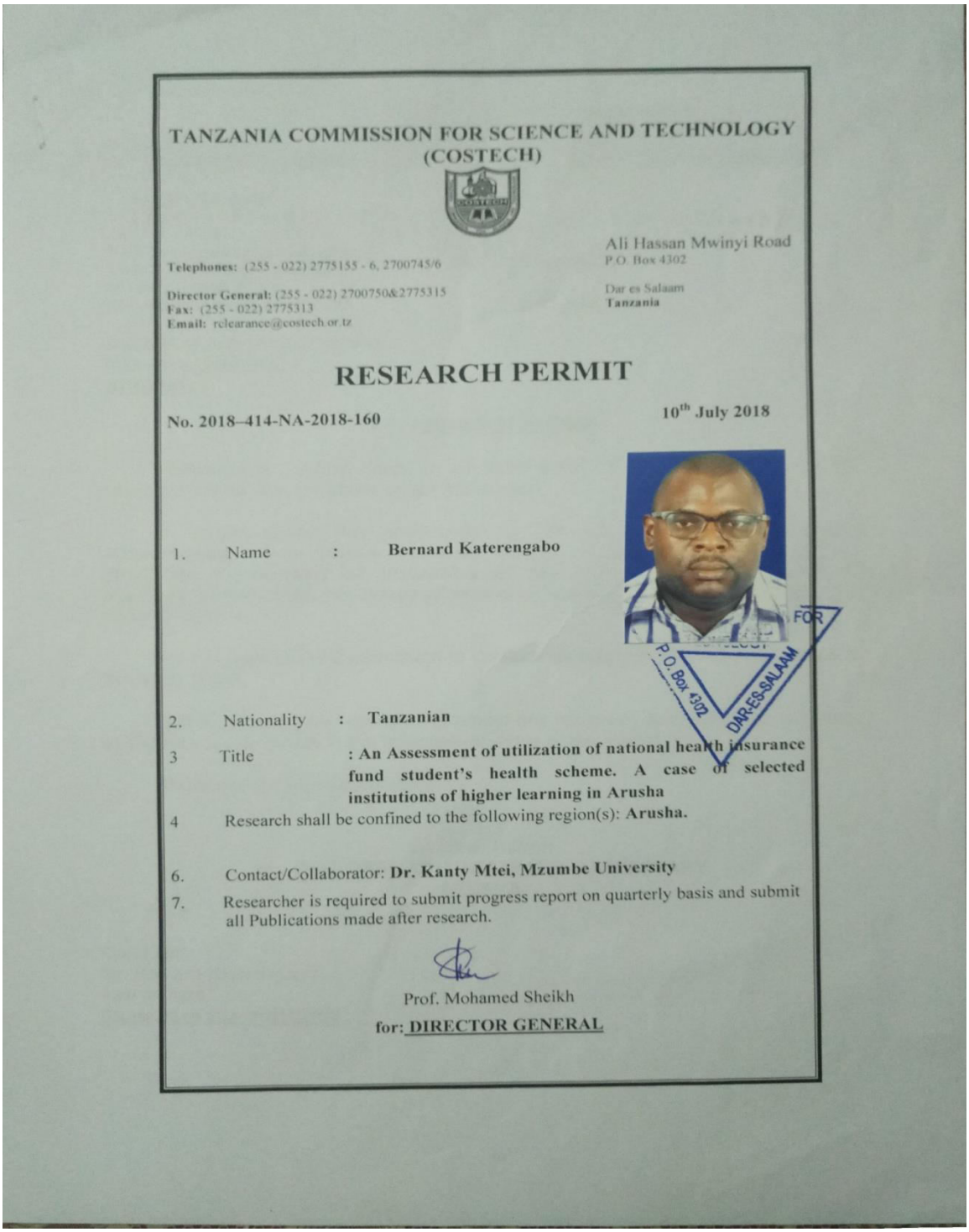
Due to this, you are requested to render any necessary Administrative assistance to enable him to accomplish the intended objective of this research.

Thank you for your cooperation.

Vivian B. William
For: **REGIONAL ADMINISTRATIVE SECRETARY**
ARUSHA

Copy to:
Mr. Bernard Katerengabo,
Researchers,
Student of DU- NAIROBI .

Appendix F: Research Permit by Tanzania Commission for Science & Technology



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(COSTECH)

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Director General: (255 - 022) 2700750&2775315
Fax: (255 - 022) 2775313
Email: rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
Tanzania

RESEARCH PERMIT

No. 2018–414-NA-2018-160

10th July 2018

1. Name : **Bernard Katerengabo**

2. Nationality : **Tanzanian**

3 Title : **An Assessment of utilization of national health insurance fund student's health scheme. A case of selected institutions of higher learning in Arusha**

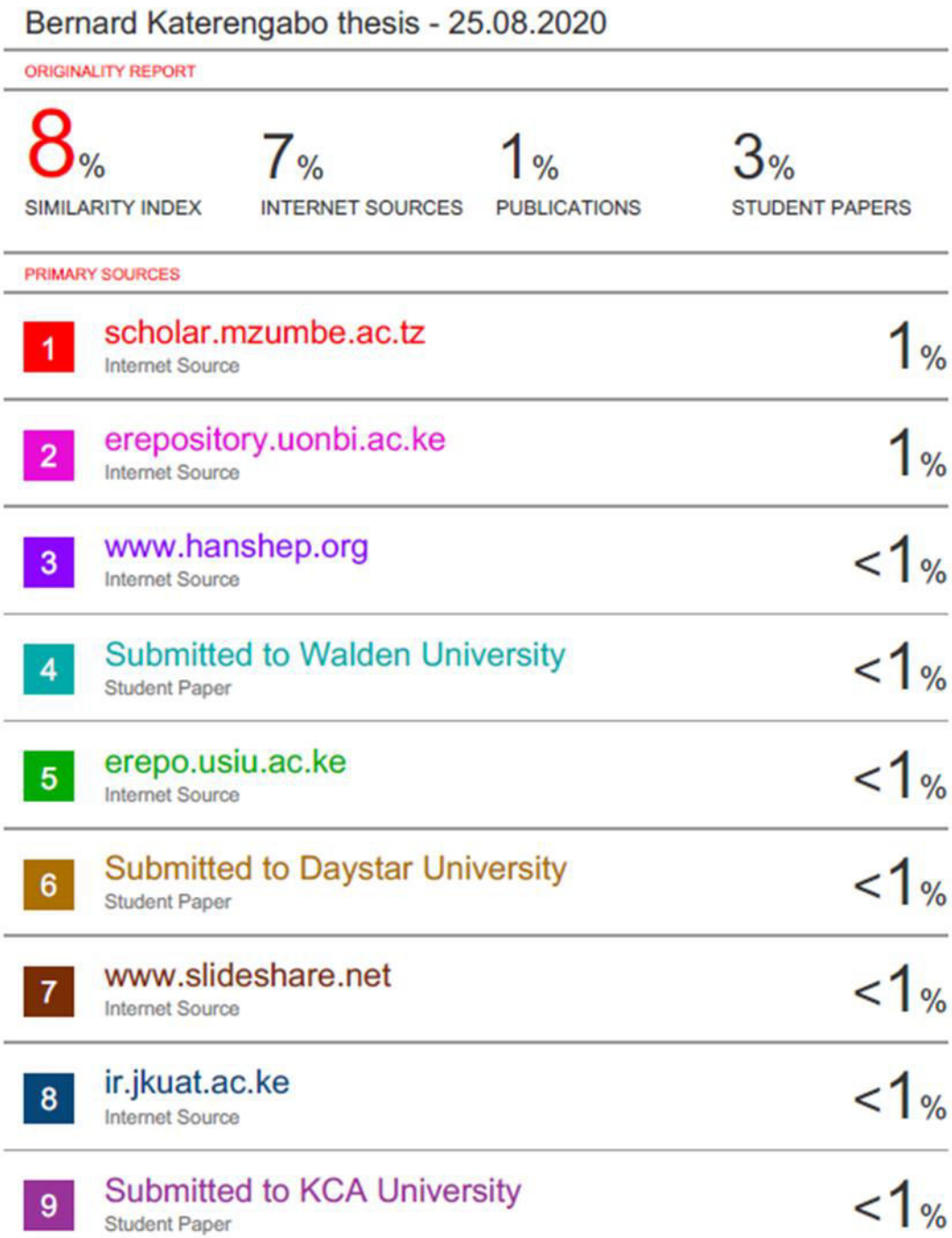
4 Research shall be confined to the following region(s): **Arusha.**

6. Contact/Collaborator: **Dr. Kanty Mtei, Mzumbe University**

7. Researcher is required to submit progress report on quarterly basis and submit all Publications made after research.

Prof. Mohamed Sheikh
for: DIRECTOR GENERAL

Appendix G: Plagiarism Report



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Bernard Katerengabo thesis - 25.08.2020

by Bernard Katerengabo

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