

**MEMBERS' SATISFACTION WITH HEALTH SERVICES DELIVERED BY
COMMUNITY HEALTH INSURANCE FUND (CHIF) IN KYELA
DISTRICT, TANZANIA**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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ABSTRACT

This research was done to analyze members' satisfaction with health services delivered by Community Health Insurance Fund (CHIF) in Kyela district with the specific objectives to: document the modality by which CHIF provides health services, determine the effects of CHIF services on members' health care utilization and financial protection and evaluate CHIF members' satisfaction with the health care services. The study population was CHIF beneficiaries, and data were collected from January to March 2012 from a sample of 160 CHIF beneficiaries. The results showed that 71.2% of the respondents got the information on health services provided by CHIF through Kyela FM, public meetings and brochures. They also showed that there were positive effects of CHIF on membership to health care utilization and financial protection. About the hypotheses of the study, it was found that the overall points scored on a 90-point scale by which satisfaction was measured were 70.5, which implies that generally the beneficiaries were very much satisfied with the services. However, the level of satisfaction varied depending on various factors, including access to information about CHIF. Using one-way ANOVA, there were significant differences in the number of points scored on the satisfaction scale among people with various levels of access to CHIF information ($F = 3.052$, $p = 0.019$). Accordingly, it was concluded that the beneficiaries of CHIF were satisfied with the services. It was also recommended that CHIF services should be scaled up concomitantly with more dissemination of information about CHIF products.

DECLARATION

I, Andrew Mwaipopo, do hereby declare to the Senate of Sokoine University of Agriculture, that this dissertation is my original work and that it has neither been submitted nor being concurrently submitted for degree award in any other institution.

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Date

The Above declaration is confirmed by;

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Date

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DEDICATION

This work is dedicated to the Almighty God and to my father, the late Lameck Mwaipopo who passed away in 1993 and my young brother Joseph Lameck Mwaifwani who passed away seven day after my wedding day. May the Almighty God rest their souls in eternal life. Moreover, it is dedicated to my mother Mrs Yuster Mwaipopo, my Uncle Edward Lamsi my beloved wife Olike Andrew Mwaipopo, my son Christian and my daughter Clara whose moral support for my studies has helped me to reach this successful stage. Let my children follow my success.

TABLE OF CONTENTS

ABSTRACT	ii
DECLARATION	iii
COPYRIGHT.....	iv
ACKNOWLEDGEMENTS.....	v
DEDICATION	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	xii
LIST OF FIGURES	xiii
LIST OF APPENDICES.....	xv
LIST OF ABBREVIATIONS	xvi
 CHAPTER ONE	 1
1.0 INTRODUCTION.....	1
1.1 Background Information	1
1.2 Problem Statement	4
1.3 Research Justification.....	5
1.4 Objectives and Hypotheses.....	6
1.4.1 General objective of the study.....	6
1.4.2 Specific objectives of the study	6
1.4.3 Null hypotheses of the study	6
 CHAPTER TWO	 7
2.0 LITERATURE REVIEW	7

2.1	Definition of Key Concept	7
2.1.1	Community-based health insurance (CBHI).....	7
2.1.2	Community Health Fund (CHF).....	8
2.1.3	Community Health Insurance Fund (CHIF)	8
2.2	Health Insurance Schemes in the World	9
2.2.1	Health insurance schemes in Africa	9
2.2.2	Health insurance schemes in Tanzania	10
2.3	CHIF with Health Risks	10
2.4	CHIF as an Insurance	11
2.5	Payment for Performance (P4P)/ Results Based Bonus (RBB).....	11
2.6	Health Workers Attitudes towards Health Insurance Scheme.....	12
2.7	Primary Health Care and Community Health Insurance Fund	12
2.8	Community Participation in Management of Health Insurance Fund	13
2.9	Power Dynamics between Community Actors towards Health Insurance Scheme	13
2.10	The Conventional Theory	14
2.10.1	Theory applications	15
2.11	Empirical Literature	15
2.12	Paucity in Literature	19
CHAPTER THREE		21
3.0 METHODOLOGY.....		21
3.1	Geographical Location of the Research Area	21
3.2	Research Design.....	23

3.3	The Study Population and Sampling	23
3.3.1	Population	23
3.3.2	Sampling procedures	23
3.3.3	Sample size.....	23
3.4	Data Collection	24
3.4.1	Primary data	24
3.4.2	Secondary data	25
3.5	Data Analysis	25
3.6	Data Limitations and Delimitations of the Study	27
CHAPTER FOUR.....		28
4.0	RESULTS AND DISCUSSION	28
4.1	Socio-Demographic Characteristics of the Respondents	28
4.1.1	Sex of the respondents	28
4.1.2	Age of the respondents	28
4.1.3	Marital status of the respondents.....	29
4.1.4	Levels of education of the respondents.....	31
4.1.5	Household heads.....	32
4.1.7	Main occupations of the respondents	34
4.2	Modality Used by CHIF to Disseminate Knowledge and to Provide Health Services	35
4.2.1	Information and knowledge dissemination about CHIF to the community	35
4.2.2	Health facility used by CHIF to offer health services to its beneficiaries	36

4.2.3	Services offered by Community Health Insurance Fund (CHIF).....	37
4.3	CHIF with Accessibility of Healths Care to Rural People	39
4.3.1	Governance, democracy, structure and accessibility of health care to rural people	39
4.3.2	CHIF and accessibility of health care to rural people	42
4.3.3	CHIF with the premium charged for health insurance	43
4.3.4	Effects of CHIF on health care utilization and financial protection.....	44
4.4	CHIF Members' Satisfaction with Health Care Services Delivered by CHIF	45
4.4.1	Descriptive analysis of satisfaction with healthcare services delivered by CHIF	46
4.4.2	Inferential analysis of satisfaction with healthcare services delivered by CHIF	47
4.4.2.1	Inferential analysis of satisfaction with healthcare services using F-test	47
4.4.2.2	Inferential analysis of satisfaction with healthcare services using ordinal logistic regression	50
CHAPTER FIVE		52
5.0 CONCLUSIONS AND RECOMMENDATIONS		52
5.1	Conclusions.....	52
5.2	Recommendations	54
5.2.1	Policy level recommendation	54

5.2.2	District level recommendations	55
5.2.3	CHIF association	56
5.2.4	Recommendation for further research	57
REFERENCES		58
APPENDICES		65

LIST OF TABLES

Table 1:	Perceptions of Quality of care by District and Community Respondent Group (Data from focus group discussions)	18
Table 2:	Age distribution of the respondents	29
Table 3:	Shows marital status of respondents	31
Table 4:	Education level of the respondents	32
Table 5:	Heads of households	33
Table 6:	The main occupation of the respondent	34
Table 7:	Community with information and knowledge about CHIF	35
Table 8:	Knowledge about CHIF	36
Table 9:	Health facilities contracted by CHIF association to offer health services	37
Table 10:	Respondents' awareness of services offered by CHIF to its beneficiaries	38
Table 11:	CHIF and accessibility of health care to rural people	42
Table 12:	The premium charged being affordable by rural people	43
Table 13:	Contribution of CHIF in health care utilization and financial protection	45
Table 14:	Comparing satisfaction among people with different occupations.....	48
Table 15:	Comparing satisfaction among people with different levels of access to information	49
Table 16:	Satisfaction of beneficiaries with health services measured at different statistical level of measurement.....	50

LIST OF FIGURES

Figure 1: Conventional theory modal	14
Figure 2: Conceptual Framework of the research.....	20
Figure 3: Map of Kyela District showing the study area	22
Figure 4: Structure of CHIF association Structure prepared by	40
Figure 5: Magnitudes of the impacts of some factors on satisfaction with CHIF services: Source: data from field.....	51

LIST OF PHOTOS

Photo 1: Means of transport used by CHIF in transporting seriously ill patients	39
Photo 2: Some of the Village representatives (CHIF photo during the field, 2012)	41
Photo 3: Village representatives making follow up on a presentation addressed by CHIF coordinator during general assembly (GA) at Ipinda in Kyela District. On 2 nd March 2012	41

LIST OF APPENDICES

Appendix 1: Definition of variables	65
Appendix 2: The Questionnaire for the Research.....	67
Appendix 3: Checklist for Key Informants	76

LIST OF ABBREVIATIONS

CBHI	Community-Based Health Insurance
CHF	Community Health Fund
CHIF	Community Health Insurance Fund
CHMT	Council Health Management Team
CHSB	Council Health Service Board
CIDR	Centre International de Développement et de Recherché (Center for International Development and Research)
DC	District Commissioner
DED	District Executive Director
DFID	Department for International Development (of U.K.)
DMO	District Medical Officer
DSI	Development Studies Institute
FBO	Faith-Based Organisations
GA	General Assembly
GOT	Government of Tanzania
HMIS	Health Management Information System
HSSP	Health Sector Strategic Plan
IPD	In Patient Department
KDC	Kyela District Council
KDH	Kyela District Hospital
MDG	Millennium Development Goals
MLH	Matema Lutheran Hospital

MNCH	Maternal, Newborn and Child Health
MOH&SW	Ministry of Health and Social Welfare
NGO	Non Governmental Organisation(s)
OPD	Out Patient Department
RHMT	Regional Health Management Team
SPSS	Statistical Package for Social Sciences
SUA	Sokoine University of Agriculture
URT	United Republic of Tanzania

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

In the 1980s, there was a “health care crisis”, particularly in developing countries. The crisis was in terms of shrinking budgetary support for health care services; inefficiency in public health provision, an extremely low quality of public health services, and the resultant imposition of user charges which reflected states’ inability to meet health care needs of the poor (World Bank, 1993).

The crisis led to the emergence of many community-based health insurance schemes (CBHI) in different regions of developing countries, particularly in sub-Saharan Africa (Preker, 2004; Wiesmann and Jeutting, 2001), the crisis also led to decentralization process which unleashed in these countries to empower lower layers of government and the local community further fuelled their emergence (Atim, 1998).

In rural and in informal sectors where supply of health services is expected to be weak, both financing and provision aspects need to be tackled simultaneously. Indeed, most of the CBHI schemes have either been initiated by the health providers which are missionary hospitals, or tend to be set around the providers themselves (Atim, 1998).

Thus, the potential benefit of these schemes is seen not just in terms of mobilization of resources, but also in the improvement and organization of health care services. Whereas the CBHI concept is theoretically appealing, its merits still have to be proven in practice. In the literature, this question is controversially debated: Proponents argue

that CBHI schemes are potential instruments of protection from the impoverishing effects of health expenditures for low-income populations. It is argued that CBHI schemes are effective in reaching a large number of poor people who would otherwise have no financial protection against the cost of illness (Dror and Jacquier, 1999).

In Tanzania, Community Based Health Insurance scheme (CBHI) is commonly known as Community Health Fund (CHF). It is recognized as an effective tool for mobilizing voluntary community involvement and participation in supporting communities' own health care. It provides an opportunity for seasonal income earners in the informal sector to pay for their health services before they fell sick. The expectations were to advocate and promote the scheme so as to step up the mobilization of the communities to join the programme (URT, 2003).

However, according to a study which was conducted in 2008 in Mbeya by Centre for International Development and Research (CIDR,2008), and in Dodoma by (Timmis,2009) the community health fund scheme has proved failure in different parts of Tanzania like in Kyela District (Mbeya Region), Kongwa District (Dodoma Region) and Mbozi District (Mbeya Region).

From April to September 2008, CIDR, which is a French NGO, conducted a study in Kyela District Tanzania in order to analyze the causes of the CHF poor level of enrolment. The aim of the study was to highlight the potential strategies to boost the CHF scheme in the district. The study ended with six suggestions for improving CHF, which were to: (1) Improve the attractiveness of the CHF premium by developing attractive packages (including emergency transport) at affordable prices through long-

term premium subsidy mechanisms; (2) Make the CHF modality more flexible and efficient in order to connect the CHF coverage with quality care and to improve the membership conditions; (3) Use matching funds as a quality care investment fund in order to improve the general quality of care; more specifically in the government structure; (4) Set up an independent CHF entity based on participative governance structures opened to the members only in order to enhance ownership, transparency and accountability of the system; (5) Dissociate the functions of health care provider and purchaser in order to establish a real quality control delivered to the CHF members; and (6) Introduce a professional Insurance management system of the premium.

The Community Health Insurance Fund (CHIF) association is a new association in Kyela District, Tanzania, which has been formed in collaboration with CIDR and CHF, with the aim of reducing the impact of sickness episodes on the incomes of people in the informal sector by strengthening CHF in Kyela District. It is not an attempt to replace the CHF, but to design a programme that is more current and efficient, which was designed by following direct observations in the field (feasibility study) and experience in the country (Mbozi District-Tanzania) (CIDR, 2008).

However, the CHIF association has signed a contract with Kyela District Council Health Service Board (CHSB) to delegate the CHF operations to the CHIF association.

Furthermore, before the formation of CHIF, CHF had 800 members in the whole district since 2006 when it was formed and the premium charged was Tsh 10 000 per household per year, and the current CHIF has 9 013 members in the whole district since 23rd August 2010 when it was formed (CIDR, 2008). With a remarkable change

shown by the new association in enrolling CHIF members, still the association had a challenge to make sure that all people in the district are covered with health insurance. CHIF association gets funds by collecting premium from members which is Tsh 2 000 per head per year, subsidy from the District Council, and the International Bioland who pays on the basis of members and cocoa growers and non-cocoa growers. The cocoa growers are subsidized by the International Bioland and Non-cocoa growers are subsidized by the District Council.

1.2 Problem Statement

Despite the fact that national efforts have been made by the government of Tanzania to reduce incidences of illness through Community Health Fund (CHF), the situation of health services and status in Kyela District is not good. For example, lack of medications, poor attitude of health care staff, poor understanding of insurance theory and lack of trust in management still constrain health services (CIDR, 2008).

The causes of bad health services and status in the district are probably due to low incomes of people to pay for health services, poor management health services, poor information dissemination about health services, poor health care quality, inability to pay premium, and lack of availability of medication. However, whether any of these rational factors were relevant or the impact of the new CHIF on health services delivered to CHIF members in Kyela District were not known. Therefore, the aim of this research was to determine empirically the impact of community health insurance fund on health services, particularly community members' satisfaction with health services before and after CHIF.

1.3 Research Justification

The introduction of the CHF has not provided the expected benefits to poor people as well as those who are working in the informal sector. There are a number of constraints which should be urgently addressed, including delays in the introduction of the CHFs and weak management at the district and lower levels. More importantly, previous studies found that poor people often cannot afford to pay the CHF premium because it is too high and has to be paid at once. If membership of the CHF becomes compulsory and poor people are not effectively exempted from paying CHF premiums and co-payments, the impact of the CHF can be disastrous and lead to double exclusion of poor people (Laterveer *et al.*, 2004).

This research was worth doing to contribute to information generation about the national objectives on providing quality health services to people. The information may form a basis for planning a new system of health insurance which will have a positive output to people. Furthermore, the research has generated empirical information on whether the insured members are satisfied with the health services provided to them by CHIF. The research is in line with the 6th Millennium Development Goal, which is to “Combat HIV/AIDS, malaria and other diseases”. The information will be vital for health planning and CHIF managers to improve and keep up health services. Through this study, it is possible to analyze the efficiency of CHIF in delivering health services to its members.

The findings from this research will provide a stock of knowledge to policy makers and practitioners, thus they will be able to rectify or not rectify the insurance system in

Tanzania, especially to the informal sector and reduction of unnecessary death of people who are working in the informal sector.

1.4 Objectives and Hypotheses

1.4.1 General objective of the study

To analyze members' satisfaction with health services delivered by Community Health Insurance Fund (CHIF) through health centres in Kyela District Tanzania.

1.4.2 Specific objectives of the study

- (i) To document the modality by which the Community Health Insurance Fund (CHIF) provides health services through government and non-government health centres
- (ii) To determine the effects of CHIF services on membership to health care utilization and financial protection.
- (iii) Evaluate CHIF members' satisfaction with health care services delivered by CHIF

1.4.3 Null hypotheses of the study

- (i) Satisfaction with health services through CHIF in terms of points scored on a scale measuring satisfaction does not differ significantly between people with different occupations.
- (ii) Satisfaction with health services through CHIF in terms of points scored on a scale measuring does not differ significantly between people with different levels of access to information.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Definition of key concept

2.1.1 Community-based health insurance (CBHI)

Community-based health insurance (CBHI) is a mechanism to achieve universal coverage for health care in low-income countries which provides financial protection from the cost of seeking health care. It has three main features: prepayment for health care by the community members; community control; and voluntary membership (Mladosky and Mossialos 2006).

Community based health insurance schemes can be initiated by health facilities, NGOs, trade unions, local communities, local governments or cooperatives and can be owned and run by any of these organizations. They may be organized around geographic entities (villages, wards, District, cities), professional bodies (that is cooperatives or trade unions) or around health care facilities. They tend to be pro-poor since they strengthen the demand for health care in poor rural areas, and enable low-income communities to articulate their own healthcare needs. Many community finance schemes have evolved in the context of severe economic constraints, political instability, and lack of good governance. Usually government taxation capacity is weak, formal mechanisms of social protection for vulnerable populations absent, and government oversight of the informal health sector lacking (Jutting and Ahuja 2003).

In such difficult contexts, community involvement in financing health care provides a critical first step towards improved access to health care by the poor and social protection against the cost of illness (Jutting, 2003). The states in most developing

countries have not been able to fulfil health care needs of their poor population. Shrinking budgetary support for health care services, inefficiency in public health provision, an unacceptable low quality of public health services, and the resultant imposition of user charges are reflective of the state's inability to meet health care needs of the poor (World Bank, 1993).

2.1.2 Community Health Fund (CHF)

Community Health Fund (CHF) is a voluntary pre-payment scheme, which offers a client (household) the opportunity to acquire a “health card” after paying contribution. However, A household can be an individual or a family and a card is renewed after every 12 months (Sendoro 2007).

2.1.3 Community Health Insurance Fund (CHIF)

The Community Health Insurance Fund (CHIF) association is a new association in Kyela District, Tanzania, which has been formed in collaboration with CIDR and CHF, with the aim of reducing the impact of sickness episodes to rural people by strengthening the CHF in Kyela District. It is not an attempt to replace the CHF, but to design a programme that is more current and efficient, which was designed by following direct observations in the field (feasibility study) and experience in the country (Mbozi District-Tanzania) (CIDR, 2008).

However, the CHIF association has signed a contract with Kyela District Council Health Service Board (CHSB) to delegate the CHF operations to the CHIF association. There is a co-management committee, gathering representatives from both sides. Under this aspect there is a separation between health service providers and the buyer

of health services. However the goal of doing this is to make sure that CHIF members get satisfaction from the health service delivered to them, this a dependents factor, it is achieved, if the following independent factors are taken into considerations which are setting the premium which is affordable by rural people, health service providers are well motivated, premium are properly managed, people are well informed about the insurance system and Availability of medications (CIDR, 2008).

2.2 Health Insurance Schemes in the World

The policy link between CBHI and universal coverage is implicitly determined by the historical experience of mutual health insurance in Europe (Barnighausen and Sauerborn, 2002). In 19th century there were 27 000 friendly societies in Europe, which operated much like CBHI schemes, in the United Kingdom alone (Bennett, 2004b). Rather than being locally initiated by farmers, associations of industry workers or employers as in Europe and Japan, today's CBHI schemes are mostly the result of top-down interventions led by foreign aid agencies or national governments (Meessen,*et al.*, 2002).

2.2.1 Health insurance schemes in Africa

It is estimated that in West Africa there was more than a two-fold increase in the number of CBHI schemes in just three years, from 199 schemes in 2 000 to 585 in 2003 (Bennett, 2004b), this is still a small number of schemes when compared to the situation in Europe.

2.2.2 Health insurance schemes in Tanzania

Community based Health insurance scheme in Tanzania is known as the Community Health Fund (CHF). It was introduced in Tanzania as part of the Ministry of Health's endeavor to make health care affordable and available to the rural population and the informal sector. The scheme started in 1996 in Igunga as a pilot district and later expanded to other districts (Mtei and Mulligan 2007).

The scheme was a result of studies conducted in 1990-92 on willingness and ability to pay, implementation experience of Igunga was evaluated in 1998 then used to roll out the scheme to nine more districts. In 2001, the policy decision was reached to cover all districts through an Act of Parliament; the scheme operates in partnership between communities and the Government. The Government provides "Matching Grant" to CHF scheme at district level; Communities can pay contributions during harvest time and enjoy services throughout the year. CHSB and Community Health Committees manage the Fund and CHF scheme is not intended to replace the government funding (Sendoro, 2007).

2.3 CHIF with Health Risks

Among the risks facing poor households, health risks probably pose the greatest threat to their lives and livelihoods. A health shock thrusts health expenditure on a poor household precisely at a time when they can ill-afford it due to income shortfall resulting from the shock. Moreover, the uncertainty of the timings of illness and unpredictability of its costs make financial provision for illness difficult for households receiving low and irregular income (Tenkorang, 2001).

2.4 CHIF as an Insurance

Insurance separates time of payment from time of use of health services for each member, and thereby makes possible demand for such services by its members who would not have otherwise been able to afford the cost. Insurance is particularly beneficial to the poor who often bear high indirect costs of treatment due to their limited ability to mitigate risk on account of imperfect labour and credit markets (Develtere and Fonteneou, 2001).

2.5 Payment for Performance (P4P)/ Results Based Bonus (RBB)

Over the past decade, there has been little progress made in the reduction of maternal and new born mortality ratio despite of many interventions and efforts. The Ministry of Health and Social Welfare (MOH and SW) has embarked on P4P strategy initially focusing on performance management to Health workers in order to improve Maternal, Newborn and Child Health (MNCH) services which are articulated in the Health Sector Strategic Plan III (HSSP III) addressing Millennium Development Goal (MDG) 4 and 5 (URT, 2010).

Implementation of payment for performance will cover all health facilities in all councils in Tanzania Mainland that are providing MNCH services. The units eligible for the payment for performance will be dispensaries, health centres, district and regional hospitals, Faith Based Organization (FBO) facilities, Council Health Management Teams (CHMT) and Regional Health Management Teams including the co-opted members. Council Health Management Teams (CHMTs) should update the list of health facilities that will be enrolled in the scheme and update the list annually.

The implementation of P4P will be monitored monthly, quarterly and annually using selected Health Management Information Systems (HMIS) indicators which are all reported on a monthly basis, and are intended to be the means for self assessment as well as a focus for supportive supervision from the Council Health Management Teams (CHMTs) and Regional Health Management Teams (RHMTs) (URT, 2010).

2.6 Health workers attitudes towards health insurance scheme

Health workers' ability to implement the scheme was constrained by a lack of information about CBHI from the local government, limited training before and during its implementation and inadequate supervision from the doctor in charge of the facilities. It is likely that these factors resulted in health workers not following the guidelines for implementing CBHI. Instead they focused their efforts on other duties. Further, health workers' apparent reluctance about CBHI was observed by some community members and created distrust between the two groups (DFID, 2010).

2.7 Primary Health Care and Community Health Insurance Fund

Since its adoption by the government, primary health care has been the cornerstone of the Tanzania national health policy. In its endeavour to ensure success in delivery of essential health care in the country, the government through primary health care emphasizes on community involvement and ownership through active participation in identification of problem area, planning, implementation, monitoring and evaluation of health care services, empowerment through decentralization of health services to regions, districts and community health insurance fund will help to ensure effective coordination, implementation, supervision and provision of quality health care to the community (URT, 2003).

2.8 Community Participation in Management of Health Insurance Fund

Community support is an important factor in achieving high levels of uptake and increasing enrolment of members to health insurance schemes. In the area where the scheme is considered to be more successful, members were involved in a variety of activities including overall coordination, community sensitization, encouragement and advice, and providing infrastructure. Importantly, they perceived CBHI to offer benefits in the form of financial risk protection and access to good quality care. In the other community, managers and health workers did not mobilize the community, partly due to a lack of information, and this resulted in lower levels of uptake (DFID, 2010).

2.9 Power Dynamics between Community Actors towards Health Insurance

Scheme

In the more successful case-study, the community leader who is respected and has a lot of influence, is assigned to control the CBHI drugs and ensured accountability. In doing so he/she secures the trust in the scheme by community members, thus increases enrolment. In the other community, the person responsible for coordinating the scheme is viewed as being dishonest and untrustworthy. As a consequence, community members lost interest in CBHI leading to low levels of uptake therefore when introducing Community Health Insurance fund it is important to observe power dynamics between the community actors for the sustainability of the scheme (DFID, 2010).

2.10 The Conventional Theory

The conventional theory of health insurance has held that becoming insured acts like a reduction in the price of health care, just as if the price reduction had occurred exogenously in the market (John, 2001). The purpose of studying the relationship between health insurance and demand, the important point is that insurance is like a subsidy to purchase medical care; that is, it lowers the per-unit price of care. This means that any additional health care consumed as a result of becoming insured, that is, any moral hazard is welfare, decreasing. This welfare-loss argument, first made by Pauly (1968), is illustrated in Fig. 2. The consumer's Marshallian demand for medical care is represented by D and the firms' supply by MC , the marginal cost of medical care. Without insurance, the market price is $P = 1$ and M_u medical care is consumed. With insurance, the price drops to $P = 0$ and M_i is consumed. The value of the additional medical care is measured by area $aMiMu$, and the cost by area $abMiMu$, so the welfare loss from the additional care is $abMi$ (New check, 1996).

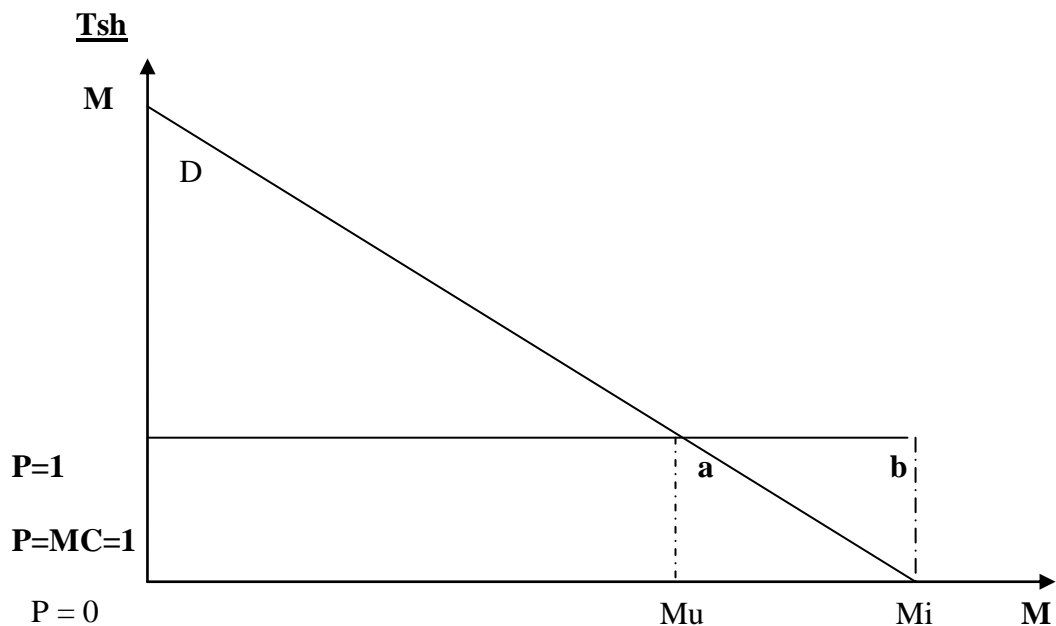


Figure 1: Conventional theory modal

2.10.1 Theory applications

CHF beneficiaries may purchase an expensive life-saving procedure that would otherwise be unaffordable to them. This additional health care is the income transfer effect of insurance in reality, however, the difference between the premium and the payout in expenditures is paid for by many purchasers of insurance who remain healthy and transfer their premium through the insurer to those consumers who become ill.

2.11 Empirical Literature

In this section research results based on previous related research are given, the study findings are reported by each of the causes of low enrolment identified in previous CHF evaluations. Inability to pay membership contributions analysis of documentary data shows that inability to pay annual contributions is identified as an important barrier preventing poor households from joining the CHF. As one document notes: ‘When it comes to health care, the majority of household members declared that they were unable to cope with costs. . . . 38.7% of rural households and 27% of urban households declared that they were mostly not able to pay for health care’ (Kamuzora and Gilson, 2006).

Interview data from all categories of key respondents (from poor households to officials at ward, district and national levels) are consistent with the documentary data on this point. However, all 13 FGDs in both case study districts indicated that inability to pay was not an important barrier for average and wealthy groups. In principle, the CHF policy design addresses this barrier by requiring districts to introduce exemption systems: ‘People who are too poor to pay the required CHF contributions will be exempted from paying (URT, 1999).

Documents collected from the districts studied confirmed that central government guidelines on the exemptions policy were available to district managers. In addition, all six ward and eight district managers interviewed had knowledge of the policy. For example, a manager in one district remarked: ‘we had exemption but we left this responsibility to the villagers’, whilst in the other district one of the managers commented: ‘the exemption system did not work as it should’. In contrast, however, all 28 poor households interviewed in this study across districts did not know of the exemption provision. Two of the four national-level interviewees also indicated that the CHF target population is commonly not aware of exemption possibilities (Kamuzora and Gilson, 2006).

The interview data highlight several issues linked to managers that are likely to explain why poor households did not know of or receive exemptions. District and ward managers’ responses indicated a negative attitude towards exemption. In one district, three out of the four (and in the other, two out of four) district managers commented that exemptions are difficult to implement, noting that since the number of households qualifying for exemption was large, exemption provision would erode the CHF’s financial base.

In addition a large number of interviewees at both district (three out of four in each district) and ward (two out of six in one district and four out of eight in the other) levels argued that exemptions are untenable. They all blamed the central government for not addressing the financial sustainability of the CHF. (Kamuzora and Gilson, 2006).

District managers also undermined exemption initiatives in two ways. First, they simply ignored guidelines from the central government requiring them to develop exemption criteria. In one district, one of the four district managers interviewed commented that it was the responsibility of the village governments to set criteria, while the other three observed that the government did not have clear exemption criteria. In the other district, two district managers commented that it was not their responsibility to set exemption criteria, and two again argued that there were no clear criteria to guide the exemption process. Secondly, district managers discouraged exemption proposals coming from the communities. Two wards in one of the districts had their requests for exemption refused, while in another district there was no feedback from district managers after submission of requests for exemption. (Kamuzora and Gilson, 2006).

Table 1: Perceptions of Quality of care by District and Community Respondent Group (Data from focus group discussions)

District 1(4% enrolment rate)		District 2 (11% enrolment rate)	
Average group	Wealthy group	Average group	Wealthy group
Shortage of drugs	Shortage of drugs and essential supplies	Shortage of drugs	Shortage of drugs and essential Supplies
Inappropriate diagnosis due to lack of diagnostic equipment	Inappropriate diagnosis due to lack of diagnostic equipment	Inappropriate diagnosis and ineffective treatment	Inappropriate diagnosis due to lack of diagnostic equipment and ineffective treatment (Drugs)
Staff-related problems:	Staff-related problems:	Staff-related problems:	Staff-related problems:
<ul style="list-style-type: none"> • Unresponsiveness to patients' • Problems (wasting time in • Talking • Maltreatment and bad language to patient • Absenteeism (or assigned other duties) • Staff shortage • Corruption (asking for bribes from patients) • Lack of comprehensive • Service coupled with lack of referral system 	<ul style="list-style-type: none"> • Discrimination: favoring relatives and friends • Unresponsiveness to patients' problems • Maltreatment and bad language to patients • Absenteeism (or assigned other duties) • Corruption (asking for bribes from patients) • Poor referral system 	<ul style="list-style-type: none"> • Discriminating against CHF members, favoring those • Paying fees instantly. • Unresponsiveness to patients' problems. • Maltreatment and bad language to patients • Absenteeism (or assigned other duties) • Staff shortage • Lack of confidentiality • Lack of choice of desired health facility and referral system 	<ul style="list-style-type: none"> • Discriminating against CHF members, favoring those paying fees instantly • Unresponsiveness to patients' • Problems • Maltreatment (giving injection • Bad language to patients) • Staff shortage • Lack of choice of health facility of preference, comprehensive service and referral system

Lack of trust in CHF managers the level of trust in CHF officials varied among community members. Although the majority of poor households in both districts perceived CHF officials as trustworthy, responses in eight out of 13 FGDs indicate

that the average and wealthy groups did not trust the officials. While in one district, expressions of lack of trust in CHF leaders focused on the ward leadership, mentioning corruption and lack of transparency, this was seen by the respondents as the result of district managers' failure to supervise the ward-level CHF managers and health facility staff. In the other district, issues raised included lack of information about the general operations of the CHF in the district in general, corruption and lack of transparency at health facilities: 'There is little knowledge about the fund. How the fund is going to help us is not known to people.' 'Past experience of embezzling public funds affects mobilization of communities for CHF negatively; people think that CHF money collectors will embezzle (Kamuzora and Gilson, 2006).

A study which was conducted in Nigeria by Mohammed and Sambo (2011) identified factors which lead to less satisfaction could be addressed properly to improve on the health insurance activities. Health care providers' politeness toward clients, decreased hospital waiting times, and increased availability of hospital personnel at all times served as a composite measure of satisfaction and will help in improving client satisfaction with service provision in the health insurance scheme. Further, similar studies are needed in other settings for comparison due to knowledge gap because the studied population was from an academic setting. The dynamic nature of certain regions of Nigeria might exhibit some socio-demographic differences due to cultural, educational, religious and economic status which needed careful consideration.

2.12 Paucity in literature

Thorough review of literature enabled the researcher to find the empirical information presented above.

However, no information was found about impact of new innovation on Community Health Insurance Fund (CHIF). This shows that the research on the impact of CHIF on health services delivered in Kyela District Tanzania had either not been done or had been done scantily. Therefore, this research was done, among other things, to fill this paucity in literature.

2.13: Conceptual Framework

The research was guided by conceptual framework presented in figure 2. The figure shows that the main variable for the research is satisfaction with health care services delivered by CHIF. The figure also shows that the dependent variable is offered directly by social, economic, cultural, institutional and background variable listed in figure.

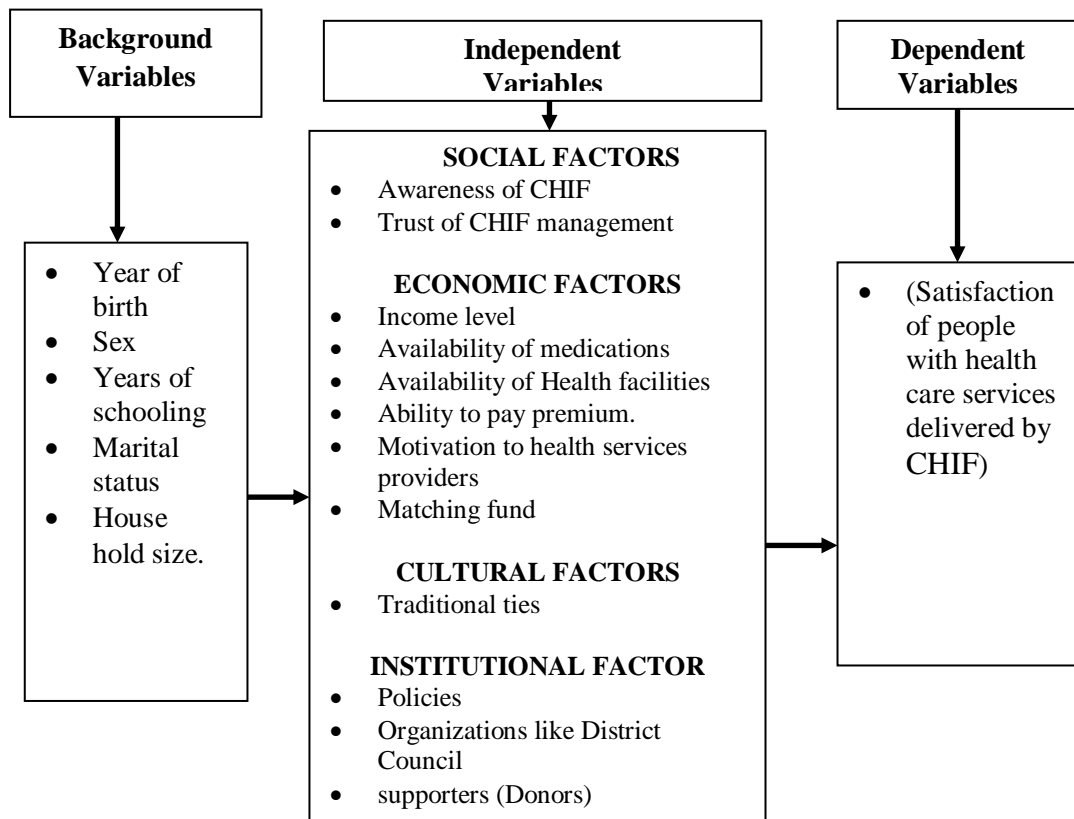


Figure 2: Conceptual Framework of the research

Source: researcher's own conceptualization

CHAPTER THREE

3.0 METHODOLOGY

3.1 Geographical Location of the Research Area

Kyela District is located in the Southern end of Mbeya Region and is one among seven districts in the region. The district lies between 35° 41' and 30° longitudes East of Greenwich Meridian and 9° 25 and 9° 40 latitudes south of the Equator. In the East, the district borders with Makete and Ludewa Districts of in Iringa Region; in the West it borders with Ileje District; in the North it borders with Rungwe District of Mbeya Region, and in the South it borders with the Republic of Malawi and Lake Nyasa (KDP, 2002).

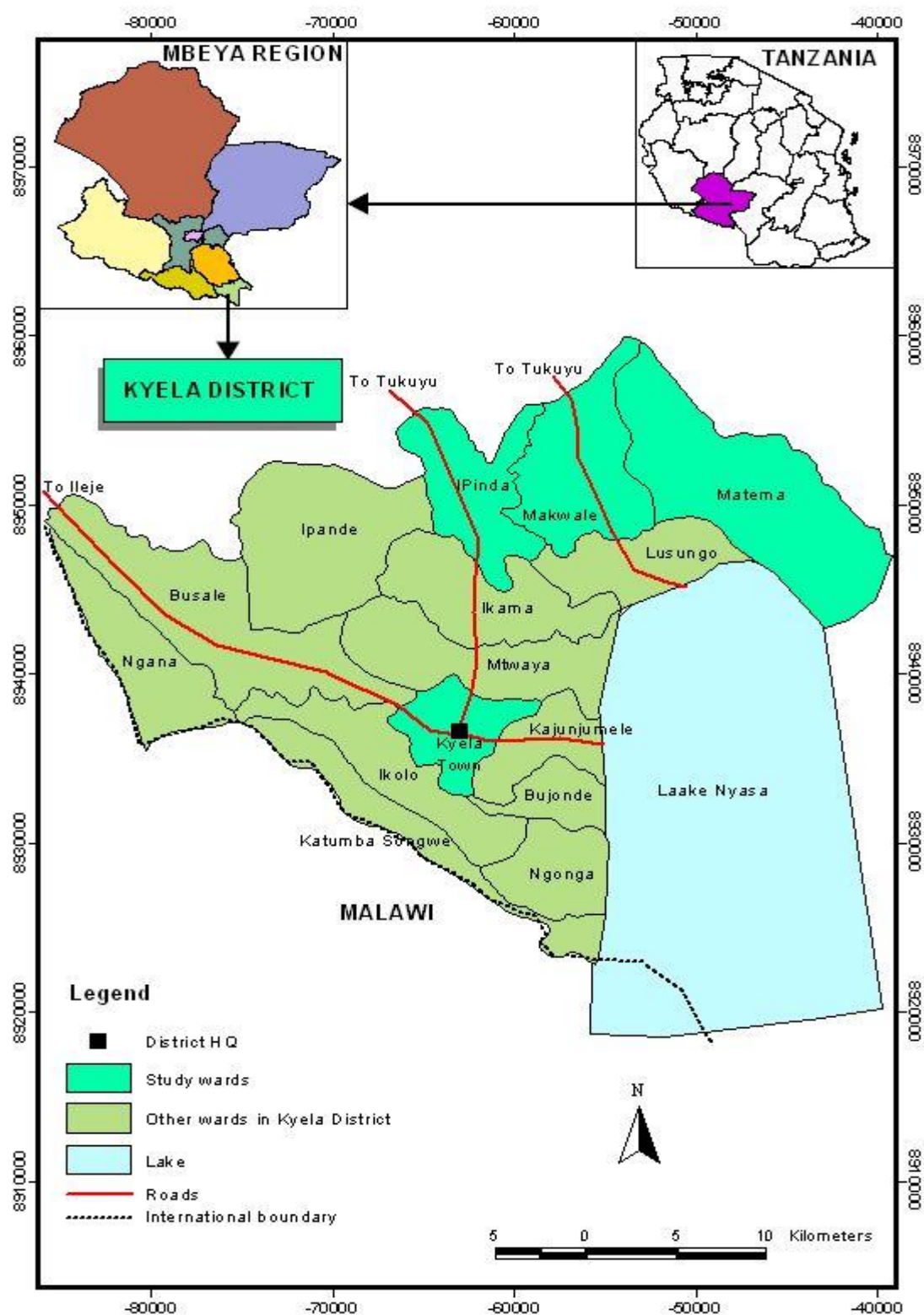


Figure 3: Map of Kyela District showing the study area

Source: Kyela District Profile (2002)

3.2 Research Design

The study used a cross-sectional design. The design enabled the researcher to collect data at one point in time from a sample selected to represent a large population. This design, according to Babbie (1990), is useful for description purposes as well as for the determination of relationships between variables at the time of the study.

3.3 The Study Population and Sampling

3.3.1 Population

The population of the study consisted of all Community Health Insurance Fund (CHIF) members' who were 9 013 in total.

3.3.2 Sampling procedures

Purposive sampling was used to select four wards where the project of Community Health Insurance Fund (CHIF) was taking place. Systematic random sampling technique was employed in selecting beneficiaries in the study area. The sampling frame for selecting beneficiaries was a list of registered beneficiaries in the research area. The sampling frames were obtained from respective field officers.

3.3.3 Sample size

The sample size was 160 respondents, 40 from each ward. This sample size was reasonable as Bailey (1994) argues that, regardless of the population size, a sample of not less than 30 cases is the minimum acceptable size for statistical data analysis.

3.4 Data Collection

Data were collected through face to face interviews with respondents, focus group discussion from health service providers and from key informants. A questionnaire with both closed and open ended questions was used to interview the respondents. Three focus group discussions were conducted and comprised groups of 6 to 10 people. A key informant interview guide was used to collect information from key informants who were District hospital team, Matema Lutheran Hospital team, Ipinda Health centre team, Ward Dispensaries team committees, CHIF executive committee board, Kyela District Council and CIDR-coordinator.

3.4.1 Primary data

A cross-sectional survey was employed for primary data collection where questions to a representative sample of the population were asked at single point of time; structured interview using interview schedule with standard set of questions (Appendix 2) was done to CHIF members in Kyela district. The interview table was pre-tested before embarking on the full-scale field work. Four wards were involved in the process: Ipinda ward, Kyela town ward, Matema ward, and Makwale ward. The purpose of pre-testing was to test the relevance of the questionnaire and objectives of the study.

Unstructured interview using lists of general questions (Appendix 2 and 3) was also employed to key informants from district council representatives and for focus group discussion. Focus group discussions (FGDs) were used together the information on satisfaction of CHIF members with health services provided to them through CHIF by using the available health centres. Five group discussions were conducted; FGDs were categorised as follows; Health services Providers from Matema Lutheran Hospital

(MLH), Health service providers from kyela district hospital, health services provider from Ipinda health centre, health service provider from Dispensaries and CHIF executive committee and CIDR programme coordinator. Each focus group had at most 10 members for effective discussion.

3.4.2 Secondary data

Secondary data were collected through the Internet, journals, books, and from Kyela District Medical Office (DMO). Most of this information was about the former CHF. Other secondary data on CHIF were obtained from CHIF association office.

3.5 Data Analysis

Both quantitative and qualitative methods of data analysis were employed. Quantitative data, basically from CHIF beneficiaries, were verified, compiled, coded, summarized and analyzed using the Statistical Package for Social Sciences (SPSS) computer programme. Descriptive statistics including means, frequencies, percentages, minimum and maximum values were computed. F-test was used to test the first hypothesis of the research by determining whether the number of points scored on a scale on satisfaction with healthcare services through CHIF were significantly different among people with different levels of access to information about CHIF. Moreover, inferential analysis was done using Ordinal Logistic regression to determine the impacts of some socio-economic, institutional and cultural factors on the chances the respondents being satisfied with CHIF health services. The dependent variable, satisfaction with health services, was measured in terms of ranges of points scored on the scale that was used to measure satisfaction. The following mathematical model was used:

$\ln (\text{Prob (event)} / 1-\text{Prob (event)}) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$ (Robert, 1991),

Where:

Logit (pi) = \ln (odds (event)), that is the natural log of the chances of an event occurring

Pi = prob (event), i.e. the probability that the event (i.e. satisfied with CHIF health services) will occur.

1-pi = prob (non-event), that is the probability that the event (i.e Satisfied with CHIF health services) not occurring;

b_0 = constant of the equation

b_1 to b_k = coefficients of the independent variables

k = number of independent variables, 10 in this case

x_1 to x_i = independent variables to be entered in the model, which are

x_1 = Accessibility to health facilities

x_2 = Increase of health facilities

x_3 = Motivation of health worker

x_5 = Household income

x_5 = CHIF offers good health services

x_6 = contract with private pharmacy

x_7 = the use of CHIF ambulance

x_8 = freedom of asking questions

3.6 Limitations and Delimitations of the Study

The study encountered three main obstacles. These are:

1. Some of the respondents wanted to be paid for them to give the information; so it was difficult to convince them because most of them argued as follows “you researchers normally use our time without paying us while yourself before and after collecting data you are paid” But after detailed explanations, some responded willingly to the questions but some did not show good cooperation.
2. Postponements of interviews with spokespersons due to other commitment at the hospital was common;
3. Language barrier was a constraint in interviewing most elderly respondents who did not know Kiswahili; they spoke the Nyakyusa language while the researcher could not speak the language. This constraint was circumvented by using some of the villagers who knew the Nyakyusa language as interpreters.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio-Demographic Characteristics of the Respondents

In this study demographic socio-economic characteristics of the respondents which are sex, age, marital status, level of education, household size, and main occupation of the respondents as a major source of income were studied, these variables were analysed and discussed accordingly.

4.1.1 Sex of the respondents

The sample comprised 160 Community Health Insurance Fund (CHIF) members from whom 80 men and 80 women were interviewed because questions were targeted to those who are CHIF beneficiaries. a half of the sample representing men and the other half of the sample representing women because the researcher wanted to provide equal chance for both sex to get full participation providing information concerning questions interviewed, however, men and women do have different opinion when you come to the question of health services provision.

4.1.2 Age of the respondents

Age was important variable and is primary basis of demographic in vital statics, censuses and surveys (URT 2005) to a researcher age helps the researcher to determine which age group is capable in paying the premium and why; however, three groups of age were identified as presented in Table 2. It was found that one eighth of the respondents (12.5%) were aged above 65 years, while more than a half of them

(56.9%) were aged from 36 to 64 years. About one- third of the respondents (30.6%) were aged from 18 to 35 years.

The minimum age was 16 years, and the maximum age was 83 years, while the mean age was 49.5 years. The minimum and maximum ages of CHIF beneficiaries show that the respondents were mature people.

These results depict that people who are capable of paying the price of Community Health Insurance are the younger ones whose ages range from 36 to 64 years. This is a category of age whereby most of people are productive and reproductive in terms of economic production and population increase, respectively. Therefore, they need to have health insurance to make sure their family members are safe from diseases by getting quality health services on time.

Table 2: Age distribution of the respondents (N= 160)

Age category of respondent	Frequency	Percent
Respondent aged 18 up to 35	49	30.6
Respondents aged 36 up to 64	91	56.9
Respondents aged <65	20	12.5
Total	160	100.0

4.1.3 Marital status of the respondents

According to Philip and Abdillahi (2003) married couples showed high level of participation in community development project, probably due to the power of marriage institution for both individuals in the society. It is significantly related to the

level of participation promoting CHIF to the community, due to the fact that marriage event in life cycle of individuals represent enlistment, relationships and social interaction in the participation of in delivering health services . For this case of marital status results show that, more than two-thirds (71.2%) of the respondents were married; (7.5%) were never married; (1.9%) were widowers; (17.9%) were widows; (1.8%) were divorced. These results are presented in Table 3.

However, the findings show that most of the people who had health insurance were married followed by widowers. This tells us that people who are married do have a big household size in most cases. Members from such families are likely to go to hospital more frequently compared to single ones, because the possibility of one member out of five members in the household to fall sick is higher than that in families with single household heads, and it is difficult to handle the problems compared to those who are not yet married. Those were the reasons why the family comprises more than two people, and these people in a given families depend on one person who is the household head in the family. Therefore, for this person to make sure those members of her/his family get quality health services, he/she goes for health insurance services which assure him/ her to get health services for the whole year at relatively less costs. On the side of widows, they were the secondary category to have health insurance in Kyela District; this is because most of widows have low income, and they have families left by their deceased husbands. So, to solve health problems they need to have health insurance through CHIF association.

Table 3: Shows marital status of respondents (N = 160)

Marital status	Frequency	Percent
Married	114	71.2
Never married	12	7.5
Widower	3	1.9
Widow	28	17.5
Divorced	3	1.8
Total	160	100.0

4.1.4 Levels of education of the respondents

Education was an important variable for this study because education helps the community to determine the importance of community health insurance fund, however education influences the health behaviour of the individuals and community, and also education improves the quality of life of all people and reduces unnecessary deaths. The results in Table 4 show that those who had never been to school were 9.4% while one-tenth of them (10%) were standard four leavers; more than two-thirds (68.8%) of the respondents were standard seven leavers; (2.5%) were standard eight leavers; (6.2%) of the respondents were form four leavers; (1.2%) of the respondents were form six leavers; and (1.9%) of the respondents had higher learning or college education.

However, the results indicate that there were low level of illiteracy and high level of literacy because only (9.4 %). of the respondents had never been to school and the rest had acquired formal education at different levels as indicated in Table 4. The high percentage of literacy was a result of the efforts made by the Government of Tanzania

(GoT) to ensure that all illiterate youths and adults have equal and continuous access to quality formal and non-formal education as a way of improving people's livelihoods and creating a learning society which is a key factor for sustained social and economic development (URT, 2001).

These findings show that most of the people who had joined the scheme of community health insurance fund (CHIF) were standard seven leavers. This is a category of people who had formal education and were found in rural areas. Therefore, through this formal education it was easier for them to analyze the importance of Community Health Insurance fund (CHIF) as an important security against diseases for their life and economic development.

Table 4: Education level of the respondents (N=160)

Level of education	Frequency	Percent
Never been to school	15	9.4
Primary education	130	81.3
Secondary education	12	8.4
College education	3	1.9
Total	160	100.0

4.1.5 Household heads

Household heads was an important variables in this study because the household head in this study is guided as a decision making unit or is the one who takes all responsibilities in the household for that case it was important for the researcher to know who was the household head and what were their responsibilities and how do

they manage to solve the problem of sickness in their families. From the results About Three-fifths (58.1%) of the respondents were adult male household heads; about two fifths (39.4%) were adult female household heads; (1.9%) of the household heads were orphans heads; (0.6%) of the respondents was a male orphan household head as shown in Table 5.

These results show that the proportion of households headed by adult males was the greatest among households which were members of CHIF. This is partly because such households have high income compared to households headed by adult females, orphans female and male orphans. The reason for the adult male to have high income compared to other identified groups is that most of the adult males own land by which they earn income when they are married for raising their families, while adult females are not given anything when they get married; that is why there is disparity of income between adult female and adult male.

Table 5: Heads of households (N=160)

Household head	Frequency	Percent
Adult male	93	58.1
Adult female	63	39.4
Orphans female	3	1.9
Orphans male	1	0.6
Total	160	100.0

4.1.7 Main occupations of the respondents

Main occupation was an important variable for this study so as to help the researcher to know the main source of income to her/his respondents, that will help him/her to relate the price of CHIF health services and the income earned by the CHIF beneficiaries, thus study findings indicates that seven-eighths (86.9%) of the respondents had their main occupation being crop production; (1.2%) of the respondents were employed by the government.

From these findings the main economic activities of the respondents in Kyela District is crop production. On the basis of this information it was easy to determine the affordability of health services in comparison with the price of the services which was Tsh 2 000 per head per year. Furthermore, on this basis it was easy, to set the time for collecting premium; that the premium should be collected during harvesting period because it was the time when most of the beneficiaries had money (Table 6).

Table 6: The main occupation of the respondent (N = 160)

Main occupation	Frequency	Percent
Crop production	139	86.9
Government employment	5	3.2
Non government employment	1	0.6
Licensed trade	1	0.6
Non licensed trade	10	6.2
Student pupils	4	2.5
Total	160	100.0

4.2 Modality Used by CHIF to Disseminate Knowledge and to Provide Health Services

4.2.1 Information and knowledge dissemination about CHIF to the community

Good methodology on information and knowledge dissemination about CHIF to the community is important because community in rural areas has been enclosed with a number of factors which can hinder low income people from accessing quality health care. These factors include poverty, taboos, ignorance, high cost of health care and distance from health centres (KCBHFA, 2012).

Therefore, the modality on information should be good so as to capture the audience easily, study findings indicates that One-eighth (12.5%) of the respondents got the information about CHIF through Radio Kyela FM; more than two-third (71.2%) of the respondents got the information about CHIF through both Radio Kyela FM, Public meetings and brochures as summarized in Table 7 below.

Table 7: Community with information and knowledge about CHIF (N=160)

Media	Frequency	Percent
Through Radio Kyela FM	21	12.5
By Conducting public meeting and Distributing Brochures	21	12.5
Both Radio, conducting Public meeting and distributing brochures	114	74.6
None of the above.	4	0.4
Total	160	100.00

Knowledge about CHIF among the respondents in Table 8 shows that (98.8%) of the respondents had the knowledge about CHIF, but (1.2%) of the respondents did not know anything about CHIF. Therefore, these findings show that the community in Kyela District was well informed of the services offered by Community Health Insurance Fund (CHIF).

Table 8: Knowledge about CHIF (N = 160)

Knowledge about CHIF	Frequency	Percent
Yes I Know	158	98.8
No I don't know	2	1.2
Total	160	100.0

4.2.2 Health facility used by CHIF to offer health services to its beneficiaries

The respondents were asked about health facilities from which they obtained health services; their responses are summarized in Table 9 which shows that (93.8%) of the respondents were getting CHIF health services from both private and government Health facilities; (5%) of the respondent got CHIF health services through government health facility; and (1.2%) of the respondents did not know exactly the health facility through which CHIF was offering health services to its beneficiaries.

These findings show that CHIF in Kyela District has extended health services up to private hospitals, unlike the CHF whose clients were obliged to get health services to the particular health facilities where they were registered. By signing contract with private health facilities like Matema Lutheran Hospital (MLH) and government health

facilities, CHIF has given freedom to its beneficiaries to go to any health facility within the district to get health services.

Table 9: Health facilities contracted by CHIF association to offer health services
(N=160)

Health facility	Frequency	Percent
Through government health facility	8	5.0
Through both government and private health facility	150	93.8
I don't know	2	1.2
Total	160	100.0

4.2.3 Services offered by Community Health Insurance Fund (CHIF)

Community Health Insurance Fund (CHIF) is an association which was formed in collaboration with Kyela District Council and CIDR. By so doing CHIF has full mandate of running all activities which were done by Community Health Fund (CHF) in the district. This aimed at improving health services in the district.

Thus, unlike CHF, CHIF has services which are transport, minor and major surgical operations, Outpatient Department (OPD) and Inpatient in Departments (IPD). Table 9 shows the results on health services offered by CHIF to its beneficiaries. More than two-thirds (68.1%) of the respondents were aware of the health services offered by CHIF; one-third (30%) of respondents were aware of ambulance services; and 0.6% of the respondents was not aware of any services offered by CHIF (Table 10).

Table 10: Respondents' awareness of services offered by CHIF to its beneficiaries
(N=160)

Services offered	Frequency	Percent
OPD, IPD, and Surgery	2	1.2
Ambulance services	48	30.0
I don't know	1	0.6
All, OPD, IPD, Surgery and Ambulance services	109	68.2
Total	160	100.0

Therefore, the above findings show that the modality used by CHIF in delivering health services to its beneficiaries is by disseminating enough information and knowledge about CHIF to the community, contracting private and government health facilities in providing health services and ambulance services to CHIF beneficiaries. However, the patient is free to get health services from any contracted health facility within the district. Below is a figure showing CHIF Ambulance which is used in transporting seriously ill patients to hospital and dead bodies back home for burial services.



Photo 1: Means of transport used by CHIF in transporting seriously ill patients (CHIF photo taken during the field, 2012)

4.3 CHIF with Accessibility of Healths Care to Rural People

4.3.1 Governance, democracy, structure and accessibility of health care to rural people

The governance of CHIF association starts at household level, village level; whereby beneficiaries at the village level form a section, then leaders from different sections sit together to elect ward representatives; the ward representative also sit together to elect a Board of CHIF and the Board members elect CHIF Executive Committee which is comprises three people who are the chairman, the general secretary and the Treasurer. Governance and democracy in CHIF association is observed by opening the room for asking questions and to give opinions so as to improve health services at the district. To make sure good governance and democracy are highly practised, meetings at the village level, the ward level, Board meeting and General assembly are held two times a year whereby during the meeting problems and opinions are collected and presented

in the ward meeting. If the problems are not solved at the ward level then they are presented in the CHIF board meeting, and if they persist, they are solved during the General assembly (GA) whereby the District Medical Officer (DMO), District Commissioner (DC), District Executive Director (DED) and other representatives from the council, discuss them and deliberate on the same. Therefore, governance and management structure of CHIF shows the ownership of the association to the community. The organisational structure of CHIF is presented in Fig. 5. Below;

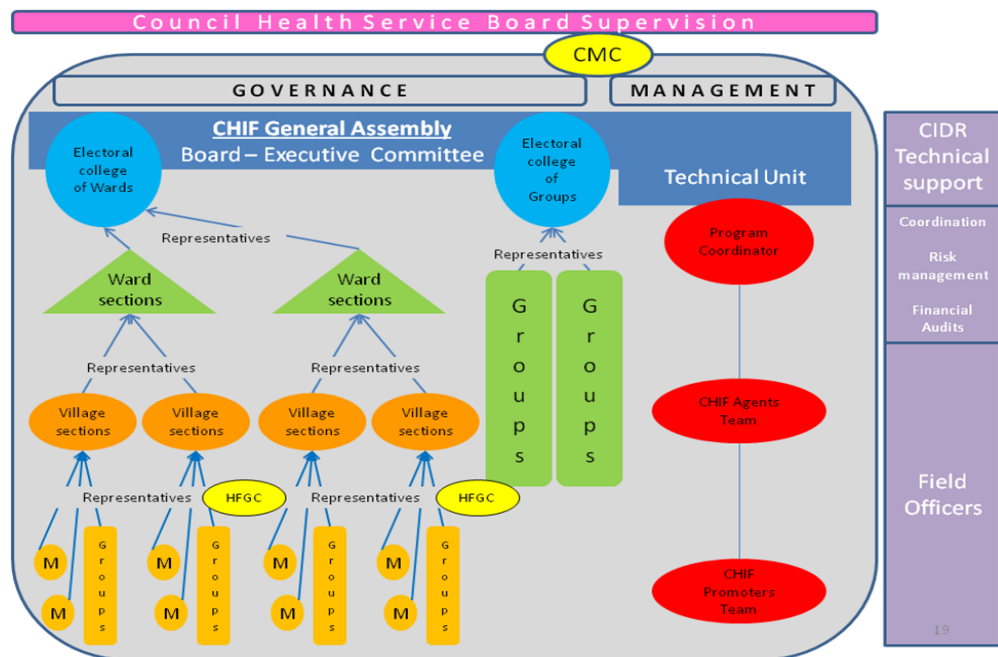


Figure 4: Structure of CHIF association Structure prepared by (CIDR, 2010)

This study is in line with the findings from the Jakab *et al.* (2001), which suggested that creating a sense of ownership and trust is important to control for moral hazard and for the acceptance and institutional stability of the scheme in general. To achieve this, regular community level meetings and workshops, where members of the community could express their views on the design of the scheme are helpful.

Below is a picture of some of village representatives during a general Assembly (GA) at Ipinda in Kyela District on 2nd March 2012.



Photo 2: Some of the Village representatives, during general assembly (GA) at Ipinda in Kyela District. CHIF photo taken during data collection on 2nd March 2012



Photo 3: Village representatives making follow up on a presentation addressed by CHIF coordinator during general assembly (GA) at Ipinda in Kyela District. CHIF photo taken during data collection on 2nd March 2012

4.3.2 CHIF and accessibility of health care to rural people

Results show that slightly more than three-quarters (76.2%) of the respondents said that CHIF had improved the accessibility of health care. Therefore, from these findings rural people through CHIF were accessible to health care in terms of availability, appropriateness, and affordability. These results are in support with the findings presented by Tina (2004); which states that accessibility in health care is looked on three things which are availability of health care, appropriate health care, and affordability of health care. Under the aspect of availability of health care, it is important to know whether people are diagnosed and treated promptly and can obtain quality preventive care early enough to illness or complications and services are affordable within a reasonable distance from where people live.

Coming to the aspect of appropriateness of health care, this refers to the right mix of health care professionals existing to attend to people's most frequent needs (NPCC, 2004). Cultural and linguistic barriers are addressed in such a way that patients get proper diagnoses and can communicate effectively with their providers and affordability of basic health insurance coverage.

Table 11: CHIF and accessibility of health care to rural people (N=160)

Accessibility	Frequency	Percent
Yes	118	76.2
No	42	23.8
Total	160	100.0

4.3.3 CHIF with the premium charged for health insurance

Premium is a specified amount of payment required periodically by an insurer to provide coverage under a given insurance plan for a defined period of time. The premium is paid by the insured party to the insurer, and primarily compensates the insurer for bearing the risk of a payout, should the insurance agreement's coverage be required (Stephen, 2005). However, the demand of households for health insurance depends not only on the quality of care offered by the health care provider on the premium and benefit package, but also on socio-economic and cultural characteristics of households and communities. Widespread absolute poverty among potential members can be a serious obstacle to the implementation of insurance.

The findings of this study are in line with those of a study conducted by Johannes and Doris (2003) whereby it was reported that demand of households for health insurance depends not only on widespread absolute poverty among potential members but also on socio-economic and cultural characteristics of households and community in which (94.4%) of the respondents said that the premium charged was affordable to all rural people. Therefore, from these results the premium charged by CHIF was affordable by rural people, despite their differences in socio-economic and cultural characteristics.

Table 12: The premium charged being affordable by rural people (N=160)

Premium charged	Frequency	Percent
Yes	151	94.4
No	9	5.6
Total	160	100.0

4.3.4 Effects of CHIF on health care utilization and financial protection

The respondents were asked on how CHIF helped the community in health care utilization and financial protection in Kyela District. It was found that the responses from the respondents showed that all the respondents said that through CHIF people had been able to go for health care whenever they fell sick. CHIF beneficiaries save money simply because the money charged for healthcare per head is less than the premium paid per head to CHIF. Also more than one-tenth (11.9%) of the respondents said that by using CHIF ambulance for transporting a seriously ill person to hospital and carrying dead bodies back home for burial services CHIF members have been able to save a lot of money.

Thus the results of this research are comparable with those of a study conducted by Johannes (2003) in Senegal whereby it was found that health insurance schemes are an increasingly recognized factor as a tool to finance health care provision in low income countries. Given the high latent demand from people for health care services of a good quality and the extreme under-utilization of health services in several countries, it has been argued that social health insurance may improve the access to health care of acceptable quality.

Table 13: Contribution of CHIF in health care utilization and financial protection

(N=160)

Reasons for saving money	Frequency	Percent (%)
Because of CHIF, most of people save money from medication	140	12.4
CHIF policy aim at reducing the level of poverty among CHIF beneficiaries by offering health services at low costs	155	16.6
CHIF beneficiaries can no more spend money for buying medicine.	142	13.8
By paying 2000 as premium CHIF beneficiaries.	132	10.0
The premium charged by CHIF for Health services has reduced the burden to those who are taking care of the patients.	153	15.1
Motivation provided by CHIF to health service providers builds the spirit of hospitality among health service providers.	140	12.4
By using CHIF ambulance for transporting a seriously ill person to hospital and carrying dead bodies back home for burial services	157	19.7
CHIF members have been able to save a lot of money		
Total	1 318	100.0

NB: Some of the respondents gave more than one answer categories number of cases will not add to 160 (data set was based on multiples responses). Source: data from field

Members of CHIF had better access to health care. Members could go to hospital more often, in case of a serious illness. In so doing members saved financially because they paid a lesser amount of money in hospital. Therefore the Community Health Insurance Fund (CHIF) was a tool for effective utilization of health care and financial protection to beneficiaries. By assuring its members health care and enabling them to save financially, CHIF can lead to the development of other social activities like paying school fees for children and improving the livelihood in general.

4.4 CHIF Members' Satisfaction with Health Care Services Delivered by CHIF

Customer satisfaction, a term frequently used in marketing, is a measure of how products and services supplied by a company meet or surpass customer expectations.

Customer satisfaction is defined as "the number of customers or percentage of total

customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals (Gitman. *et al.*, 2005). Customer satisfaction was analysed descriptively and inferentially.

4.4.1 Descriptive analysis of satisfaction with healthcare services delivered by CHIF

Descriptive analysis of satisfaction with healthcare services delivered by CHIF was determined by the respondents being asked if they were satisfied or not with CHIF health services. The satisfaction was also determined using a 90-point scale to determine levels of satisfaction. The scale was constructed using 18 statements with positive connotation (which are seen in Section D of Appendix 2) about the respondents being satisfied with the healthcare services provided by CHIF. For each of the statements one could score a minimum of 1 point and a maximum of 5 points, and for all the questions the minimum and maximum possible scores on the scale were 18 and 90, respectively.

The results showed that the respondents actually scored an average of 70.5, a minimum 36.0, and a maximum of 90.0 points. The overall points scored were grouped into three groups of low satisfaction (36.0 to 67.0 points), moderate satisfaction (68.0 to 75.0 points), and high satisfaction (76.0 to 90.0 points). The cut-off points for the categorisation were aimed at having group sizes that were not much different. Based on these cut-off points, the results showed (37.3%) of the respondents had low satisfaction; (41.4%) of the respondents had moderate satisfaction; and (20.8%) of the respondents had high satisfaction. On the basis of these findings, it is

evident that the majority of the beneficiaries were satisfied with healthcare services offered through CHIF.

4.4.2 Inferential analysis of satisfaction with healthcare services delivered by CHIF

Inferential analysis of satisfaction with health care services through CHIF was done using an F-test by one-way ANOVA and ordinal logistic regression as described and reported below.

4.4.2.1 Inferential analysis of satisfaction with healthcare services using F-test

F-test was used to compare satisfaction health care services among beneficiaries who had various main occupations and among those who had different levels of access to information about CHIF. F-test was used because it is the model of choice for analysing differences when one has a categorical independent variable indicated by with more than two groups while the dependent variable is recorded at the ratio level (i.e. in terms of a continuous variable). In this research both main occupation and access to CHIF were recorded in terms of continuous variables with three options for each of them, while the dependent variable was recorded as a continuous variable in terms of the number of points scored on the 90-point scale described above. The one-way ANOVA results are presented in Tables 13 and 14.

Table 14: Comparing satisfaction among people with different occupations

Main occupation	N	Mean	Between and within groups	Sum of Squares	df	Mean Square	F	Sig.
Crop production	136	65.4926	Between Groups	482.468	6	80.411	1.197 ^{ns}	0.311
Government employment	2	75.0000	Within Groups	10 073.009	150	67.153		
Non government employment	1	79.0000						
Technical employment	3	69.3333						
Licensed trade	1	65.0000						
Non licensed trade	10	64.2000						
Student pupils	4	69.7500						
Total	157	65.7962	-	10 555.478	156			

ns = Not significantly different ($p > 0.05$)

In Table 14, since the Sig. level was 0.311 ($F = 1.197$, and non-significant at the 5% level, $p > 0.05$), the results mean that there were no significant difference in satisfaction with health care services among people with various main occupations, albeit Non-governmental employees had the highest satisfaction (79.0 out of 90.0 points) followed by Government employees (75.0 out of 90.0 points), as seen in Table 14.

Unlike in Table 14 where there was no significant difference in satisfaction with healthcare services among people with various main occupations, there was significant difference in the satisfaction among people with different levels of access to

information as seen in Table 15 where Sig. is 0.019 ($F = 3.052$), which means the difference was significant at the 5% level ($p \leq 0.05$).

Table 15: Comparing satisfaction among people with different levels of access to information

Information dissemination	n	Mean	Between Groups and within groups	Sum of Squares	df	Mean Square	F	Sig.
Through Radio	20	66.3000	Between and Within Groups	784.708	4	196.177	3.052*	0.019
Through Television	2	69.0000		9 770.770	152	64.281		
By Conducting public meeting and Distributing Brochure	20	67.4000		10 555.478	156			
Both Radio, conducting Public meeting and distributing broch	113	65.6991						
Not applied	2	47.0000						
Total	157	65.7962						

*Significantly different at the 5% level ($p \leq 0.05$).

The results in Table 15 show that the most satisfied people were those who accessed information about CHIF through television (69.0 out of 90.0 points, followed by those who accessed the information through public meetings brochures (67.4 out of 90.0 points) and accessed the information through the radio (66.3 out of 90.0%). However, since only 2 of the respondents had TV sets, the most important means of accessing the information were public meetings and brochures.

4.4.2.2 Inferential analysis of satisfaction with healthcare services using ordinal logistic regression

Ordinal logistic regression is the model of choice when one has a dependent variable recorded at the ratio level in terms of ranked options of the dependent variable (e.g. low, moderate, and high) and independent variables (covariates) recorded at various levels: nominal, ordinal, interval, and ratio. In this research it was suitable because the dependent variable was also recorded in terms low satisfaction (36.0 to 67.0 points), moderate satisfaction (68.0 to 75.0 points), and high satisfaction (76.0 to 90.0 points), as seen in Section 4.4.1. The results of inferential analysis using ordinal logistic regression are presented in Table 16.

Table 16: Satisfaction of beneficiaries with health services measured at different statistical level of measurement

Independent variables	Estimate	Std. Error	Wald	df	Sig.
Accessibility to health facilities	1.801	0.428	17.730***	1	0.000
Increase of health facilities	1.414	0.531	7.094*	1	0.008
CHIF motivate health workers	0.941	0.338	7.750*	1	0.005
With CHIF people with low income can get health service	-13.011	0.000	0.0	1	0.0
CHIF offers good health services	1.586	0.438	13.142***	1	0.000
Contract with private pharmacy	0.763	0.386	3.919*	1	0.048
The use of CHI ambulance	-0.450	0.392	1.317 ^{ns}	1	0.251
Freedom of asking question and giving opinion on better health services offered	1.122	0.325	11.916***	1	0.001

* Significant at the 5% level

*** Significant at the 0.1%

Ns Not significant

In Table 16, the parameters in the Estimate column show the direction (negative or positive) of the impacts of the independent variables on the chances of CHIF members being satisfied with health services provided though CHIF; the Wald statistics show

the magnitudes of the impacts; and p-values (Sig.) show the extents to which the impacts were significant. Accordingly, the factors that had the greatest impact on CHIF members being satisfied with the healthcare services provided through CHIF were Accessibility to health facilities (Wald statistic = 17.730 and quality of services offered by CHIF (Wald statistic = 13.142). These and some other factors had significant impact. The others are as seen in Table 16. In order to show more clearly the impacts, the Wald statistics were used to produce Fig.8

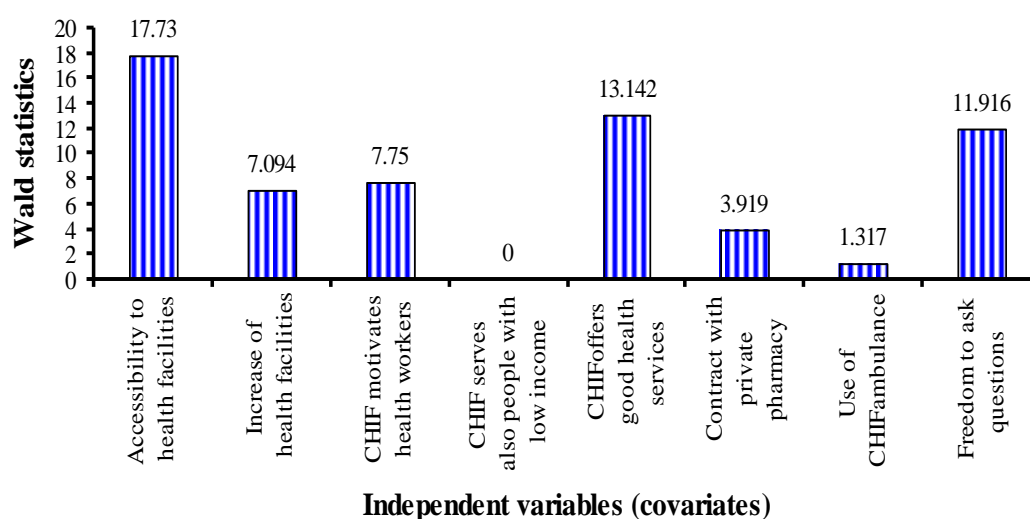


Figure 5: Magnitudes of the impacts of some factors on satisfaction with CHIF services: Source: data from field

In view of the findings shown in Table 16, the independent variables (covariates) out of eight, had impact on beneficiaries' satisfaction from health care services delivered by CHIF. However, accessibility to health facilities, good health services offered by CHIF and freedom of asking questions had greatest impact on CHIF members' satisfaction from health care services delivered by CHIF.

CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the empirical findings from the study showed that, the modality used by Community Health Insurance Fund (CHIF) to provide health services based on information dissemination is good, since more than two-thirds (71.2%) of the respondents got the information about CHIF from both media through Kyela FM, public meetings and brochures.

However, the results from the study findings shows that more than three quarters (76.2%) of the respondents said that the modality of CHIF to include private health facilities like Matema Lutheran Hospital, Ngamanga and Mahenge Dispensaries had improved the accessibility of health services to people.

Therefore, from these findings; Community Health Insurance Fund (CHIF) had a positive effect on the economic and social situation of the members. Besides the spread of the financial risk of illness and better access to health care, indirect effects of health insurance can materialize such as better health outcomes and an increase in labour productivity in Kyela District.

Based on the objective number two, the effect of CHIF services on membership to healthcare utilization and financial protection, 94.4% of the respondents said that the premium charged by CHIF was affordable by people. By paying the premium of CHIF, people had managed to save money which they used for health care services;

previously some used to sell pieces of land, cattle, cocoa farm and bags of paddy which they stored for food so that they could afford the cost of health services. Therefore, CHIF has helped people in Kyela District to improve their social well being.

Furthermore, based on the same objective number two, the findings that slightly more than three-quarters (76.2%) of the respondents said that CHIF had improved the accessibility and utilization of health services. From this finding it can be concluded that CHIF has improved the availability, appropriateness, and affordability of health services in the district. With respect to objective number three, more than four-fifths (86.9%) of the respondents said that, they were satisfied with health care services delivered to them through CHIF. From this finding, it is concluded that health care services offered by CHIF met or surpassed CHIF members' expectation.

According to the null hypothesis of the study which state' that "Satisfaction with health services through CHIF in terms of points scored on a scale measuring satisfaction does not differ significantly between people with different occupations and between people with different levels of access to information". using one-way ANOVA, the results of comparing satisfaction with health services by level of access to information showed that the levels of satisfaction with health services provided through CHIF were significantly different among people with various levels of access to information ($F = 3.052$, $p = 0.019$). On the basis of this finding, while there was no significant difference in the satisfaction by main occupation, it is concluded that access to information about CHIF is a more important determinant of satisfaction with health services than main occupation.

However, from the null hypothesis, it can be concluded that beneficiaries of CHIF were very much satisfied with the services, but that they could be more satisfied if scaling up of the services were done concomitantly with more information dissemination on the services.

In view of the findings from the survey, six independent variables (covariates) out of eight, had impact on beneficiaries' satisfaction from health care services delivered by CHIF. However, accessibility to health facilities, good health services offered by CHIF, and freedom of asking questions had greatest impact on CHIF members' satisfaction with health care services delivered by CHIF. Being satisfied, it is concluded that if the six independent variables were improved, more people would be satisfied with health care services offered through CHIF.

5.2 Recommendations

5.2.1 Policy level recommendations

- i. The Ministry of Health and Social Welfares (MOH&SW) is urged to use the modality used by CHIF in delivering health services to its beneficiaries by disseminating enough information and knowledge about CHIF to the community and Health service providers, contracting private and government health facilities in providing health services. However, the patient should be free to get health services from any contracted health facility within the district or all over the country if there is a control. In view to the tested null hypothesis, it is recommended that CHIF services should be scaled up concomitantly with more dissemination of information about them.

- ii. CHIF/CHF schemes should operate as an independent entity, with its own staff worker, who will take all CHIF/CHF activities including sensitization, registration of members, and preparing payments for health services at the district where majority of rural people and informal sector workers are found, without depending on health worker, who regards CHIF activities as an extra-duty.

5.2.2 District level recommendations

- (i) On the basis of the conclusion that during data collection most of the health services providers said that payment for health services were not done timely, because of bureaucracy find at the district, it is recommended that Kyela District Council should allow CHIF association to deposit the premium collected from clients direct to CHIF account. This will help the association to pay health facilities on time and health services providers will purchase medicines which will help to offer quality health services to beneficiaries thus the beneficiaries will enjoy the services, thus they will be able to renew their membership status in subsequent years.
- (ii) Local rules and regulations must be flexible enough to allow creative ideas to be put into motion. This will help to improve health services at district level day after day.

5.2.3 CHIF association recommendations

- (i) Based on the Checklist data collected, financial support and technical assistance are crucial for convening meetings, coordinating communication, and monitoring and reporting progress.
- (ii) On the basis of the conclusion during data collection most of people from different sections, according to the given check list, recommended that more education to the council expertise and to the people in the district is needed.

The education on the return on an investment in a collaborative process should be the priority. For example, improved access to health care, can mean less absenteeism and greater productivity from workers; health service providers are likely to see more patients at earlier stages of illness, before complications and poor prognoses occur, and peoples' reliance on uncompensated care including alternative health care may be reduced.

- (iii) In view to the tested null hypothesis, it is recommended that CHIF services should be scaled up concomitantly with more dissemination of information about the products offered by CHIF.

(iv) Household level recommendation

Based on CHIF members' satisfaction with health services delivered to them and financial protection, people who have not yet joined CHIF are advised to join with CHIF for the improvement of their social wellbeing.

5.2.4 Recommendations for further research

- (i) After identifying that CHIF members are satisfied with health services provided through CHIF, an evaluation study should be conducted in Kyela District to determine the sustainability of CHIF.
- (ii) Further research is also needed on how CHIF system as a form of health insurance can be scaled up and replicated all over the country.

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APPENDICES

Appendix 1: Definition of variables

S/N	Variable	Operational definitions	Level of measure ment	Units of measurement
Background Variables				
1.	Age	Number of years since one was born.	Ratio	Absolute years
2.	Sex	Being male or female	Nominal	1=male 2=female
3.	Education level	Number of years one spent in formal school	Nominal	
4.	Marital status	Being married both males and females or otherwise.	Nominal	1=Married 2=Single 3=Divorced 4=Otherwise
Institutional factors				
5.	Organization	A social unit of people, systematically structured and managed to meet a need or to pursue collective goals on a continuing basis	Nominal	0= non goals 1= goals
8.	Policies	Rules and regulations which guide the use of productive	Dummy	0=Unavailable 1=Available

		resources.		
Economic factors				
11.	Income	Monetary value of earning per person	Ratio	Tsh
12.	H/h size	A number of members from a single house hold	Ratio	Numbers
Socio cultural factors				
15.	Traditional ties	The practice using traditional medicine for medication	Dummy	0=Non traditional medicine 1=Traditional medicine.

Appendix 2: The Questionnaire for the Research

SOKOINE UNIVERSITY OF AGRICULTURE

DEVELOPMENT STUDIES INSTITUTE

A questionnaire for a research on: NO.

**THE IMPACT OF COMMUNITY HEALTH INSURANCE FUND ON
HEALTH SERVICES DELIVERED IN KYELA DISTRICT TANZANIA**

By

Mwaipopo Andrew.

M.A. (Rural Development) a.mwaipopo@yahoo.com

SECTION A: BACKGROUND INFORMATION (fill or circle the number of the appropriate answer) *To begin with, please let me ask you about all members of your household*

1. Name of respondent (optional).....
2. Ward.....
2. Village of residence of the respondent.....
3. Year of birth.....
4. Sex of respondent:
 1. Male,
 2. Female
5. Years of schooling of respondents-----

(Please circle the number of the appropriate answer)

Marital status	Household head	Relationship with the household head	Main occupation
1. Married	1. Adult male	1. Household head	1.Crop production
2. Never married	2. Adult female	2. household head’s spouse	2.Livestock keeping
3. Widower	3. Orphan male	3. Household head’s child	3.Government employment
4. Widow	4. Orphan female	4. Household head’s grand child	4. Non-government employment
5. Divorced		5. Household head’s nephew/niece	5. Technical employment
6. Separated		6. Household head’s brother/sister	6.Service provision
7. Too young to be married		7. Household head’s son/daughter in-law	7. Licensed trade
		8. Household head’s father/mother	8. Non licensed trade
		9. Other type of relationship	9. Student /pupil
	10. Too young to go to school		

SECTION B: MODALITY BY WHICH COMMUNITY HEALTH INSURANCE FUND (CHIF) PROVIDES HEALTH SERVICES IN KYELA DISTRICT.

Please let me ask you about modality by which Community health insurance fund

(CHIF) provides health services in kyela district

10. Do you know anything about CHIF?

1. Yes I know
2. No I don't know

11. If "Yes "how does CHIF offer health services to its beneficiaries?

1. Through private health facilities
2. Through government Health facilities
3. Both private and government Health facilities

12. Mention two types of services offered by CHIF which are different from CHF

1-----

2-----

13. What types of services from question No 12, are you most interested in?

.....

14. Why are you interested with the services mentioned in question 13 above?

.....

15. How does CHIF disseminate its information to the community?

1. Through Radio []

2. Through Television []

3. By conducting public meeting and Distribution of brochure []

4. Both radio, conducting public meeting and Distribution of brochure []

16. Do you have an opportunity to ask question and to give the opinion on

Governance and the way health services are offered?

1 Yes []

2 No []

17. If “yes” how many times have you ever given the comment and opinion to

CHIF Governing Board and Technical team

1. Once []

2. Twice []

3. None of the above. []

4. More than twice. []

18. Are your opinion and comment given considerations by the governing Board

and Technical team?

1. Yes []

2. No []

19. If “Yes” give the example of the opinion or comment that you gave to the
Governing board and was taken into considerations.

.....

20. Do you think the modality used by CHIF in governance and offering health
services will make CHIF sustainable?

1. Yes []

2. No []

21. If “Yes” in question 20 above why?

.....

22. If “No” in question 21 above why?

SECTION C: ABOUT HEALTH FACILITY UTILIZATION AND FINACIAL PROTECTION TO CHIF BENEFICIARIES:

Next, please let me now ask you about health facility utilization and financial protection to CHIF beneficiaries in kyela district. . Please, tell me whether CHIF do significantly contribute in utilization of health facility among CHIF members in kyela District. (Yes/no)

[illegible]

5. Please, tell me whether CHIF do significantly contribute in Financial Protection to CHIF beneficiaries (yes/no).

S	SOCIAL FACTORS	1	2	SN	INSTITUTIONAL	1	2
1	The presence of CHIF has reduced a number of people who were going for traditional hillers.			9	CHIF policy intends to reduce the level of poverty among CHIF beneficiaries by offering health services at low cost.		
2	ECONOMIC FACTORS, CHIF is means for retaining the economy of the community in kyela district			10	By using CHIF ambulance in transporting a serious person to hospital and carrying dead body back home for burial services, CHIF members has been		
3	Through CHIF people with low income can access health services.			11	Most of people spent more than 50000 Tsh. Per year for health services in kyela district.		
4	The tendency of CHIF signing contract with private pharmacy, shows the assurance of medication to beneficiaries						
5	By paying 2000 as a premium, beneficiaries are accessible to any health facilities within the district without any direct payment from pocket.						
6	The premium charged by CHIF for health services, has reduced the burden to those who are taking care of the patient						
7	Motivation provided by CHIF to health service provider, build the spirit of hospitality among health services providers.						
	CULTURAL FACTORS						

SECTION D: ABOUT SATISFACTION OF (CHIF) MEMBERS WITH HEALTH CARE SERVICES DELIVERED TO THEM BY (CHIF)

In the following section I would like to know your satisfaction from health services offered by CHIF. I request you to put a mark ranking (1, 2, 3, 4 or 5 against each statement.

S/No	Statements implying satisfaction	Maximum Scores	Scores by respondents
	SOCIAL FACTORS		
1.	The community of Kyela is aware with services provided by CHIF	5	
2.	CHIF governing board is transparent,	5	
3.	In CHIF the community has an opportunity to give comments and opinions for better health services.	5	
4.	Democracy in CHIF is highly practised	5	
	ECONOMIC FACTORS		
5.	The community of kyela Depend on Agriculture as their source of income.	5	
6.	The premium charged by CHIF is affordable	5	
7.	Through CHIF, the community has been able to access health services.	5	
8.	CHIF has increased the availability of health facilities	5	
9.	CHIF has increased the availability of medication	5	
10.	Through CHIF Health providers are motivated	5	
11.	CHIF offers good health services	5	
12.	CHIF can rescue the life of the poor	5	
13.	CHIF gets matching fund from Government	5	
	CULTURAL FACTORS		
14.	CHIF has reduced the number of people from using traditional medicines to modern medicines.	5	
15.	Most of the elders (traditional leaders) support the presence of CHIF	5	
	INSTITUTIONAL FACTORS		
16.	CHIF is in line with the 6 th millennium development goal which is to combat, HIV/AIDS, Malaria and other Diseases.	5	
17.	District council work with CHIF to make sure the enrolment of CHIF members increases notably	5	
18.	CHIF gets support from donors in running its activities.	5	
	TOTAL SCORES		

SECTION E: COMMUNITY HEALTH INSURANCE FUND (CHIF) AND ACCESSIBILITY TO HEALTH CARE, OF THE POOR AND PEOPLE WHO ARE WORKING IN INFORMAL SECTOR.

In the following section I would like to know the accessibility of poor and people who are working in informal sector to health services offered by CHIF. I request you to put a mark ranking 1-5 against each statement.

S/No	Statements implying the accessibility of poor people and those who are working in informal sector to health facilities.	Maximum Scores	Scores by respondents
	SOCIAL FACTORS		
1	CHIF members are aware with all health facilities in which CHIF is offering its Health services.	5	
	CHIF governing board is transparent,	5	
2	In CHIF the community has an opportunity to meet Technical team and Governing board.	5	
3	Democracy in CHIF is observed.	5	
	ECONOMIC FACTORS		
	The income of kyela community is more than 100,000/ per year	5	
4	CHIF members don't have to pay cash from pocket so as to access health services.	5	
5	Through CHIF, the community has been able to access health services.	5	
6	CHIF has increased the availability of health facilities to the community in kyela district.	5	
7	CHIF has increased the availability of medication at affordable price	5	
8	Through CHIF Health providers are accessible to different incentives, which help to improve their wellbeing.	5	
9	CHIF members are accessible to ambulance for transporting a serious patient from home place to hospital or from hospital to referral hospital.	5	
	CHIF Members are accessible to ambulance for transporting a dead body Back home for burial services.	5	
	CULTURAL FACTORS		
10	District Council support Health services offered by CHIF to the community	5	
11	CHIF can rescue the life of people from using traditional medicine, and shift to modern medicines which are provided after being examined.	5	
	INSTITUTIONAL FACTORS		
12	Unlike CHF, CHIF members are accessible to any health facilities within the district provided has an ID card and Guarantee letter from the section leader.	5	
13	Unlike CHF, CHIF has increased the availability of Health services by signing contract with private health institution with like Matema Hospital with its dispensaries,	5	
14	Unlike CHF, CHIF get support from donors in running her activities.	5	
	TOTAL SCORES		

THANK YOU FOR YOUR COOPERATION

Appendix 3: Checklist for Key Informants

Health service providers from Matema hospital

1. The modality by which community health insurance fund (CHIF) provide health services in kyela district
2. About health facility utilization and financial protection to CHIF beneficiaries
3. Satisfaction (CHIF) members and Health service providers with health care services delivered to them by (CHIF)
4. Community Health Insurance Fund (CHIF) and accessibility to health care, of the poor and people who are working in informal sector.
5. Sustainability of CHIF association.

Health service providers from Kyela district hospital

1. The modality by which community health insurance fund (CHIF) provide health services in kyela district.
2. About health facility utilization and financial protection to CHIF beneficiaries.
3. Satisfaction (CHIF) members and Health service providers with health care services delivered to them by (CHIF)
4. Community Health Insurance Fund (CHIF) and accessibility to health care, of the poor and people who are working in informal sector
5. Sustainability of CHIF association.

Health service provider from Ipinda Health centre

1. The modality by which community health insurance fund (CHIF) provide health services in kyela district
2. About health facility utilization and financial protection to CHIF beneficiaries

3. Satisfaction (CHIF) members and Health service providers with health care services delivered to them by (CHIF)
4. Community Health Insurance Fund (CHIF) and accessibility to health care, of the poor and people who are working in informal sector
5. Sustainability of CHIF association

Health service provider from Dispensaries

1. The modality by which community health insurance fund (CHIF) provide health services in kyela district
2. About health facility utilization and financial protection to CHIF beneficiaries
3. Satisfaction (CHIF) members and Health service providers with health care services delivered to them by (CHIF)
4. Community Health Insurance Fund (CHIF) and accessibility to health care, of the poor and people who are working in informal sector.
5. Sustainability of CHIF association.

CHIF executive committee and CIDR programme coordinator

1. The modality by which community health insurance fund (CHIF) provide health services in kyela district
2. About health facility utilization and financial protection to CHIF beneficiaries
3. Satisfaction (CHIF) members and Health service providers with health care services delivered to them by (CHIF)
4. Community Health Insurance Fund (CHIF) and accessibility to health care, of the poor and people who are working in informal sector.
5. Sustainability of CHIF association.

THANK YOU FOR YOUR CCOPERATION