Willingness to pay for children health insurance benefits among parents/guardians in Mbeya city

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WILLINGNESS TO PAY FOR CHILDREN HEALTH INSURANCE BENEFITS AMONG PARENTS/GUARDIANS IN MBEYA CITY

By

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

Muhimbili University of Health and Allied Sciences
October, 2019

CERTIFICATION

The undersigned certify that he has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled: **"Willingness to pay for children health insurance benefits among parents/guardians in Mbeya City",** in (partial) fulfilment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

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

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, **Aminatha Arsen Kashangaki**, declare that this **dissertation** is my own original work and that has not been presented and will not be presented to any other university for similar or any other degree award.

Signature: ..... **Date:** .....

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First, special thanks to the Almighty Lord for giving me energy, wisdom and passion in the whole process building this work.

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DEDICATION

This thesis is dedicated to my family. My father Arsen Kashangaki, my late mother Joycelina Bagorwaki (R.I.P), my sisters and my bothers.

ABSTRACT

Background: Tanzania is like Many other developing countries, that out of pocket still contributing the large percent of the in the health financing mechanisms. Out of pocket expenditure that parents/guardians spend on the consultation, transportation, medicines, admission are pushing them especially those vulnerable group to a poverty and create barrier for primary health utilization for children. Tanzania introduced Toto afya Card as the solution for reducing health expenditure, how ever since its initiation parent's/ guardians' perceptions related to willingness to pay for Toto afya card to reduce out of pocket costs has not been explored

Objective: The study aimed at assessing willingness to pay for Toto Afya Card among parents/guardians in Mbeya city.

Design and methods: A cross sectional descriptive study was used to describe factors associated with willingness to pay. Study used Contingent valuation methods to elicit willingness to pay, take it or leave it (TIOLI) and open-ended technique with follow up questions are among four contingent valuation techniques that were used to estimate willingness to pay. A simple random sampling was used to select one study ward from the 36 total wards in the city. On arriving to the selected ward all the street in a particular ward total of eight streets was included in the study. In arriving to a street, a random systematic sampling strategy was used to select the 51 or 52 households in every street by skipping two households after each sampled house. In case a household was found to have more than one parent/ guardian with a child under 18 they were both included in a study.A questionnaire with structured questions was used to collect data on the parent's/guardians' willingness to pay, perceptions toward health insurance, child health expenditure and the socio-economic factors.

Results: High proportional of male 88.3% were more willing to pay than female. Maximum willingness to pay ranged from TZS (1,000–100,000), with mean maximum willingness to pay of TZS 41,877.97 (SD 16,818.26).

Among all perception statement, information about Toto Afya Card in the community scored lowest mean of 3.74 (SD 0.95). Among all statement, statement with insurance

children can archive their dreams with good health scored high mean score of 4.56 9(SD 0.62).

Results from ordinary least square shows that education and the monthly income were the socio-economic factors associated with willingness to pay. Results from logistic regression shows that education, occupation and monthly income were the socio-economic factors associated with willingness to pay.

Conclusion: The average maximum willingness to pay found in this study was TZS 41,877.97 and median TZS 40,4000 lower compared to the actual premium of the TotoAfya Card.Respondents agreed to the importance of children health insurance scheme and how it save child's medical expenditure. High health expenditure create a barrier for the child access the health services especially to the families with low income. S ocio economic factors (income and education,) influenced parents/guardians' willingness to pay for Toto Afya Card.

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LIST OF ABBREVIATIONS

CHF	Community Health Fund
CVM	Contingent Valuation Method
NHIF	National Health Insurance Fund
NHIS	National health insurance scheme
NOAA	National Oceanic Atmospheric Administration
OE	Open Ended
OLS	Ordinary least square
OOP	Out of Pocket
P	P-value
PR	Principle researcher
RA	Research Assistant
TDHS	Tanzania Demographic Health Survey
TIOLI	Take It or Leave It
UHC	Universal Health Cover
W.H. O	World Health Organization
WTP	Willingness to Pay

DEFINITION OF TERMS

Contingent Valuation Method: Is 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 specified product/services, or willingness to accept (WTA) to give up a product/services.

Health financing: function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system.

Health insurance benefits package it is defined as the benefits coverage that the insurer provides to those insured.

Health insurance: Contract between insurance provide (insurer) and an individual (insured), an insurer will receive amount the premium, from an insured in exchange of a pay-out to be made should the insured become ill, thus incurring the health care costs.

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.

Perception defines as the way sensory information is organized, interpreted, and consciously experienced.

Take it or leave it is a method that use close ended questions and respondents answer only "yes" and "no" or "i don't know" to the bid.

Take-it-it-or-leave-it with follow-up, this approach involves assigning one more bid to the initial bid.

Universal health coverage: coverage with health services; with financial risk protection; for all.

Willingness to pay is defined as the maximum amount that an individual is willing to pay for goods or services.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Health insurance is an insurance that covers the whole or a part of the risk of a person incurring medical expenses, by spreading the risk over a large number of persons. In Africa some governments, sometimes in collaboration with donor agencies from developed countries, have introduced and expanding insurance-based health care financing for the purpose of helping people to be protected from financial health shocks(1,3,5). The use of health insurance financing rather than directly payments that is user fees, tend to reduce barrier in children health utilization, as it has the following importance. It raises revenue to fund the cost of health care services provision that may be used to improve quality, reduce financial constraints to obtaining health care at the time of illness and encourage caregivers to use health services cost-effectively for their children(3).Reducing financial barriers is important especially for those children who are vulnerable, example those coming from poor families and those who chronically ill would be achieved by sharing the financial risks associated with ill health and health care consumption among an insured children (1,4).

Tanzania in order to decrease private costs and encourage greater and more equitable use of health services especially children under 5 years who are vulnerable to disease, this group were exempt from healthcare charges, including inpatient fees. Despite this policy, approximately 75% of health care expenditure appears to be coming from households money which was used to pay costs of hospital pediatric admissions (2,3). Study in southern Tanzania found that cost for hospital admission for children in the lowest socio-economic quintile was almost half cost of the household expenditure (2).

Children health insurance has influence on the use of primary care by children as it is important to children's well-being and is considered to be one predictor for use of health services in developed and developing countries(3).

1.2 The problem statement

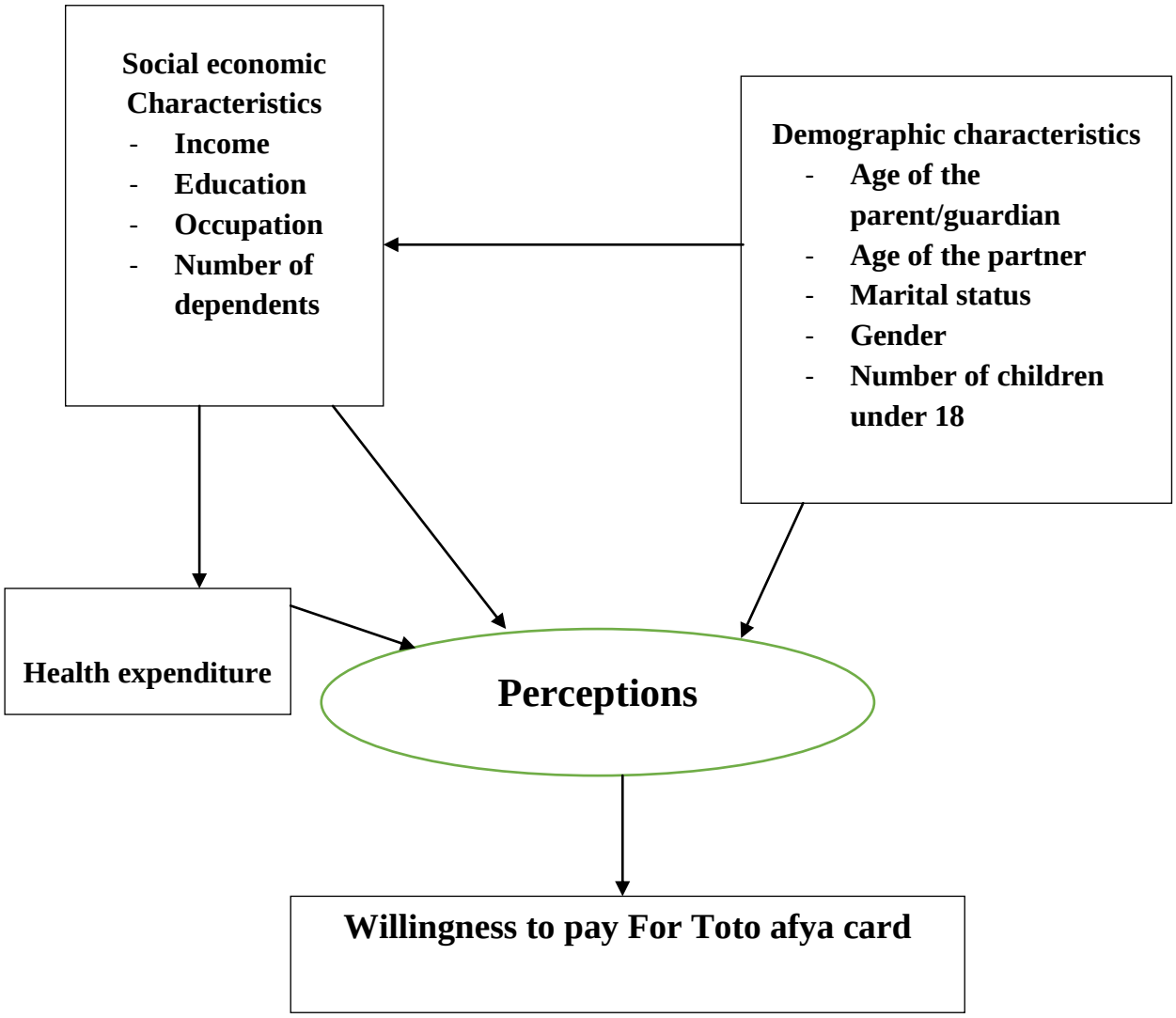
In Tanzania, there is still large percent of people who use out of pocket expenditure to pay for the hospitals bills. These include paying for consultation, drugs/ medical supplies, t ransport, admission charges and others(2,4). Out of pocket expenditure act as a barrier for children to access basic health care as early as possible(5).In Tanzania Annual health expenditure per household is TZS 62,861(6), which is high especially to those household with low income. To meet this expenditure care givers are forced to sell assets and borrow money from relatives' and friends to pay health bills(7).

Studies shows that Out-of-pocket expenditure is associated with household size, financial constraints, the level of health insurance, higher level of education and use of private facilities(13–17).

Possible solution to address this situation is participation in health insurance (18,19). Tanzania government introduced Children health insurance scheme (also known as Toto Afya Card) as the approach for improving access to health care services in children under 18.

However, since its initiation parent's/ guardians perceptions related to willingness to pay for Toto afya card to reduce out of pocket costs has not been explored. Willingness to pay studies in Tanzania focused on insect treated nets, community health funds and voluntary health insurance(15–18), But Toto Afya Card is newly introduced. Therefore, children are vulnerable to diseases. It was important to find the willingness to pay for the scheme for the purpose of increasing the coverage of the scheme.

1.3 Conceptual Framework



(Source: Researcher's own customized construct 2019)

Figure 1: Conceptual Framework

The conceptual framework for this study shows the variables associated with the Willingness to pay for children health insurance benefits/ Toto afya card.The dependent variable in this study iswillingness to pay (WTP)and Independent variables in this conceptual framework are demographic characteristics, social economic characteristic, health expenditure and perception.

1.4 Rationale of the study

Assessing the influence of care givers perceptions on their willingness to pay for Toto Afya Card was important because could provide useful information for informed decision making policy makers and development practitioners when promoting Toto Afya Card in the country. This study also contributes to the body of knowledge by providing empirical evidence of perception in influencing caregivers decision to pay for children health insurance benefits.

1.5 General question

What level of willingness to pay for Toto Afya card among parents/guardians in Mbeya city?

1.5.1 Specific questions

i. To what extend parents/ guardians are willing to pay for Toto afya card in Mbeya city?
ii. What are parent's/guardians' perceptions on Toto afya card in Mbeya city?
iii. What cost parents/guardians spend for child health in Mbeya city?
iv. What social-economic factors associate with willingness to pay for Toto afya card among parents/ guardians in Mbeya city?

1.6 Objectives

1.6.1 Broad Objective

To assess willingness to pay for children health insurance benefits among parents/guardians in Mbeya city.

1.6.2 Specific objectives

i. To estimate willingness to pay for children health insurance among parent/guardians in Mbeya city.
ii. To determine parent's/guardians' perceptions toward children health insurance benefits in Mbeya city.
iii. To explore parent's/guardian's health expenditure on child in Mbeya city.
iv. To assess socio-economic factors associated with willingness to pay for the children health insurance benefits among parents/ guardians in Mbeya city.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Measuring willingness to pay for health insurance

2.1.1. Contingent valuation method

Contingent valuation method is a method for eliciting market valuation of a non-market goods. Is commonly used to elicit willingness to pay. Involve using of survey to collect the useful data on the individual preferences for non-market goods, their ability and willingness to pay for the goods. The method is called "contingent" Because the elicited willingness to pay values are contingent upon the particular hypothetical market described to the respondent(19).It uses information on how people say they would behave given certain hypothetical situations; these hypothetical market scenarios provide valuable information about the characteristics of the demand for a good to a consumer.

2.1.2 Estimating willingness to pay for health insurance

WTP it is defined as the maximum amount that an individual is willing to pay for goods or services(20). Consumer often willing to pay higher price of the goods depend on how much that good is used. Willingness to pay diminishes rapidly with non-essential goods use. Several authors proposed different hierarchical classification frameworks to organize existing methods to willingness to pay estimation. One Open-ended format elicits willingness to pay by asking respondents the maximum amount of money they are willing to pay. With advantages of being quick to administer and avoiding the "anchoring effect"(21). Dichotomous discrete choice" method involves a take-it or leave-it kind of format. Respondents are simply asked on whether they are willing to pay or accept a certain amount given a scenario.

Studies have used different methods in measuring willingness to pay. One study aimed to obtain information on willingness to pay, used the bidding game strategy at eliciting willingness to pay for Micro insurance, also by adopt follow up questions with two degrees of certainty 'definitely sure' and 'probably sure'. Used this approach to remove the hypothetical bias both in laboratory and field experiment(22). Another study done in Kenya used contingent valuation method of double bounded dichotomous choice with follow up questions to elicit the household WTP for the scheme(23). A study done in

Tanzania used CVM to estimate WTP for community-based health insurance by using unidirectional bidding game. The bids which were used in the final study were TZS 5000, 8000, 10,000 and 15,000. They started with the highest bid; the bid was then lowered until respondents accepted the specified amount. And then they use the lowest bid; the bid was then raised until respondents could no longer accept the specified amount. During the main study, the bids were randomly assigned to the respondents(17). But there is no study that used Take It or Leave It and open ended method with follow up questions in eliciting willingness to pay for health insurance in Tanzania.

2.2 Perceptions toward health insurance

Studies that have looked on the people's perceptions on the health insurances found that, Study in Ukraine has look on the perceptions of beneficiaries in comparison to non-beneficiaries of a community-based health insurance scheme. Study found that financial constraints and lack of information have been cited as the most important reasons for people to not be enrolled. Although most of them seem to agree to the fact that insurance can help them protect against catastrophic expenses to a certain extent(24).

Study in India has look on the individuals' health insurance product perceptions and individuals' personality traits which inhibits people from subscribing to health insurance plans. Respondents reported statements like "*subscribing they will not be benefited, health insurance will not reduce medical expenditure, lots of hassles during claims*" (25).

Study in Nigeria looked on perception about the national health insurance security (NHIS) and found that they believed that health insurance is a way of paying for healthcare services, they believed that everybody can be health insured and other believed that NHIS will work in Nigeria. From this study, more than average of the respondents had correct perception of NHIS, and this was influenced by the level of education. Where In this study, awareness and perception of NHIS was significantly higher among the respondents that are government employed compared to those not employed by government(26).

Study in Tanzania had looked on the people perceptions on community health fund and some have looked on the perception on NHIF (25). But there is no study that have looked on parent's perceptions toward Toto Afya Card in Mbeya city.

2.3 Child health Expenditure

Medical expenditure can be taken as an indicator of economic status like income and total expenditure(27). Different studies have been conducted, Study in Pelotas, found that Health care expenditures most were spend on the medicines that were purchased using user fee. The health expenditure was found to be higher in the families with good socio-economic status since they had the ability to pay for them(28).

Another study in Ghana found that, medicine and medical supplies had high probability to consume large percent of the health expenditure, when the patient was admitted there was high cost of the medicines and many costs were un predicated. This resulted for parents to be unsure of how much money they should carry when the child was admitted and cause them to delay or fail to get medical services. Study further explained that Medicines and supplies came from the private hospitals had more cost and contributed more on the total health expenditure.

In the study conducted in Washington found the association of willingness to join insurance was found to be much stronger in Households experiencing hospitalization (69). They had higher health expenditure, as majority of them showed eagerness to join the scheme(29).

Study conducted in Tanzania had shown that patient choose whether to go to private or to the public hospitals, but mostly were going to the private hospital because of amount of time that were spend on the public hospitals. Hence, they tend to spend more of their expenditure on the private hospitals (68). But few studies have looked on children health expenditure and willingness to pay for children health insurance. This study looked on the parent/ guardian's health expenditure on their child and their willingness to pay for the Toto Afya Card in Mbeya city.

2.4 Socio-economic factors associated with willingness to pay

Willingness to pay studies has the impact on the policy making. Different studies showed how the willingness to pay is associated with social economic factors. Study conducted in, France shows occupation and household composition of respondents were factors that affect the individual WTP(30).Study conducted in India on awareness and willingness to

join for health insurance. Found that education, occupation, income of respondents affected their willingness to pay for health insurance(13). Study conducted in India found that socio-economic factors and physical accessibility to quality health services appeared to be significance determinants of willingness to join and pay for such a scheme (31). Study conducted in Kosovo on willingness to pay for food diary found that the level of consumer's income has positive correlation with the willingness to pay more for food safety, the higher the incomes were the probability that consumers express willingness to pay extra price for dairy products safety. The level of education shows positive relationship with the willingness to pay where there was high willingness to pay in high education compared to the group of elementary education (32). Study conducted in Iran on willingness to pay to improve people health status, among factors only income was associated with the willingness to pay for health status(33).

Study conducted in Tanzania based on artemisin in-based combination therapy found that Socio-economic status had no significant effect on willingness to pay, that is willingness to pay was not associated with education, occupation, household size or number of children under five. The only association with willingness to pay was being a mother(18).

There are few studies in Tanzania that have looked on effect of parent's social economic status that affect their willingness to pay for children health insurance. This study looked on the socio-economic factors that associate with the willingness to pay for Toto Afya Card among parents/ guardians.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study area

The study was conducted in Mbeya city which is the capital city of Mbeya Region, it is located in the country's southwest. According to the 2012 national census, the city had a population of children under age of 18 more than 141,475. The user fee still is major source of the health financing in many dispensaries and other hospitals (7).

Mbeya was chosen, because willingness to pay studies are conducted in the area where the product was not being firstly initiated. As the Toto Afya Card was first introduced and initiated in Dar es Salaam.

3.2 Study design

The study was cross sectional study for assessing the factors associated with WTP. The study used the Contingent valuation method to elicit WTP using take it or leave it (TIOLI) and open ended methods with follow up questions to collect data on willingness to pay for Toto Afya Card (15,16)among parents/ guardians in Mbeya city. The Take it or leave it (TIOLI) was used as it consisted of the close ended questions on a certain prices of health insurance premiums that the respondents were asked to say yes, no or don't know for the health insurance premium presented to them. Follow-upquestions that involved assigning them with one more bid to the initial bid. For the open-ended question (OE), the respondents were asked to reveal the maximum amount that they would be willing to pay for a health insurance prices without knowing Toto Afya Card price(34). Since zero WTP are not allowed in these kinds of studies in TIOLI to take care of this problem open ended question was introduced where the respondent was allowed to mention zero as his/her WTP valuation.

3.3 Study population

The study population was parent or guardian, who has at least one child, aged 0-17 years.

3.4 Study sample

The sample size was determined using quantitative sample estimation equation.

The Sample Formulae was given by: $N= z^2 P (1 - P)/e^2$

Whereas;

N = Estimated Sample Size

Z = standard normal deviate of 1.96 using 95% Confidence Level.

P =expected proportion of people who were willing to pay for someone else (proportional of parents who are willing to pay to reduce the incidence of childhood overweight/obesity by half 48.8% in Ghana)(21) .

e = Margin of error, 0.05 on using 5%.

Thus, $N = 1.96^2 \times 0.488 (1 – 0.488)/0.0025$.

N= 383.16= 384 round up

Considering 10% non-response ratewas 38.4

=384+38.4

N =422.4

The total Sample was 423.

3.5 Sampling procedures and techniques applied.

A simple random sampling was used to select study respondents. From 36 wards one ward was selected. One ward was selected because it had the total of 5585 households which more than 50% of them have the children under 18 (35). Hence, by that households' numbers I was able to get enough numbers of the eligible households to get total sample size from one ward. On arriving to the selected ward all the street in a particular ward total of eight streets was included in the study. 51-52 households were randomly selected from each street in list of households. In case a household was found to have more than one parent/ guardian with a child under 18 they were both included in a study. In case a sampled household had no parent with child under 18, the nearest house was used to replace the household.

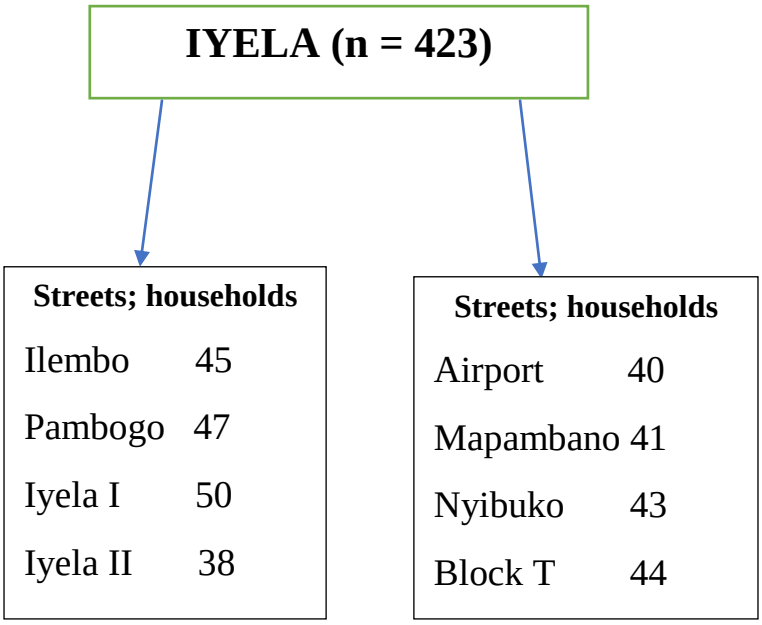


Figure 2: Recruitment of the sample in the respective households.

3.6 Eligibility Criteria

3.6.1 Inclusion criteria

All parents/ guardians in household who had at least one child age of 0-17were included in the study.

3.6.2 Exclusion criteria

Parents who were sick, who had disabilities, those who didn't speak English or Kiswahili and those already had Toto Afya Card was excluded.

3.7 Data collection tools (instrument)

Data was collected from households through face to face interviews using questionnaire. The questionnaire with structured questions (close and open ended) was developed in English and then translated to Kiswahili. The first part of questionnaire consisted of characteristic of respondents, socio-economics characteristics and demographic characteristics of respondents. The second part of the questionnaire consisted of contingent valuation hypothetical Toto Afya Card scenario which described information of Benefits of using health insurance, the premium and payment mechanism, coverage of benefits packages, duration of the package, covered number of members and benefits to dependents. Followed by both open-ended and TIOLI with follow up questions. The third part consisted of questions on perceptions of parents/ guardians on Toto Afya Card with Likert scale measurement of strongly agree, agree, uncertain, disagree, strongly disagree). And the last part consisted of child health expenditure questions.

3.8 Pre-testing of instruments

The pilot testing of a tool was carried out in two days in mwakibete ward by principal investigator and the research assistants. During the testing sessions, aim was for checking on the abilities of the RA's through observing them doing the interviews, to check whether the questions were difficult for the respondents to understand, how the targeted population understood the tool and the scenario, consistency of questions, logic of questions, how the respondents responded to the interview and necessary modification was made during meetings. Conducting the pilot study was assist the researchers in identifying existence of problems if any and collection of the questionnaire was done after testing and improve changes, and also to determine the time spent on gathering information(36).

3.9 Recruitment and training of research assistants

Three research assistants were recruited and trained for two days'. The orientation of the research assistant was comprised of briefing of the study and its objectives, understanding of the study method including contingent valuation method, background and detailed information of Toto Afya Card. Research assistants were oriented on tool so as to be familiar with it and how to us a tool to collect data. Research assistants also were

introduced to research ethics issues and administrative issues such as field work schedule and other logistics(37).

3.10 Data collection procedure

On reaching the households the interviewer introduced him/herself to the respondents. Respondents requested to give consent to participate in the study. Face to face interview was conducted with the respondent using Kiswahili questionnaire with structured questions. The questionnaire contained questions based on respondent characteristics, social-economic characteristics and beneficially characteristics. Followed by the scenario which was include information of Benefits of using children health insurance, the premium and payment mechanism, Coverage of benefits packages, Duration of the package, Covered number of members and Benefits to dependents. (38) The scenario was presented to the respondent and during the continuation the respondent was shown the Toto Afya Card physically and was asked if he/she have any question so as to make sure that the scenario was well understood by the respondents and the interviewer continued to explain the scenario to the respondent to the end.

A take it or leave it (TIOLI) which a follow up question followed to elicit WTP. And Only four bids was stated (70400, 60400,50400,40400) the starting bids was alternated from one respondents to another to avoid the starting point bias(38). After the TIOLI questions the respondent was further asked the maximum amount the was willing to pay for Toto Afya Card (22). Other parents' perceptions questions with Likert scale was asked and followed by child health expenditure questions. Interviews were conducted in privacy to enable respondents to provide information. Field data collection was conducted from 7th- 21st September 2018.

3.11 Study variables

3.11.1 Dependent variables

- Willingness to pay; using two binary variables each taking a value of 1 if the parent/ guardian is willing and 0, otherwise.

3.11.2 Independent variables

Measuring Social economic and respondents' characteristics variables.

Table 1: Independent variables

Variable	Operational definition	Measurement	Unit
Age	Years since one was born	Ratio	Years
Sex	Biological difference between male and female	Nominal	(1) Male (2) Female
Education level	Level of education one has attained	Ordinal	(1) Educated (2) Otherwise
Marital status	Being married or not	Ordinal	(1) Married/In-union (2) Widowed (3) Divorced, Single
Occupation	Time when a person starts working and being paid	Ordinal	(1) Employed (2) Not employed
Dependent number	Number of people leaving or not leaving in the house that depend on the respondent financially.	Ratio	Number
Income	Amount earned	Ratio	Amount
Number of children under 18.	Total number of live children	ration	Number
Age of child	Years since one was born	Ratio	Years

- Measuring Perceptions; Parents or guardian's perception variables will be measured as an ordinal scale of 5 levels Likert scale (1 = strongly agree, 2 = agree 3 = Uncertain, 4 = dis agree, 5 = strongly disagree). The mean score used to score those who agreed and those who do not agreed. The mean of 3 was neutral and above that indicated that the respondents agreed and below it indicated that the respondent disagreed.
- Measuring the health expenditure

Table 2: Health expenditure variables

Variable	Operational definition	Measurement	Unit
Monthly health expenditure	Average health cost per month.	Ratio	Amount
Outpatient expenditure	Cost for outpatient	Ratio	Amount
Inpatient expenditure	Cost for child admission	Ratio	Amount
Source of finance for medical expenditure		Ordinal	(1) Household income (2) Bank savings (3) Neighbors (4) Relatives (5) Private lender (6) Selling assets

3.12 Data Management

Data was recorded in questionnaires. All filled questionnaires on the end of the day was checked for completeness and collected by the principle investigator from research assistants. The questionnaire that was having faults was collected by the PI. The interview process was closely supervised by the principle investigator through observation(39).

3.13 Data Analysis

The analysis was done base on the research objectives to answer the research questions and objectives. The data was entered, cleaned and analyzed using the statistical computer program SPSS.

Descriptive statistics was done for demographic characteristics and socio-economic characteristics of the respondents. Data were presented in frequencies, percentage, Mean and standard deviation.

Bivariate logistics regression analyses and multiple logistic regression were done to examine socio-economic factors associated withwillingness to pay for Toto afya Card. The measure of statistical significance was expressed in P Value less than 0.05.

Table 3: Data analysis technique by objectives

Research objectives	**Data analysis techniques**
To estimate altruism willingness to pay for children health insurance benefits among parent/guardians in Mbeya city.	Mean, median and other Descriptive statistics presented in cross table with frequency percentages and $\chi 2$ p values for comparing willingness to pay.
To determine parent/guardians' perceptions toward children health insurance benefits in Mbeya city.	Likert scale.
To explore parents/guardian's health expenditure on child in Mbeya city.	Descriptive statistics presented in cross table with frequency, percentages and p-values for comparing WTP also mean, SD, median and range were computed.
To assess socio-economic factors associated with willingness to pay for children health insurance in Mbeya city.	Logistic regression analysis with coefficients and p-value for statistical significance.

3.14 Ethical issues and consideration

Ethical clearance was provided by the Muhimbili University of Health and Allied Sciences (MUHAS) Ethical Committee. Permission to conduct the study was requested and provided by the Mbeya city director. The informed consent was obtained from participants before they participate in the study. Participants were informed about the objectives of the study and that their participation was voluntary as there was no any kind of force for participation. Participants were free to decline or withdraw at time in the continuation of the study without any repercussion. It was clearly clarified that the information to be provided whether orally or in writing will be for research purposes and would therefore be strictly anonymous and dealt with confidentially.

3.15 Dissemination of the research findings

The study report will be disseminated and made available in the MUHAS library for use. The report will be disseminated and made available to Mbeya city council for use in improving the enrollments of Toto Afya Card. The findings to be submitted to a journal for publication to make it available for use by the wider community to advance knowledge.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-Demographic characteristics of the study respondents

Table 4 shows the socio- demographic characteristics of respondents. A total of 423 respondents were interviewed. About 178(42.1%) of the respondents were in age group of 28-37. Among 423, About 334(79%) of the respondents was married/cohabiting. A total of those who reported to be meeting health care cost for the children majority 302 (71.4%) had average of 1-2 children who were under 18 years of age. Majority 188 (44.1%) reported that the father of the child paid for the children health cost.

Table 4: Socio-demographic characteristics of the study respondents

Variable	Frequency	Percent
Sex		
Female	295	69.7
Male	128	30.3
Total	423	
Age of the parent/guardian		
18 – 27	171	40.4
28 – 37	178	42.1
38 – 47	43	10.2
48+	31	7.3
Total	423	
Marital status		
Married/Cohabiting	334	79.0
Widowed	26	6.1
Single/ Separated	63	14.9
Total	423	
Number of children under 18 of parent/guardian who pay for he alth cost		
1-2	302	71.4
3-4	108	25.5
5+	13	3.1
Total	423	
Who pays for child health cost		
Mother	163	38.9
Father	188	44.1
Together (mother and father)	50	11.8
Other Relatives	22	5.2
Total	423	

4.2 Estimate of willingness to pay for Toto Afya Card among parent/guardians in Mbeya city

Table 5 shows that, among 423 study respondents a high proportional of male 88.3% (113) were willing to pay compared to female 85% (253). However there was no statistically significant difference between sex of the respondents and their willingness to pay the Toto Afya Card per annum (P= 0.538).

Table 5: Respondents' sex and willingness to pay for the children health insurance benefits per annum(N=423)

Sex	Willingness to pay N=423			
	Yes n (%)	No n (%)	Total n (%)	P-Value
Female	253 (85.8)	42 (14.2)	295 (100)	0.538
Male	113 (88.3)	15 (11.7)	128 (100)	
Total	366 (86.5)	57 (13.5)	423	

Respondents were asked the vote and both questions to elicit willingness to pay (amount) for the child. The questions were asked regardless of their responses in vote (TIOLI). Table 6 shows the respondents responses to the open-ended questions, respondents reported maximum amount that ranged between TZS (1000 – 100000) per annum. The maximum average willingness to pay was TZS41877.97 (SD 16818.263) per annum.

Table 6: Respondent's maximum willingness to pay for children health insurance benefits for one year in TZS

Minimum (TZS)	Maximum (TZS)	Mean (TZS)	Median (TZS)	SD (TZS)
1000	100000	41877.97	40400	16818.263

4.4 Respondents perceptions for children health insurance benefits

Table 7; summarize the responses of the respondent's perceptions on the child's health insurance. The statements that were presented guided respondent's perceptions to them regarding willingness to pay and to join for the child's health insurance benefits. The agreement was different in each statement, which provided and overall mean score of 4 indicating that respondents agreed.

There is information about Toto Afya Cardin the community, this statement scored mean of 3.74 (SD 0.947) indicating that respondents agreed to the Toto Afya Card information in the community.

Quality health benefits package, this statement scored mean of 4.13 (SD 0.74) indicating that respondents agreed with the Toto Afya Card benefits.

Premium is affordable, this statement scored the mean of 4 (SD 0.978) indicating that respondents strongly agreed with Toto Afya Card premium to be affordable.

Eligibility criteria, this statement scored the mean of 3.94 (SD 0.982) indicating that respondents agreed that child's health insurance are not difficult.

Children health insurance benefits conditions had a mean of 3.94 (SD 0.980) means respondents agreed with health insurance benefits conditions.

Statement Toto Afya Card save medical expenditure, this statement compared with other statement scored highest mean 4.37 (SD 0.651). This means respondents agreed to this statement.

With Toto Afya Card children get medical services in many health facilities, statement had mean of 4.03 (SD 0.838). Indicating that respondents agreed to this statement.

Children archiving their dreams with health insurance by having good health scored highest mean of 4.56 (SD 0.620). Means that respondents agreed to this statement.

Table 7: Likert's Mean score of the perception toward children health insurance.

Variable	**Strongly Agree (%)**	**Agree (%)**	**Uncertain (%)**	**Disagree (%)**	**Strongly Disagree. (%)**	**Mean (SD)**
Toto Afya Card information in the community.	100 (23.60)	162 (32.40)	116 (27.40)	43 (10.20)	2 (0.50)	3.74 (0.95)
Insurance package.	150 (35.50)	188 (44.40)	74 (17.50)	10 (2.40)	1 (0.20)	4.13 (0.74)
Premium affordability	139 (32.90)	144 (45.90)	50 (11.80)	29 (6.90)	11 (2.60)	4 (0.98)
Eligibility criteria.	128 (30.30)	199 (47.00)	41 (9.70)	51 (12.10)	4 (0.90)	3.94 (0.98)
Product/ insurance conditions.	129 (30.50)	193 (45.60)	52 (12.30)	43 (10.20)	6 (1.40)	3.94 (0.98)
Monetary benefits.	111 (26.2)	165 (39.0)	22 (5.2)	84 (19.9)	41 (9.7)	3.52 (1.33)
Save the medical expenditure.	188 (44.4)	212 (50.1)	16 (3.8)	6 (1.4)	1 (0.2)	4.37 (0.65)
Assured medical services.	111 (26.2)	139 (32.9)	144 (34.0)	23 (5.4)	6 (1.4)	3.77 (0.95)
Medical services in many health facilities in Tanzania.	140 (33.1)	169 (40.0)	103 (24.3)	9 (2.1)	2 (0.5)	4.03 (0.84)
Assuring good health	258 (61.0)	147 (34.8)	14 (3.3)	3 (0.7)	1 (0.2)	4.56 (0.62)
Total Mean Score						4

4.5 Child's health expenditure and willingness to pay for the Toto Afya Card

Table 8, shows that among 423 respondents, about 391(92.4%) responded to the question about the average monthly health expenditures that they spent on the child health. The average mean child expenditure was about TZS 32,440.15 (SD 35,417.68) TZS per month, with minimum and maximum child health expenditure about TZS 2,000 and TZS 300,000respectively. About 317 (74.7%) respondents who reported their child to had fallen sick for the last three months, 205 (64.7%) respondents reported to have spent on hospital outpatient visit. The mean on outpatient expenditure was TZS 28,058.536 (SD 27,147.49) with the minimum and maximum of TZS 3,500 and TZS 240,000 respectively. A total of 317 (74.7%) respondents only 35 (11%) reported that they directly spent on hospital inpatient (admission). The mean inpatient expenditure was TZS 68,028.57 (SD 62,903.982), with a minimum and maximum inpatient expenditure of TZS 3,000and TZS 300,000.

Table 8: Reported child health expenditure in Tanzania shillings (TZS) in the last 3 months' prior interview on health care

Expenditure categories	Range Expenditure (TZS)	Mean (TZS)	Standard deviation (TZS)	N
Average expenditure	2000 –300,000	32,440.15	35,417.675	391
Outpatient expenditure in last 3 months	3,500 –240,000	28,058.536	27,147.49	205
Inpatient expenditure in last 3 months	3,000 –300,000	68,028.57	62,903.982	35

Table 9, shows that majority of respondents 271 (79.5%) used less than or equal TZS 30,000 as average child health expenditure. High proportional of responded who used average expenditure range from 30,001 – 130,000 were more likely to be willing to pay for the child's insurance.

Table 9: Respondents child health expenditure in Tanzanian shillings and willingness to pay for the children health insurance benefits (N=341).

Health expenditure	**Willingness to pay**			
	Yes (%)	**No (%)**	**Total**	**p**
≤ 30,000	220 (81.2)	51 (18.8)	271	
30,001 – 130,000	104 (95.4)	5 (4.6)	109	0.001
130,001+	10 (90.9)	1 (9.1)	11	
Total	334 (85.4)	57 (14.6)	341	

Table 10, shows that among 423 majority of respondents 321(75%) responded to the source of finance question. among 321(75%) about 266 (82.87%) responded to use household income as source of finance for child health. High proportional 233(87.6%) who used house hold income as source of finance were more likely to be willing to pay for child's health insurance.

Table 10: Sources of finance for child health expenditure for in last 3 months' prior interview and willingness to pay (N=321).

Sources of finance	**Willingness to pay**			
	Yes	**No**	**Total**	**P – value**
Household income	233 (87.60)	33 (12.40)	266	
Neighbors	6 (85.70)	1 (14.30)	7	
Relatives	12 (66.70)	6 (33.30)	18	0.112
Private lender	4 (80.00)	1 (20.00)	5	
Selling assets	19 (76.00)	6 (24.00)	25	
Total	282	39	321	

4.6 Socio- economic factors associated with willingness to pay for children health insurance benefits in Mbeya city

Table 11, Presents the estimates from the Ordinary Least Square (OLS) model of the socio-economic factors associated with maximum willingness to pay. The results show that the re spondent monthly income and education were the socio-

economic factors which hadPositive impact on willingness to pay for the children health insurance benefits. Other variables (respondents occupation and number of dependent) they were not statistically significantly influencing WTP.

Table 11: Socio-economic factors of maximum willingness to pay of the Ordinary Least Square model

Independent variables	Coefficient	P>|t|
Constant	32547.62	0.00
Sex	-2049.80	0.30
Parent's/guardian's education	4379.78	0.03
Parent's/guardian's occupation	-855.65	0.66
Number of Dependent	535.47	0.69
Parent's/guardian's monthly income	5864.95	0.00

Table 12 present the logistic regression analysis on TIOLI bids for "YES" and "NO" responses. Respondents who females are were less likely to give the affirmative response to the WTP question to all bids compared to males. Furthermore, the findings reveal that sex was not statistically significantly associated with willingness to pay for the bid of TZS 70,400, TZS 50,400, and TZS 40,400.

Comparing those who had more education to those of primary education, those who had higher education were more likely to give an affirmative response to willingness to pay questions to all bids. However, education was statistically significantly associated with the willingness to pay for the bids of TZS 70,400, TZS 50,400 and TZS 40,400 (p=0.00, p=0.001 and p=0.18) respectively.

At bid of TZS 40400 respondents who were engaging in business as their main source of income were more likely to give an affirmative response to WTP for children health insurance compared to respondent with other types of occupation. Occupation was statistically significantly associated with WTP at the bid ofTZS40400 (P=0.018). At bid of TZS70,400 respondents who were engaging in business were less likely to give an affirmative response, but there was no statically significantly association with the willingness to pay for children health insurance.

Compared with respondent with 3-5 and 6+ with respondent with ≤ 2 number of dependent. Those with 3-5 and 6+ they were more likely to give an affirmative response at all bids.

How ever there was no statistical significance association at all bids.

Holding other variable constant at bid of TZS 70400 and TZS 60400, respondents in quartile3 were less likely to give the affirmative response to WTP for children health insurance. Those respondents in income quantile1, quantile2 and quantile4 were more likely to give an affirmative response at all bids. The strong statistically significantly association with willingness to pay was found to those in Quantile4 at all bids.

Table 12: Coefficients and p-values of logistic model on the willingness to pay for children health insurance benefits at certain bid

Independent variable	70400		60400		50400		40400	
	Coefficient	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**	**Coefficient**	**P-value**
Gender								
Male	Reference		Reference		Reference		Reference	
Female	-0.46	0.27	-0.61	0.02	-0.56	0.01	-0.543	0.05
Respondents education								
Primary education	Reference		Reference		Reference		Reference	
Other wise	0.251	0.00	0.53	0.07	0.83	0.001	0.58	0.01
Respondents occupation								
Other occupation	Reference		Reference		Reference		Reference	
business	-0.475	0.25	0.01	0.94	-0.01	0.97	0.58	0.01
Number of dependents								
≤2	Reference		Reference		Reference		Reference	
3-5	0.321	0.48	0.477	0.103	0.239	0.308	0.312	0.225
6+	0.812	0.20	0.201	0.688	0.003	0.995	0.262	0.551
Respondent monthly income								
Quartile 1	Reference		Reference		Reference		Reference	
Quartile 2	0.214	0.65	0.43	0.56	0.25	0.48	0.08	0.81
Quartile 3	-0.120	0.82	-0.97	0.40	0.48	0.19	0.60	0.14
Quartile 4	1.548	0.00	1.84	0.005	1.68	0.00	1.35	0.00

CHAPTER FIVE

5.0 DISCUSSION

The purpose of this study was to assess willingness to pay for child's health insurance benefits among parents/guardians. This chapterdiscusses the results of the study focusing on willingness to pay, health insurance perceptions, child's health expenditure and socio-economic factors associated with willingness to pay for child's health insurance benefits.

5.1 Willingness to pay for child's health insurance

In this study male study participants, were more likely to accept to pay for the health insurance compared to female respondents. Similar findings were found in the study of willingness to pay for a child's health insurance in Japan were female respondents were unwilling to join for child's health insurance compared to male respondents(40). In African settings men are the ones that take care of the family financially and they know the burden of paying for health cost of the family. This implies insurer should consider special interventions that will increase awareness on the importance of health insurance so as to increase willingness to pay to join in both genders.

The mean maximum willingness to pay reported by respondents was lower than the actual premium of TotoAfya Card. This finding implies that respondents mean willingness to pay was lower. However the findings contradict with a study on caregivers willingness to pay for children's nutritional services, elsewhere the willingness to pay was approximate to the actual prices of the services(39). Reason could be TIOLI method with follow up questions is sensitive to strategic behavior bias. The implication of findings could be there is reasonably high agreement among parents on the valuation of children health insurance benefits. In this study more, participants reported the lowest bid. A study done in Swaziland, also found that the higher the price of initial and other follow up bids, the less probability of the subsequent bid being accepted. Reason could be starting point bias (25), Also, this reflect the law of demand that indicate the higher the price of a good, the lower is the quantity demanded and vice versa. When the price of a product of service is very high other thing remain equal, the demand will decrease implying that while consumers may wish to purchase more of a product, they are limited by their ability to buy. Therefore, only few respondents may accept higher price as prices are risen(41).

5.2 Children health insurance perceptions

Theoretically health insurance protects risks of losing money in case of illness episodes, therefore influencing the perception that many people are likely to agree with a statement health insurance is important for their child's health. We found the similar response to that statement in a study done in Nigeria(42).This indicates that parents understand the importance of the health insurance for the children as it helps to be assured of getting medical services in case of an illness episodes.

When health insurance companies offer good health benefits package which design towards the health needs of the people influencing people perception (45). Therefore, influencing the perception that many people are likely to agree with a statement children health insurance benefits package. This implies in order to increase the enrolment of health insurance; health insurance companies must offer quality benefit coverage to meet people health needs (44).

Income constraits cause difficulties to people to afford health insurance premium. In this study people were more likely to agree with toto afya card premium to be affordable. In case of premium affordability these findings contradict withstudy done on perception on health insurance in rural area, the majority disagree to the mode of premium payment as premium to be paid all at once bring the financial constraints resulting to be burden to pay(43).Also, study done in Nigeria reported because of the Poverty level was high among the respondent's, many people disagreed that premium was high and they couldn't afford it because of their financial status and inconsistent income(42). Reason for this contradiction could be due to study settings as these studies were done in rural area. These imply that parents perceive a premium to be affordable. Premium to be paid per year will not be the reason for the financial constraints for other households expenditure, as paying will have minimum effect on their basic needs(44).

5.3 Children Health Expenditure and willingness to pay for health insurance

In this study shows that, those who paid more than one hundred and fifty thousand shillings (TZS) were more likely to pay for the health insurance, these findings corroborate those in Kenya on a willingness to pay health insurance for the household(44) . Their findings show that respondents with higher medical expenditure were more likely to pay health insurance compared to respondents with lower medical expenses. This could also imply that in our study people who were spending more on medical services, on their child were more inclined to pay for insurance to trim down their economic burden.

People who spend most of their household income to cover medical expenditure were more likely to be willing to pay for the children health insurance than others who would sell assets to cover health expenditure. Such findings are similar to other studies where the respondents reported to borrow money, taking a loan, or received help from relatives and friends so as to cover medical expenditure (9–11,45).

5.4 Socio-economic factors associated with willingness to pay

Socio-economic factors have been shown to influence the willingness to pay in this study were parent/guardian education and parent/guardian monthly income. These socio-economic factors associated with willingness to pay in our studywas simiral with other willingness Study that was done in india, showed that education and income of respondents affected the respondents willingness to pay for health insurance for other (13). This could be due to validity of willingnes to pay data in the study.

High monthly income influenced the willingness to pay for children health insurance. Similar findings on a study done on caregivers WTP for food diary for their children, found that higher level of caregiver's income had positive influence on the willingness to pay more for good nutrition. This implies that parent with lower income have lower demand for all products services, including health insurance due to income constraints (21).

Education is a factor that also improves the health seeking behavior and hence insurance uptake. In this study education positively influenced the willingness to pay for child's health insurance. Similar findings reported high WTP among high-educated respondents compared to those of elementary education (39).

This means there is lower WTP to those with lower education which could result in lower enrollment of Toto Afya Card by this group. Implication of this finding could be Government should provide special support to these groups with low income and education in order to increase the enrollment of Toto Afya Card in this group.

CHAPTER SIX

6.0 CONCLUSION, RECOMMENDATION AND LIMITATION

6.1 Conclusion

This study aimed at assessing the willingness to pay for the children health insurance benefits and associated factors among parent'/ guardians'.

1. The mean and median maximum willingness to pay estimated by both open-ended and Take-it-or-leave-it methods were lower compared to the actual NHIF premium of the Toto Afya Card. This implies that majority of the guardians/parents would be less willing to pay for the Toto Afya Card.
2. Although parents/guardians mention a lower WTP values compared to the NHIF actual premium recognized the importance of children health insurance scheme and how it saves the child's risk for medical expenditure if ones has an illiness episode.
3. High health expenditure create a barrier for the child to access health services especially to families with low income status.
4. The study also found that socio- economic factors (income and education) influence parent /guardians' willingness to pay for Toto Afya Card.

6.2 Recommendations

This study recommends the followings;

1. Development practioners should conduct a through ability to pay study to ascertain the willingness to pay for the Toto Afya Card.
2. Socio-economic factors should be considered by policy makers and other practioners when setting Toto Afya Card premium.

6.3 The starting point and strategic behaviour bias

This study was likely to face some hypothetical scenario biases. These biases could be starting point and strategic biases. One possible source could be the starting point, which may be due to starting bid which may cause people to respond to it more than the other follow up bids. Thus, for the starting point bias the individual may respond differently depending on the magnitude of the starting bid. Means that effect starting point bias influenced the actual WTP of the individual. Therefore, as suggested from the other CV studies alternating starting point bids was used to reduce the effect of the starting point bias (18, 20, 38).

Strategic behavior bias may arise when the respondents provide a biased answer in order to influence a particular outcome. As other CV studies suggested, in this study, we used the referendum format to reduce strategic bias. The “YES”, “NO” questions with an additional follow-up question of maximum WTP was used in order to reduce this bias.

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APPENDICES

Appendix I: Questionnaire English Version

QUESTIONAIRE FOR WILLINGNESS TO PAY FOR CHILDREN HEALTH INSURANCE AMONG PARENTS/ GUARDIANS IN MBEYA CITY.

Questionnaire Number: [ ] [ ] [ ]

1. Interview Date: Mo. ___ Day___ Yr. ___
2. Time Interview Began:
3. Time Interview Completed.

1. Parent/guardian Demographic and Socio-economic characteristics Questions.

QN.NO	QUESTION	RESPONSE	SKIP
1.	How old were you at your last birthday?	Years…….	
2.	Interviewer: what is the gender of the respondent?	1. Female 2. Male	
3.	What is your marital status?	1. Married/In-union 2. Widowed 3. Separated/Divorced 4. Single	Go to 5
4	What is your husband/wife/partner age?	Years…….	
5.	What is the highest level of education completed?	(1) No formal education (2) Primary (3) Secondary (4) College/ University	
6.	What is your husband/wife/partner highest level of education completed?	(1) No formal education (2) Primary (3) Secondary (4) College/ University	If widow

7.	What is your main source of income?	1. Farmer 2. Employed in private sector 3. Employed in public sector 4. Unemployed 5. Business 6. Entrepreneurs 7. Others …….	
8.	What is your husband/wife/partner main source of income?	1. Farmer 2. Employed in private sector 3. Employed in public sector 4. Unemployed 5. Business 6. Entrepreneurs 7. Others …….	If widow
9.	How many dependants live in this household?	No. of individuals …….	
10.	How many living children under age of 18 do you have?	Number ……	

Beneficially characteristics Questions

NO	11. Age of the child	12. Sex Of the child M/F	13. Did your child fall sick for the last 3 months? (yes/no)	14. How many episode	15. Total duration of illness (from onset to recovery) days.		16. Did you visit the hospital?		17. Did the illness of the child interfere with your income earning?		18. Did the illness of the child interfere with your partner/wife/husband income earning?	
					1^{st} episode	2^{nd} episode	Yes	No	Yes	No	Yes	No
1												
2												

B. willingness to pay for children health insurance scenario

Health Insurance (Toto Afya Card)is a payment package is designed to cater for the health needs of people. It ensures that adequate and affordable health care is provided for all the people that are registered with the service. has an attractive benefits package that is offered to its beneficiaries through accredited health facilities country wide, this package has a benefit that are offered to beneficiaries as per Standard Treatment Guidelines issued by the Ministry of Health alongside the Fund`s regulations. The package services include: -

(Consultation, Medicines and medical supplies, Investigations, Surgical Services. Inpatient Care Services including ICU and HDU, Physiotherapy and rehabilitation services,Eye and Optical Services, Spectacles, Dental and Oral health Services, and Medical/Orthopedic Appliances.)

RA/PR: Show respondent the SHOW CARD reflecting the various services that will be provided in the insurance scheme.

Ask if the respondent has question

Continue: It operates as a form of small contribution which is annually to the facilitator of the scheme and any health need that arises for members within the scope of the insurance will be covered. And covered members will start receiving the health services within 21 days after the legislation and being able to get services over 6000 facilities that has been registered by the NHIF.

Ask if the respondent has questions.

QN.NO	QUESTIONS	RESPONSES	SKIP
19.	Considering the insurance, I explain about are you willing to join for your child/children?	1. Yes 2. No	
20.	Considering the insurance, I explain about how many children are you willing to join for per annum?	Number ……	
21.	Considering the insurance, I explain about which one of age of child are you willing to join for per annum?	Age ……	
22.	Considering the insurance, I explain about which one of gender are you	1. Female 2. Male	

	willing to join for per annum?		
23.	Considering the insurance, I explain about are you willing to pay for your child/ children per annum?	1. Yes 2. No	
24.	Considering the insurance, I explain about how many children are you willing to pay for per annum?	Number ……	
25.	Considering the insurance, I explain about which one of age of child are you willing to pay for per annum?	Age ……	
26.	Considering the insurance, I explain about which one of gender are you willing to pay for per annum?	1. Female 2. Male	
27.	Suppose the price of toto afya card is 60,400shs would you be willing to pay for it per annum?	1. Yes 2. No 3. I don't know	 Go to 29 Go to 29
28.	Suppose the price of toto afya card is 70,400 shs would you be willing to pay for it per annum?	1. Yes 2. No 3. I don't know	Go to 31 Go to 31 Go to 31
29.	Suppose the price is 50,400 shs would you be willing to pay for it per annum?	1. Yes 2. No 3. I don't know	Go to 31 Go to 30 Go to 30
30.	Suppose the price is 40,400shs would you be willing to pay for it per annum?	1. Yes 2. No 3. I don't know	Go to 31 Go to 31 Go to 31
31.	You said you will pay …… tshs, are you willing to pay the highest price than the previously price? What is the highest price you would be willing to pay for toto afya card per annum?	Amount……	

C. PERCEPTIONS FOR CHILDREN HEALTH INSURANCE (TOTO AFYA CARD)

Which of the following reasons did you consider being the most important while choosing to join and pay for toto afya card? Please give the response for following statements on five point Likert's Scale ranging from Strongly Agree to Strongly Disagree:

NO		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree.
32.	There is good information about toto afya and it is well understood in the community.					
33.	Good quality health package so it will benefit me .					
34.	Premium is cheap and affordable .					
35.	The eligibility criteria are very fine .					
36.	I find product conditions are not complex .					
37.	It does not provide any monetary benefits but it is okay .					
38.	Save the medical expenditure to the children					
39.	Children get assured medical services					
40.	With toto afya card, children get medical services in many health facilities in Tanzania					
41.	Children can archive his/her dreams by having good health					

D. HEALTH EXPENDITURE

NO	QUESTION	RESPONSE	SKIP
42.	What is your child under 18 monthly health care expenditure?	Amount…….	
43.	Where was the source of treatment?	(1) Public health facilities (2) Private health facilities (3) Both public and private health facilities (4) Other……. (specify)	
44.	What cost was spent during last episode of the outpatient expenditure?	Direct cost Amount i. Doctors' fees……. ii. Medicines……. iii. Diagnostics…… iv. Diet …… v. Transportation…… vi. Others…… Indirect cost Amount Loss of income of …… Household.	
45.	What cost was spent during last episode of the Inpatient expenditure?	Direct cost ……. Cost for transportation……. Indirect cost Loss of income of the household……..	
46.	Who usually pay for the medical expenditure for your	1. My self 2. Husband/ wife	

	child/ children?	3. Other (specify)…….	
47.	What was the source of finance for medical expenditure?	(7) Household income (8) Bank savings (9) Neighbors (10) Relatives (11) Private lender (12) Selling assets (13) Don't know	
48.	What is your average monthly income?	Amount ……	
49.	What is your husband/wife/partner average monthly income?	Amount……	

THANK YOU VERY MUCH

Appendix II: Swahili Version Translated Questionnaire

DODOSO KWA AJILI YA UTAYARI WA KULIPIA BIMA YA AFYA YA WATOTO (TOTO AFYA KADI) KATI YA WAZAZI/WALEZI KATIKA JIJI LA MBEYA.

Namba ya dodoso: [ ] [ ] [ ] [ ]

1. Siku ya mahojiano : mwezi ___ siku ___ mwaka . ___
2. Muda wa kuanza mahojiano:
3. Muda wa kumaliza mahojiano:

TAARIFA ZA KIDEMOGRFIA NA UCHUMI

NO.	SWALI	JIBU	RUKA
1.	Ulikuwa na miaka mingapi katika tarehe yako ya mwisho ya kuzaliwa?	Miaka ……..	
2.	Jinsia ya mshiriki ?	1. Mwanamke 2. Mwanamume	
3.	Hali yako ya ndoa?	1. Nimeoa/olewa/ naishi na mwenzi wangu wa jinsia tofauti nyumba Moja 2. Mjane /mgane 3. Mtalaka/tumetengana, Mjane 4. Sijaoa/sijaolewa	Nenda no. 5 Nenda no. 5
4.	Umri wa mwenza wako/ mke wako/ mume wako	Miaka	

5.	Unakiwango gani cha elimu?	1. Sina elimu 2. shule ya msingi 3. shule ya sekondari 4. Chuo na Zaidi	
6.	Mwenza wako/ mke wako/ mume wako anakiwango gani cha elimu?	1. Hana elimu 2. shule ya msingi 3. shule ya sekondari 4. Chuo na Zaidi	Kama hajaoa/ kuolewa Mjane / mgane
7.	Kipi unachikifanya kinakuingizia kipato zaidi?	1. Mkulima 2. Umeajiliwa sekta binafsi 3. Umeajiliwa serikalini 4. Huna kazi 5. Biashara 6. Mjasiriamali 7. Nyingine……	
8.	Kipi anachokifanya mwenza wako / mkeo/ mumeo kina cho muingizia kipato zaidi?	1. Mkulima 2. Umeajiliwa sekta binafsi 3. Umeajiliwa serikalini 4. Huna kazi 5. Biashara 6. Mjasiriamali 7. Nyingine……	Kama hajaoa/ kuolewa Mjane / mgane
9.	Watu wangapi wanaokutegemea wanaishi pamoja na wewe nyumbani?	Idadi ya watu…….	
10.	Watoto wangapi hai chini ya miaka 18 ulionao?	Idadi ya watoto……	

NO	11. Miaka ya mtoto	12. Jinsia ya mtoto Me/ke	13. Mtoto wako amewahi kuumwa ndani ya miezi 3 iliyopita? Ndiyo/ hapana	14. Kaumwa mara ngapi ndani ya miezi 3?	15. Ugonjwa ulidumu kwa muda gani (toka aanze kuumwa mpaka kupona) Siku		16. Je ulienda hospitalini?		17. Je ugonjwa wa mwanao uliingilia shughuli zako za kujiingizia kipato?		18. Je ugonjwa wa mwanao uliingilia shughuli za mwenza wako/ mkeo/ mumeo za kujiingizia kipato?	
					Mara ya kwanza	Mara ya pili	Ndiyo	Hapana	Ndiyo	Hapana	Ndio	Hapana
1					…….	…….						
2												

MASWALI YA MFAIDIKA WA TOTO AFYA KADI.

B. UTAYARI WA KULIPIA BIMA YA AFYA YA WATOTO (NADHARIA)

TOTO AFYA KADIni kadi ya Bima ya Afya ya NHIF inayotolewa kwa watoto wa chini ya miaka 18 waliosajiliwa na NHIF ili kuwawezesha kupata huduma za matibabu katika vituo vilivyosajiliwa na NHIF nchi nzima.
Mfuko huu wa Bima ya Afya unatoa mafao yafuatayo kwa wanachama wake:

(Kujiandikisha na kumwona daktari, .Vipimo zaidi ya 350 vya msingi na maalum, Dawa zote zilizosajiliwa na zinazoruhusiwa kutumika hapa nchini ,Huduma za kulazwa kwa daraja la kwanza au la pili kulingana na makubaliano kati ya NHIF na Watoa huduma,Upasuaji mdogo, mkubwa na wa kitaalamu, Huduma za afya ya meno, Matibabu ya macho, Huduma za mazoezi ya viungo (physiotherapy), Miwani ya kusomea kwa mwanachama mchangiaji na Vifaa saidizi (Medical/ Orthopedic appliances) kama Fimbo nyeupe, magongo, vifaa vya usikivu, vifaa shikizi vya shingo.

Mtafiti:Uliza kama mshiriki ana swali lolote

Endelea: inafanya kazi kwa kuchangia kiasi kidogo cha hela kwa mwaka kwa ajili ya mtoto mmoja kwenye mfuko. Na matatizo yoyote ya kiafya atakayo pata mwanachama atatibiwa bure. Mwanachama ataanza kuhudumiwa huduma za afya baada ya siku 21 baada ya usajili na kuweza kupata huduma kwenye vituo zaid ya 6000 vilivosajiriwa na NHIF.

Uliza kama mshiriki ana swali lolote

NO	MASWALI	MAJIBU	RUKA
19.	Kwa bima niliyo elezea hapo juu je upo tayari kujiunga kwa ajili ya mwanao/wanao kwa mwaka?	1. Ndio 2. Hapana	
20.	Kwa bima niliyo elezea hapo juu je upo tayari kujiunga kwa ajili ya watoto wangapi kwa mwaka?	Idadi …….	
21.	Kwa bima niliyo elezea hapo juu je upo tayari kujiunga kwa ajili ya mwanao mwenye umri gani kwa mwaka?	Umri ……	
22.	Kwa bima niliyo elezea hapo juu je upo	1. Kike	

	tayari kujiunga kwa ajili ya mwanao wa jinsia gani kwa mwaka?	2. Kiume	
23.	Kwa bima nliyoelezea hapo juu upo tayari kulipia kwa ajili ya mwanao/wanao kwa mwaka?	1. Ndio 2. Hapana	
24.	Kwa bima niliyo elezea hapo juu je upo tayari kulipia kwa ajili ya watoto wangapi kwa mwaka?	Idadi …….	
25.	Kwa bima niliyo elezea hapo juu je upo tayari kulipia kwa ajili ya mwanao mwenye umri gani kwa mwaka?	Umri …….	
26.	Kwa bima niliyo elezea hapo juu je upo tayari kulipia kwa ajili ya mwanao wa jinsia gani kwa mwaka?	1. Kike 2. Kiume	
27.	Vipi kama bei ya toto afya kadi ni sh. 60,400 utakua tayari kuilipia kwa mwaka?	1. Ndio 2. Hapana 3. Sijui	Nenda 28 Nenda 29 Nenda 29
28.	Vipi kama bei ya toto afya kadi ni sh. 70,400 utakua tayari kuilipia kwa mwaka?	1. Ndio 2. Hapana 3. Sijui	Nenda 31 Nenda 31 Nenda 31
29.	Vipi kama bei ya toto afya kadi ni sh. 50,400 utakua tayari kuilipia kwa mwaka?	1. Ndio 2. Hapana 3. Sijui	Nenda 31 Nenda 30 Nenda 30
30.	Vipi kama bei ya toto afya kadi ni sh. 40,400 utakua tayari kuilipia kwa mwaka?	1. Ndio 2. Hapana 3. Sijui	Nenda 31 Nenda 31 Nenda 31
31.	Ulisema utalipia sh ……. Kiasi gani kikubwa zaidi uko tayari kulipia kwa ajili toto afya kadi kwa ajili ya mwanao/wanao kwa mwaka?	Kiasi ……	

C. MTAZAMO WA WAZAZI/ WALEZI KWENYE BIMA YA WATOTO (TOTO AFYA KADI)

Ipi kati ya hizi sababu zimekufanya ziwe sababu kubwa katika kuchagua kulipia au kujiunga na toto afya kadi? Tafadhali toa maoni yako kwa sentensi hizi kwa kuanzia nakuabaliana sana hadi sikubaliani kabisa. Kulingana na mtazamo wako.

NO		Nakubaliana sana	Nakubaliana	Sina hakika	Sikubaliani	Sikubaliani kabisa
32.	Kuna taarifa nzuri kuhusu toto afya kadi na zinaeleweka vizuri katika jamii.					
33.	Kuna mafao mazuri ya afya na yatanifaidisha kwa mwanangu.					
34.	Bei ya kujiunga ni nafuu na naweza kuimudu.					
35.	Vigezo vya kujiungani vyepesi.					
36	Kufata masharti ya toto afya kadi si vigumu.					
37.	Hairudishi hela kama bima isipo tumika lakini ni sawa.					

38.	Inaokoa matumizi ya hela yanayotumika kwa ajiri ya afya ya mtoto.					
39.	Kwa toto afya kadi watoto wanapata huduma za afya za uhakika.					
40.	Na toto afya card watoto wanapata huduma katika vituo vingi vya afya.					
41.	Kwa toto afya kadi watoto wanaweza kufikia ndoto zao kwa kua na afya bora.					

D. MATUMIZI YA HUDUMA YA AFYA YA MTOTO

NO	SWALI	MAJIBU	RUKA
42.	Je unatumia matumizi kiasi gani kwa mwezi kwa ajiri ya huduma ya afya yam toto wako wa chini ya miaka 18?	Kiasi …….	
43.	Wapi unapopata matibabu mtoto akiumwa?	(1) Vituo vya afya serikalini (2) Vituo vya afya binafsi (3) Vyote Vituo vya afya binafsi na	

		serikalini (4) Vingine…… (taja)	
44.	Gharama gani za matumizi zilitumika katika matibabu ya nje mara ya mwisho mwanao alivoumwa ?	Gharama za moja Kwa moja kiasi i. Ada ya kumuona daktari …….…… ii. Dawa …… iii. Uchunguzi/Vipimo……. iv. Mlo maalum …….. v. Usafiri…… vi. Vinginevyo ……... Gharama zisizo za moja kwa moja kiasi kupoteza hela ya matumizi ya nyumbani.……	
45.	Gharama gani za matumizi zilitumika kwa mtoto/ mgonjwa mara ya mwisho mtoto alipolazwa?	Gharama za moja Kwa moja ……. Usafiri ……. Gharama zisizo za moja kwa moja kiasi kupoteza hela ya matumizi ya nyumbani.……	
46.	Nani kawaida hulipa gharama za matibabu ya afya ya mtoto?	1. Mwenyewe 2. Mume /mke 3. Mwingine ……. (mtaje)	

47.	Kipi ni chanzo cha kulipia gharama za matibabu ya afya ya mtoto?	(1) Hela ya matumizi ya nyumbani (2) Akiba benki (3) Majirani (4) Ndugu (5) Wakopeshaji binafsi (6) Kuuza mali	
48.	Wastani wa kipato chako kwa mwezi?	Kiasi ……	
49.	Wastani wa kipato cha mwenza / mke/ mume wako kwa mwezi?	Kiasi ……	

ASANTE SANA KWA USHIRIKIANO

Appendix III: Verbal Informed Consent (English Version)

WILLINGNESS TO PAY FOR CHILDREN HEALTH INSURANCE (Toto Afya Card)AMONG PARENTS/GUARDIANS IN MBEYACITY.

Dear Participant,

Introduction

My name is……., from Muhimbili University of Health and Allied Sciences (MUHAS) and I am the principal investigator PI / research assistance RA in the proposed study with the title above.

Purpose of the research

The aim of this study is to estimate the willingness to pay for children health insurance and its associated determinants. Findings of this study will show how you as parents/ guardians perceive this insurance and to collect your views on how many are willing to pay for, and at what premiums as the means to minimize out of pocket payments expenditure for your children and remove barrier in health care utilization especially primary health care.

Procedures

To find answers to some of these questions, we invite you to take part in this study. This is because we feel that your experience as an individual can contribute much information to this study. If you accept, you will be asked some questions. If you do not wish to answer any of the questions, you may say so and we will move to other questions. You may also refuse to answer any question if you feel the question(s) are personal or if talking about them makes you uncomfortable. Your decision will be highly respected.

Risks and discomforts

There are no risks in participating in this study.

Benefits

If you agree to take part in this study, we hope that the information we gather from this study will also be beneficial to you directly or indirectly. As understanding of the perceptions and other determinants associated with willingness to pay is necessary for the development of different options that will be useful for increasing the enrollment of Toto

Afya Card It will help shade some light on which specific mechanisms development practitioners should take when promoting children health insurance (Toto Afya Card) in Mbeya.

Confidentiality and anonymity

The information that we collect from this research will be kept confidential. No information other than this consent form will have your identification on it.

Right to refuse or withdraw

Participating in this study is voluntary. You do not have to take part in this research if you do not wish to do so and refusing to participate will not affect you in any way i.e. nobody will be informed that you have refused to participate in this study.

Duration: Interview will take approximately 15 minutes.

Who to contact:

If you have any questions, please contact the

Principal Investigators
Miss. KASHANGAKI Aminatha Arsen
P.O.BOX 3435,
MBEYA.
PHONE No: 0765-395848
0659-975845
Email address: aminathakashangaki@gmail.com

Supervisor
Prof. 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

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 IV: Fomu Ya Ridhaa (Swahili Version)

UTAYARI WA KULIPA BIMA YA AFYA YA WATOTO KWA WAZAZI/ WALEZI KATIKA JIJI LA MBEYA.

Mpendwa Mshiriki,

Utangulizi

Naitwa ……. kutoka katika chuo kikuu kishiriki cha tiba na sayansi Muhimbili, mimi ndio mtafiti mkuu/ msaidizi katika utafiti huu tajwa hapo juu.

Lengo la utafiti

Dhumuni la utafiti huu ni kutathmini utayari wa kulipia bima ya afya ya watoto. Matokeo ya utafiti huu yataonesha namna ninyi wazazi au walezi mna mtazamo gani juu ya bima hii, na kukusanya maoni yenu juu ya wangapi wana utayari wa kulipia bima hii na kwa kiasi gani. Ili kupunguza kulipia gharama ya huduma ya afya ya moja kwa moja kwa wa watoto wenu na kuondoa vikwazo katika kupata huduma ya afya muhimu kwa watoto.

Njia ya kushiriki

Ili kuweza kupata majibu ya baadhi ya maswali, tunakuomba ushiriki katika utafiti huu. Tumekuchagua wewe kwa kuona kuwa ufahamu wako unaweza kuwa wa ufanisi mkubwa kwa utafiti huu. Kama utakubali kushiriki, utaulizwa maswali. Iwapo kutakuwa na swali usilotaka kujibu basi unaweza kueleza hivyo na tutaendelea na maswali mengineyo. Unaweza pia kukataa kujibu swali unaloona kuwa linaingilia uhuru wako, kukuvunjia heshima au unaloona linakufanya usijisikie vyema. Uamuzi wako wowote tunaupokea bila kinyongo na tunauheshimu.

Madhara

Hakuna madhara yoyote yanayotarajiwa kutokana na ushiriki wako katika utafiti huu.

Faida

kama ukikubali kua sehemu ya utafiti huu. tunatumaini kwamba taarifa tutakazo zikusanya kwenye utafiti huu zita kufaidisha pia moja kwa moja au kwa njia moja au nyingine. Kwamba kwa kuelewa mtazamo wa wazazi/walezi na sababu sababishi nyingine

zinazopelekea utayari wa kulipia ni muhimu kwa ajili ya kutengeneza njia mbali mbali ambazo zitasaidia kuongeza usajili wa toto afya kadi kwenye jiji la Mbeya.

Usiri wa taarifa

Mazungumzo utakayofanya katika utafiti huu yatatunzwa kwa usiri mkubwa. Vilevile hakuna mahali popote patakapoandikwa jina lako wala utambulisho wako zaidi ya kwenye fomu hii uliyojaza kukubali kushiriki.

Haki ya kutoshiriki/kujitoa

Ushiriki wako katika utafiti huu ni wa hiari. Hushurutishwi kwa namna yoyote kushiriki, kama utaona huhitaji kushiriki na uamuzi wako wa kutoshiriki hautakuathiri kwa namna yoyote ile. Hakuna yeyote atajulishwa kuwa umekataa kushiriki katika utafiti huu.

Muda:Majojiano yatachukua muda wa dakika 15.

Mawasiliano:

Kama una jambo lolote ungetaka kuuliza/ kushtaki

MAWASILIANO
Mtafiti Mkuu
KASHANGAKI Aminatha, Arsen
P.O.BOX 3435,
MBEYA
PHONE No: 0765-395848
0659-975845
Email address: aminathakashangaki@gmail.com

Msimamizi
Dr. Phare Mujinja
SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES
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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

(2) Hapana usiendelee na Mahojiano

Appendix V: Ethical Clearance Letter

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

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Direct Line: +255-22-2151378
Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. DA.287/298/01A/

3rd September, 2018

Ms. Aminatha A. Kashangaki
Master of Public Health
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "WILLINGNESS TO PAY FOR CHILDREN HEALTH INSURANCE BENEFITS AMONG PARENTS/GUARDIANS IN MBEYA CITY"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from 3rd September, 2018 to 2nd September, 2019. In case you do not complete data analysis and dissertation report writing by 2nd September, 2019, you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
ACTING: DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Public Health and Social Sciences, MUHAS

Appendix VI: Introduction Letter to Mbeya City Authority

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

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

Ref. No. HD/MUH/T.409/2017

6th September, 2018

Director,
Mbeya City Council
P.O. Box 149
MBEYA.

Re: INTRODUCTION LETTER

The bearer of this letter Ms. Aminatha A. Kashangaki is a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing Master of Public Health.

As part of her studies she intends to do a study titled:"***Willingness to pay for children health insurance benefits among parents/guardians in Mbeya City ".***

The research has been approved by the Chairman of University Senate.

Kindly provide her the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. S. Kamby
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Dean, School of Public Health and Social Sciences
cc: Ms. Aminatha A. Kashangaki

Appendix VII: Approval Letter from Mbeya Municipal

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI MBEYA

IDARA YA AFYA,
S.L.P. 149,
MBEYA

Kumb. Na. PHD/MCC/R.4/VOL.IV/48 — Tarehe: 05/09/2018

AFISA MTENDAJI
KATA YA IYELA,
S. L. P 149,
MBEYA.

YAH: UTAMBULISHO

Tafadhali husika na kichwa cha habari hapo juu.

Namtambulisha kwako **AMINATHA A KASHANGAKI** toka Chuo Kikuu cha Afya Muhimbili (MUHAS) Tanzania. Ambaye anakuja kufanya utafiti kuhusu **"Utayari wa kulipia bima ya Afya ya watoto (toto Afya kadi)"**, utafiti huu utafanyika kuanzia tarehe 7/09/-21/09/2018.

Kwa barua hii, naomba apewe ushirikiano ili kukamilisha utafiti huo.

Nakutakia kazi njema.

Jonas Lulandala
MGANGA MKUU JIJI
MBEYA

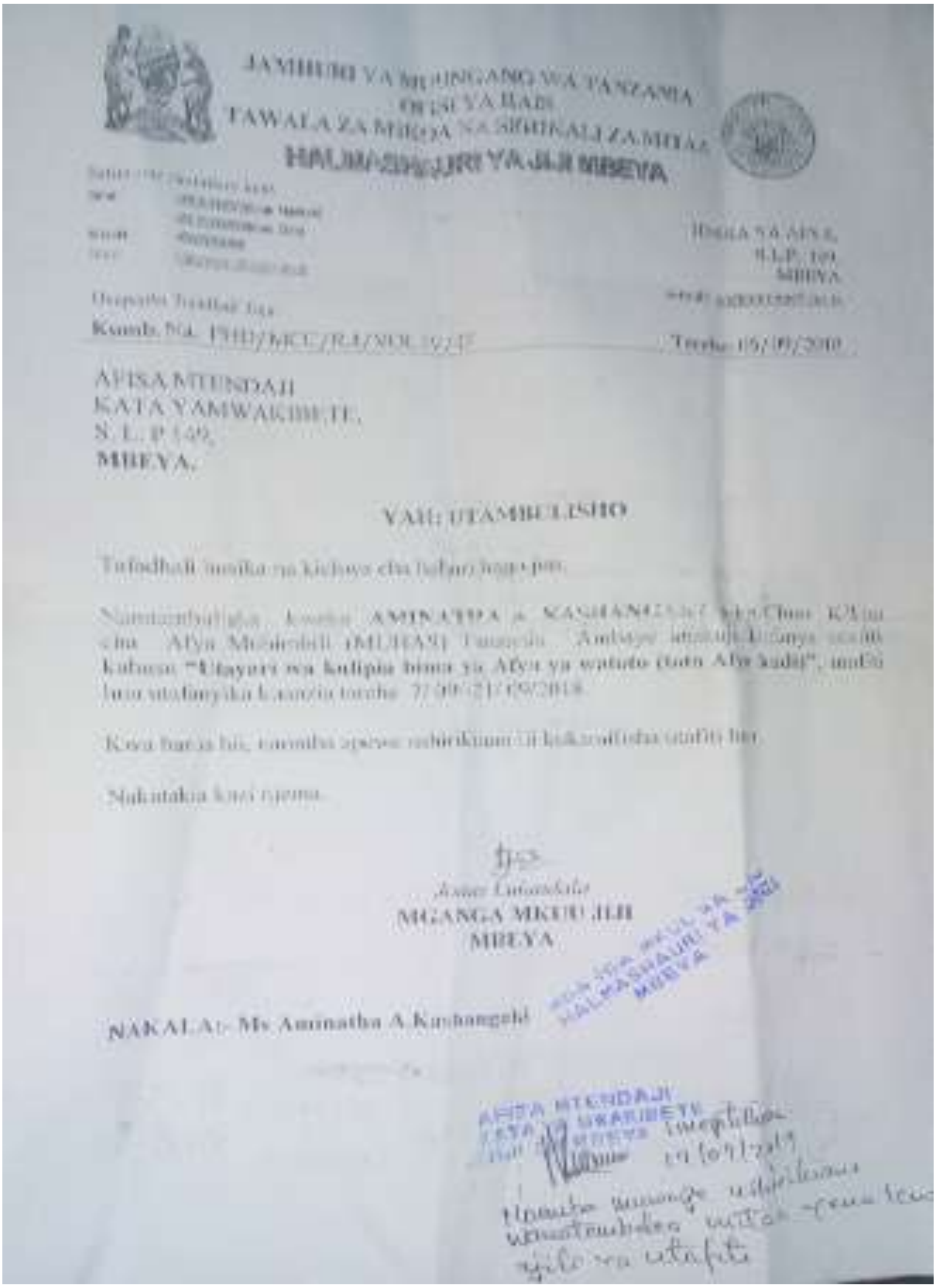
HALMASHAURI YA JIJI MBEYA

NAKALA:- Ms Aminatha A.Kashangaki

Apatiwe ushirikiano atakao hitaji

AFISA MTENDAJI WA KATA
KATA YA IYELA
JIJI LA MBEYA

Appendix VIII: Approval Letter from Mbeya City Authority



JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI MBEYA

[illegible]

Kumb. Na. [illegible]

Tarehe [illegible]

AFISA MTENDAJI
KATA YA MWAKIBETE,
S. L. P 149,
MBEYA.

YAH: UTAMBULISHO

Tafadhali [illegible]

[illegible] AMINATHA A. KASHANGEKI [illegible] "Utayari wa kulipia bima ya Afya ya watoto [illegible]" [illegible]

[illegible]

Nakutakia kazi njema.

MGANGA MKUU JIJI
MBEYA

NAKALA: Ms Aminatha A Kashangeki