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RESEARCH ARTICLE

Determinants of uptake of national health insuarance Fund scheme by the informal sector in kabare ward, kirinyaga county, Kenya

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Abstract

Objective: To investigate the determinants influencing uptake of National Health Insurance Fund (NHIF) in the informal sector in Kabare Ward, Kirinyaga County, Kenya

Design: A cross-sectional study

Setting: Kabare ward, Kirinyaga East sub-County, Kirinyaga County.

Subjects/Participants: Males and Females between the age of 18 and 60 work in the informal sector.

Results: There is low uptake of the NHIF scheme among workers in the informal sector. Awareness, income levels and accessibility to NHIF outlets were some of the factors that played a critical role in the uptake of NHIF insurance among workers in the informal sector here.

Conclusion: Future policies needs to consider these factors to achieve maximum enrollment into NHIF scheme for workers in the informal sector in Kabare ward, Kirinyaga East sub-County, Kirinyaga County

1 | INTRODUCTION

Globally many countries have been finding ways of how to improve their health financing systems to provide enough health protection to all populations (Elias, 2018) Good health care financing systems ensure that the population has good access to health care and also, they utilize health care services when they need them. World Health Organisation (WHO) is committed to developing their health financing systems to ensure all people have access to health care and do not encounter difficulties in paying for these services (Preker, 2017). Developed and developing countries have adapted social health insurance as a way to improve their health financing systems towards achieving universal coverage. Kenya has had the National hospital insurance fund, since its establishment in 1966 through an Act of Parliament, Cap 255 Laws of Kenya, which has been revised to NHIF Act No. 9 of 1998. It was designed to offer inpatient insurance cover to formal sector workers only. However, changes in regulations over the years have allowed informal sector contributors to enroll in the scheme, with their contributions set at Ksh 500 per month or Ksh 6000 per year. The members

can access in-patient insurance cover through the network of more than 400 NHIF accredited facilities distributed in all 47 counties in the country. Attempts to promote universal health coverage in Kenya through the proposed National social health insurance fund have faced challenges, including resistance from trade unions and other stakeholders in the health sector. The bill which was to introduce social health insurance failed to go through all the approval stages following resistance from many fronts. The low penetration of health insurance in Kenya has meant that many poor people in rural and urban areas are denied access to quality healthcare due to their inability to meet the high out-of-pocket payments that characterize the healthcare financing system.

According to the Kenya National Bureau of Statistics Economic Survey 2018, active members of NHIF in the informal sector are 2.9 million representing a proportion of 44%. Total active NHIF membership as shares constitutes 40% thus implying that two-thirds of the employed Kenyans do not have NHIF cover. Out of the two-thirds of the employed Kenyans who do not have NHIF cover 80% are from the informal sector. This implies that NHIF coverage in the informal sector is low.

2 | MATERIALS AND METHODS

Study Design: The study adopted a cross-sectional study design.

Study Setting: The study was conducted in Kabare ward, Kirinyaga East sub-County, Kirinyaga County. According to the Kenya National Bureau of Statistics, Kabare ward has a population of 38,489 people. The number of males was 18,484 and females were 19,517.

Variables

The independent variables of the study were the three determinants which are access, awareness, and income levels, the intervening variables was government policy and regulations while the dependent variable was the uptake of the NHIF scheme

Target Population

This study's target population was males and females between the age of 18 and 60 because they provided a good number of those who work in the informal sector. The study was done in Kirinyaga County, Kirinyaga East sub-County, Kabare ward. The number of males in this ward was 18,484 and 19,517 females.

Sampling Techniques

The study used stratified random sampling which was suitable for this study because the population had mixed characteristics.

Sample Size Determination

Sample determination was guided by Cochran's sample size formula, which allows you to calculate the ideal sample size given a desired level of precision, desired confidence level, and the estimated proportion of attribute present in the population

$$n_0 = \frac{Z^2 pq}{e^2}$$

E is the desired level of precision

P is the proportion of the population which has the population which has the attribute question

Q is 1-p

P= 0.28, 95% confident which gives a Z value of 1.96

$$\frac{(1.96)^2(0.28)(0.72))}{(0.05)^2} = 309$$

The sample size used for this study was 309 respondents.

Supplementary information: The online version of this article (https://doi.org/10.15520/arjmcs.v8i09.4 70) Contains supplementary material, which is available to authorized users.

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Data Collection: The researcher used a questionnaire, to collect data. The questionnaire was constructed in a simple language that everybody could easily read and understand. The use of questionnaires was suitable since they did solicit similar information from the respondents.

Data Analysis

Once questionnaires were completed first they were examined by the researcher to check on completeness and consistency. The collected data were then coded to facilitate the grouping of the data into categories. Statistical package for social sciences version 20 was then used to organize data and carry out statistical analysis. Data were then summarized in the form of tables showing descriptive statistics for each variable.

Ethical Considerations

The research observed all ethical considerations in research. This was done through acquiring all relevant documents such as letters from the various significant authorities. In the study, ethical conduct was observed where all respondents were provided with an informed consent form. Due respect to community values attitudes and beliefs were be observed in the field. Logistical and ethical considerations letter from the department was used for guidelines.

3 | RESULTS

In total, 309 questionnaires were administered to the head of the household heads in the Kabare ward. Completed questionnaires were 300, thus a return rate of 97.09 percent.

Social Demographics of Study Respondents

Table 1: Demographics for the 300 respondents of the study

Variables N		**%**
Gender		
Male	147	49
Female	153	51
Age		
18-25 years	27	9
26-35 years	75	25
36-45 years	53	17.7
46 and above	145	48.3
Marital status		
Married	217	72.4
Separated		186
Single	54	18
Divorced		113.6
Variables	**N**	**%**
Household size		
255	18.5	
3-5	130	43.2
6-8	63	21
9 and above	52	17.3
Children below 18 years		
0	47	15.7
1-3	90	30
4-6	112	37.3
7 and above	51	17
Level of education		
Primary	213	71
Secondary	63	21
College	18	6
University	6	2

From table 1, it is clear that 147 (49%) individuals identified as females, while 153 (51%) identified as males. In regards to the age majority, 145 (48.3%) of the respondents were aged 46 years and above, followed by 75 (25%) aged between 26-35 years, 53 (17.7%) aged between 36-45 years, while 17 (9%) were aged between 18-25 years. This shows that most of the household heads were in their productive years. Thus the likely hood of them working and earning incomes for basic needs and payment of health insurance. In regards to marital status, the majority, 217 (72.4) of the respondents, indicated that they were married, followed by 54 (18%) were single, 18 (6%) were separated, and 11 (3.6%) were divorced.

Regarding household size, majority 130 (43.2%) of households size had 3-5 members, followed by 63 (21%) had 6-8 members, following 35 (18%) households had 1-2 members while 52(17.3) of the households had nine or more members. Regarding the distribution of several children below 18 years, 253 (81.3%) of the respondents had children, While 47 (18.7) of the respondents had no children. This shows that a more significant proportion of the households would be expected to have a form of health insurance to cater to their children's health needs.

Regarding the level of education majority, 213 (71%) had attained primary level education, followed by 63 (21%) who had attained secondary level education, 18 (6%) had attained college education, while 6(2%) had attained university education. These findings show that all of the respondents had some form of education; thus, they would understand health insurance messages.The study assessed respondents on their main economic activities, household income levels, and level of premiums to address this objective.

Distribution of respondents by their main economic activity

The study sought the distribution of the respondents by their main economic activity. The results were summarized in table 2.

Table 2: *Distribution of respondents by their main economic activity*

Variables	N	%
Salaried employment	18	6
Small scale farming	187	62.2
Small scale business	92	30.8
Others	3	1
Total	**300**	**100**

From this table majority, 187 (62.2%) of the respondents engaged in small scale farming activities, followed by 92 (30.8%) who engaged in small scale business, 18 (6 %) were in salaried employment and 3 (1%) were in other activities. These findings indicate a typical rural economy dominated by small scale business opportunities with few opportunities for salaried employment.

Distribution of respondents by estimated average household incomes and influence of household income on uptake of NHIF scheme

Table 3: *Distribution of respondents by estimated average household incomes and influence of household income on uptake of NHIF scheme*

Average household	Health insurance status				
Income (ksh) P.M	with insurance		without insurance		TOTAL
	%	N	%	N	%
Less than 5000 0	0	9	3	9	3
6000-10, 00099331414724080					
11,000-20, 000289.4165.24414.6					
Above 20, 0006	2 1	10.47	2.4		
Totals 133	**44.4**	**167**	**55.6**	**300**	**100**

Table 3 shows that 133 (44.4) who had the NHIF cover, majority 99 (33%) had a house income of between Ksh 6000-10,000, followed by Ksh11, 000-20,000 net income with 28 (9.4%) and 6(2%) who had a net income of above Ksh 20,000. Worth noting is that none of the respondents who earned less than Ksh 5000 had insurance cover.

Affordability of monthly premiums

Enrollment in the NHIF scheme involves payment of monthly premiums. Therefore, the study designed to assess the perceptions of respondents on the affordability of the Ksh 500 monthly premiums paid by the informal sector contributors. Respondents were asked whether they could afford the amount Table 4

Table 4: *Affordability of Ksh 500 monthly premium*

Affordability of premium	N	%
Yes	90	30
No	210	70
Total	**300**	**100**

Table 4 shows that the majority, 210 (70%), thought that 500 was not affordable and 90 (30%) felt affordable. This gives an implication on the policy regarding the review of monthly subscriptions.

Awareness of NHIF

The respondents were requested to indicate whether or not they were aware of NHIF. The results were as summarized in table 5.

Table 5: *Distribution of awareness and its influence on uptake of NHIF scheme*

Health insurance status						
Awareness of	**With Insurance**		**without Insurance**		**Total**	
NHIF	N	%	N	%	N	%
Aware	133	44.4	155	51.6	288	96
Not aware	0	0	12	4		
Total	133	44.4	167	55.6	300	100

Table 5 shows that out of the 288 respondents aware of the NHIF scheme, 133 (44.4%) were enrolled, while 155 (51.6%) were aware but not enrolled. This could mean that the 155 who were aware and not enrolled could have received incomplete or inaccurate information about the NHIF scheme. The table also shows that all the 12 respondents who were not aware were not enrolled.

Source of information on NHIF

The 288 respondents who indicated they were aware of NHIF were asked to indicate source of information on NHIF. The results were summarized in table 6

Table 6: *Sources of information on NHIF*

Source of information of NHIF	**N**	**%**
Radio	158	55
TV	33	11.4
Newspaper	2	0.6
Employer	31	
Family friends	89	31
Others	31	
Total	**288**	**100**

Table 6 shows that the majority of the respondents, 158 (55%), received information about the NHIF scheme from a radio, followed by 89 (31%) from family friends followed by television 33(11.4%) next employer and others at 3 (1%) each and lastly newspaper at 2 (0.6%). The prevalence of radio compared to television and newspaper may be explained by the low-income levels in the informal sector.

Awareness of NHIF registration procedures, premiums, payment mechanisms and benefits

For successful enrollment in high numbers, people have to know how to register and the mechanism of premium payments and then associated benefits. Therefore, the respondents were asked to indicate whether they were aware of various aspects of the NHIF scheme.

Table 7: *Awareness of registration, premiums and benefits*

Statements	Aware		Not aware	
	N	%	N	%
1 All Kenyans over 18 years can join NHIF Scheme	132	44	168	56
2 NHIF covers one contributor, one spouse and all children under 18 years	124	41.3	176	58.7
3 All NHIF contributors are issued with a photo card after submitting passport	138	46	162	54
4 One can register at any NHIF office	111	37.1	189	62.9
5 Registration is open to all people of all ages	108	36	192	64
6 Self-employed contributors pay Ksh 500 P.M	141	47	159	53
7 Contributors can pay through M-pesa or KCB, Co-operative or National bank	93	31	207	69
8 Late penalty of monthly contributors attracts a penalty	99	33	201	67
9 NHIF card covers admissions on registered hospitals only	117	39	183	61
10 Family can use the card for a maximum of 180 days in a year (6 months)	81	27	219	73

Table 7 shows that the level of awareness in registration procedures, premiums premium payment mechanism and benefits packages is below 50%. Although most respondents indicated that they were aware of NHIF 288 (96%), the results on awareness of specific statements on NHIF show that they had insufficient information on how to register, how to pay premiums and the benefits associated with being enrolled. This study reveals significant insurance knowledge gaps that should be filled through mass campaigns to educate the people on insurance in health financing.

Access to NHIF outlet and its influence on NHIF uptake

This was capture by asking the respondents whether they knew where NHIF was located.

Table 1: *Distribution of respondents by knowing where NHIF outlets are located and its influence on NHIF uptake*

Know where NHIF Offices are located	Health insurance status: with insurance		without insurance		Total	
	N	%	N	%	N	%
Yes	133	44.4	155	5	148	49.4
No	0	0	15	49.4	152	51.6
Total	**133**	**44.4**	**167**	**54.4**	**300**	**100**

Table 8 shows that most of the respondent, 152 (51.6), didn't know where the NHIF outlets are located, and none of them was enrolled in NHIF. Of those who knew where the outlets were located, 148 (49.4%), 133 (44.4%) were enrolled, and 15(5%) were not enrolled. This shows that a lot needs to be done on the distribution of NHIF outlets within the country when there's a need for them to be increased and create awareness to the public on where and how to access them. Hypothesis 3: Workers in the informal sector do not have limited access to NHIF outlet and the findings do not support this.

4 | DISCUSSION

The uptake of NHIF among all the income categories varies. Concerning household income, the study established that the majority of respondents, 80%, earned between Ksh 6000 – 10000 per month, with only 2.4% earning more than Ksh 20,000 per month. Those who had these two groups were 33% and 2.4%, respectively. This shows that those earning Ksh 20,000 had a higher percentage of enrollment compared to the other groups. This is because high incomes enable families to meet basic household needs. These findings agree with Anthony et al., (2017). They found that high-income earners were seven per cent more likely to enroll in Indonesia national health insurance fund than those with lower incomes. Improving agricultural practices and small scale business may better the social-economic wellbeing of residents and improve their ability to pay health insurance premiums.

The study established that 96% of the respondents were aware of NHIF, while 4% were unaware. However, the level of awareness had not translated into a high enrollment of members. Out of 96% who were aware, only 44.4% were enrolled. Among the 4% who were not aware, none of them was enrolled. The finding demonstrated the low awareness that only 81 (27%) of the 300 respondents knew the benefits of NHIF membership. Concerning sources of awareness on NHIF, radio was the primary source of information for the majority 158 (55%) of the respondents. Other sources were family at 31%, television at 11%, employer and others had 1% each while newspaper had 0.6%. NHIF should consider using radio as their preferred way of creating awareness as it is evident to be the leading source of information in this rural community. On awareness of specific registration procedures, premiums and benefits, it was evident from the analysis that the level of awareness is shallow, with all the statements recording on awareness of below 50%. This shows that although most people have heard about NHIF, they were not aware of the product in-depth. The findings on low awareness levels of health insurance in the informal sector agree with Booysen & Hongoro (2018), who observed that low enrollment in the informal sector was influenced by the deficit in information and inadequate understanding of the functioning of insurance schemes. Brugiavin, & pace (2016) also found that knowledge of basic insurance concepts lacked in Ghana, and potential clients could not answer insurance products and premium questions. The study shows a need to have clear and simple messages on health insurance delivered using the most used communication media in the rural community. The study established that 49.4% knew where to access NHIF outlets while 51.6 % did not know where to access the NHIF outlets. Among those who had access, 133 out of 148 individuals were enrolled to NHIF, while 152 of the respondents who had no access none of them had been enrolled to NHIF. These findings agree with the findings of a study by Anastacia et al., (2016) conducted In Muranga County on UNAITAS Sacco members. This study observed low enrollment due to distance to the NHIF outlets because they were mainly located in the urban

areas, making it hard for people in the rural areas to access them. Therefore there is a need to increase NHIF outlets to make them more accessible to the people in rural settings, thus enhancing enrollment.

5 | CONCLUSIONS

The finding confirms that there's low uptake of the NHIF scheme among workers in the informal sector. The study also confirms that awareness, income levels and accessibility to NHIF outlets are some of the factors that play a critical role in the uptake of NHIF insurance among workers in the informal sector. This implies that future policies need to put into consideration these factors to achieve maximum enrollment for workers in the informal sector.

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