ASSESSMENT OF WILLINGNESS TO PAY FOR HEALTH INSURANCE BENEFITS AND ASSOCIATED FACTORS AMONG COMMERCIAL MOTORCYCLE RIDERS IN DAR ES SALAAM-TANZANIA

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By

Ismail Omary Luhwavi

A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Public Health of

Muhimbili University of Health and Allied Sciences
October, 2019

CERTIFICATION

The undersigned certify that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a Dissertation entitled**: "Assessment willingness to pay for Health Insurance benefits and associated factors among Commercial Motorcycle riders in Dar es Salaam, Tanzania'',** in (partial) fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

_____

Prof. Phare G. M. Mujinja, BA (Hon), CIH, MA, (Econ), MPH, PhD

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Ismail Omary Luhwavi**, declare that this **dissertation** is my own original work and it has not been presented to any other University for similar or any other degree award.

Signature…… **Date**……

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At last but not last, very special thanks goes to my family for keeping on supporting me and for their persistence during my absence.

DEDICATION

This work is dedicated to my lovely mother Aida C. Lukuta, my young sister Ulumbi Elias and my lovely son Malcolm Ismail Luhwavi for their tolerance for me throughout my study period.

ABSTRACT

Background information: In Tanzania like many developing countries, injuries due to motorcycle accidents represent a major public health problem resulting in high cost of health care among the commercial motorcyclists accident victims in Tanzania. Most of these victims spend exorbitant amount of money for treatment that takes a long duration, most of the risk involving money in case of an accident as not protected by any prepayment mechanisms.

Literatures have been done on motorcycle accidents and risk taking behaviors relating to payment of hospital cost and reduction of catastrophic expenditures among motorcycle riders.

There is knowledge gap on exploring willingness to pay (WTP) for Health Insurance benefits and associated factors among Commercial Motorcycle riders in Dar es Salaam, as the option to reduce the out of pocket payment.

Aim: The study aimed at exploring WTP for health insurance benefits as a health financing option and its associate factors (Socio-economic and demographic, health insurance benefit packages, premiums) among commercial motorcycle riders in Dar es n Salaam, and how it might be influenced by insurance related factors.

Methodology: A cross sectional descriptive study was using Contingent valuation methods (CVM) using Take It or Leave It (TIOLI) and open ended elicitation techniques with follow up questions was applied to determine the extent of willingness to pay for health insurance and associated factors among respondents. A sample of representatives was selected from their parking stations in Ilala Municipal. A scenario, elicitation and individuals characteristics questions was presented in a face to face interview with the respondent.

Sampling methods: Sample size of this study was 423. A random sampling was used to select 20 commercial motorcycle parking stations in Ilala Municipal during the working hours at the time of data collection. The list of parking areas was obtained from the respective authorities and was used as sample frame. The parking areas was randomly selected while 423 respondent was picked randomly from the box or table of random numbers.

Data analysis was done using SPSS version 24.0; Distribution of WTP was explored, mean, and median and range were determined, multiple regression (logistic) was applied to determine and explore the determinants of WTP in descriptive statistical value.

Results: Almost total of 423 respondents were interviewed, among them 95.7% were willing to pay for health insurance themselves and 77.8 % their willing to pay for themselves and their dependents for medical costs. The mean was TZS 62,500/= median was TZS 76,000/= and maximum WTP for health insurance was TZS 300,000/= as premium for health insurance per one person per years.

There was statistical significant association between willingness to pay for health insurance and socio-economic and demographic characteristics (age, education, and employment status, risk taking behaviors, income and information asymmetry

There was statistical significant association between maximum willingness to pay for health insurance benefit and risk taking behavior, awareness of health insurance benefits, insurance coverages and altruism (Willingness to include other peoples from principal member health insurance benefit package).

Conclusion and recommendations: Majority of respondents were willing to pay for health insurance benefits package and the mean was TZS 62,500/= median was TZS 76,000/= and maximum WTP for health insurance was TZS 300,000/= as premium for health insurance per one person per years. Further studies must be conducted to investigate other determinants of WTP for health insurance benefits packages to commercial motorcycle riders, because this group of population is growing rapidly. There is a need of special attention to strategize effective plan of health promotion, provision and protection as the means toward universal health coverage to all by promoting pre payments mechanism while reducing out of pocket payments and catastrophic expenditures among commercial motorcycle riders

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ABBREVIATION

CHF	Community Health Fund
CVM	Contingent Valuation Method
DAS	District Administrative Secretary
DED	District Executive Director
KIKOA	Bima ya afya Kwa kikundi cha ujasiliamali
MOHCDGEC	Ministry of Health, Community, Development, Gender, Elder and Children
MUHAS	Muhimbili University of Health and Allied Sciences
NHI	National Health Insurance
NHIF	National Health Insurance Fund
NOAA	National Oceanic Atmospheric Administration
NSSF	National Social Security Fund
OE	Open Ended
OOP	Out Of Pocket
PC	Payment Card
PR	Principle researcher
RA	Research Assistant
RAS	Regional Administrative Secretary
RTA	Road Traffic accidents
SHIB	Social Health Insurance benefit

STATA	Statistics and Data
TIKA	Tiba Kwa Kadi
TIOLI	Take It Or Leave It
TIRA	Tanzania Insurance Regulatory Authority
UHC	Universal Health Cover
W.H.O	World Health Organization
WTA	Willingness to Accept
WTP	Willingness to Pay

DEFINITION OF KEY TERMINOLOGIES

The definition of terns used in this study is based on operational

Commercial motorcycle riders there are people who ride motorcycle as means of transport for generating income.

Contingent Valuation Method; defined as a method of estimating the value that person places on product or services. The approach asks people to directly report their willingness to pay (WTP) to obtain a specified product/services, or willingness to accept (WTA) to give up a product/services

Health insurance benefits package it; defined as the benefits coverage that the insurer provides to insured (Registration fees, Investigation, medicine and medical supplies, surgical services, inpatient care services physiotherapy and rehabilitation services, eye and optical services, spectacles, dental and oral health services, medical/orthopedic application)

Health insurance; defined as the coverage that provided for the payments of benefits as a result of sickness or injury. It includes insurance for loses from accident, medical expenses and disability between insurer and insure.

Open ended question is defined as the questions designed to encourage a full, meaningful answer using the subject's own knowledge and or feeling. Also it includes follow up questions

Take it or leave it (TIOLI) is a method that use close ended questions on a certain price where respondent is asked to say Yes or No/don't know for the price presented

Willingness to pay **(WTP**) is defined as the maximum amount an individual is willing to sacrifice to procure a product or services.

CHAPTER ONE

1.0 INTRODUCTION

1.1. Background of the study

Health insurance is important aspect of National development in economic and social aspects. Therefore, it is important for countries to design and provide sufficient, effectiveness and efficiency financial risk protections to its citizens through appropriate health care financing systems (Carrin & James, 2005). Kimani et al., (2012) asserts that health insurance is one of the ways in which healthcare can be financed to improve access and affordable healthcare since the financial risk has been sheared among the insured, therefore, out of pocket payments will be minimized and facilitating universal health coverage to all community groups.

In Tanzania motorcycles known as bobaboda has become important means of transport in urban and rural areas' due to its ability to navigate door to door and in traffic jams. The majority of commercial motorcycle riders do not follow road safety measures and use personal protective equipment's like; wear helmets, use reflectors, over speed, and overload passengers` `Mishikaki``. Therefore, commercial motorcycle riders are at a high risk of getting severe head and traumatic brain injuries or death (WHO 2011 report). Moreover, Trafic reports estimate that motorcycle-related accidents account for 14% of reported road fatalities in Kenya, which stands at 3,000 per year (Okoth, 2013). But luck enough the proportions of insured commercial motorcycle were unknown.

The growth of hired/commercial motorcycles (commonly known as Boda boda in Tanzania) as a mode of transportation has increased road safety challenges (Annual Traffic Report, 2015). Statistics show that Dar es Salaam city alone is estimated to have between 50,000-80,000 commercial motorcycle riders. Evidence shows that as the number of motorcycles rises, the number of accidents, especially to motorcycle riders, will increase (Umar et al, 1995; Widyastuti, 2012).Injuries due to motorcycle accidents represent one of the major emerging public health problems in developing countries. They contribute significantly to the overall road traffic injuries (Peen, 2004; Kobusingye, et al, 2001; 2002). Available evidence from

Tanzania traffic reports (2015) indicates that 54% of accidents are associated with motorcycle injuries which lead to increase cost of treatment and hospitalization among the victims.

Injuries caused by motorcycle accidents make up a significant proportion of serious traffic accidents, being a significant cause of increased morbidity and mortality in the world, especially among young males. Every day, nearly 3,000 people die and 30,000 are seriously injured in traffic accidents worldwide. Costs of treatment among injured motorcyclist are high when considering developing countries where the vulnerable are young people. In 2020, road traffic collisions tend to reach the third leading cause of death and disability in the world. (WHO, 2010 report)

There has been little effort to estimate the costs of health care among motorcycle rider's injuries in Tanzania.However, cost of treatments resulting from commercial motorcyclist injuries has become a major public health problem, while majority of the victims suffer catastrophic expenditure because the accidents are sudden event, where most of them are forced to pay out of pocket. Additionally, about 1.67% of Motorcyclist populations are pushed below the poverty line due medical cost when they are injured (Kudebong *et al.*, 2011). The cost of medical service continues to push millions of people below poverty lines (Omar, 2015). Social protection mechanism such as health insurance provides financial protection that arises from medical related events.

1.2 Problem Statement

Road injuries resulting from motorcycle riding in both rural and urban areas in Tanzania have increased tremendously; 54% of accidents are associated with motorcycle injuries, which lead to increase cost for health services in health facilities (Tanzania traffic report, 2015).This has resulted into a rapid increase of the cost of medical treatment among the victims (Race and Carlile, 2004,)

The injuries and costs of medical treatment has increased due to reckless driving and dangerous road conditions, motorcycle defects, inexperienced riders, over speeding, driving under influence of alcohol and unsafe lane change.

This increase in injuries and costs of health care have also resulted in increase of the victims, expenditures on health care due to the sudden happening of the accident event; where most of them are forced to pay out of pocket with limited financial protections. The cost of treatment is also increased by the long term duration of treatment among some of victims, pooling some of these below poverty line (Oyekale, 2012,).

Various initiatives have been implemented in Tanzania to minimize the motorcycles injuries and cost of treatments. These include Road act, 2007, Road week safety, wearing helmets campaigns, pre payments mechanisms. However the motorcycle accidents have not been reduced accordingly.(Broughton, 2011)

The gap of this study is that; there is no study conducted on willing pay for health insurance benefits in Tanzania..

This Dissertation, therefore aimed at assessing Willingness to pay specifically on joining pre-payment mechanism as means of cushioning for escaping catastrophic expenditure in case of a happening of motorcycle accident that would result into injuries that need health care. Specifically, the Dissertation aimed at exploring the WTP for health insurance benefits and associated factors as a health financing option among commercial motorcycle riders in Dar es Salaam (TZA-CHF).

Health insurance is an important financing mechanism that cautions the loss of incomes, in case of accident happening for motorcycle riders, in Tanzania the probability of an accident is higher and hence seeking care. Additionally, the cost of treatment are likely to be high. Understanding the WTP of motorcyclist to join health insurance mechanism is therefore of public health importance (Foreit *et al.*, 2004).

1.3 Rationale of study

i. The study findings will be used by commercial motorcycle riders to explore befits of health insurance.
ii. Also the study findings will add knowledge on issues of willingness to pay for health insurance benefits among commercial motorcycle riders.
iii. The study findings will be used by insurance companies and they can influence options to cover the commercial motorcycle riders.

1.4 Research Questions

This Dissertation was focus on the following questions

1.4.1 Main research question

To what extent are Motorcycle riders willing to pay for health insurance benefits and what are the determinants associated with willingness to pay among commercial motorcycle riders in Dar es Salaam**?**

1.4.2 Specific research questions

Specific research questions

1. What is the maximum amount of premium for health insurance that commercial motorcycle riders in Dar es Salaam are willing to pay for an Insurance benefits?

2. What are the motorcycles riders socio-economic, demographic factors associated with Willingness to pay for health insurance among commercial motorcycle riders in Dar es Salaam

3. What are the Health insurance benefit packages that motorcycle rides would be willing to pay for?

4. What are the risk taking behavior associated with willingness to pay for health insurance benefits among commercial motorcycle riders in Dar as salaam?

1.5 Research Objectives

1.5.1 Main research objectives

To assess the willingness to pay for health insurance benefits and associated determinants among commercial motorcycle riders in Dar es Salaam.

1.5.2 Specific research objectives

1. To determine the maximum health insurance premium that commercial motorcycle riders are willing to pay

2. To identify socio-economic, demographic factors associated with Willingness to Pay for health insurance benefits among commercial motorcycle riders in Dar es Salaam?

3. To explore the Health insurance benefit packages that commercial motorcycle riders in Dar es Salaam would be willing to pay for.

4. To assess the risk taking behaviors associated with willingness to pay for health insurance benefits among commercial motorcycle riders in Dar as salaam.

1.6 Conceptual framework of WTP for health insurance benefits among commercial motorcycle riders

The conceptual framework for this research shows the variables associated with the Willingness to pay for health insurance benefits among commercial motorcycle riders in Dar es Salaam.

This study was focused on exploring willingness to pay for Health Insurance benefits and associated factors among motorcycle riders in Dar es Salaam. The association factors concerning with the following variables;

i. Demographic characteristics of motorcycle riders. (Age, marital status.)

ii. Socio-economic economic factors. (Income level, education level.)

iii. Health insurance benefit packages (Registration fees, physiotherapy fees.)

iv. Willingness to join for health insurance

v. Risk behavior associated with willingness to pay for health insurance benefits among commercial motorcycle riders in Dar as salaam as the variables which influence the outcome variable; that is Willingness to pay for health insurance benefits. (Risk averse, risk seeking and risk neutral)

vi. Willingness to pay for health insurance benefits(Maximum WTP value)

The conceptual framework below for this study were constructed based on the willingness to pay for health insurance studies and associated factors. In this study, the factors associated with willingness to pay health insurance benefits, were identified and grouped into; Socio-economic and demographic characteristics, risk taking behaviors, health insurance benefits packages while willingness to join the health insurance will influence the willingness to pay for health insurance.

Therefore; this study aimed at exploring willingness to pay for health insurance benefits and associated factors among commercial motorcycle riders in Dar es Salaam.

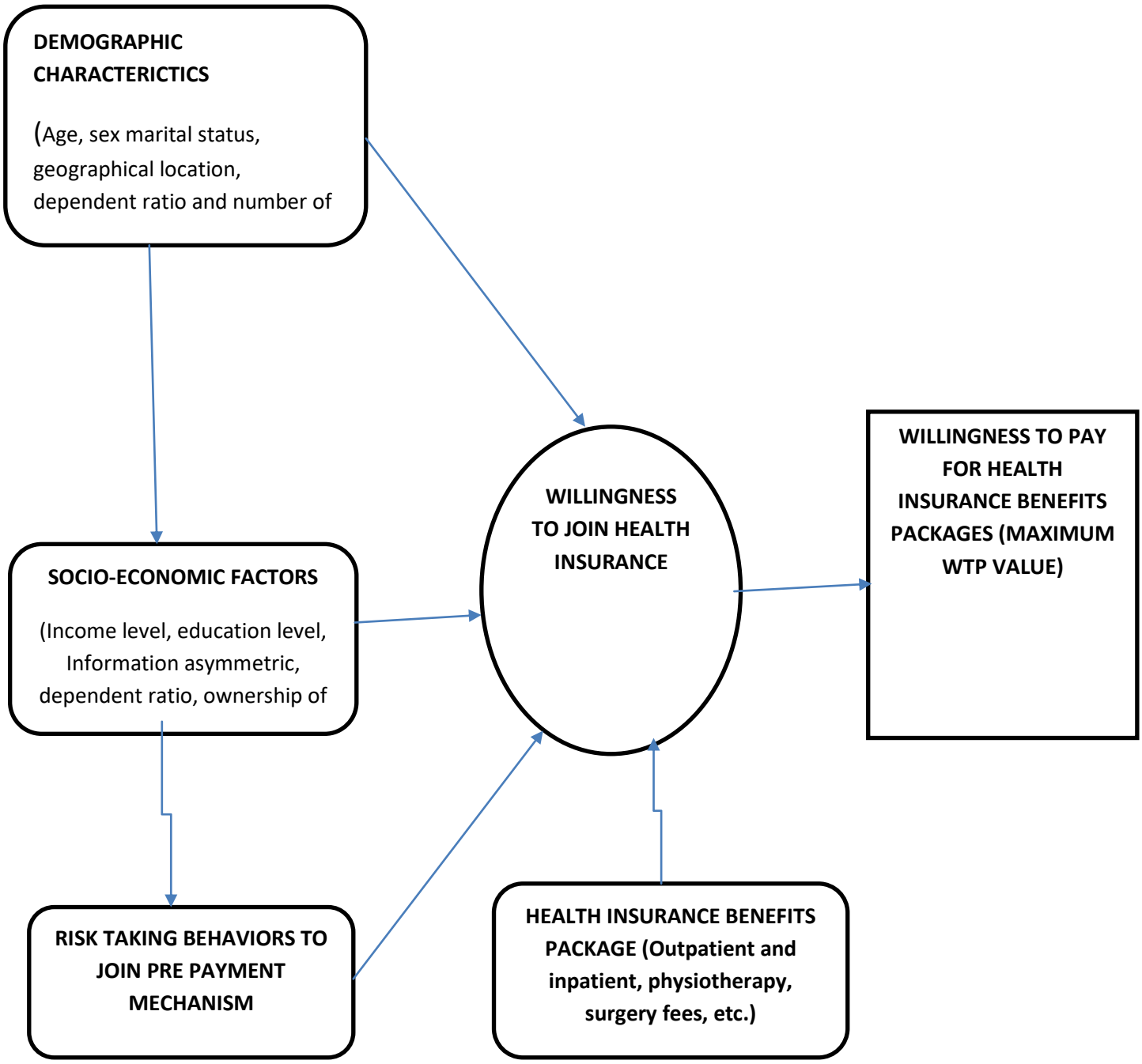


Figure 1: Conceptual framework of willingness to pay for health insurance benefits among commercial motorcycle riders

Source; (my own format)

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Measuring willingness to pay

Willingness to pay is the maximum amount of money a person voluntarily to pay for health improvement or avoiding health risk, and Willingness to Accept (WTA): the minimum amount of money a person voluntarily is willing to accept for compensation to let go of health improvement or take a health risk.(Asenso-Okyere *et al.*, 1997)

Different literature have proposed the classification of the existing methods for WTP estimation (Marbeau 1987). According to Grunert et al. (2009) WTP information is vital for checking the expected profitability for new product development, product improvement, product differentiation, and line extensions. Also, Shafter and Zhang (1995) signified that WTP is critical for promotional activities.

Two major distinctions among WTP methods are whether they measure WTP directly or indirectly, and whether they determine consumers' hypothetical WTP or actual WTP (Miller et al., 2011). What majorly distinguishes actual and hypothetical WTP methods is the quality of the data. Hypothetical WTP data are gathered solely via simple questionnaires by asking the respondents to state their preferences for a hypothetical product. Actual WTP data are gathered through sophisticated research designs like simulated market transactions (Silk and Urban 1978), experiments (Vickrey, 1961; Becker et al., 1964) and incentive-align surveys (Miller et al., 2011; Ding, 2007).

The Usefulness of WTP and WTA in economic decision making process is to provide information which will help policy makers to understand the demand of public goods, price level and associate determinant which influence individuals WTP for. This study will use hypothetical purchase context and contingent valuation as direct measures to elicit WTP for health insurance among commercial bodaboda riders in Dar es Salaam.

2.2 Factors affecting willingness to pay studies review

Health status of country/individuals is influenced by economic status of that particular country/individuals. The study conducted In Pakistan shows that; many people have no access to quality healthcare services, this is due to health care financing depend much on private out-of-pocket payment while willingness to pay for health insurance and its determinants mostly influenced by; disability in the household, sickness of any household member in last 30 days, sold any household item for the treatment of any household member, Income of the household and awareness about health insurance (Bach Xuan Trana, 2013). Another study was conducted in Ethiopia based on socio-economic factors that affect the willingness to pay (WTP) of households. The findings shows that willingness to pay for health insurance and its determinants mostly influenced by; sex of the respondent, Age of the respondent, education level, Income of the household, distance of the household from the source of water (meter) ,Household monthly water expenses, marital status of respondents, level of households satisfaction with the existing water service (Bias and Approaches, 2001) Also the study conducted in Tennessee based on the effects of demographics and attitudes on Willingness-to-Pay for Fuel, shows that; age, gender, marital status, geographical location, occupations and ethnicity, race, interests, opinions and lifestyle may influence the WTP for in positive way or negative ways.(Carson, 1997). Also another study conducted in Kisarawe Tanzania looked at willingness to pay for treated bed nets used household survey on socio-economic characteristics and the findings reflected that that respondent was willing to pay and some was influenced by bed net colors Mujinja, 2002). Another study was conducted in Dodoma, Tanzania looked at residents' willingness to pay for improved solid waste management. The findings shows that majority of respondent their WTP for improved System of waste management, in all attributes have positive signs showing that the welfare of the respondents increase as the attributes of system of waste management were improved. The respondents were willing to pay an additional $ 0.237 which was equivalent to TZS 391.05 if the collection frequency was improved, $ 0.189 which is equivalent to TZS 311.85 if the transport mode was improved, and $ 0.153 which is equivalent to TZS 252.45 if the disposal method was improved (Moussa. 2015)

The study conducted in Nottingham based on protection insurance and financial wellbeing shows that; injuries and protection issues of health, influenced by risk management that individuals and households have the following options; Jensen et al,(2012).

- To Reduce the risk, by reducing either the likelihood of an adverse event or the severity of any consequences (both financial and in terms of reductions in quality-adjusted life expectancy),
- To protect by using insurance, and/or
- To provide additional liquidity, through precautionary saving.

The study conducted in Tanzania based on Assessment of the Willingness to Pay for Organic Products amongst Households in Morogoro Municipal. The researchers surveyed 100 households using semi-structured questionnaires to examine their perception about organic products and assess their willingness to pay for such products. The study revealed that 78% of the respondents are willing to pay price premium. Results also indicated that the main reasons for purchasing organic products are environmental and health benefits. Findings provide more evidence on consumers underlying purchase motivations and the need to establish appropriate market strategies to develop the future demand (Demonko et al, 2011).

2.3 Health care financing and insurance in Tanzania

Early 1990s the government of Tanzania adopted health sector reforms program that changed the financing system from free services to mix financing mechanisms including cost sharing policies. Cost sharing in the form of user fees was introduced in four phases: Phase I from July 1993 to June 1994 to referral and some services in regional hospital; Phase II from July 1994 to December 1994 to regional hospital; Phase III from January 1995 onwards to district hospital and Phase IV introduced to health Centre and Dispensary after completion of introduction to all district hospital. Exemption and waiver were integral part of the cost sharing policy introduced in 1994.(Berendes *et al.*, 2011)

Health care financing and insurance is among the key component of a functional health system. (Bonu et al i 2003). Financing involves three aspects, namely revenue collection, risk pooling, and purchasing. In recent years, there has been a growing demand for access to high-

quality and affordable health care for all, thus the government is committed to respond with a process of developing health financing strategy (Castellani *et al.*, 2015). An inter-ministerial steering committee has been developed, composed of key ministries and department to ensure that the proposed reforms meet the needs of the population (Chee, 2002). Improving the prepayment mechanisms are the main agenda in the development of the strategy, which is assumed to be a potential facilitator in the progress towards UHC (Fichera and Savage, 2015). Tanzania has made efforts to expand health insurance coverage. However, health insurance remains highly fragmented, with a variety of schemes in existence. Overall, coverage is low, reaching less than 20% of the population nationally. In the absence of health insurance, households are typically required to make high out-of-pocket payments, limiting access to care for the poorest groups WHO, (2016).

The largest health insurance scheme, the National Health Insurance Fund (NHIF), is compulsory for public servants and began operations in 2001. The NHIF is administered by an independent body answerable to the Ministry of Health, Community Development, Gender, Children and Elderly (MOHCDGCE). However, given that over 90% of the population in Tanzania work in the informal sector, this fund has a limited reach. The Community Health Fund (CHF), a voluntary pre-payment scheme, is another large scheme targeting the informal sector especially in rural areas with support from the World Bank, then MOHCDGE rolled out the CHF in 2001, managing it at the district level. A third insurance scheme known as “Tiba kwa Kadi” (TIKA) that intends to operate on a similar basis as the CHF but is implemented in urban councils. Another is Social Health Insurance Benefit (SHIB) established as a benefit under the National Social Security Fund (NSSF)) (Tundui and Macha, 2014)Recent statistics shows that there were about 7 private health insurance firms as indicated in the Tanzania Insurance Regulatory authority (TIRA),

2.3.1 National Health Insurance Fund (NHIF)

Health Insurance Fund (NHIF) is the outcome of a 1990-1992 study on the long-term options for financing health services in Tanzania. It was established by an Act of Parliament: Act No. 8 of 1999. The scheme commenced its operations on 1st July 2001 by members and their

respective employers starting to contribute, together with the 2002, 2005 and 2009 Amendments to it that calls for forceful membership. Public servants they no choince of joining any health insurance Fund (Mandatory memberships). While for private and informal sector employee are fall under voluntary membership. NHIF provides services to accredited facilities around 600 across the country July 2015 NHIF has contributing members 640,341 132 and beneficiaries was 3,237,434, 155.

The following are types of NHIF membership

1) Retiree membership;
2) Public institutions employee membership;
3) Toto Afya Card membership; Student's membership; of
4) Staffs of Religious Denomination
5) Private groups of entrepreneurs (KIKOA**);** KIKOA is a health insurance scheme for groups in the informal sector e.g. VIBINDO, SACCOS, AMCOS, VIKOBA and special groups of registered entrepreneurs like motor cycle drivers (boda boda), food vendors or.

   Members of KIKOA contribute **TZS 76,400** per person on a yearly basis and are issued with NHIF membership ID cards to be used for medical treatment in over 6,000 accredited Health facilities registered by NHIF in the country.
6) Private membership

2.3.2 Social Health Insurance (SHIB)

Social Health Insurance Benefit (SHIB) is part of the National Social Security Benefits introduced in 2007. All members of NSSF have access to medical care through SHIB after undergoing registration process with only one health facility of their choice. The scheme accredits both public and private health care providers. The benefit is part of their 20% contribution to the NSSF (Chee, 2002)

2.3.3 Community Health Fund (CHF) and Tiba Kwa Kadi (TIKA)

Community Health Fund is the scheme that targets the largest population in the rural areas and informal sector, while membership is voluntary. There is a counterpart called TIKA which mainly targets the informal sector individuals in urban areas. The CHF and TIKA are both regulated under the CHF act 2001 and managed at district level. Council Health service boards (CHSB) and health facilities governing committees (HFGC) are responsible to oversee the operation of CHF and sensitization. In 2009 the National management role of CHF was given to the NHIF.

2.3.4 Private insurance schemes

According to TIRA, there are private health insurance schemes in Tanzania in the large extent covers private sector, and for each additional beneficiary from the principle member more cost is incurred.

The following are some of private health insurance operates in Tanzania;

1. Strategies is one of the first registered (2002) private health insurance firms in Tanzania. Members of Strategies insurance are corporate employees/Individuals and to become a members is through registration to firm and payment of contributions. Have benefits p=package which vary by age between 790,200/ TSH premium minimum for below 30 years to 2,435,400/- minimum premium for above 60 years of age for a single principle member without beneficiaries on year base(Castellani *et al.*, 2015)
2. Jubilee Insurance, Resolution Health,
3. Alliance Insurance corporate Ltd and
4. Metropolitan Insurance are other examples of private health insurance firms with less similar features as strategies and
5. AAR. (Berendes *et al.*, 2011)

2.3.5 Health insurance coverage in Tanzania

Health insurance coverage is still low in Tanzania. As of June 2013 NHIF was estimated to be covering about 6.6% of the population while CHF covers about 7.3% of the population based on 2012 Census. Beneficiaries of NHIF includes the contributing members, spouse and up to four dependents. The CHF beneficiaries include head of household, spouse and all children below 18 years. Other prepayment schemes cover less than 1% of the population.(Bonu, Rani and Bishai, 2003) CHF mainly focuses its coverage in rural population while private health insurance schemes target urban population. Low insurance coverage leads to overreliance on direct payment at the point of use of health care, which is among the fundamental problem that restrains the move towards universal health coverage in many developing countries. Direct payment can lead to high level of inequity, and in most cases denying the poorest access to needed health care.(Berendes *et al.*, 2011)

2.4 Contingent Valuation Method

Contingent valuation (CV M) is a survey-based method frequently used for placing monetary values on environmental, health goods and services that not bought and sold in the marketplace. CVM is usually the only feasible method for including passive use considerations in an economic analysis (RT Carson, 2000).

Hypothetical market would be used in CVM to reproduce actual market to reveal the preference of health insurance services. Respondent will be asked to reveal how much they would be willing to pay or willing to accept, the choice of elicitation approach for CVM may use discrete or continuous valuation to elicit values for WTP with format of open ended and closed ended or dichotomous choice questions (Hanley, Mourato and Wright, 2001; Carson and Hanemann, 2005). The Dichotomous technique was more recommended by the US National Oceanic Atmospheric Administration (NOAA) to be superior to open ended formats due to its minimal bias and more efficient to measure produced by dichotomous choice.(World Health Organization, 2000)

Normally continuous and discrete approaches will be used in contingent valuation to elicit value for WTP for health insurance services in this study (Arrow et at, 1993).

There are two major groups of CVM; continuous and discrete, are commonly used to elicit WTP values. The discrete choice approach consists of take –it –or-leave –it (TIOLI) and the bidding game (BG). While the continuous choice approach consist of the open-ended (OE) and payment card (PC). The Take it or leave it (TIOLI) approach use the close ended questions on a certain price and asks respondents to say yes or No/don't know for the price (Walraven, 1996) Recently the researchers introduced the follow-up questions and scenario's to improve the level of precision of the WTP estimations. In the bidding game approach (BG), asks respondent at incremental levels what would be willing to pay. For example: "Would you pay Tsh 76,400 for health insurance per one person per year?", "Yes", "Ok, Would you pay Tsh 229,200 health insurance per two people per year?" and so on. It is possible to go from a low value and increase the price until the respondent reaches the highest valuation. In open-ended questions (OE), the respondent is simply asked to reveal the maximum amount that they would be willing to pay for a good or service without the researcher giving a cue what an expected value for the service is. (Tundui and Macha, 2014).This may be problematic for some people who do not know to read. Payment card approach (PC), asks the respondents to simply mention their value for non-marketed goods or services from an ordered sequence of cards presented, and to choose the value that represents the maximum WTP for the good or services (Thiede, Akweongo and McIntyre, 2007).

Different studies have used CVM to eliciting WTP for health care programs in Africa, particularly Tanzania (Aderamo and Olatujoye, 2013)(Kumaranayake *et al.*, 2000) (Kuwawenaruwa, Macha and Borghi, 2011) For instance, in Tanzania CVM has been used to value the WTP for district hospitals services among patients and households in north-west rural of Tanzania, also another study looked at exploring determinants of consumer preferences and willingness-to-pay for insecticides treated bed nets before intervention in a poor rural Tanzania by looking into house hold factors (Mujinja, 2002). In south Sudan, the CVM was conducted to measure the WTP for National health Insurance Fund among public

servant in Juba city and the results showed that Willingness to pay is mainly influenced by awareness, alternative sources of individual income, household size, insurance cover and religion. (Khwaja, 2010)Most of the public servants were aware of and willing to pay for NHIF and prefer a premium of up to 5% of their total monthly income (Ogubi et tal, 2017). In Tanzania CVM has been used to measure the effects of social capital on WTP for health insurance services provided through community health fund (CHF), the effects are associated with age, education level, and household size and level income (Tundui and Macha, 2014).

The ideal would be to obtain individuals' WTP from observing their choices in the preferences in hypothetical market. Interest in CVM has increased over the last decade or so because:

- They are the only means available for eliciting values for market and non-market goods and services
- Improved statistical methods for testing and correcting sample selection bias in discrete choice continent valuation studies are available and are found to perform well (Eklof and Karlsson,1999)
- The Yes/No design would seem to encourage protest answers, the follow –up questions might help to avoid protest answer and understanding of the reason for the choice made. Minimization of the protest answer improves efficiency in the analysis of determinants of WTP

The main challenge posed to economists by the widespread use of CVM is that CVM survey is complicated to design and expensive to administrate but, as Carson et al. (2001) argued, many of the alleged problems with CVM may be solved by careful design and administration of this survey. The main advantage posed by the use of CVM in economics has been its ability to measure the benefit of WTP and economic changes in a large amount of situations (Bias and Approaches, 2001)

In this Study both CMV approaches was used; discrete and continuous especially TIOLI, Open ended questions and closed up questions with follow up questions due to its effectiveness and efficiency in measuring WTP for health insurance among Commercial motor riders in Dar es salaam and its associated determinants.

2.5 Willingness to pay for health insurance studies

Willingness-to-pay studies are increasingly being used in the evaluation of health care program in developed and developing countries However, there are methodological interest varying in which willingness-to-pay questions are presented to respondents in contingent valuation for health care. Studies on willingness to pay for health insurance schemes and associated determinants have been done in some countries. In Tanzania a study has been conducted on WTP for voluntary health insurance looking on enrollment of household, insurance benefit packages and insurance premiums,(Kuwawenaruwa et al, 2011). Also in Nigeria study conducted on WTP for community health insurance and its determinants among household heads in rural communities in North –Central Nigeria looked at socio-economic status of the households and enrollment level, (Babatunde, 2012). The study conducted on willingness to pay for National Health Insurance among Motorcycle Taxi Driver in Depok City, Indonesia, (Castellani *et al.*, 2015).Shows that average income of motorcycle taxi drivers in Depok City was lower than the minimum wages and insurance premium (Pujiyanto, 2017).The ability of households to pay for healthcare services depends partly on the level of household income (Hayward et al., 2000). While studies have found that healthcare is a normal good, the estimates of the income elasticity of the demand for healthcare have shown considerable variation. This is probably due to the various measurements used for income (Benzema et al., 2001). Nevertheless, several studies have found a significant effect of income on the utilization of medical care facilities (Gerdtham, 1997; Windmeijer and Silva, 1996; Van Doorslaer et al., 1993). Some studies in particular showed that healthcare is a normal good with a low income elasticity (Mocan et al., 2004; Di Matteo and Di Matteo, 1998; Hitiris and Posnett, 1992; and Rosett and Huang, 1973).If education leads to efficient investments in health, Grossman (1972) proposed that a more educated individual will demand a greater stock of health. Many studies since then have supported this finding (Grossman, 2003; Grossman and Kaestner, 1997). However, more recent research carried out in advanced economies such as Sweden, Denmark, Europe and the U.S. (Fuchs, 2004, Spasojevic, 2003; Arendt, 2002; Lleras-Muney, 2002) failed to show that a higher level of education leads to better health.

This study therefore will look at the factors associated with WTP for health insurance among commercial motorcycle riders in Dar es Salaam and its associated determinants; demographic characteristics, socio-economic status, risk taking behaviors and health insurance benefits package.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Description of the study area

The study was conducted in Dar es Salaam, Tanzania. Dar es Salaam Region is divided into five administrative Municipals; Ubungo, Kinondoni, Kigamboni, Inala, and Temeke. All five districts are governed as municipal councils, and all of the city's suburbs and wards are affiliated within them, while the Area skim is 1,393 and population of about 4,364,541 Tanzania census (2012).

Dar es Salaam is one among the busiest cities in the country; attracts commercial motorcycle to become one of the dominant means of transport within the city and Ilala Municipal was randomly selected as the study area.

3.2 Study Population

This study was focused on commercial motorcycle riders, aged 18 years and above. These were motorcycles riders who park at registered stations/packing areas within Ilala municipals, both who own the motorcycle and those who are employed. Statistics show that Dar es Salaam city alone was estimated to have between 50,000-80,000 commercial motorcycle riders Tanzania traffic report (2015)

3.3 Study design

This was a cross sectional descriptive study using Contingent valuation methods to elicit WTP using take it or leave it (TIOLI) and open ended technique with follow up questions, elicitation technique were applied to collect data on willingness to pay for health insurance benefits and associated factors among commercial motorcycle riders in Dar es Salaam (Broughton, 2011).
The above elicitation techniques was chosen to balance the direct and indirect measures of contingent valuation; discrete approaches to elicit values for WTP were used in the form of open ended as continuous and take it or leave it as a discrete or dichotomous choice; Take it or

leave it (TIOLI) and open ended question with follow up questions has the rationale in conducting contingent valuation studies.

The usefulness of Take it or leave it (TIOLI) and open ended question with follow up questions playing a greater role on WTP and WTA in economic decision making process; to provide information which will help researchers and policy makers to understand the demand of public goods, price level and associate determinant which influence individuals WTP for. Hypothetical purchase context and contingent valuation as direct and indirect measures to elicit WTP for health insurance benefits among commercial boda boda riders in Dar es Salaam was used in this study**.**

A hypothetical market price was presented to the respondent, as a presentation of actual market to reveal the preference of health insurance benefits package provided by Health Insurance Company. Respondent was asked to reveal how much they would be willing to pay. Discrete and continuous valuations approaches to elicit values for WTP was used. These formats were open ended as continuous and take it or leave it as a discrete or dichotomous choice (Arrow et at, 1993).

Continuous and discrete, were commonly used to elicit WTP values. Take –it –or-leave –it (TIOLI) while the continuous choice approach consist of the open-ended (OE). The Take it or leave it (TIOLI), close ended questions on a certain prices of health insurance premiums was asked to the respondent to say yes or No/don't know for the health insurance premium with follow up questions

For the open-ended question (OE), the respondent was asked to reveal the maximum amount that he would be willing to pay for a health insurance premium without be giving a cue on what an expected value for the premium was.

3.4 Sample size

Mitchel and Carson (1989) suggest that the sample size for a TIOLI study should not be less than 400.

The Cochran formula of calculating sample size is used to calculate the sample size

Given formula $n= z^2p\ q/e^2$

Where n= the minimum sample size

z= Standard value which correspondents=1.96 for 95% confidence level

p =Expected proportion of WTP for health insurance among motorcycle riders to be 50%, because of the unknown WTP among them

e= is the desired level of precision (i.e. the margin of error) 5% for P values

q= 1-p

Therefore;

n= 1.96*1.96*(0.5*0.5)/0.005*0.005

n=384.16, considering 10% non-response rate=38.416

n= 384.16+38.4169=422.576 rounded up to 423.

Hence 423 commercial motorcycle riders were included in the study

3.5 Inclusion criteria

All Commercial motorcycle riders registered within their parking stations in the respective study municipals were included in the study.

3.6 Exclusion criteria

All Commercial motorcycle riders who had just started on the business on the day of interview within the parking stations were excluded. Because of lack of experience of risks associated with ridding commercial motorcycles, but even though they're in high risk also of getting injuries. Also all commercial motorcycle riders who were refuse to participate in the study were excluded

3.7 Sampling procedures

A random sampling was used to select 20 out of 50 commercial motorcycle parking stations in Ilala Municipal during the working hours at the time of data collection. The list of parking areas was obtained from the respective authorities and was used as sample frame. The parking was randomly selected while 423 respondent were picked randomly from the table of random numbers.

3. 8 Data collection tools/instruments

A. Data collection tools/instruments

An English study tool (questionnaire) that containing the scenario, questions of both approaches, the follow up questions and the individual characteristics were developed. It was translated in Kiswahili and later retranslated in English. The Kiswahili questionnaire was used for data collection.

The following WTP contents was included;

1. Scenario contains description of health insurance benefits packages,, payment method and period cover/renewal, benefits package, importance of health insurance and effect of payment for health insurance benefits, premium.
2. Demographic characteristics i.e. Age, geographical location, marital status, sex
3. Socio-economic characteristics; ,Education level, health expenditures, information asymmetry, dependent level in the family, awareness of health insurance, level of income per month.
4. Questions on WTP for health insurance benefits package, both open-ended and TIOLI questions including follow up questions
5. Risk taking behaviors of commercial motorcycle riders (Risk averse, risk neutral and risk seeking)

B. Recruitments and trainings

Two (2) research assistants was recruited and trained for three days. The scope of training includes; research questions to answered, objectives of the study, study area, study population, data collection procedure and tools, importance of confidentiality and the ethical consideration, timeframe and budget of the study, interviewing techniques and handling of respondents

C. Pre-testing of Data collection tools/instruments

Pre testing of the Kiswahili questionnaire and the scenarios was conducted to50 commercial riders' at their parking stations in Kinondoni Municipal. Pre-testing help the team to identify problems content validity of questionnaire, and corrections was done before administering the tools for data collection using CSEnty data collection tool for android phone.

3.9 Data collection procedures

Permission to interview the respondents. Chairmen/leaders of motorcycle stations /packing areas was further approached to allow research team before the motorcycle riders are contacted to the interview. Face to face interview was conducted.

Upon arrival at the field during data collection, the participant was invited for the interview. Introduction of the research team was done by the PR and or RA. Face to face interview was concocted by PR and two RA, data was collected by using Kiswahili questionnaire with structured questions. Respondent's verbal concert were sought before the interview starts. Respondents also was assured of confidentiality.(Pearce and Özedemiroglu, 2002)

The scenarios was include, but were not limited to, discretion of health insurance benefits package

1) The health insurance scheme and its benefit package
2) Benefits of using health insurance
3) The premium and payment mechanism (Mode of payment)
4) Coverage of benefits packages
5) Duration to be ensured from health insurance

6) Accessibility and affordability (The budget portion require to pay the premium)
7) Covered number of dependent from principal members
8) Benefits to dependents

A contingent valuation scenario on WTP for health insurance among motorcycle riders was presented to the respondent. A health insurance benefits package was presented to the respondent. The health insurance demo card was shown to assure respondent that demo card did not differ from original health insurance card, in size and or shape or color. The scenario was presented to the respondent, and lastly the respondent were asked to respond to the WTP questions, where iterative prices was presented. Four bids was presented randomly to the respondent. Only four bids were used because they had shown to generate demand curve on TIOLI studies.(Oyekale, 2012)(Dong *et al.*, 2004)

To curb the strategic bias interviewers alternated the starting point from one respondent to another. The iterative system were followed by TIOLI question, as presented by Mujinja (2002). All respondents were asked; why they was chose the response they made.(Dong *et al.*, 2005)

A take it or leave it (TIOLI) with a follow up question was used to elicit WTP. Only four bids were stated ``bids'' (Tsh 76,400 per one person, 152,800 per two people. 229,200 per three people, 305,600, per four people, all these bids was based on year bases). Each respondent was supposed to respond to all bids.

A four choice format was used to avoid `Yes-saying'. After expressing preference, the respondent was asked to give reasons for the choice made. Furthermore, whatever the choice made out of the four alternatives, the respondent was further asked the maximum amount of willingness to pay for health insurance benefits, (Fichera and Savage, 2015).

Questions based on the following factors were asked after TIOLI using CSEntry data collection tool for android phones.

a) Demographic characteristics
b) Socio-economic characteristics

c) Awareness of health insurance
d) Risk taking behaviors (Risk averse, risk neutral and risk seeking)
e) TIOLI questions
f) Open- ended questions on WTP
g) Follow up questions

At the end of the interview, the respondent was asked to ask for any questions she/he had for more elaborations based on the study.(Mujinja, Makwaya and Sauerborn, 2004).

3.10 Study variables

3.10.1Dependent variables

- Willingness to join health insurance scheme (binary)-Yes/No

3.10.2 Independent variables

- Health insurance benefits package(Registration fees, Investigation, medicine, surgical services, inpatient care services, physiotherapy and rehabilitation services, spectacles, medical/orthopedic application)
- Demographic characteristics (age, sex, marital status, education level, geographical locations, dependents level in the household, awareness of health insurance scheme)
- Social-economic characteristics (Culture, lifestyle, technology, social organization, legal framework and politics, income level; health expenditure and information asymmetry).
- Risk behaviors taking behaviors (risk averse, risk seeking and risk neutral)

3.10.3 Outcome variable

- Willingness to pay (Maximum Value)

3.11 Data management quality control

The PR was ensured that the RAs was follow all procedures correctly. After each end of the day of interview, the PR was check the data collected by all RAs, the questionnaire filled by respondent and make correction accordingly. Data collection, profiling and cleansing process was done every day after data collect so as to facilitate coding of data so as to have accurate and complete information to answer the study objectives.(Mitchell and Carson, 2005)

3.12 Data entry

Data was collected through CSEntry tool for android phone and transferred into SPSS version 24.0. Frequency distribution table was produced and data entry mistakes were checked and corrected accordingly,(Nyakyi, Kuznetsov and Nkansah-Gyekye, 2014).

3.13 Data analysis

At this stage the analysis was done as per study questions/objectives, First, the survey results were analyzed to find out the WTP values, the distribution of WTP bids, variables associated with WTP for health insurance benefit package influencing WPT and risk taking behavior associated with WTP(Mujinja, 2002).

a) **Frequency distribution**: analysis of answers to open-ended valuation questions were found for estimation of WTP. The WTP mean and median was also used to estimate the respondents' valuation of health insurance and also the calculated percentage of the motorcycle riders who were willing to join health insurance at a certain price. The percentage of respondents who agreed to pay for health insurance benefits at certain bid prices (Tundui and Macha, 2014).

b) **Multiple regression between WTP and Socio-economic variables:** The socio-economic characteristics (age, sex, education, marital status, income level, dependent ratio, ownership of the motorcycle, health expenditure and awareness of health insurance, health insurance attributes (number of beneficiaries, coverage, benefits package and

expectation of motorcycle riders towards health insurance) risk taking behaviors that influence joining pre-payment mechanism (Waters, 2005).

Respondent who was respond negative or positively to the lowest and highest bids were analyzed to see if they, in one way or another, were associated with their responses,(Lang and Lai, 2008). The analysis also was help to address the question of who was willing to pay the highest price for health insurance and why? (Weiner, 2005).

It was help to find out if the attitudinal information reveals the effect that was expected from demand theory (Wagner *et al.*, 2001).

c) **The distributions of WTP for different premium prices:** Respondents with a positive and those who have a zero WTP was also tabulate to isolate respondents who dislike and like health insurance (Littman, 2009).

   The mean, mode, median, range and maximum WTP from open ended questions of amounts that the motorcycle riders was willing to pay for health insurance benefit were calculated and percentages of WTP among respondent was grouped and estimated(Pearce and Özedemiroglu, 2002).

d) **Risk taking behaviors, awareness of health insurance benefits package and health insurance determinants** was analyzed through Multiple regression analysis (logististic regression)to identify the relationship between independent variables, extraneous and dependent variables of this Dissertation, (Albertini*et al.*, 1997). Administrative

3.14 Ethical issues

Before data collection, Ethical clearance/approval was obtained from the Research Ethics committee of the Muhimbili University of Health and Allied Sciences (MUHAS). Permission to collect data in Dar es Salaam was obtained from the Dar es Salaam Regional Administrative Secretary (RAS), District Administrative Secretary (DAS) of Ilala Municipals. Also the research team was report respectively to street management office and Dar es Salaam motorcycle (bodaboda) associations in the respective Municipal and the research team was introduced to commercial motorcycle riders' stations. Research participants were informed

about the themes, their rights and significance of the study and asked for verbal/written informed consent for their participation in the research data collection.

There were certain behaviors in research- such as causing harm to individuals, breaching confidentiality, using information improperly and introducing bias- that are considered unethical in conducting research. These biases was minimized by researcher through the use of appropriate methodology in conducting a study.

Confidentiality were assured to respondents. The respondent was informed that the information they would provide would not be shown to anyone except the research team. They were also informed that the information provided would not be used for any purpose apart from the research objectives.

3.15 Study limitation and biases

The main limitation of contingent valuation is that it is not a direct measure of willingness to pay. One is not directly selling a good or service but rather speculating with a respondent about a potential good or service. This can lead to some broad categorizations of bias (Lofgren *et al.*, 2008).

1. **Hypothetical bias**

   Hypothetical Bias was observed from the fact that a "hypothetical" situation was presented to the respondent. Respondents had difficulty in taking situation seriously and they may not had understood what the health insurance benefit package would be provided. This was corrected by presenting the health insurance benefit package in the scenario and the respondents had enough information to make an informed choice (Lofgren *et al.*, 2008).

2. **Anchoring Bias**

Anchoring bias in this study occurred where the respondents have had a piece of information on proposed health insurance prices (premiums), respondents had no pre-established WTP before the survey, and that they build it through the follow-up questioning, taking into account their preferences and the proposed bids (Rozan 1999).

To minimize this bias; a closed-ended questions with follow-up questions were used to collect information, where by the respondent was randomly allocated to different price bids (premiums).

3. **Strategic bias;** Strategic bias in this WTP study was observed when the respondent wanted a specific outcome. This lead to false responses with higher or lower than the actual amount an individual was willing and able to pay. The approach to minimize this bias was that explanation provided to the respondent about importance of paying for health insurance and time was given to them to think about the health insurance premiums and benefits packages.

4. **Respondent bias;** the fear of losing customers and the need to fulfill the researcher's objectives might had was brought different implications on the study. This bias was minimized trough using minimum time to elaborate the importance of the study to the respondent and their contribution.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-economic and demographic characteristics of the study population

This study included a total of 423 commercial motorcycle riders in Dar es Salaam City. Study participants' age ranged from 19 to 53 years and all of them were male. Majority(68.2%) of commercial motorcycle riders were of the age group between 25-29 years. Furthermore, over 69.5% of the respondents had completed above secondary school education; while those below secondary school were (30.5%). Only (63.1%)had never married while, (29.1%) were married, about (7.8%) were divorced (Table 1).

Table 1: Socio-economic and demographic characteristics of the study population

Variable	Category	Frequency	Percent (%)
Sex	Male	423	(100.0)
	Female	0	(0.0)
Place of Residence	Ilala	87	(20.6)
	Kinondoni	81	(19.1)
	Temeke	62	(14.7)
	Ubungo	128	(30.3)
	Kigamboni	65	(15.4
Age of the respondent	19-24 yrs	8	(2.2)
	25-29yrs	288	(68.2)
	30-34yrs	101	(24)
	35 yrs and above	32	(5.6)
Marital Status	Married/cohabiting	123	(29.1)
	Divorced/Separated	33	(7.8)
	Never married	267	(63.1)
Level of education	Below sec school	107	(30.5)
	Above Secondary school	316	(69.5)
Average of money spent for treatment	60,000/= Tsh	358	(84.6)
	120,000/= Tsh	61	(14.5)
	180,000/=Tsh	4	(0.9)

4.2 Willingness to join health insurance and Socio-economic and demographic characteristics of respondents

Table 2 shows; more than 95.7% of respondents were willing to join a health insurance as principal members, while 77.8% of respondents were willing to join a health insurance as principal beneficiaries' members including other dependents in their health insurance benefits. Commercial motorcycle riders aged 25-28 years old (75.0%) were willing to join a health insurance scheme, while all respondents aged 35 years and above were willing to join a health insurance scheme. Those who had hand never married (56.2%) of commercial motorcycle riders were willing join a health insurance scheme compared to those who we married (81.3). All respondents (100.0) % who were reported to have had spent an average of TZS 180,000 in the last three months were more WTP for health insurance benefits compared to those who spend TZS 60,000 (55.9) and about 91.5% who had above secondary school education were WTP to pay for health insurance compared to those who had had education below secondary school (Table 2).

Table 2:Socio-economic and demographic characteristics of respondent by willingness to join for health insurance

Variable	Category	N (%)	Willing	Not Willing
Sex	Male (Principle member only)	423(100.0)	405 (95.0)	18(5.0)
	Principle member & dependents	423(100.0)	329 (77.8)	94 (22.2)
Age of the respondent	19-24 yrs	8 (2.2.)	6 (75.0)	2 (25.0)
	25-29yrs	282(68.2)	270(95.7)	12(4.3)
	30-34yrs	101(24)	98(97.1)	3 (2.9)
	35 yrs and above	32(5.6)	32 (100.0)	0 (0.0)
Marital Status	Married/cohabiting	123(29.1)	100 (81.3)	23 (18.7)
	Divorced/Separated	33(7.8)	10 (30.3)	23 (69.7)
	Never married	267(63.1)	150 (56.2)	117 (43.8)
Average of money spent for treatment	60,000/= Tsh	358(84.6)	200 (55.9)	158 (44.1)
	120,000/= Tsh	61(14.5)	39 (63.9)	22 (36.1)
	180,000/=Tsh	4(0.9)	4 (100.0)	0(0.0)
Level of education	Below sec school	107	76 (71.0)	31 (29.0)
	Above Secondary school	316(69.5)	289 (91.5)	27 (8.5)

4.3 Willingness to pay reported for different bids prices

Four prices were presented during the scenario presentation. These were TZS 50,000, 76,000,150,000 and 300,000. For TZS (50,000),(76,000), (150,000) and (300,000) prices presented, about 48.9%, 31.2%, 14.4% and 5.4% of the respondents were willing to pay for health insurance benefits respectively (Table 3)

Table 3: Willingness to pay reported by Respondents as per indicative prices

TZS (AMOUNT)	Number	Percent
TZS 50000	207	48.9
TZS 76,000	132	31.2
TZS 150,000	61	14.4
TZS 300,000	23	5.4
Total	423	100.0

4.4 Willingness to pay and Socio-economic and demographic characteristics of the respondents

Table 4.4 shows four prices were presented for each individual to show his willingness to pay. Majority among all age group were willing to pay TZS 50,000 per annum. About 51.1%, 48.5%, and 40.6% of age group 25-29, 30-34 and 35 and above were willing to pay TZS 50, 000 per annum for health insurance benefits package

Table 4: Willingness to pay and Socio-economic and demographic characteristics of the respondents

Variable	Categories	(TZS 50,000) n (%)	(TZS 76,000) n(%)	(TZS 150,00) n (%)	(TZS 300,000) n (%)	Total (n)
Age of the respondent	19-24 yrs.	3 (37.5)	4 (50.0)	1 (12.5)	0(0.0)	8
	25-29yrs	144 (51.1)	121(42.9)	14 (5.0)	0(0.0)	282
	30-34yrs	49(48.5)	31 (30.7)	20(19.8)	1(1.0)	101
	35yrs and above	13 (40.6)	10 (31.3)	5(15.6)	4(12.5)	32
Marital Status	Married/cohabiting	67 (54.4)	39 (31.7)	12(9.8)	5(4.1)	123
	Divorced, Separated	18 (63)	10 (29)	5 (8)	0 (0)	33
	Never married	96 (36)	94 (35)	75 (28)	2 (1)	267
Average of money spent for treatment	60,000/= Tsh	286 (84)	32(7)	24 (5)	16 (4)	358
	120,000/= Tsh	30 (49)	10 (17)	12 (19)	9 (15)	61
	180,000/=Tsh	2 (50)	1 (25)	1 (25)	0 (0)	4
Level of education	Below sec school	47 (43)	37 (34)	22 (20)	1 (3)	107
	Above Secondary school	166 (52)	87 (26)	53 (16)	10 (6)	316

4.5 Maximum willingness to pay as reported by respondents

Respondents were eventually asked to mention the maximum amount that they would be willing to pay apart from the four indicative prices presented to them(Table 5)

Table 5: Maximum willingness to pay as reported by respondents for principal beneficiaries

Variable	TZS (Amount
Maximum	300,000
Minimum	50,000
Mean	62,500
Median	76,000
(Std)	28,500

4.6 Maximum willingness to pay health insurance benefits for principal beneficiaries and their dependents as reported by respondents

Respondents were eventually asked to mention the maximum amount that they would be willing to pay for themselves and their dependents apart from the four indicative prices presented to them (Table 6)

Table 6: Maximum willingness to pay as reported by respondents for principal beneficiaries and their dependents

Variable	TZS (Amount
Maximum	600,000
Minimum	250,880
Mean	190,636
Median	165,000
(Std)	94,478

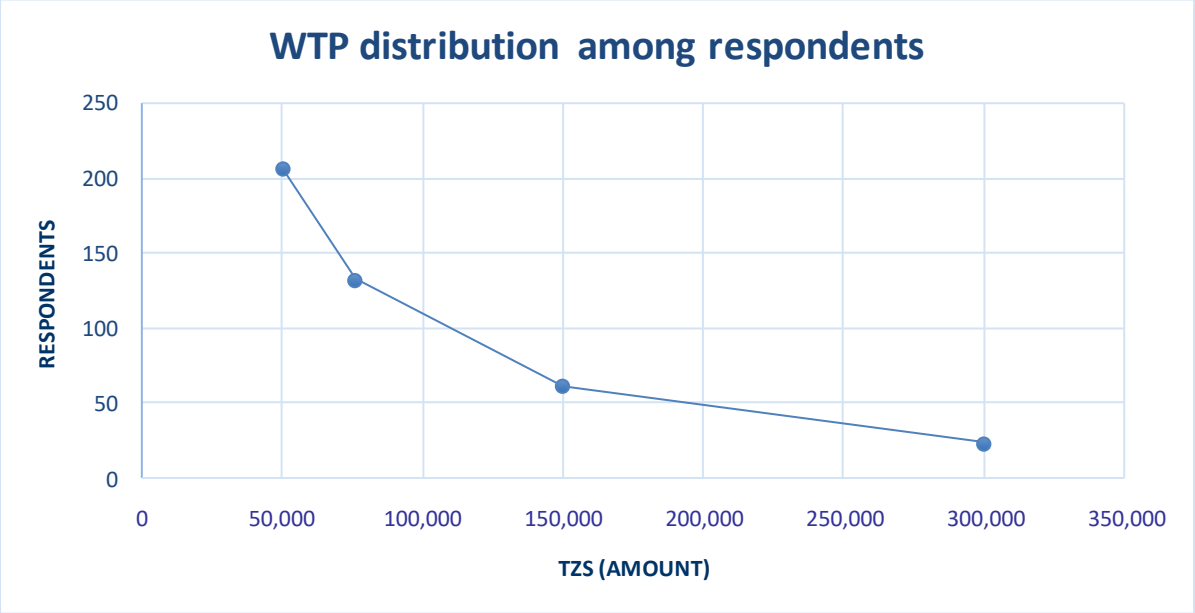


Figure 2: Distribution of Maximum WTP for health insurance per indicative price

The distribution of health insurance TZS 50,000, 76,000, 150,000 and 300,000, a total of 217, 132, 61 and 23 were willing to pay for these prices respectively

4.7 Choices of health insurance benefits coverage by respondents

The different health services packages were presented to the respondents during the scenario presentation. However the respondents were later asked to mention which benefits they would be willing to pay for. More than 99.2% of respondents were willing to pay for consultation as health insurance benefit package, while 99.5% of respondents were willing to pay for Surgical services. Over 97.3% were willing to pay for Investigation, about 96.6% were willing to pay for Physiotherapy while rehabilitation services and 94.0% were willing to pay forDental and Oral health services. (Table 7)

Table 7: Choices of health insurance benefits packages by respondents

Choices of Health insurance benefits	Frequency	Percentages
Consultation	420	99.2
Medicines	360	85.1
Investigations	412	97.3
Surgical services	421	99.5
Inpatient and outpatient care services	379	89.5
Physiotherapy and rehabilitation services	409	96.6
Dental and Oral health services	398	94.0
Eye and Optical Services	294	69.5

4.8 Risk taking behaviors of respondents

Respondents were asked on their risk taking behaviors. About a quarter (25%) reported to had an accident due to careless riding, while 57%reported to have had attended to a hospital in the last three months prior the interview. About 42% had attended driving/riding training. More than 19% were preferred to take alcohol while riding, about 68% preferred to carry multiple passenger on one trip (Table 8)

Table 8: Risk taking behaviors of respondents

Risk behaviors	Yes	No	Don't remember
Have ever had injury due to careless riding	107(25)	283(70)	20(5)
Do you sometimes ride without Wearing helmet	294 (69)	283(70)	121(29)
Are you ridding without training	119(28)	179 (42)	125(30)
You take alcohol during riding	79(19)	314(74)	30(7)
Have a Driving license	212(50)	211(49.8)	0(0)
Have a Motorcycle insurance	390(92)	33(80)	0(0)
You Carry Multiple passengers	289(68)	108(26)	26(6)
Obeying traffic rights	274 (65)	51(13)	92(22)
Attending hospital in last 3 Month	239 (57)	105(24)	79(19)

4.9 Factors associated with maximum willingness to pay

Respondents were presented with four different prices/premium. Respondents were asked to mention the maximum amount that they would be willing to pay for health joining a health insurance scheme. Results shows, that there was statistically significant (P= 0.337) among age groups and willingness to pay, health expenditure shows statistically significant (P=0.234) with willingness to pay for health insurance among respondents, reported that there is statistically significant association (P=0.324) between cost of treatments and WTP for health insurance benefits among respondent, while injuries due to careless riding shows statistically significant association (P=0.277) with willingness to pay for health insurance scheme among. Results shows, statistically significant (P=0.072) between attending health facility in the last 3 months and willingness to pay for health insurance scheme among respondents for premium TZS 50,000, 76,000,150,000 and 30,0000.

Table 9: Factors associated with maximum willingness to pay

Variable	Coefficient	P Value
Age (Number of years of age)	0.0174	0.337
Marital Status of the respondents	0.0482	0.016
Education Level of respondent	0.1071	0.0001
Health expenditure in last 3 months	-0.0377	0.324
Injury due to careless ridding	-0.0345	0.277
Take alcohol while ridding	-0.0502	0.0001
Obeying Traffic Lights	0.0105	0.613
Attending Hospital in last 3 months	0.0557	0.072
Health Insurance Cover of respondents	0.4187	0.0001

4.10 Health insurance prices respondents are willing to pay

Results show that in age group majority were willing to pay TZS 50,000 compared to TZS 30,00 while respondents who have had incurred cost of treatment were willing to pay TZS 76,000 compared to TZS 150.000 per annum per principal beneficiaries.

Table 10: Health insurance prices, respondents are willing to pay

Variables	Health Insurance Prices Respondents are Willig to Pay							
	50,000		76,000		150,000		300,000	
	Coefficient	P Value	Coefficient	P Value	Coefficient	P Value	Coefficient	P Value
Age	-0.0678	0.013	0.036	0.015	-0.0678	0.013	-0.0089	0.714
Marital Status	0.0437	0.15	0.0012	0.939	0.0437	0.15	0.0401	0.137
Education Level	0.1259	0.02	-0.0386	0.185	0.1259	0.02	0.0809	0.092
Expenditure	-0.202	0.001	0.0238	0.449	-0.2024	0.001	-0.0974	0.061
Careless Injury	-0.097	0.044	0.0532	0.042	-0.0976	0.044	-0.0112	0.793
Alcohol Use	0.0284	0.629	-0.0098	0.756	0.0284	0.629	-0.0279	0.595
Obeying Traffic Lights	-0.0167	0.73	-0.0009	0.971	-0.0167	0.73	0.0642	0.135
Attending Hospital	0.0313	0.505	-0.0144	0.57	0.0313	0.505	0.0326	0.437
Health Insurance Cover	0.398	0.002	-0.0308	0.648	0.3982	0.002	0.129	0.247

CHAPTER FIVE

5.0 DISCUSION

This study aimed at exploring willingness to pay for health insurance benefits and associated factors among commercial motorcycle riders. Specifically, it assessed the associations of socio-economic and demographic factors, risk taking behaviors, health insurance benefits coverage, and willingness to join with maximum willingness to pay value.

5.1 Willingness to pay for health insurance benefits

Most of the respondents were willing to pay for health insurance for themselves and also for others (altruism) because Commercial motorcycle riders are in high risk of being injured(Broughton, 2011).

Age was associate by willingness to pay for health insurance benefits, the age of respondents who were willing to pay decreased as the prices increased. Older people are in high risk of being ill compared to youth as well as they have dependents who depend for them for other cost of life. Recent studies indicates the proportion of individuals with health insurance among youth and adults. (Babatunde, 2012).This imply that older people are more willing to pay compared with youth.

Educational level was statistically significant associated with maximum WTP for health insurance benefits. People with higher education in most cases are associated with higher income and awareness of health insurance which facilitates the willingness to pay for health insurance. More than 74.7% of respondents from this study were willing to pay and they had secondary school education and above. (Asenso-Okyer, W.K et al, 1997).This imply that people with high level of education were more aware with health insurance benefits, they earn average and high income, while they take care for their health, hence their more willing to pay for health insurance benefits compared to people with low level of education.

5.2 Risk taking behaviors

In this study; respondents attended to hospitals in the last three months was significant associated with willingness to pay for health insurance among respondents. Attending to hospital in the last three months is determines how they use health care services. Utilization of health care services can be influenced by the different factors but main is the cost of health care services and availability of health insurance, (Cronin T et al, 2013). This means that the general health seeking behavior of an individual is influenced much with low cost of health services and health insurance.

In this study, more than 11.6% of respondents who had experienced injury due to careless riding were more likely to pay for health insurance compared those who didn't experience on injury. Because people who had involved in injury had experience on the cost of treatments and other are faced catastrophic expenditures. The study conducted in Nottingham based on protection insurance and financial wellbeing shows that; injuries and protection issues of health, influenced by risk management that individuals and households have the following options; Jensen et al,(2012).

- To reduce the risk, by reducing either the likelihood of an adverse event or the severity of any consequences (both financial and in terms of reductions in quality-adjusted life expectancy),
- To protect by using insurance, and/or
- To provide additional liquidity, through precautionary saving.

This imply that; people who had involved in financial cost of injuries are more risk takers compared to people who didn't experienced the injury, health insurance is the best option to reduce OPP and financial catastrophic when injury occurred.

5.3 Health insurance benefits coverage

Results of this study, shows that; there was significant association between health insurance benefits coverage (consultation, medicine, investigation, surgical services, inpatient and outpatient care services, physiotherapy and rehabilitation services, dental and oral health

services, eye and optical services) and willingness to pay. About (99.2%), (97.3%), (99.5%), (96.6%) and (94%) were reported to choose; consultation, investigation, surgical services, physiotherapy and rehabilitation services, dental and oral services. Health insurance with necessary and more benefits coverage with affordable price influencing more people to pay compared with health insurance contained less benefits and with high cost (premium),(Khwaja, 2010). This imply that; najority of people were willing to pay for health insurance with affordable price and with essential benefits packages and coverages.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

More than 95.7% of respondents were WTP for health insurance as principal beneficiaries, while 77.8% of respondents were willing tp pay for health insurance as principle members and other dependents (altruism). Because Commercial motorcycle riders are in high risk of being injured. The median maximum willingness to pay for health insurance benefits was TZS 76,000. This amount almost are the same with NHIF KIKOA Scheme TZ 76,400 per annum per individual. This could motivate more commercial motorcycle riders to join and pay for NHIF KIKOA Scheme and reducing OPP.

Willingness to pay for health insurance benefits among commercial motorcycle riders were associated with socio-economic and demographic characteristics, risk taking behaviors and health insurance benefits coverage.

6.2 Recommendations

1. More studies should be conducted to explore the implications of implementing health insurance and OPP for health services to informal sector.

2. This study has explore the socio-economic and demographic characteristics, risk taking behaviors and health insurance benefit package that are associated with WTP for health insurance. Such findings would be useful especially to public and private health insurance providers when conducting market research.

6.3 Policy Implications

1. Self-help groups was found within commercial motorcycle riders. Policy makers should explore ways in which financial resources can be pooled from such groups and integrated to the Health insurance scheme. This mechanism would increase risk pool hence facilitates achievement of universal health care coverage to commercial motorcycle riders

2. Strategic plan should be developed to establish health insurance scheme to commercial motorcycle riders in Tanzania.

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APPENDICES

Appendix 1: Questionnaire – English Version

QUESTIONAIRE FOR WTP FOR HEALTH INSURANCE AMONG COMMERCIAL MOTOCYCLE RIDERS

Introduction;

Name of interviewer:

Interviewer number:

Questionnaire number:

Date of interview:

Time start interview

Time end interview:

A. Demographic and Socio-economic characteristics Questions;

Respondent number:

Phone number of respondents:

Parking station no/name

1. Sex: {DON'T ASK OBSERVE}

(1) Male

(2) Female

2. Where is your place of residence?

(1) Ilala

(2) Kinondoni

(3) Temeke

(4) Ubungo

(5) Kigamboni

3. How old are you……. (Complete years as per last birthday)

4. What is your marital status?

(1) Married/cohabiting

(2) Divorced/separated /Widow/widower

(3) Never married

5. What is your Level of education?

(1) No formal education
(2) Primary
(3) Secondary
(4) College/ University

6. What is your average income from motorcycle riding per week? …….

7. What are the average of money do you spend for treatment per month?

(1) 60,000
(2)120,000
(3)180,000

8. Are you a member of any health financing scheme?

(1)Yes

(2) No

9. How many dependents including your wife, children under-five and children **below 18 years** of age depend on you for their costs of treatments?

B. Risk Taking Behaviors Questions

10. Have you ever been involved in a road accident and injury while riding? And when you was involved in that accident and have you wearied helmet?

11. How likely would you have use helmet when riding? Can I see it?

(1)Extremely unlike

(2) Extremely likely

(3) Somewhat unlike

(4) Somewhat likely

(5) Don't know

12. Did you get any training on motorcycle riding and road safety?

(1) Yes

(2) No

13. How likely did you drink any kind alcohol while riding motorcycle?

(1) Extremely unlike

(2) Extremely likely

(3) Somewhat unlike

(4) Somewhat likely

(5) Don't know

14. What the average of your riding speed?

15. Do you have driving license?

(1) Yes

(2) No

16. Do you have motorcycle insurance?

(1)Yes

(2)No

17. How likely you carry multiple passenger (``Mishikaki``)

1) Extremely unlike

(2) Extremely likely

(3) Somewhat unlike

(4) Somewhat likely

(5) Don’t know

18. How likely do you obey traffic lights win- ever it ask you to stop?

1) Extremely unlike

(2) Extremely likely

(3) Somewhat unlike

(4) Somewhat likely

(5) Don’t know

19. In the last 3 months, have you had experienced any illness?

(1)Yes

(2) No

20. If yes, how much cost did you incurred in the last 3 months?

C. Health Insurance benefits packages

21. Do you have a health insurance cover?

(1)Yes

(2) No

22. If yes, what type is it?

(1)Public (NHIF)

(2) Private Community-Based

23. Are you aware that you and your family members can benefit from owning a health insurance cover?

(1). Yes

(No)

24. Are you read to join any health insurance scheme which covers your family and you including 4 children's?

(1) Yes

(2) No

25. Do you know any health insurance benefits packages?

(1) Yes

(2) No

26. If yes mention that health insurance benefits package……..

D. WTP health insurance scenario and questions

Enumerator: Now, I would like to ask you about your level of WTP for health insurance scheme for yourself and other family members.

Scenario for eliciting WTP insurance

The benefit package in the proposed insurance will consist of a basic health package, which includes all primary healthcare (i.e. routine health maintenance, treatment of common illness such as malaria, typhoid, diarrhea), some aspects of secondary care (i.e. surgery, and hospital admissions, emergencies and other acute lifesaving investigations and operations). Healthcare would be delivered by healthcare providers (hospitals, pharmacists, laboratories, etc.).

In more detail, the benefit package in the proposed insurance plan covers selected preventive, curative and to promote health services and they include:

(1) out-patient care including necessary consumables;

(2) Essential drugs and essential diagnostic tests;

(3) Maternity care for up to four live births;

(4) Preventive care such as immunization, health education, family planning, antenatal and postnatal care;

(5) Consultation with specialists such as physicians, pediatricians, obstetricians, gynecologists, general surgeons etc.

(6) Eye examination and care excluding provision of spectacles and contact lenses; and

[Enumerator: Ask whether respondent has any question]

You will be required to pay a premium in order to join the scheme. After payment of the premium, the enrollees will receive services free of charge at the point of consumption accredited by NHIF-KIKOA Scheme

[Enumerator: Ask whether respondent has any question]

Each registered person will be issued with a health insurance identity card renewable yearly after payment of premium. The services will be accessed from primary healthcare centers, general hospitals, selected private hospitals and from mission hospitals that the management committee will register. The consumers are restricted to the providers which the CBHI management group will select.

27. Considering about health insurance I have discussed with you, are you willing to join for health insurance cover?

(1) Yes
(2) No
(3) Not sure

28. Considering what I have told you about Health insurance, are you willing to pay health insurance cover?

(1) Yes
(2) No
(3) Not sure

29. Considering about health insurance I have discussed with you, are you willing to join for health insurance with your family members?

(1) Yes
(2) No

30. Considering what I have told you about Health insurance, are you willing to pay health insurance which will be used by you and other five members you choose to include in your cover? If No, give one reason for not paying? .....

WTP FOR PRINCIPLE MEMBER

31. The price of a yearly insurance premium (contribution) is TZS **50,000/=** are you willing to pay?

(1)Yes

(2) No

(3)Do not know

32. What is the maximum amount you are willing to pay?

(Interviewer: if more or equal to **TZS 50,000**/= go to Q37, but if less than **TZS 50,000**/= go to Q38)

33. What if the premium is **TZS 150,000**/=, will you be willing to pay?

(1) Yes

(2) No

34. What if the premium is **TZS 300,000**/=, will you be willing to pay?

(1) Yes

(2) No

35. What if the premium is **TZS 300,000**/=, will you be willing to pay?

(1) Yes

(2) No

36. What really is the maximum amount you are willing to pay for the community-based health insurance premium?

(Interviewer: If more or equal to **TZS 50,000/=** go to (Q39), but if less than **TZS 50,000/=** go to (Q 33)

37. If the answer is below **TZS 50,000/=**, the amount that you have quoted is too low, and cannot cover the cost of the premium, and so you will have to increase the amount if you really want to join the health insurance scheme. So what is the final maximum amount you are willing to pay per annual to join the health insurance scheme?
(Interviewer: No matter the answer, go to Q38)

38. If due to inflation or other uncertainties, the premium for the NHIF health insurance increases, what is the maximum amount you are very certain to pay for?

WTP FOR OTHER HOUSEHOLD MEMBERS

39. The price of annual insurance premium is **TZS 150,000**/=; are you willing to pay this amount of money per household member?

(1)Yes

(2) No

(3) Do not know

40. What is the maximum amount you are willing to pay?
(Interviewer: if more or equal to **TZS 300,000/=** go to Q36, but if less than, **TZS 300,000/=** go to Q37)

41. What if the premium is **TZS 150,000**/=, will you be willing to pay?

(1) Yes

(2) No

42. What if the premium is **TZS 76,000**/=, will you be willing to pay?

(1)= yes go to (Q46)

(2) = No (Q43)

43. What if the premium is **TZS 300,000**/=, will you be willing to pay?

(1) Yes

(2) No

44. What really is the maximum amount you are willing to pay for the NHIF health insurance premium?

(Interviewer: If more or equal to **TZS 150,000**/=, go to (Q38), but if less than TZS **76,000** go to (Q43)

The amount that you have quoted is too low, and cannot cover the cost of the premium, and so you will have to increase the amount if you really want your other household members to enrol in the community-based health insurance scheme. So what is the final maximum amount you are willing to pay per month per person for other household members to join the community-based health insurance scheme? (Interviewer: No matter the answer, go to Q46)

45. If due to inflation or other uncertainties, the premium for the NHIF health insurance increases, what is the maximum amount you are very certain to pay per household?

46. Would it be useful to have some sort of estimate of the possible cost of coverage for a variety of NHIF benefit packages and present these to interviewees to determine the amount that they would be willing to pay?

THANK YOU VERY MUCH FOR YOUR TIME

Appendix 2: Swahili Version Translated Questionnaire

DODOSO KWA AJILI YA UTAYARI WA KULIPIA BIMA YA AFYA MIONGONI MADEREVA BODA BODA NA ILALA, JIJINI DAR ES SALAAM.

Utangulizi;

Jina la Mdodosaji:

Namba ya mdodosaji:

Namba ya Dodoso:

Tarehe ya Mahojiano:

Muda wa kuanza mahojiano:

Muda *wa* kumaliza mahojiano:

A. ASWALI YANAYOHUSU HALI ZA WATU; KIUCHUMI NA KIJAMII

1. Jinsia **{USIULIZE TAZAMA}**

(1) Mwanaume

(2) Mwanamke

2. Makazi yako ni manispaa ipi?

(1) Ilala

(2) Kinondoni

(3) Temeke

(4) Ubungo

(5) Kigamboni

3. Una umri gani? ..... (miaka kamili toka alipozaliwa)

4. Hali ya ndoa

(1) Kuwa kwenye ndoa/kuishi na mwenza

(2) Kutalikiwa/Kuachika/mjane/mgane

(3) Sijawahi kuoa/kuolewa

5. Una kiwango gani cha elimu?

(1) Sina elimu ya msingi

(2) Elimu ya msingi

(3) Elimu ya sekondari

(4) Elimu ya chuo/chuo kikuu

6. Wastani wa kipato chako kutoka kwenye pikipiki ni shilingi ngapi kwa wiki?

7. Unatumia wastani wa shilingi ngapi kwenye matibabu kwa mwezi?

(1) Shilingi 60,000

(2) Shilingi 120,000

(3) Shilingi180, 000

8. Je wewe ni mwanachama wa bima ya afya yeyote?

(1) Niyo

(2) Hapana

9. Una watu wangapi wanaokutegemea kwa gharama za matibabu akiwemo mke/wake, watoto chini ya miaka mitano, watoto chini ya miaka 18**? ……**

B. Mawsali ya Tahadhari

10. Umeshawahi kupata ajali na kuumia ukiwa unaendesha bodaboda, na ulikuwa umevaa kofia ngumu?

11. Je unavaa kofia ngumu unapoendesha boda boda? Unayo hapo na naweza kuiona?

(1) Situmii kabisa

(2) Natumia sana

(3) Kiasi Fulani situmii

(4) Kiasi Fulani natuni

(5) Sijui

12. Je umewahi kupata mafunzo yoyote ya uendeshaji pikipiki pamoja na usalama barabarani?

(1) Ndiyo

(2) Hapana

13. Je unatumia aina yeyoye ya kilevi wakati ukiwa unaendesha pikipiki?

(1) Situmii kabisa

(2) Natumia sana

(3) Kiasi Fulani situmii

(4) Kiasi Fulani natunimia

14. Unaendesha bobaboda kwa wastani wa spidi kiasi gani?

15. Una leseni ya kukuruhusu kuendesha pikipiki?

16. Je bodaboda yako ina bima ya chombo cha moto?

(1) Ndyo

(2) Hapana

17. Ni kwa kiasi gani unapenda kupakia abiria mpandano (``Mishikaki``)

(1) Sipakii kabisa

(2) Napakia sana

(3) Kiasi fulani sipakiii

(4) Kiasi fulani napakia

(5) Sijui.

18. Ni kwa kiasi gani unaheshimu taa za kuongozea magari, hata palezinapokusimamisha?

1) Siheshimu kabisa

(2) Naheshimu sana

(3) Kiasi fulani naheshimu

(4) Kiasi fulani siheshimu

(5) Sijui

19. Katika miezi 3 iliyopita, uliwahi kupata tatizo lolote la kiafya?

(1)Ndiyo

(2) Hapana

20. Kama jibu ni ndiyo, je ulitumia kiasi gani cha fedha katika matibu, ndani ya hiyo miezi mitatu hiyo iliyopita?

C. HUDUMA ZA BIMA YA AFYA

21. Je una bima ya afya?

(1)Ndiyo

(2) Hapana

22. Kama ndiyo, ni aina gani?

(1)Kampuni ya Umma (NHIF)

(2) Kampuni binafsi

23. Je unafahamu kwamba wewe na familia yako mnaweza kuwa wanufaika wa bima ya afya?

(1). Ndiyo

(2) Hapana

24. Uko tayari kujiunga na bima ya afya ambayo itagharamia familia yako pamoja na watoto wanne?

(1) Ndiyo
(2) Hapana

25. Je unajua huduma yeyote ya bima ya Afya?

(3) Ndiyo
(4) Hapana

26. Kama jibu ni ndiyo, Tafadhali, orodhesha huduma unazopenda kunufaika nazo toka bima ya afya.

D. UTAYARI WA KULIPIA BIMA YA AFYA, NADHARIA NA MASWARI

Mtafiti: Sasa, napenda kukuuliza kiwango chako cha pesa na utayari wa kulipia bima ya afya, wewe na familia yako.

Nadharia kwa ajili ya kupima utayari wa kulipia bima ya afya.

Faida za bima ya afya zilizopendekezwa zitahusisha vifurushi vya msingi, vinavyojuisha, afya ya msingi e (i.e. kutibiwa mara kwa mara, tiba kwa magonjwa ya kawaida mfano; malaria, taifod, kuhalisha), baadhi ya hudums ya afya ya sekondari (i.e. upasuaji, kulazwa, dharura pamoja na kuokoa maisha, uchunguzi). Huduma za afya zitakuwa zinatolewa na watoa huduma za afya (hospitali, maduka ya kuuza dawa za binadamu pamoja na Maabaralabora.).

Kwa maelezo Zaidi, huduma za bima afya zilizopendekezwa na kuchaguliwa katika mpango wa kutibu, kuzuia na kukuza huduma za afya;
(1) mgonjwa wa nje;
(2) Dawa muhimu na vipimo muhimu;
(3)Huduma ya uzazi kwa kina mama mpaka watoto wa
(4) Huduma za kujikinga mfano;as chanjo, elimu ya afya,uzazi wa mpango, duduna za cliniki;
(5) Ushauri wa kitaalam kutoka kwa daktari, mtaalam wa magonjwa ya watoto, Madaktari wa uzazi, Wanabiolojia na upasuaji wa jumla
(6) Huduma za macho.

[Mtafiti:] Uliza kama mlipwaji ana swali/maswali

Utatkiwa kulipia ada ili kujiunga na bima ya afya. Ada italipwa mara moja kwa mwaka. Baada ya kulipa ada, utapewa kadi ya bima ya afya na utapata huduma ya afya bila malipo mengine katika vituo vya kutoa huduma vilivyochaguliwa na Mfuko wa bima ya afya wa taifa chini ya skimu ya KIKOA.

27. Zingatia kuhusu bima ya afya tuliyojadiliana, je uko tayari kujiunga na bima ya afya?

(1) Ndiyo

(2) Hapana

(3) Sina uhakika

28. Zingatia kuhusu bima ya afya tuliyojadiliana, je uko tayari kulipia bima ya afya kwako peke yako?

(1)Ndiyo

(2)Hapana

(3) Sina uhakika

29. Zingatia kuhusu bima ya afya tuliyojadiliana, je uko tayari kujiunga na bima ya afya wewe na familia yako?

(1)Ndiyo

(2)Hapana

(3) Sina uhakika

30. Zingatia kuhusu bima ya afya tuliyojadiliana, je uko tayari kujiunga na bima ya afya wewe na familia yako? Kama jibu ni hapana, nipe sababu moja ya kutokubali kulipia……

UTAYARI WA KULIPIA BIMA YA AFYA KWA MWANACHAMA WA MSINGI

31. Gharama za kulipia bima ya afya kwa mwaka kwa mtu mmoja ni (michango) shilingi **76,000/=** uko tayari kulipia?

(1)Ndiyo

(2) Hapana

(3) Sijui

32. Je ni kiwango kipi cha juu unachoweza kulipia kwenye bima ya afya?

(Mtafiti: kama zaili au sawa na or eshilingi **50,000**/= nenda swali namba 33, lakini kama ni chini ya shilingi **76,000**/= nenda swali namba 34)

33. Kama kiwango cha malipo ya bima ya afya kwa mwaka itakuwa shilingi **150,000**/=, utakuwa tayari kulipia?

(1) Ndiyo

(2) Hapana

34. Kama kiwango cha malipo ya bima ya afya kwa mwaka itakuwa shilingi **300,000**/=, utakuwa tayari kulipia?

(1) Ndiyo

(2) Hapana

35. Kama kiwango cha malipo ya bima ya afya kwa mwaka itakuwa shilingi **300,000**/=, utakuwa tayari kulipia?

(1) Ndiyo

(2) Hapana

36. Ni kiwango gani cha juu kabisa upo tayari kulipa kwa ajili ya bima ya afya ya nfuko wa bima ya afya wa taifa chini ya skimu ya KIKOA?

(Mtafiti: kama ni juu au sawa na shilingi **76,000/=** nenda swali na (46), kama chini ya **TZS 76,000/=** nenda swali namba (43)

37. Kama jibu ulilotoa ni chini ya shilingi **76,000/=**, kiasi ulichokitaja kipo chini sana na hakiwezi kufikia malipo ya bima ya afya, hivyo unatakiwa kuongeza kiasi ili uweze kujiunga na bima ya afya. Hivyo ni kiwango gani cha juu cha mwisho ambacho uko tayari kulipa kwa ajili ya bima ya afya kwa mwaka?

(Mtafiti: jibu lolote lile, nenda swali namba 38)

38. Kama itatoka mfumuko wa bei au kutokuwa na uhakika, kiwango cha malipo ya bima ya afya kwa mfuko wa bima ya afya ya taifa skimu ya KIKOA, utakuwa tayari kulipa kiasi cha juu kabisa kujiunga na bima ya afya

UTAYARI WA KULIPA BIMA YA AFYA KWA WANACHA WA FAMILA. Malipo ya **39**.bima ya afya kwa mwaka ni shilingi **TZS 300, 000**/=; utakuwa tayari kulipa hiki kiasi kwa ajili yako na familia yako?

(1)Ndiyo

(2) Hapana

(3) Sijui

40. Ni kiwango gani cha juu kabisa ambacho upo tayari kulipa kwa ajili ya bima ya afya

(Mtafiti: kama Zaidi au sawa na shilingi **300,000/=** nenda swali namaba 41, lakini kama chini ya shilingi, **76,000/=** nenda swali namba 43)

41. Vipi kama kiwango cha malipo ya bima ya afya kikiwa shilingi **150,000**/=, utakuwa ytayari kulipa kwako pamoja na wategemezi wengine watano?

(1) Ndiyo
(2) Hapana

42. Vipi kama kiwango cha malipo ya bima ya afya kikiwa shilingi **300,000/=,** utakuwa ytayari kulipa?

(1) Ndiyo (swali namaba 43)
(2) Hapana (swali namaba)

43. Vipi kama kiwango cha malipo ya bima ya afya kikiwa shilingi **150,000**/=, utakuwa tayari wewe na wategemezi wako kulipa?

(1) Ndiyo (2) Hapana

44. Ni kiwango gani cha juu kabisa upo tayari kulipa kwa ajili ya bima ya afya ya mfuko wa bima ya afya wa taifa chini ya skimu ya KIKOA?

(Mtafiti: kama Zaidi au sawa na shilingi **30,000**/=, nenda swali namba (45), kama chini ya TZS **76, 000** nenda swali namaba 46)

45. Kama jibu ulilotoa ni chini ya shilingi **76,000/=**, kiasi ulichokitaja kipo chini sana na hakiwezi kufikia malipo ya bima ya afya, hivyo unatakiwa kuongeza kiasi ili uweze kujiunga na bima ya afya. Hivyo ni kiwango gani cha juu cha mwisho ambacho uko tayari kulipa kwa ajili ya bima ya afya kwa mwaka (IMtafiti: jibu lolote, nenda swali namba 46)

46. Kama itatoka mfumuko wa bei au kutokuwa na uhakika, kiwango cha malipo ya bima ya afya kwa mfuko wa bima ya afya ya taifa skimu ya KIKOA, utakuwa tayari kulipa kiasi cha juu kabisa kujiunga na bima ya afya wewe na familia yako?

ASANTE SANA KWA MUDA WAKO

Appendix 3: Verbal Informed Consent - English Version)

TITLE OF THE STUDY: EXPROLING WILLINGNESS TO PAY FOR HEALTH INSURANCE AMONG COMMERCIAL MOTORCYCLE RIDERS AND ASSOCIATED FACTORS IN ILALA AND KINONDONI MUNICIPL, DAR ES SALAAM.

Introduction

My name is LUHWAVI, Ismail Omary, a master's of science in Public Health student at MUHAS and I am the principal investigator in the proposed study with the title above.

Purpose of the study

The aim of this study is exploring willingness to pay for health insurance among commercial motorcycle riders and associated factors in Kinondoni and Ilala Municipals. Findings of this study will show whether or not health insurance is another preferred health financing mechanism for commercial motorcycle riders indicates what insurance benefits package that the commercial motorcycle riders are willing to pay for, and at what premiums as the means to minimize out of pocket payments expenditure by the patients and facilitating universal health coverage.

Participation in the study

Participation in the proposed study is voluntary and no any kind of payment will be given on participating in the study but also no any action will be taken to any commercial motorcycle who refuses to participate in the study. All the data collected will be kept confidential and used for research purposes only.

Benefits from this study

No direct benefit but your participation in this study is very important as the results from this study will give the clear picture of willingness to pay for health insurance status and its associated factors. This will help to inform the policy makers on willingness to pay for health insurance status among commercial motorcycle riders in order to encourage more commercial

motorcycle riders to join health insurance at accepted prices so as to reduce the economic burden of road traffic injuries among commercial motorcycle riders.

Risks

No risk or harm is anticipated from participating in the proposed study.

In case you have any question or query you may contact the following;

Contact person

1. **Principal Researcher**

   Mr. LUHWAVI, Ismail Omary

   NMB Foundation for Agricultural Development

   P.O.BOX 9213

   DAR ES SALAAM

   PHONE No: 0755-222 907, 0717-798 454

   Email address: ismailsuma36@gmail.com

2. **Supervisor**

   Dr. Phare Mujinja

   SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES

   MUHAS

   P.O.BOX 65000

   DAR ES SALAAM

   TELEPHONE No: 0754-271 171

   0622-271 171

3. **Chairman of the MUHAS Senate Research and Publication Committee,**

   P.O.BOX 65001

   DAR ES SALAAM

   TELEPHONE No: 2150302-6

VERBAL CONSENTING

Will you be willing to be interviewed? (a) Yes….. (b) No……**STOP INTERVIEW**

Appendix 4: Fomu Ya Ridhaa (Swahili Version)

KICHWA CHA HABARI CHA UTAFITI: UTAYARI WA KULIPA BIMA YA AFYA KWA AJILI YA WAENDESHA ``BODA BODA` NA SABABU SABABISHI` NDANI YA MANISPAA YA ILALA NA KINONDONI, JIJINI DAR ES SALAAM

Utangulizi

Naitwa ndugu Luhwavi, Ismail Omary, mwanafunzi wa shahada ya uzamili katika chuo kikuu kishiriki cha tiba na sayansi Muhimbili, mimi ndio mtafiti mkuu katika utafiti huu tajwa hapo juu wa.

Dhumuni la utafiti

Dhumuni la utafiti huu ni kutathmini utayari wa wagonjwa wa saratani kulipia bima ya afya. Matokeo ya utafiti huu utaonyesha kama wagonjwa wapo tayari au hapana, kulipia bima ya afya na katika ndio ni kwa kiwango gani ili kupunguza kulipia gharama za huduma ya afya toka mfukoni.

Ushiriki katika utafiti huu

Ushiriki katika utafiti huu ni wa kujitolea na hakuna malipo yoyote yatakayotolewa kwa mtoto wako vilevile hakuna adhabu yoyote itakayochukuliwa kwa mtoto yeyote atakayekataa kushiriki katika utafiti huu. Taarifa zote zitakazokusanywa kutoka kwa mtoto wako zitakua ni siri na hazitatumika kwa malengo yoyote tofauti na utafiti huu.

Faida ya kushiriki katika utafiti huu

Hakuna faida za moja kwa moja lakini ushiriki wako katika utafiti huu ni muhimu kwa sababu matokeo ya utafiti huu yataonesha watunga sera mtazamo kuhusu bima ya afya kwa wagonjwa wa saratani kama njia mbadala ya kulipia huduma za afya mbali na utaratibu wa huduma bure wa serikali na kupunguza kulipa gharama za matibabu toka mfukoni.

Athari ya kushiriki katika utafiti huu

Hatutegemei kuwa na athari au madhara yoyote yatakayotokana na mtoto wako kushiriki katika utafiti huu.

Ikiwa una swali au swala lolote unaweza kuwasiliana na wafuatao;

Mawasiliano

1. **Mtafiti Mkuu**
   Luhwavi, Ismail Omary
   P.O.BOX 9213
   DAR ES SALAAM
   PHONE No: 0717 798 454, 0755 222 907
   Email address: ismailsuma36@gmail.com

2. **Msimamizi**
   Dr. Phare Mujinja
   SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES
   MUHAS
   P.O.BOX 65000
   DAR ES SALAAM
   TELEPHONE No: 0754271171
   Chairman of the MUHAS Senate Research and Publication Committee,
   P.O.BOX 65001
   DAR ES SALAAM
   TELEPHONE No: 2150302-6

Ridhaa ya mdomo kushiriki kwenye utafiti

Je upo tayari kushiriki kwenye utafiti? (1) Ndio

Hapana usiendelee na mahojiano

Appendix 5: Ethical Clearance

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

P.O. Box 65001
DAR ES SALAAM
TANZANIA
Web: www.muhas.ac.tz

Tel G/Line: +255-22-2150302/6 Ext. 1015
Direct Line: +255-22-2151378
Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. MU/PGS/SAEC/Vol. X/ 17th May, 2018

Mr. Ismail Lubwavi Omary
Master of Public Health
MUHAS.

u.f.s. Supervisor,
MUHAS.

Re: YOUR REQUEST FOR APPROVAL OF ETHICAL CLEARANCE

Please be informed that the Expedited Review Sub-Committee of Senate Research and Publications held its meeting on 15th May, 2018, together with other business the committee discussed your proposal and came up with the attached comments.

You are required to address all comments and resubmit your proposal as soon as possible not later than two weeks from the date of this letter.

Please note that all addressed comments should be bolded in the text and summarized as per attached format. Short to that your proposal resubmission will be considered as first submission and will be subjected to all review procedures.

Dr. Emmanuel Balandya
Ag: **DIRECTOR OF POSTGRADUATE STUDIES**

cc: Dean, School of Public Health and Social Sciences, **MUHAS**- For noting

Appendix 6: Permission Letter

The United Republic of Tanzania

Prime Ministers' Office

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

ILALA DISTRICT
Phone Address:
Phone No: 2201195/2203182
In reply quote: Ref. No: AB.60/337/01/



DISTRICT COMMISSIONER'S OFFICE
ILALA DISTRICT
P. O. Box 15486,
DAR ES SALAAM
Date: 04/07/2018

Municipal Director,
P. O. Box 20950,
Ilala,
DAR ES SALAAM.

RE: RESEARCH PERMIT

Prof./Dr./Mr./Mrs./Ms./Miss: Ismail Omary Lubinavi
from The Muhimbili University of Health and Allied Sciences, she/he has been permitted to undertake a field work research on "...Exploring willingness to pay for health insurance benefits and associated factors among Commercial motorcycle riders in Dar es Salaam, 2018."
The case study at Ilala District from July 1 2018 to August 20, 2018.

Therefore, you are asked to give the said researchers necessary assistance and Cooperation.

District Administrative Secretary
ILALA

Copy: Ismail Omary Lubinavi

.....

Principal/Vice Chancellor,
Muhimbili University of Health
and Allied Sciences

Appendix 7: Introduction Letter

HALMASHAURI YA MANISPAA YA ILALA

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA MANISPAA

SIMU NA. 2128800
2128805
FAX NO. 212 1486

OFISI YA MKURUGENZI
TMTAA WA MISSION
S.L.P 20950
11883 – DAR ES SALAAM

KUMB. NA. IMC/AF.3/31

09/07/2018

Mkandaji wa kata
ya Kisuka, Upanga, Mtt
Kariakoo, Buguruni, Ilala, Tabata

YAH: KUWATAMBULISHA Ismail Omary Kuhwadi

Husika na mada tajwa hapo juu.

Halmashauri ya Manispaa ya Ilala imeridhisu Watumishi toka Chuo cha Afya Muhimbili kufanya juu 'Project/Field/Research' ya Mwenyeji wa Tanzania na bima kwa wagonjwa barabarani katika ofisi yako. **"Project/Field/Research"** itaanza kuanzia tarehe 09/07/2018 hadi 10/08/2018.

Orodha ya majina yao imeambatanishwa na barua hii.

Tafadhali wape Ushirikiano.

Nakutakia kazi njema.

For: MUNICIPAL DIRECTOR
ILALA MUNICIPAL COUNCIL

R. Muna
Kny: MKURUGENZI WA HALMASHAURI
MANISPAA YA ILALA