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Households Characteristics Influencing Enrollment into Health Financing Schemes in Siaya County, Kenya

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Abstract

Health insurance delivers the capacity for the government to raise additional funds for essential public health services and provide cover through risk sharing, and promote access to health care services especially amongst poorer sections of the population. Hence it is one aspect of social security and a poverty reduction strategy. Hence the purpose of the study was to establish individual households' characteristics influencing enrollment into Health Financing schemes in Siaya County. This was a cross-sectional descriptive Baseline Survey study that was carried in three counties in Nyanza Province in Kenya, Siaya being one of them. Quantitative descriptive statistics was used during analysis. Study subjects were women of reproductive age (15-49 years). WHO EPI 30 by 10 Methodology was used to come up with a sample size of 2900 households. Awareness of the existence of Health financing Schemes within the communities' was 45%, those who were aware and enrolled were 5.6%. Level of education (16%) and income status played role in the uptake of health insurance cover; the self employed group had 6.4% and those employed and salaried had 32% respectively. The study established that general awareness of the existence of the health financing schemes within the communities is low with slightly more than half the population not having knowledge on them. Even though some are aware, they are not enrolled in any of the health care schemes but only a small percentage has enrolled. Education level income status both played a role in enrollment. There`s need by all the stakeholders to invest more in Social awareness and education campaigns. These findings will be useful in informing policy and practice on where to focus in order to increase in enrollment rates hence universal coverage.

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1. Introduction

Equity and social justice is one of the principles of Primary Health Care. The call for Universal Coverage through sustainable health financing strategies are key to improved economic productivity and hence poverty alleviation. Hence Health insurance is part of the social security and a strategy of poverty reduction.

According to the World Health Assembly of 2005 held in Kampala, member states were urged to strive and plan for universal coverage, within their particular macroeconomic, socio-cultural and political context of each country. The secretariat went ahead to define universal coverage as "access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost" [1]. Hence health insurance is a means to Universal Coverage globally. Hence Health Financing Schemes are strategies employed by different governments to promote accessibility and utilization of quality health care services by populations.

Despite all the interventions to ensure access to health care services, the utilization of health care services has been declining in the current decade, according to the Kenya National Health Accounts [2] indicates that in 2001/02 outpatient attendance was 45%; 40% in 2005/06 to 39% in 2009/10. While in-patient attendance in 2001/02 was 32%; 29% in 2005/06 and 21% in 2009/10, yet a possible reason for this could be escalation of costs in health care and lack of streamlined health insurance policies that enable all to enroll and access quality care regardless of social class.

It is true that there have been wide variations in utilization of services between urban and rural populations, with utilisation remaining low in rural areas, [3]. People have had to bear the heavy burden of the cost of health care. Even though a waiving policy in Kenya was put in place to protect the poor and exemption for children below five years, the truth of the matter is that, waiving mechanisms are not working, [4]. Infact 2005/06, households' out of pocket (OOP) expenditure was the largest contributor to health care financing, followed by donors and the Government. 35.9% of Total Health Expenditure (THE) was met by households, while 29.3% was paid for by government. Private companies contributed 3.3% while donors contributed 31.0%, [5].

According to the Economic Recovery Strategy and Vision 2030 of 2007, the Government of Kenya (GoK) has made a commitment to prioritize health, as a signatory to the Abuja Declaration in 2001, Kenya made a commitment to increase health allocations to 15 percent of total government allocations, [2]. Over the last decade, total health spending in the health sector has increased and this has translated into better health outcomes, as reported in the 2008/09 Kenya Demographic Health Survey (KDHS) but this indicators are still high according to the required world agreed standards, [6].

Health financing schemes or insurance schemes refers to financial plans/strategies that are put in place by the governments, groups of people or individuals to facilitate payment of hospital costs incurred during the spate of ill-health while Healthcare financing refers to the pooling of funds from various sources such as government, households, Private sector and donors to share financial risks across larger population groups, and using them to pay for services from public and private healthcare providers, [7].

Kenya`s National Hospital Insurance Fund (NHIF) is one of the oldest in Africa yet and upto now it only covers 6.6 million beneficiaries plus principal members all translating to 18% coverage nationally. On the other hand, the concept of Community Health Financing first came to Kenya in 1999 by the Kenya Community Based Health Financing Association, [8]. However, enrollment remains a challenge for all of them.

The existing Health Financing Schemes have over time concentrated much on those in the formal sector neglecting those in the informal sector, [7]. This has left the Community Based Health Insurance schemes to bridge the gap by providing cover to the poor and low income groups in the rural and slum dwellings. The question is; **What can the government do to have the poor and those marginalized in the society enroll and access health care?** Health financing strategies are part of the Health systems reforms that are geared towards universal coverage by ensuring there`s equitable, effective, accessible and affordable health care for all in line with the Health Policy.

The development of a broad strategy on sustainable financing of healthcare in Kenya is a critical area of concern of all Kenyans. This is so because many Kenyans have had to pay directly for health services whenever they need them, and sometimes at levels that can impoverish the family unit. Payment of out of pocket expenditures for health services due to lack of insurance cover has become a major barrier to health care service access and utilization, [7, 3, 4]. Hence the need to critically look at ideas that will elicit willingness to enroll and pay for Health Insurance by households hence improved health outcomes.

Yet enrollment in Kenya still remains a great challenge, the total population coverage is estimated to be at 20%. Not much has been done by the government and stakeholders' on the area of social awareness and marketing that can elicit willingness to pay for the cover voluntarily. Hence the study aimed at determining households' characteristics influencing enrolment into Health Financing Schemes, especially the National Hospital Insurance Fund (NHIF) by households in Siaya County. The purpose of the study was to establish individual households' characteristics influencing enrollment into Health Financing schemes in Siaya County.

Even though the main study was looking at maternal and child health, this study only focused on demographic and socio-economic factors, awareness and enrolment into health insurance schemes by households in Siaya County where the target group were women of reproductive age, 15 – 49 years.

Hence by establishing the Health Financing gaps from the households, especially those in the informal sector; will be of great importance not only to Kenya, but to other countries which are yet to achieve Universal Coverage of health as it will provide insight to policy makers when designing and implementing health insurance programmes of where focus their resources in order to enhance health insurance cover uptake.

2. Methods & Materials

The survey was done by GLUK/ UNICEF in two Counties (Siaya and Homabay) in Nyanza Province, in the month of September and October, 2011. Main aim of the survey was to establish multiple health indicators targeted for improvement by Ministry of Public health and Sanitation in Nyanza Province. However, the focus for this study was Siaya County. The County has a total population of 842, 304 people and covers

approximately a total area of 1520sq km. Poverty rates are as high as 58%, the area is of agricultural economy and most people are dependent on fishing, rice farming, small scale trading and engage in subsistence farming, [9]. The research was subjected to appropriate ethical review by the University`s Ethical Review Committee (GLUK- ERC).

The survey sample was drawn using multi-stage cluster sampling technique where all the five (5) districts and twenty nine (29) divisions in the county were included, in the first stage three sub-locations were randomly selected from each division, 5 villages were further randomly selected using simple random technique from each sampled sub-location. A total of 20 households were to be covered per village. A starting household was identified at the centre of each village by the supervisor and the enumerator. Data was collected by trained enumerators. Sample size determination was based on the World Health Organization (WHO) EPI 30 by 10 cluster methodology. Three divisions from each district were randomly picked; a total number of 29 sub-locations were in turn selected using the lottery method. Five (5) villages per sub-location were randomly selected where 20 households were to be covered bringing to 100 number of households per sub-location, hence bringing the number to 2900 households'. The study was limited to women of reproductive age (15-49 years) and the main area of interest for the research was to establish multiple health indicators hence questions on health financing were not dealt with in depth as required.

Data was collected through structured and semi structured questionnaires which were written in English and then translated into Luo ensure harmonization and consistency in terms of message delivery. Pre-test was done in the nearby community for clarity, acceptability, flow and consistency of the study. The questionnaire was used to collect quantitative data from the households.

Descriptive statistics was used to answer all the three objectives; Frequencies were run in-order to determine the level of health insurance uptake. Due to bad weather conditions and non-responsiveness only 2805 units (individual entities) were used in the analysis. Cross tabulations was used to determine associations between independent variables and the outcome of interest, which was uptake of health insurance amongst households in Siaya County. Results are presented in tables and graphs forms. Statistical Package for Social Sciences (SPSS version 17.0) was used during the analysis.

2.1 Statistical Analysis

Descriptive statistics was used to answer all the four objectives; Frequencies were run in-order to determine the levels of health insurance uptake, all the 2805 units (Households) were used in the analysis. Cross tabulations was used to determine associations between independent variables and the outcome of interest, which was uptake or enrolment into health insurance schemes amongst households in Siaya County. Frequencies were run and analysed using Descriptive statistics where Logistic Regression Model and cross tabulation analysis were used to determine association between various variables. The results have been presented on tables and pie charts. Univariate analysis was done on some variables while bivariate and multivariate analysis was done to combine the variables.

Results are presented in tables and graphs forms. Statistical Package for Social Sciences (SPSS version 17.0) was used during the analysis.

3. Results

3.1 Characteristics of the study population

The population structure indicates a relatively young population with a mean age of 30 years. The total response rate was 97.5% equivalent to (2727/2805) The male headed households` comprised of 86% (2412/2805) with a mean age of 34 years while female headed households` were 13% (364/2805), where the mean age for females was 26 years hence were falling within the reproductive age bracket of 15-49 years. Mean household size of five members each.

Those who were married constituted of 7.9% (222/2805) households who had only had primary level education comprised of 6.2% while others had secondary and post secondary education 16.1% (449/2805).

On income status, 40% (1122/2805) of the households` practiced farming, 1% (28/2805), were employed and earned a salary, 23% (645/2805) were self employed while 26% (729/2805) did not have any form of income meaning they are neither employed or doing any form of business.

There are a total of eight health Financing Schemes in Siaya County. The district with much knowledge on health care schemes was Rarieda 11.6% while the Ugenya district had the least knowledge on the schemes with 4.2% (118/2805). Generally, only 5.6% (157/2805) of the total populations were members of the existing health care schemes, NHIF being inclusive.

3.2 The proportion of households aware of the National Hospital Insurance Fund (NHIF) in Siaya County

figure 1 below gives the percentages of households' aware of NHIF. Only 45% (1262/2805) of the total households are aware of the National Hospital Insurance Fund (NHIF).

3.3 Distribution of awareness of existence of Health Financing Schemes by districts within Siaya County

From table 1, majority 11.6% (31/267) of households who were aware of existence of health care cost financing schemes were from Rarieda district, while the district with least knowledge was Ugenya 4.2% (12/284).

3.4 Awareness versus being a member of NHIF

Table 2 shows that the National Hospital Insurance Fund (NHIF) has 13.1% of the members who are aware of the scheme apart from being just members while 0.8% are members with little information or non about it. There`s an association between awareness of the scheme versus enrollment.

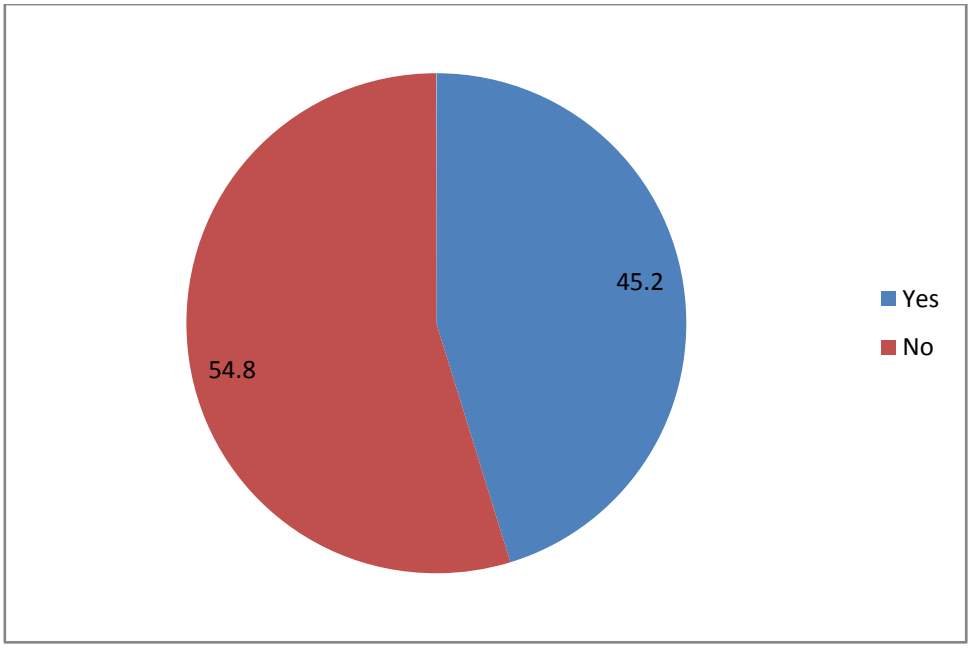


Fig 1: The proportion of household`s aware of NHIF

Table 1: Distribution of knowledge of the existing health financing schemes per districts in Siaya County

District	%	(n/N)
Bondo	7.0	41/588
Rarieda	11.6	31/267
Ugenya	4.2	12/284
Gem	9.5	26/375
Siaya	6.9	150/1934

3.5 The available Health Financing Schemes in Siaya County

From figure 2; there are a total of eleven Health Financing Schemes in Siaya County as whole. National Hospital Insurance Fund has the highest number of members, followed by Centers for Disease Control (CDC) Health Insurance Programme, CHW/HF, Yaw Pach, Millenium, Family planning, I.C, Merry go round, Phrez, Chama and Self Help Group.

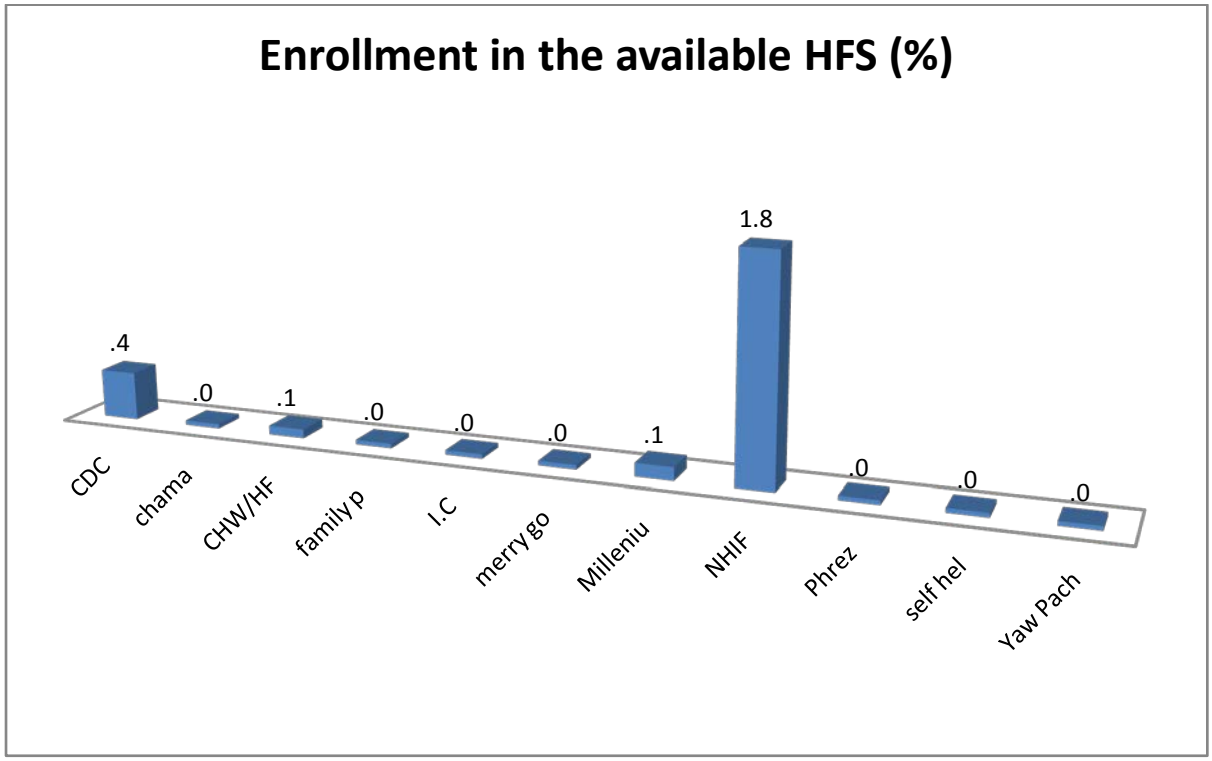
Table 2 Aware of NHIF Vs Membership in NHIF in the County

Aware of NHIF	Enrolled %(n/N)	Not enrolled %(n/N)	P-value
Yes	13.1(166/1272)	86.9 (1106/1272)	<0.0001
No	0.8(12/1573)	99.2 (1511/1573)	

3.6 The proportion enrolled in the available Health Financing Schemes in Siaya County

From the information in figure 2; below, National Hospital Insurance Fund (NHIF) has the highest number of members 1.8% (51/2805) followed by Centers for Disease Control (CDC) Health Insurance Programme with 0.4% (11/2805) CHW/HF and Millenium have 0.1% (3/2805) while the rest are at (0%) each.

Fig 2: The proportion enrolled in the available Health Financing Schemes in Siaya County



3.7 Demographic factors associated with enrollment into health financing schemes by households in Siaya County

Only 16.1% (452/2805) of households' comprising of those with secondary and post secondary education are members of the existing health financing schemes in Siaya County. Low enrolment of 6.2% (174/2805) is seen

within the group with primary education and below. Hence level of education was found to be significantly related to enrolment into the health care schemes.

On marital status, the information below, those who are single tend to enroll more 8.6% (241/2805) in Health Financing Schemes compared to the other groups. While the married polygamous enroll more 8.1% (227/2805) than the married monogamous 7.9% (222/2805) in health financing schemes compared to the unmarried 5% (140/2805), while the widows and widowers enlist the least 3.0% (84/2805) compared to those separated 7% (196/2805).

From the table below, household size did not have much impact on enrollment but those household`s with members between 1-5 (8.1% - 227/2805) registered slightly more compared to those with more than five members 7.3% (205/2805). Household size did not have any significance with enrolment into the health care schemes.

From the data most Households interviewed had mean age of between 26 years for females and 34 years for the males. On Household headship, male headed households comprised of 86% (2412/2805), while female headed households had 13% (365/2805) while there was no much significance between households headed by men 7.7% (216/2805) and households headed by women 7.9% (222/2805) in enrolment.

3.8 Socio-economic factors associated with enrollment into health financing schemes by households in Siaya County

From table 3 below, income was associated to enrollment. Those employed and salaried had 32% (898/2805) while the self employed group (business and farming) had 6.4% 180/2805).

Table 3 Demographics and Socio-economic Characteristics Vs Health Financing Schemes

	Enrolled % (n/N)	**Not enrolled % (n/N)**	**Odds ratio (95% CI)**	**P value P= 0.05**
Education Level				
Secondary & above	**16.1** (50/311)	83.9 (261/311)	2.6 (1.9-3.6)	
Primary & below	**6.2** (99/1602)	93.8 (1503/1602)		<0.0001
Marital Status				
Married	7.9 (145/1832)	92.1(1687/1832)	1.6 (0.7-3.8)	
Un married	5. (5/100)	95.0(95/100)		0.289

Household Size 1-5 =>6	8.1 (96/1189) 7.3 (52/711)	91.9 (1093/1189) 92.7 (659/711)	1.1 (0.8-1.5)	0.550
Household Headship **Males** **Females**	 7.7 (141/1820) 7.9 (9/114)	 92.3 (1679/1820) 92.1 (105/114)	 1.0 (0.5-1.9)	0.954
Main income source Salaried Self employed	32 (7/22) 6.4 (80/1255)	68 (15/22) 93.6 (/1255)		<0.0001

4. Discussions

It is true that membership in the fund is skewed against the poor and the unemployed, [3], yet they are ones who form almost 80% of the entire population in the country. Even though there is the voluntary option of paying premia monthly, they are said to be high and unaffordable to the poor in the community. Hence this is believed to hinder enrolment into the scheme.

The great discrepancy in enrollment could be brought about by the fact that there`s high fragmentation of the health insurance system in Kenya, if there could be consolidation of the existing health care schemes into a National Social Health insurance Fund (NSHIF), then it is true that enrolment could go higher. In Africa, countries such as Ghana who have reached a target of 56% and Rwanda 70% respectively [10] decided to adopt the social insurance fund from advanced countries such as Taiwan, China and the rest who have had almost 100% coverage of their populations, [11, 12]. It is clear that enrolment into health insurance scheme ownership facilitates health seeking for formal health care thus improved health outcomes meaning an economically stable National Health System.

In Ghana, increase in age was associated with enrollment, perhaps this could most likely be due to their deteriorating health conditions that led them to enroll. While age and sex are said to have influence on enrollment, the study revealed that, age is not associated with enrollment. In the USA, increase in age decreases the possibility of being enrolled into health insurance schemes, [13; 14]. In this study, marital status did not determine enrollment, [15], unlike other studies which found out that those who were single, divorced and the widowed are less likely to enroll compared to the married; [16], found out that marital status had a role it played in enrollment into health care schemes. Where the married were more likely to affiliate compared to the other lot. A possible reason for this could be that, those married have a bigger responsibility to take care of compared to the rest of the group or that those married could be in better financial position to enroll than the rest.

5. Conclusion and Recommendations

The study established that awareness was relatively low while enrollment rates were very low and this equally impacted on enrollment into Health Financing Schemes. The existing literature indicates that most developing countries have not invested adequately in public education and social awareness meaning few people were aware of the importance of health insurance. Education and employment have shown to increase the likelihood of enrollment into health insurance scheme. Level of literacy increases the knowledge and importance of health insurance cover and also correct interpretation of key health care messages. Income gives one the ability to pay for the premiums thus ensuring security against further impoverishment of the family unit.

There is need to incorporate Health Insurance concept into Community Health Strategy Programme in order to step up efforts in ensuring massive enrollment by the populations by promoting social awareness and public education on the importance of having Health Insurance cover. This will ensure those in the rural and the informal sectors are entirely reached with the relevant information, leading to trust and to willingness to pay by the people hence Universal Coverage of Health.

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