Enrollment Status and Determinants of Improved Community Health Fund Among Households in Dodoma Tanzania

Andrea R Modest[1,] Agatha Fabian Ngowi[2] and Leonard Katalambula[3]

Afiliation: The University of Dodoma; College of Health Science, Department of Public Health

Abstract

Background: Community Health Funds (CHFs) is a promising means for enhancing social economic security to low socio-economic households. In 2015 the government of Tanzania set a goal of achieving 30% of CHF enrolment amongst households, however only 16.4% was achieved. The government of Tanzania is continually reforming the Health Fund and the most recent reform started implementation on 2018 which changed the name to Improved Community Health Fund (ICHF). There is a need of knowing if the changes have affected enrolment status and what could be the driving factors. Therefore, this study aimed to establish enrolment status of ICHF and its determinants among households in Dodoma region.

Methods: This study was a cross sectional study design which employed multi stage sampling technique Structured questionnaire was used to obtain information from a total number of 424 head of the HH; Descriptive statistics were used to determine status of enrollment while chi square test and logistic regression were used to determine factors.

Results: This study found that, of all 424 respondents only 19.1% were enrolled in ICHF. Wealthiest households were 2.224 (AOR); p-value (0.034) at CI of 95% (1.063, 4.657) more likely to be enrolled to the ICHF as compared to poor households. Households with more than two elders with 60 years old and above, were 2.986 (AOR); p-value 0.006 at the CI of 95% (1.373, 6.496) more likely to be enrolled in ICHF compared to households with no elderly. And there were statistical significance between motivational benefits and availability of health care services with the enrollment status, household who perceived to receive motivational benefits once visit health facility were more enrolled as compared to those who do not and household who perceive health care service to be available were more enrolled as compared to who do not, they had chi-square of 16.017[a] and 64.084, p-value of 0.00 and 0.00 at CI of 95% respectively.

Conclusion: Wealth status, presence of elders above 60 years old, motivational benefits and availability of the HCs were the determining factors for HH to be enrolled in ICHF. The government should consider poor households by helping them to pay ICHF enrollment fees.

Keywords:- Improved Community Health Fund, Progressive Payment And Motivational Benefits.

Implications for policy makers

There should be supporting mechanism for the poor people to be enrolled to ICHF

The health care facilities should be accessible and offering wide range of services

Implication for Public

The ressearch findings demonstrate low enrollment of HH to ICHF which has influenced by number of factors including; Wealth status and availailability of health care services with all this might affects future rentintions which will convey decline of enrollment status. Therefore there should be well designed strategies such as changing the contribution modality like using progressive payment whereby having different packages for the four group of community; for the very poor, poor, middle and high income. The level of contribution will differ depending on economic status of the household such that the high income will pay more compared to middle and middle to pay more compared to poor and poor to pay more compared to very poor household this will scale up enrollment status and hence the program will be sustainable.

I. INTRODUCTION

It is estimated that; more than 150 million people have unstable financial situations in the world. It is reported also that, every year over 100 million people are forced into poverty due to expensive health services [1]. Due to expensive health services, families in low-income countries spend to the last of their coin. Community Health Fund (CHF) is the promising means for enhancing social economic security to the low socio-economic status societies in low income countries including Tanzania [2].

In Tanzania, the Community Health Fund (CHF) officially introduced in 1996 as pilot scheme. In 2001 the Community Health Fund Act No.1 was enacted which made the scheme to be compulsory [3]. Membership into Community Health Fund was categorized regarding family size. Contributions per card were between 5,000 to 15,000 Tanzanian shillings for 6 family members, this amount depended on districts' council decisions. The same amount of premiums was given by the government through National Health Insurance Fund (NHIF) to enhance the scheme sustainability. The Community Health Fund permits family members to get health care services from primary health facilities without excessive spending.

Factors which prevent individuals from accessing health services include: high costs of healthcare services, availability of health care services and cultural practices. Unfortunately, services offered at health facilities affect the perceptions of people to be enrolled to the Community Health Fund [4]. Societies with low socio-economic status in Tanzania face health problems due to lack of Community Health Fund card. Furthermore, willingness to be enrolled to the Community Health Fund was one of hindrances to more recruitment of members to the program. Moreover, the perception of the health care received acts as a barrier towards scheme acceptance [5]

The Community Health Fund (CHF) aimed to be a risk-sharing health financing mechanism, although it did not work as effectively as expected in reducing the financial catastrophe. CHF failure is attributed to the following reasons: people were pushed to be treated at the primary public facilities; services offered did not meet the majority needs yet people were discouraged to be enrolled [6]

The scheme was reformed in 2012 with some modifications and improvements thus forming the Improved Community Health Fund (CHF iliyoboreshwa). The new and improved CHF was first implemented in the three regions including; Dodoma, Morogoro and Shinyanga with a support from Health Promotion and System Strengthening (HPSS). All regions in Tanzania started to implement ICHF in July 2018. The following features were added to the Improved Community Health Fund: services were extended up to regional level, contribution increased up to 30,000 Tanzanian shillings in other regions except Dar es Salaam which doubled to 45,000 Tsh. Other improvements include: single account which is monitored by the Regional Administrative Secretary (RAS), data management through an Electronic Information System the package will offer basic health services, separation of healthcare provider and purchaser. In sustaining the program, the contribution of 30,000 Tanzanian shillings is subsided by the Government of Tanzania through NHIF. The realization of forthcoming ICHF membership growth rates is greatly doubted. This is due to inadequate knowledge on whether the community based insurance can attract financially stable members from informal sector [7].

However, researches consistently report that inadequate use of social market plan and social profile factors are hindrances to enrollment [8]. A study concerning ICHF's implementation, adoption and fidelity of the Reformed CHF came up with factors affecting its operations and progression; they include: inefficient tracking of the progress leading to low performance of the ICHF scheme and hence the plan encountered more challenges [9]. Most studies reviewed herein discuss social market strategy for scaling up the enrollment and factors affecting the operation, acceptance and commitment. Unfortunately, the reviewed studies did not explore the determinant of enrollment on the Improved Community among households which might an effect in future households' enrollment Tanzania.

Dodoma is one of the fast growing regions with a high number of low socio-economic societies facing financial hardship including Out of Pocket on health. According to MOH-TANZANIA RMNCAH SCORE CARD of October-December 2017 Dodoma has a low performance of ICHF/TIKA enrollment. Studies address the reasons related to this failure such as: disappointment and barricades for enrollment. Another reason is low performance on the Community Health Fund. However still there is inadequate knowledge on the determinant of enrollment on the Improved Community Health Fund among households in Dodoma.

II. METHODOLOGY

Study area and period: The study was conducted in Dodoma region, a capital city of Tanzania from April 2019 to October 2019. The region has 7 districts that are; Dodoma Municipal, Kongwa, Bahi, Mpwapwa, Kondoa, Chemba and Chamwino. The region is located in central Tanzania between 4°-7° latitude, East and 35°-37° longitude, west. It has 41,311 square kilometers with a population of more than 2 million people. The study involved three districts which included: Chamwino, Chemba and Bahi.

Study design and participants: The study employed cross sectional research design with quantitative research approach targeting heads of households aged 18 years old and above.

Household heads older than 18 years who were not able to communicate and having multiple health insurances were excluded in the study.

Sample size determination and sampling techniques
This sample size was determined using the following formula: Cochran (1963:75) as cited by (Polonia, 2013)
N=Z2xPxq/E2 q= 1-P
N=Minimal sample size
Z= Standard normal deviation set at 1.96 (corresponding to confidence level of 95%)
E=Marginal error is 5%
P=Prevalence rate 50% (Israel Glenn. D, 1992)
N=Z2xPxq/E2
N=1.962x 0.5x (1-0.5)/0.052
N=385 +39=424 (10% of adjustment of non-respondent rate) 424 of participants were involved in the study

A multi stage sampling techniques was employed in obtaining the study sample; it involved five stages. A first stage was purposive sampling technique; this was used in selecting Dodoma region. Selection of the district councils was a second stage, this involved simple random sampling technique. A third stage was wards selection; simple random sampling technique was used under this stage. The fourth stage involved the selection of villages; under this stage a simple random sampling techniques was used. The last stage was the selection of participant in which systematic random sampling was used.

Data collection method and tool

Structured questionnaire which was prepared in English and translated to Kiswahili was used in obtaining the required information from the respondents through face to face interview method. Two research assistants qualified as Ward Executive officer and Village Executive officer were involved in data collection and were trained for two days before data collection process. Pretesting of the tool was done in one of the village which was not included in the study area to check the practicability of the tool.

Data processing and analysis; Data were cleaned and checked for its comprehensiveness and uniformity based on the daily collection. Data were entered in a computer using SPSS version 25.0 software package whereby was run by descriptive (frequency and percentages) and inferential statistics (logistic regression where by chi-square, p-value, CI and AOR were presented). In analyzing wealth of the household, principal component analysis were used whereby the wealth of household grouped into four (4) groups based on wealth percentile, these groups includes; very poor, poor, middle and high.

III. RESULTS

Demographic characteristics of participants

A total number of 424 heads of household were involved in this study whereby a large number of participants were males, that is 253 (59.7%) were males and. 193(45.5%) were aged between 35-54 years. The mean age of participants was 39.2, median 37±12.648 and the maximum and minimum age was 77 and 18 respectively. Results also shows that majority of participants 238 (56.1%) were from Wagogo tribe and 316 (74.5%) were Christians; 387 (91.3%) were married; 303 (71.5%) had primary school education and 390 (92%) participants were peasants.

Concerning place of residence, most participants 419 (98.8%) was living in rural areas. Chamwino district council had a largest number of participants that is 172 (40.6%) participants compared with other districts. Family-wise, majority of the households had large family size; 289 (68.2%) and 187(44.1%) households had one child below the age of five years; 254 (59.9%) households had no elderly aged 60 and above; 361 (85.1) and 371 (87.5) had no family members with disability and chronic diseases respectively. Most participants were living within 5 km from health facilities 262(61.8%) as indicated as indicated in table 1

Table no 1: Social demographic characteristics (N=424)

Variable	Frequency (n)	Percentage (%)
Age		
34<	175	41.3
35-54	193	45.5
55>	56	13.2
Sex		
Male	253	59.7
Female	171	40.3
Tribe		
Gogo	238	56.1
Mrangi	46	10.8
Mburungi	25	5.9
Others	115	27.1
Marital status		
Married	387	91.3
Single	25	5.9
Widow/widower	11	2.6
Cohabiting	1	0.2
Level of education		
Informal education	78	18.4
Primary education	303	71.5
Secondary education and above	43	10.1
Occupation		
Peasant	396	93.4
Employed	9	2.1
Entrepreneur	19	4.5
Wealth index		
Very poor	106	25
Poor	108	25.5
Middle	104	24.5
High	106	25
District Council		
Chamwino	172	40.6
Chemba	124	29.2

Bahi	128	30.2
Family size categories		
Average family size	135	31.8
Large family size	289	68.2
Number of under five children		
None	111	26.2
1	187	44.1
2 and above	126	29.7
Presence of elderly 60 and above		
None	254	59.9
1	135	31.8
More than 2	35	8.3
Distance from health facilities		
Within 5 km	262	61.8
5>	162	38.2
Presence of family members with disability		
Yes	63	14.9
No	361	85.1
Presence of family members with chronic diseases		
Yes	53	12.5
No	371	87.5
Total	**424**	**100**

The enrollment status to the ICHF and Social demographic characteristics

Results from this study show that among 424 heads of household participated in the study only 19.1% were enrolled into the Improved Community Health Fund (ICHF) as shown in figure 1 below. However Bahi district council had higher enrollment status, which is 32(25%) compared to Chemba and Chamwino district council as indicated in figure 2.
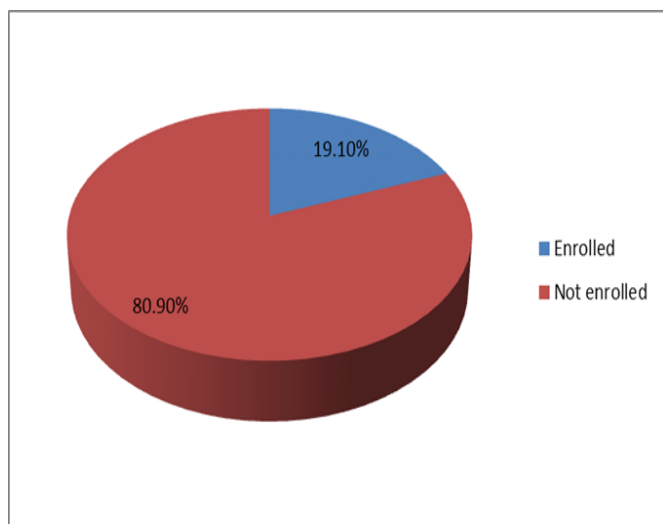

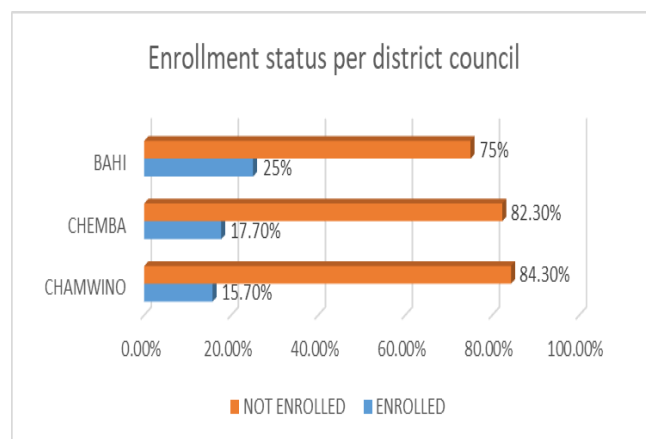**Figure** 1 Overall enrollment status (N=424)

Figure 2 Enrollment status per district council (N=424)

Regarding the enrollment status to ICHF by social demographic characteristics, this study found that most participants who had high enrollment rate, 15 (26.8%) were aged 55 years and above. Female had high enrollment, which is35 (20.5%) while 46 (18.2%) male participants were enrolled. Widows and /widowers were more enrolled 3 (27.3%) compared to single(s), married and cohabiting. Participants with secondary education and above had high enrollment 12 (27.9%) compared to those primary education and those with no education. Concerning occupations, employed participants 2 (22.2%) were more enrolled compared to the other occupational groups. Large family size had high enrollment 57 (19.7%) as compared to average family size. Households with no under five children had high enrollment making 25 (22.5%) of all participants compared to those with one or more than two under 5 children. Households with more than 2 elders of 60 years and above had high enrollment which is 14 (40%) compared to households with no or having one elder of 60 years and above. Concerning distance, households living within 5 km from health facilities were more enrolled which is 56 (21.4%) households than the households living more than 5

km from health facilities. Family members with chronic diseases were more enrolled, which is 26.4% than the

households without family members with a chronic disease as shown in table no.2

<div align="center">Table 2: Enrollment status and demographic characteristics (N=424)</div>

Variable	Enrollment status		Total (%)
	Enrolled	**Not Enrolled**	
Age group			
34<	146(83.4%)	146(83.4%)	175(100%)
35-54	37(19.2%)	156(80.8%)	193(100%)
55>	15(26.8%)	41(73.2%)	56(100%)
Sex			
Male	46(18.2%)	207(81.8%)	253(100)
Female	35(20.5%)	136(79.5%)	171(100)
Tribe			
Gogo	41(17.2%)	197(82.8%)	238(100)
Mrangi	14(30.4%)	32(69.6%)	46(100)
Mburunge	5(20%)	20(80%)	25(100)
Others	21(18.3%)	94(81.7%)	115(100)
Religion			
Christian	48(15.2%)	268(84.8%)	316(100)
Muslim	33(31.4%)	72(68.6%)	105(100)
Non	0(0%)	3(100%)	3(100)
Marital status			
Married	76(19.6%)	311(80.4%)	387(100)
Single	2(8%)	23(92%)	25(100)
Widower/Widow	3(27.3)	8(72.7%)	11(100)
Cohabiting	0(0%)	1(100%)	1(100)
Education			
Informal	13 (16.7%)	65(83.3%)	78(100)
Primary	56(18.5%)	247(81.5%)	303(100)
Secondary and >	12(27.9%)	31(72.1%)	43(100)
Occupation			
Peasants	76(17.9%)	320(82.1%)	396(100)
Employed	2(22.2%)	7(77.8%)	9(100)
Entrepreneur	3(15.8%)	16(84.2%)	19(100)
Resident			
Urban	1(20%)	4(80%)	5(100)
Rural	80(19.1%)	339(80.9%)	419(100)
Family size			
Small	24(17.8%)	111(82.2%)	135(100)
Average	24(17.8%)	111(82.2%	135(100)
Large	57(19.7%)	232(80.3%)	289(100)
Under 5 Child			
None	25(22.5%)	86(77.5%)	111(100)
1	37(19.8%)	150(80.2%)	187(100)
2 and >	19(15.1%)	107(84.9%)	126(100)
Elder ≥60			
None	47(18.5%)	207(81.5%)	254(100)
1	20(14.8%)	115(85.2%)	135(100)
2 and >	14(40%)	21(60%)	35(100)
Distance			
Within 5 km	56(21.4%)	206(78.6%)	262(100)
>5 km	25(15.4%)	137(84.6%)	162(100)
Disability			
Yes	8(12.7%)	55(87.3%)	63(100)
No	73(20.2)	288(79.8%)	361(100)
Chronic d'se			
Yes	14(26.4%)	39(73.6%)	53(100)
No	67(18.1%)	304(81.9%)	371(100)
Motivational benefits			
Yes	23(28%)	59(72%)	82(100)

		Enrolled	Not enrolled	Total
	No	58(17%)	284(83%)	342(100)
Availability				
	Yes	30(29.1%)	73(70.9%)	103(100)
	No	51(15.9%)	270(84.1%)	321(100)
	Total	**81(19.1%)**	**343(80.9%)**	**424(100)**

Relationship between the demographic characteristics and the enrollment status

Finding from this study shows that socio-economic status of the households, awareness, availability, motivational benefits, perceived health care services satisfaction and elders of 60 years old and above had statistical significant relationship with enrollment to the Improved Community Health Fund.

Households' socio-economic status was statistical significant to the enrollment into Improved Community Health Fund (ICHF); the chi square was 9.014a with the P-value of 0.029. Elderly of 60 years and above had statistical significant with the chi-square test of 11.555a and (P-value 0.003). Awareness indicated a statistical significant of being enrolled into the Improved Community Health which had a chi square of 39.524a with the (P-value 0.000). Regarding the perceived satisfaction of the health care services, chi square was 4.715a with the (P-value 0.030). Availability of health care services was another determinant of enrollment into the Improved Community Health the chi square was 8.843a with a (P-value 0.003). Motivational benefits was statistical significant to the enrollment status the chi square was 5.263a with the (P-value 0.022).

Other factors such as the age, sex, marital status and participant's educational level were statistically not significant as shown in table 3.

Table 3: Relationship between the demographic characteristics and the enrollment status

	Enrollment status			
Variable	**Enrolled**	**Not enrolled**	**(X^2)**	**P-Value**
Social economic status				
Very poor	14(13.2%)	92(86.8%)		
Poor	15(13.9%)	93(86.1%)	9.014[a]	0.029
Middle	24(23.1%)	80(76.9%)		
High	28(26.4%)	78(73.6%)		
Presence of elders 60 years and above				
None	47(18.5%)	207(81.5%)		
1	20(14.8%)	115(85.2%)	11.555[a]	0.003
≥2	14(40%)	21(60%)		
Awareness				
Yes	81(26.6%)	223(73.4%)	39.524[a]	0.000
No	0(0%)	120(100%)		
Perceived satisfaction				
Unsatisfied	30(14.8%)	173(85.2%)	4.715[a]	0.030
Satisfied	51(23.1%)	170(76.9%)		
Availability of HCs				
Yes	30(29.1%)	73(70.9%)	8.843[a]	0.003
No	51(15.9%)	270(84.1%)		
Motivational benefits				
Yes	23(28%)	59(72%)	5.263[a]	0.022
No	58(17%)	284(83%)		
Age				
34<	146(83.4%)	146(83.4%)		
35-54	37(19.2%)	156(80.8%)	2.865	0.239
55>	15(26.8%)	41(73.2%)		
Sex				
Male	46(18.2%)	207(81.8%)	0.345[a]	0.557
Female	35(20.5%)	136(79.5%)		
Marital status				
Married	76(19.6%)	311(80.4%)		
Single	2(8%)	23(92%)		
Widow/widower	3(27.3%)	8(72.7%)	2.777[a]	0.427

cohabiting	0(0%)	1(100%)		
Educational level				
Informal	13(16.7%)	65(83.3%)		
Primary	56(18.5%)	247(81.5%)	2.532[a]	0.282
Secondary education and above	12(27.9%)	31(72.1%)		

Determinants of the enrollment status to the ICHF

Results displayed in table 4 showed that wealthiest households were 2.224 (AOR) more likely to be enrolled to ICHF compared to poor households. Regarding elderly, households with more than two elders aged 60 years and above were 2.986 (AOR) more likely to be enrolled into ICHF compared to households with no elders. Households which received motivational benefits were 1.342 (AOR) times more likely to be enrolled into ICHF compared to households which did not receive motivational benefits.

Considering the availability of health care services, households which perceived health care services to be accessible, available and proximal were 1.685 (AOR) times more likely to be enrolled into ICHF compared to heads of the household who perceived health care services to be inaccessible, unavailable and far away. Regarding the perception on health services satisfaction; heads of the households who were satisfied with health services were 1.262 (AOR) times more likely to be enrolled into ICHF services compared to t heads of households who were unsatisfied.

Table 4: Determinants of the enrollment status to the ICHF (N=424)

Variables	OR	P-value	95%CI		AOR	P-value	95%CI	
			lower	Upper			lower	Upper
Wealth index								
Very poor (ref)								
Poor	1.060	0.884	0.484	2.320	1.066	0.877	0.476	2.388
Middle	1.971	0.066	0.956	4.067	1.956	0.087	0.922	4.151
High	2.359	0.018	1.161	4.793	2.224	0.034	1.063	4.657
Elders 60 yrs>								
Non(ref)								
1	0.766	0.360	0.433	1.355	0.770	0.382	0429	1.383
≥2	2.936	0.005	1.391	6.196	2.986	0.006	1.373	6.496
Perceive satisfaction								
Unsatisfied(ref)								
Satisfied	1.730	0.031	1.051	2.847	1.262	0.42	0.716	2.657
Availability								
No(ref)								
Yes	0.460	0.003	0.273	0.773	1.685	0.089	0.923	3.076
Motivation benefits								
No(ref)								
Yes	1.909	0.023	1.092	3.337	1.340	0.342	0.733	2.451

IV. DISCUSSION

In this study there was a variation in enrollment status among the districts involved in this research. The enrollment of Bahi, Chemba and Chamwino districts councils were 25%, 17.7% and 15.7% respectively. The enrollment status depended on the following reasons: awareness on ICHF, social economic status of the HH, availability of health care services, and distance from HHs to the HFs. Therefore, the overall enrollment status into the Improved Community Health Fund was low. It was observed that only 19.1% of all participants from the three district council were enrolled into ICHF. This corresponds to a study by [7] who reported 20% beneficiaries enrolled into the ICHF.

This was in contrast to a study done in urban district of Ghana 46% [10] and in west Gojjam zone in Northwest Ethiopia the enrollent status of 58.19%, [11]. The low enrollment status observed in this study could be due to low knowledge on perceived benefit of enrollment; poverty is a contributory factor to low enrollment status as well as poor quality of health care services.

Very low enrollment status was observed in a previous study done in Tanzania by [12] who found a rate of 11% while a study from Rwanda with a trend of 2000/01, the average membership rate remained at 7.9%, but it then increased in subsequent years to 10.3% in 2000/02 and to 15.6% in 2002/03 [13].

These differences could be due to dissimilarities in the study areas and demographic situations of the source population as well as the estimate number of the people were smaller than those in the current study.

When controlling for a range of variables that could explain the decision to enroll (determinants),perceived satisfaction of health care services was found to be an important determinant. Those study participants who were satisfied with health care services were more likely to be enrolled in ICHF compared to those who were unsatisfied,

this is similar to the findings from two studies done in Northwest Ethiopia which showed that, satisfaction is based on the quality of services of health institutions was a significant factor for enrollment decisions [11] as well as in a study from northeast Ethiopia [14]. These similarities of the findings might be due to the direct benefits gained from the quality of services delivered by health institutions.

Motivational benefits received at the health facilities was another determinant for the enrolled in ICHF. HHH who perceive to receive the additional benefits were more likely to be satisfied with the health care services as compared to the households who were not perceived to receive the additional benefits at the health facilities this was in line with a study by [11] who showed that, participants who perceived adequate benefit package were two times more likely to enroll compared to their counterparts.

Availability of the health care services determines the enrollment into ICHF since it was statistical significance on these factors on households' enrollment into the ICHF. This was disagreeing with the findings from a study conducted by World Bank Group which showed that, households living in villages with a health center are less likely to enroll, most likely because they are required to leave their villages to attend the district hospital for their first point of care hence it is less attractive when a health center is readily available in the village [15].

Awareness of the ICHF contributes to the enrollment into ICHF, this was in line with the findings from Lebanon which showed that, consumer awareness of scheme is a significant determinant of scheme up- take [16]. This similarity is due to the fact that information is power and can inspire the household in making decision to be enrolled into the scheme.

Wealth status, plays a huge role in the enrollment status to ICHF in this study, households with high socio-economic status were enrolled into ICHF compared to the middle socio-economic, poor and very poor groups families. This proved that some households were unable to contribute to the ICHF because of their socio-economic status. This was similar to other previous studies which reported that, middle socio-economic and the high socio-economic households were more likely to be enrolled than the poor and very poor households [5,10]. These similarities reflect the situation of most of very poor and poor households are unable to contribute to the scheme because of their socio-economic status.

Demographic factors like age, determines the likelihood of being enrolled into ICHF this is shown by the fact that, those who were elderly age (60 years and above), were three times more likely to be enrolled compared to those below sixty years old. This was however, contrary to the report by World Bank which stated that, having an older family member or children under the age of five does not significantly increase the probability of enrollment [15]. This difference is due to the existence of different policies on waivers and exemptions which favors aged individuals

and under five children who are allowed to receive free medical care services.

V. CONCLUSION AND RECOMMENDATION

The determinant factors for households' enrollment into Improved Community Health Fund include: awareness, wealth status, presence of elderly above 60 years, motivational benefits and availability of the health care services. To scale up the enrollment status to the Improved Community Health Fund these factors must be taken into consideration because they play essential role in the enrollment status. The government should consider poor households by assisting them to reimbursement ICHF enrollment fees.

VI. STRENGTH AND LIMITATION OF THE STUDY

Strength
This study adopted and modified the standard tool to measure the wealth status of the household and the perceived healthcare services satisfaction.

Limitation
This was quantitative study therefore it was limited on its explanatory findings.

Ethical Issues and consent to participate
Study reviewed and approved by University of Dodoma Research Review Committee and granted research clearance. Permission for the study was sought from the President Office, Regional Administration and Local Government Authority (PORALG), the Regional Secretariat (RAS) and the District Executive Directors. Written informed consent was requested to each participant before data collection

Competing interest

There is no any conflict of interest in this research between the Author and co-authors.

Authors' Contribution

ARM made substantial contributions to the study design, engaged in data collection and data analysis, and drafted the Manuscript. **AFN** and **LK** contributed to the interpretation of data and revised the manuscript. All authors read, commented on and approved the final manuscript.

Author's detail

[1,2,3]Department of Public Health, School of Nursing and Public Health, The University of Dodoma; P.O.Box 395, Dodoma, Tanzania.

REFERENCES

[1]. C. Evans, David B & Etienne, "The World Health Report: health systems financing," *World Heal. Organ.*, pp. 1–128, 2010.

[2]. M. John and P. Johannes, "www.econstor.eu," 2004.

[3]. Parliament of the United Republic, "An Act to provide for the mechanism of establishment of Community Health Fund and to provide for the constitution of the management organs, and the administra tion of the Fund and other related matte rs," 2001.

[4]. E. N. Chomi, P. G. M. Mujinja, U. Enemark, K. Hansen, and A. D. Kiwara, "Health care seeking behaviour and utilisation in a multiple health insurance system : does insurance affiliation matter ?," *Int. J. Equity Health*, vol. 13, no. 1, pp. 1–11, 2014.

[5]. B. Marwa, B. Njau, J. Kessy, and D. Mushi, "Feasibility of introducing compulsory community health fund in low resource countries : views from the communities in Liwale district of Tanzania," *BMC Health Serv. Res.*, vol. 13, no. 1, p. 1, 2013.

[6]. J. Macha, A. Kuwawenaruwa, S. Makawia, G. Mtei, and J. Borghi, "Determinants of community Health Fund membership in Tanzania : Mixed Methods Analysis," pp. 1–11, 2014.

[7]. B. Lee, K. Tarimo, and A. Dutta, "October 2018 Tanzania ' s Improved Community Health Fund An Analysis of Scale-Up Plans and Design," 2018.

[8]. N. A. Kapologwe *et al.*, "Understanding the implementation of Direct Health Facility Financing and its effect on health system performance in Tanzania: A non-controlled before and after mixed method study protocol," *Heal. Res. Policy Syst.*, vol. 17, no. 1, 2019.

[9]. A. Kalolo, R. Radermacher, M. Stoermer, M. Meshack, and M. De Allegri, "Factors affecting Adoption, Implementation fidelity, and Sustainability of the Redesigned Community Health Fund in Tanzania; A mixed methods protocol for process evaluation in the Dodoma region," *Glob. Health Action*, vol. 8, no. April 2017, 2015.

[10]. E. Nsiah-Boateng *et al.*, "Sociodemographic determinants of health insurance enrolment and dropout in urban district of Ghana: A cross-sectional study," *Health Econ. Rev.*, vol. 9, no. 1, 2019.

[11]. T. H. Mirach, G. D. Demissie, and G. A. Biks, "Determinants of community-based health insurance implementation in west Gojjam zone , Northwest Ethiopia : a community based cross sectional study design," pp. 1–8, 2019.

[12]. P. Kamuzora and L. Gilson, "Factors influencing implementation of the Community Health Fund in Tanzania," *Health Policy Plan.*, vol. 22, no. 2, pp. 95–102, 2007.

[13]. S. & K. Kalisa, Musange, David, "The Development of Community-Based Health Insurance in Rwanda: Experiences and Lessons," 2016.

[14]. S. G. Workneh, G. A. Biks, and S. A. Woreta, "Community-based health insurance and communities' scheme requirement compliance in Thehuldere district, Northeast Ethiopia: Cross-sectional community-based study," *Clin. Outcomes Res.*, vol. 9, no. June, pp. 353–359, 2017.

[15]. The World Bank, "Community-Based Health Insurance in Lao P.D.R. Understanding Enrollment and Impacts," 2010.

[16]. R. Fadlallah *et al.*, "onducted in Burkina Faso, Cameroon, India, La PDR, and Thailand found that consumer awareness of scheme existence was a significant determinant of scheme up- take-income countries: A systematic review," *Int. J. Equity Health*, vol. 17, no. 1, pp. 1–18, 2018.