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DETERMINANTS OF THE UPTAKE OF NHIF MEDICAL COVER BY INFORMAL SECTOR WORKERS: A CASE OF UNAITAS SACCO MEMBERS IN MURANG'A COUNTY

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ABSTRACT

Purpose: The purpose of this study was to establish the major determinants of uptake of medical cover at Kenya's National Health Insurance Fund by informal sector workers among UNAITAS SACCO members in Murang'a County.

Methodology: The target population comprised of all members of UNAITAS SACCO in Murang'a County. The population was 68,000 members who were in existence as at December 2014 (SASRA, 2014). Stratified random sampling technique was used to select 150 members in the informal sector participating in the study. A likert scale questionnaires was used to collect quantitative data. Statistical package for social science (SPSS) was used to draw inferences from the coded data. This included descriptive and inferential statistics.

Results: Results showed that the major determinants of level of uptake of medical cover at Kenya's National Health Insurance Fund by informal sector workers among UNAITAS SACCO members in Murang'a County were namely income level, awareness of NHIF benefits, access to NHIF outlet and the amount of premiums payable. The results also revealed that there were other determinants of uptake of NHIF medical scheme. These included gender of the head of the household, the level of education, presence of children, age and marital status.

Unique contribution to theory, practice and policy: The study recommended that the government should educate the people operating within the informal sector on better ways of accessing finance so as to increase their capital and as result increase their levels of income. This would result to increased uptake of the NHIF medical scheme.

Keywords: *Income levels, workers, medical cover*

1.0 INTRODUCTION

1.1 Background of the Study

Out of pocket payment (OOP) is the predominant means of health care financing in the majority developing countries including Kenya. This is a regressive form of financing, due to its alignment with the level of health care use, rather than the socioeconomic status of an individual. The consequence is a disproportionately high cost burden on the poor (Mahal *et al*., 2010). It has been estimated that a high proportion of the world's 1.3 billion poor have no access to health services simply because they cannot afford to pay at the time they need them (Dror & Preker, 2002). Many of those who do use services suffer financial hardship, or are even impoverished, because they have to pay (WHO, 2010). To decrease the negative impact of OOP costs, many developing countries have embarked on formal and informal risk pooling mechanisms that decouple the relationship between financial contributions and level of service use. One such mechanism is Voluntary Health Insurance (VHI), which provides formal means of risk pooling for countries with chiefly informal economies (Witter & Garshong, 2009).

Health care has always been a problem area for many nations, including Kenya, with a large population and a substantial portion living below the poverty line. Consequently, health care access and equity become important issues, and health insurance has not been developed to its immense potential in the economy. Yet most policymakers have assumed until recently that poor families in developing countries whose survival is precarious would not pay health insurance premiums even to forestall the costs of hospitalization (International Conference on Social Health Insurance in Developing Countries, 2005).

A number of authors have documented the roots of the trend and expansion of the concept of insurance at certain parts of the world, as well as the challenges that lie ahead for the growth of insurance industry (Barrientos & Lloyd-Sherlock, 2003). Others have focused on new markets where the phenomenon effects on growth is discussed for a long time; while elsewhere evidence is provided that there are significant cross-selling opportunities that mostly arise from consumer unawareness regarding insurance offerings and their willingness to buy these new products (Campbell et al., 2005).

Out of pocket (OOP) payments to finance healthcare usually leads to inequitable and mostly catastrophic situations for most households. This has led to the establishment of health insurance scheme whose purpose is to mitigate this situation (McIntyre, 2008).A number of developing countries have introduced Social Health Insurance (SHI) in response to the call by World Health Organization to move towards universal coverage (WHO, 2010). SHI is mostly in form of contributions by employees and employers in the formal sector while those in the informal sector contribute either to private or community based health insurance.

According to a study by Smith et al. (2010), different regions of the world have different levels of uptake of health insurance. In the United States of America, Private Health Insurance (PHI) is the major source of health financing and accounts for approximately 35% of total health expenditure, public expenditure accounts for 44.9% while OOP is at 13.5%. There is a tax based system in the United Kingdom which provides universal health care through the country's National Health Service which covers 86% of overall health expenditure, while PHI accounts for 2.9% and OOKP accounts for 11.1% (Boyle, 2011).

A study by Kirigia et al. (2005) in South Africa showed that approximately 30% of respondents had at least one person enrolled in a health insurance scheme while Carrin and Chris (2005) concluded in their study that Rwanda had achieved 90% health care coverage through implementation of Community Based Health Insurance scheme. In Kenya 10% of total health care occurs in a pooled basis where 5.4% of total health expenditure is derived from PHI which is collected through employers, NHIF contributes less than 4% to the total health expenditure, OOP funds 29% of Kenyan health care while 39% is funded by the government (WHO, 2010).

Different research studies have shown that there are three major sets of factors that influence a household's demand for a health insurance policy and these include; the household perspective, the quality of the healthcare system, and the characteristics of the health insurance policy itself. Scientifically tested literature shows a consistency in factors such as socio-economic and demographic characteristics of the household which include income level, education of household members, employment, health status, presence of children and aged, marital status, and sex of household head as significant determinants of demand for health insurance (Osei-Akoto & Adamba, 2011).

1.2 Statement of the Problem

With 56% of Kenyans living below the poverty line i.e. their levels of income are below the income deemed necessary to achieve an adequate standard of living in Kenya and 40% of them living in absolute poverty, financing of healthcare for a majority of Kenyans is a real challenge (UNDP, 2005). On the other hand, the existing healthcare system is designed on the basis of citizens who are capable of paying for medical care at the time and point of treatment (Sessional Paper on National Social Health Insurance in Kenya, 2003). It is the core mandate of National Hospital Insurance Fund as a social health insurance to enroll as many Kenyan workers as possible both in formal and informal sector. The organization has brought on board workers in formal sector successfully since is statutory requirement. Voluntary membership into NHIF was introduced in 1972 according to statistics in its strategic plan (2005 – 2010). NHIF has managed to bring on board only 1.03m members against an estimated informal sector population of 9.8 million (NHIF, 2012).

There is negative impact on health indicators when a large proportion of the population is without health insurance. This is the situation in Kenya where many people have to directly pay for health services whenever they need them; which has led to catastrophic spending to a level of impoverishing the family unit through sale of assets and diversion of their meager income into health care services. This situation is magnified in the informal sector which plays an important role towards generation and provision of potential employment opportunities to many Kenyans thereby improving the quality of life to those who would otherwise be without any source of livelihood (Amenya, 2007; Chuma & Okungu, 2011; WIEGO, 2013).

1.3 Objectives of the Study

The study was guided by the following objectives:-

i. To assess the major determinants of the uptake of NHIF medical cover within the informal sector workers among UNAITAS SACCO members in Murang'a County.

ii. To assess the relationship between key determinants and uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

2.0 LITERATURE REVIEW

2.1Theoretical Review

2.1.1 Agency Theory

In the agency theory a contractual relationship is entered by two persons that are the principal and the agent so as to perform some service. This involves delegating some decision making authority to the agent by the principal (Jensen & Meckling, 1976). At the same time an agent is a person employed for the purpose of bringing his principal into a contractual relationship with a third party and does not make a contract on his own behalf (Wright & Oakes, 2002).

Agency theory was directed at the person presenting the agency relationship. This is where one party delegated work to another party who performed the duty on behalf of the principal (Eisenhardt, 1989). This person was authorized to perform legal acts within his competence and not on his own behalf but for the principal. A growing view in the modern literature recognized however that the two were strange bed fellows. An Insurance Brokers is an agent employed to buy and sell on behalf of another. However, in performing his role, he owes a duty to his principal. The level of care expected is varied; a higher level of care will be expected from a professional broker than from a part-time insurance agent (Wright & Oakes, 2002).

According to the English and American law the liability of a principle for his agent torts in the ordinary course of his employment depended upon the existence of a master- servant relationship (Yin, 1989). The master was vicariously liable for his servant tortuous conduct committed within the course of employment (Yin, 1989). There were cases where an agency relationship arose when an individual group called principal hired someone called an agent to perform some service, where the principal delegated decision- making power to the agent. This kind of relation included those between stock holders and managers and between stockholders and debt holder.

2.2 Empirical Review

Mhere (2013) analyzed the determinants of health insurance participation in Gweru Urban. This came in the wake of deteriorating health standards and non participation in health insurance schemes on the part of most Zimbabweans. Given the binary nature of Health Insurance Participation, a PROBIT model was adopted. Regression results showed that the household head's level of education, household income, age, family size, and chronic illnesses, were all significant predictors of participation in health insurance schemes.

Kinyua (2013) sought to assess the influence of demographic factors on the uptake of community based health financing schemes in the Country. These CBHF schemes in Kenya are registered under the Ministry of Gender and Youth. The objectives of Kinyua's study are to establish how biological factors, level of education, socio cultural factors and the level of income influences the uptake of CBHF in Mathare valley, Nairobi County. The study reviewed relevant literature by various researchers and institutions on biological factors, level of education, socio cultural and level of income and their influence of the uptake of the CBHF. A sample of 372 individuals was

randomly selected using a stratified sampling. Questionnaires with both closed and open ended questions were used to collect data from the respondents. Observation and interview methods were also be applied in the process (Kinyua, 2013).

Kamau (2013) investigated factors contributing to low insurance penetration in Kenya. Knowing the reasons why this is so is important given the pivotal role that insurance plays in the development of the country. The study was a descriptive survey. Primary data was used in the study and was gathered through use of a questionnaire. The target population for the study was MBA students at JKUAT Nairobi CBD campus. A sample of 65 respondents was chosen. Fifty two questionnaires were completely and satisfactorily filled. Two interviews were conducted with the public relations manager and the marketing manager at the Insurance Regulatory Authority.

Odeyemi (2014) sought to review the present status of CBHI in SSA in general to highlight the issues that affect its successful integration within the NHIS of Nigeria and more widely in developing countries. The study used a literature survey using PubMed and EconLit to identify and review studies that report factors affecting implementation of CBHI in SSA with a focus on Nigeria. Results showed that CBHI schemes with a variety of designs have been introduced across SSA but with generally disappointing results so far. Two exceptions were Ghana and Rwanda, both of which have introduced schemes with effective government control and support coupled with intensive implementation programmes.

Bawa (2011) concluded that health insurance was not a new concept in India as people were getting aware about it from the radios, television, newspapers, agents, friends etc but the awareness had not improved the level of subscription since as a result 19.4% of the respondents were being covered by any form of health insurance while the a large proportion of the population was still financing health care expenditure without health insurance.

Gobah and Liang (2011) sought to assess the effect of the Scheme on access to and utilization of healthcare services in the Akatsi District of the Volta region of Ghana. Both qualitative and quantitative data was collected through face-to-face interview with 320 individuals and three service providers using structured questionnaires. The result show that age, level of education, level of awareness and occupation are major determinants of membership of the scheme. The scheme had a positive effect on health seeking behaviour and utilization of health care services by removing significant financial barriers to access.

Muiya and Kamau (2013) reviewed approaches used by selected governments towards achieving universal health coverage for their citizenry. Data was generated from a review of existing literature. The study examined available opportunities and challenges faced by the Kenyan government towards enrolling informal sector workers to health insurance. The study revealed that the informal sector does not readily ensure guarantee to financial accessibility to health care by a majority workers. Most informal sector workers are highly vulnerable to economic shocks that result from catastrophic out-of-pocket health expenditure. The study recommended that though health insurance for informal sector workers increases their access to the services they need and improves financial risk protection, their uptake of health insurance is low. The review

established that several countries (German, Singapore, Taiwan, Ghana, and Tanzania) have enrolled informal sector workers to health insurance schemes through increased awarenesss, an approach that can be replicated in Kenya.

Muli (2013) sought to establish the determinants of voluntary social health insurance uptake in the public transport industry with reference to Matatu Saccos in Nairobi. The study adopted a descriptive research design. The target population comprised of 11,053 drivers and conductors in Nairobi, and the senior management officers of the Matatu Saccos in Nairobi. A sample population of 384 drivers and conductors was used in this study. Primary data was collected using questionnaires and interview guides. Data collected was edited and coded using descriptive analysis methods in order to get meaningful results from the questionnaires, interview guides checklist and desktop findings. The qualitative data took an exploratory or conceptual content analysis process which is more ideal as the information gathered from the interview guides was large and could be time consuming if not well planned. A factor analysis was used to pick the factors with the highest weight. In addition the study used Karl Pearson's product moment correlation analysis to assess the relationship between the variables.

This study by Muli (2013) found out that most of the drivers and conductors working in the public transport industry are not registered with NHIF. The study concluded that the level of income has the highest effect on voluntary social health insurance uptake in the public transport industry, followed by premiums payable, then corporate image while level of awareness had the lowest effect on the voluntary social health insurance uptake in the public transport industry. The study recommends that to ensure that all the drivers and conductors are registered with NHIF, the government should carry out an advocacy campaign aimed at educating them of the need of social health insurance and how they can contribute, the amount of premium should be reduced, officials of the NHIF should go for a recruitment mission in the community and the corrupt management at the NHIF should be removed to enhance transparency (Muli, 2013).

Govender et.al. (2013) analyzed coverage of the South African government health insurance scheme, the population groups with low uptake, and the individual-level factors, as well as characteristics of the scheme, that influenced enrolment. Multi-stage random sampling was used to select 1,329 civil servants from the health and education sectors in four of South Africa's nine provinces. They were interviewed to determine factors associated with enrolment in the scheme. The analysis included both descriptive statistics and multivariate logistic regression. Results showed that notwithstanding the availability of a non-contributory option within the insurance scheme and access to privately-provided primary care, a considerable portion of socio-economically vulnerable groups remained uninsured (57.7% of the lowest salary category). Non-insurance was highest among men, black African or coloured ethnic groups, less educated and lower-income employees, and those living in informal-housing. The relatively poor uptake of the contributory and non-contributory insurance options was mostly attributed to insufficient information, perceived administrative challenges of taking up membership, and payment costs. The study by concluded that barriers to enrolment include insufficient information, un-affordability of payments and perceived administrative complexity (Govender et.al. 2013).

3.0METHODOLOGY

The target population comprised of all members of UNAITAS SACCO in Murang'a County. The population was 68,000 members who were in existence as at December 2014 (SASRA, 2014). Stratified random sampling technique was used to select 150 members in the informal sector participating in the study. A likert scale questionnaires was used to collect quantitative data. Statistical package for social science (SPSS) was used to draw inferences from the coded data. This included descriptive and inferential statistics.

4.0 RESULTS AND DISCUSSIONS

4.1 Demographic Characteristics

4.1.1 Gender

The respondents were asked to indicate their gender. Majority of the respondents were male who represented 61.24% of the sample while 38.76% were female. These results imply that the informal sector in Murang'a was male dominated. These findings are consistent with those of Kinyua (2013) who sought to assess the influence of demographic factors on the uptake of community based health financing schemes in the Country. The study revealed that age and gender, education and income level did really to a great extent influence the uptake of CBHF unlike socio cultural factors that influence the uptake to very small extent. This agrees with the research findings that gender is a significant factor in determination of the uptake of health insurance.

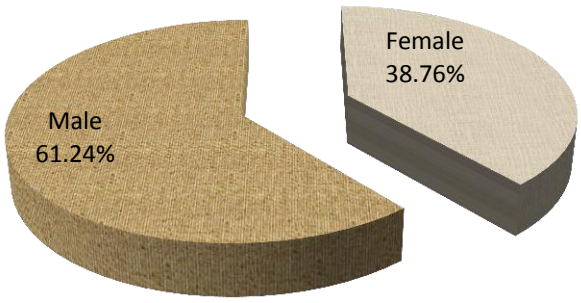

Figure 2: Gender of Respondents

4.1.2 Age

The respondents were asked to indicate their age. Majority of the respondents were between 36-45 years represented by 35.66%, 28.68%, were between 26-35 years 23.26% were above 45 years while 7.75% were between 18-25 years. This implies that the informal sector in Murang'a County was dominated by people in the middle age. These findings are consistent with those of Mhere (2013) who analyzed the determinants of health insurance participation in Gweru Urban.

Results showed that the household head's level of education, household income, age, family size, and chronic illnesses, were all significant predictors of participation in health insurance schemes.

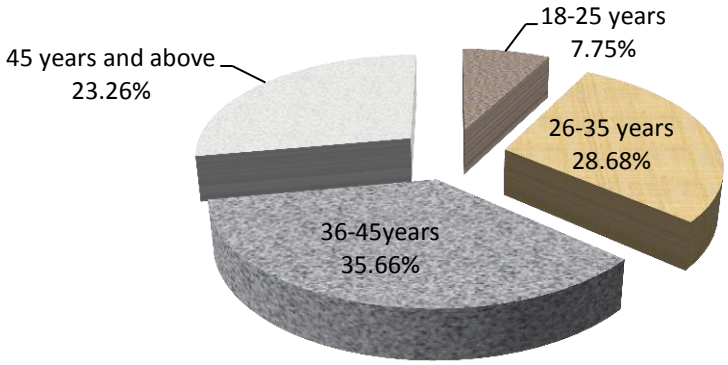

Figure 2: Age of respondents

4.1.3 Marital Status

The respondents were asked to indicate their marital status. Majority of the respondents were married as represented by 58.91%, 21.71% were single, 10.85% were separated while 8.53% were divorced. This implies that majority of the informal sector workers in Murang'a were in a family set up and the cases of divorce were minimal. These findings are consistent with those of Kamau (2013) who investigated factors contributing to low insurance penetration in Kenya. The study found that nature of insurance industry, income, cost of insurance and demographic factors such as marital status are factors which can explain the current low insurance penetration in Kenya as they had large negative contribution on uptake of insurance services.

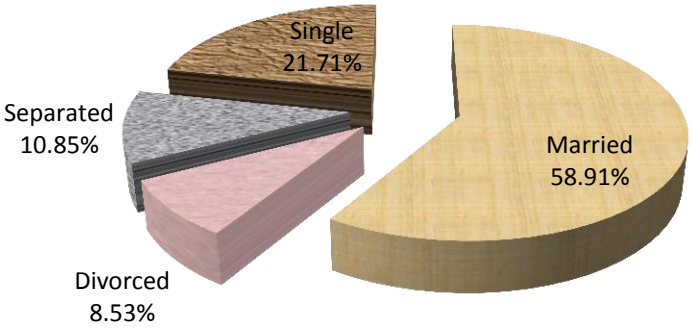

Figure 3: Marital Status of respondents

4.1.4 Level of Education

The respondents were asked to indicate their level of education. Majority of the respondents had acquired up to secondary level education as represented by 41.86%, 28.68% had tertiary level education, 27.13% had only primary school education while only 2.33% who had acquired education up to the university level. This implies that majority of the people working in the informal sector in Murang'a County had achieved education level of upto secondary school. These findings are consistent with those of Kinyua (2013) who sought to assess the influence of demographic factors on the uptake of community based health financing schemes in the Country. The study revealed that age and gender, education and income level did really to a great extent influence the uptake of CBHF unlike socio cultural factors that influence the uptake to very small extent.

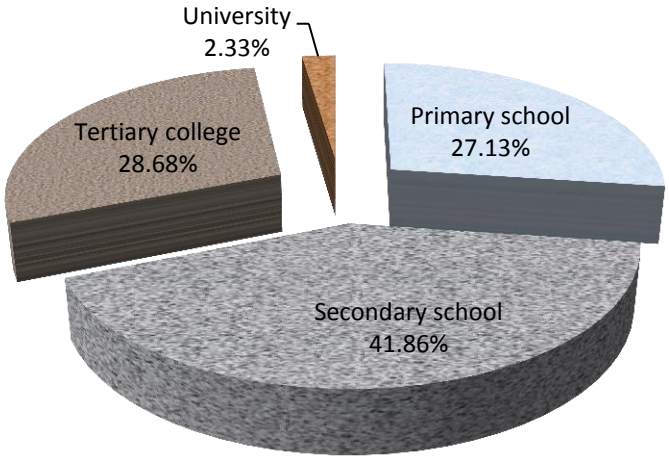

Figure 4: Level of Education

4.1.5 Type of Business

The respondents were asked to indicate the type of business that they were engaged in. Twenty two point four eight percent (22.48%) operated retail kiosks, 21.71% sold fruits, vegetables and cereals, 17.83% engaged in food beverage processing and sale, 13.95% engaged in furniture making and metal work, 13.83% sold clothes and shoes while 10.85% engaged in vehicle repair. These depict that people working in the informal sector in Murang'a County engaged in diverse types of businesses. These findings are consistent with those of Gobah and Liang (2011) who sought to assess the effect of the Scheme on access to and utilization of healthcare services in the Akatsi District of the Volta region of Ghana. The result revealed that age, level of education, level of awareness and occupation are major determinants of membership of the scheme.

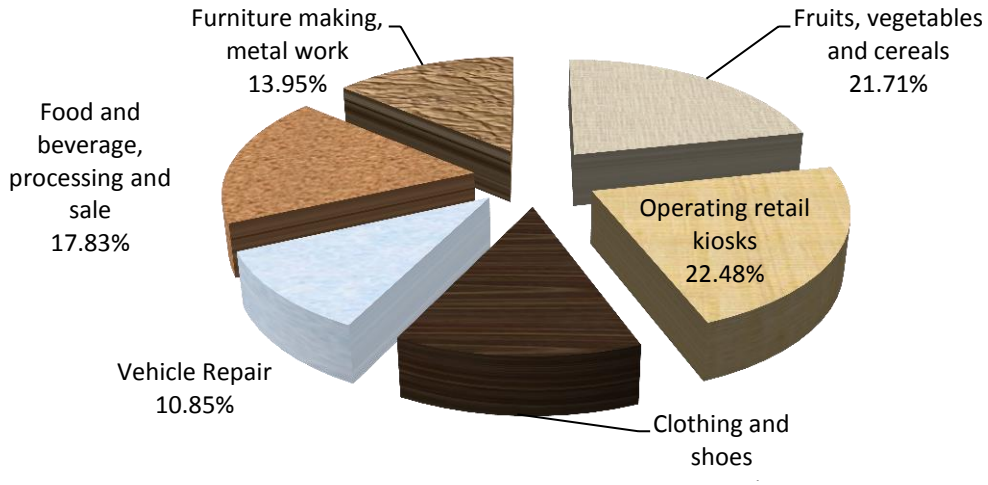

Figure 5: Type of Business

4.2 Uptake of NHIF Scheme

The respondents were asked to indicate whether they had enrolled in the NHIF medical scheme. Majority of the respondents had not enrolled as represented by 67.44% . Only 32.56% had enrolled. This implies that majority of the people working in the informal sector in Murang'a County had not embraced the National Health Insurance Fund. These findings are consistent with those of Muiya and Kamau (2013) who reviewed approaches used by selected governments towards achieving universal health coverage for their citizenry. The study revealed that the informal sector uptake of health insurance was low. This was attributed to failure by the informal sector to readily ensure guarantee to financial accessibility to health care by a majority workers. Most informal sector workers are highly vulnerable to economic shocks that result from catastrophic out-of-pocket health expenditure. The study recommended that though health insurance for informal sector workers increases their access to the services they need, it also improves financial risk protection.

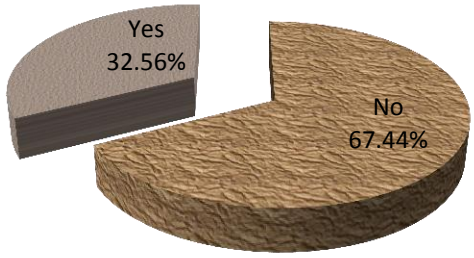

Figure 6: Uptake of NHIF

Further, the respondents who had not enrolled in the NHIF medical scheme were asked to indicate whether they had enrolled in any other form of health insurance. Majority of the

respondents indicated that they had not enrolled as represented by 90.7% of the population studied. Only 9.3% had enrolled. They indicated that they had health insurance covers with Britam (*Linda Jamii*) and their children assisted them in paying the premiums.

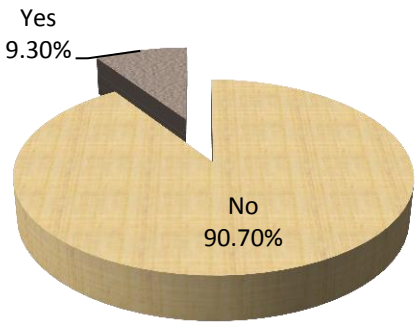

Figure 7: Uptake of other Health Insurance Scheme

4.3 Chi-Square Test for Demographics

Table 3 presents results of the demographic chi-square test. Results show that the relationship between gender and uptake of NHIF medical scheme was significant (X^2=63.859, p=0.000). The finding was also supported by a significant correlation coefficient (R=0.704, p=0.000). This implies that gender influenced the uptake of NHIF medical scheme. The results also showed that the relationship between age and uptake of NHIF medical scheme was significant (X^2=35.339, p=0.000). The finding was also supported by an insignificant correlation coefficient (R=0.033, p=0.711). This implies that age influenced the uptake of NHIF medical scheme. Further, the results showed that the relationship between marital status and uptake of NHIF medical scheme was significant (X^2=34.252, p=0.000).

The finding was also supported by a significant correlation coefficient (R=0.450, p=0.0.000). This implies that marital status influenced the uptake of NHIF medical scheme. Additionally, the results showed that the relationship between level of education and uptake of NHIF medical scheme was significant (X^2=38.944, p=0.000). The finding was also supported by a significant correlation coefficient (R=0.543, p=0.000). This implies that the level of education influenced the uptake of NHIF medical scheme. The results also showed that the relationship between type of business and uptake of NHIF medical scheme was insignificant (X^2=2.199, p=0.821).

The finding was also supported by an insignificant correlation coefficient (R=0.033, p=0.708). This implies that the type of business did not influence the uptake of NHIF medical scheme. These findings are consistent with those of Kinyua (2013) who sought to assess the influence of demographic factors on the uptake of community based health financing schemes in the Country. The study revealed that age and gender, education and income level did really to a great extent influence the uptake of CBHF unlike socio cultural factors that influence the uptake to very small extent.

Table 3: Chi Square Statistics for Demographics

		NHIF scheme Enrolment		Total	Pearson Chi Square	Correlation
		No	Yes			
Gender	Female	13	37	50	X^2=63.859 (p=0.000)	R=0.704 (p=0.000)
	Male	74	5	79		
Total		87	42	129		
Age	18-25 years	9	1	10	X^2=35.339 (p=0.000)	R=0.033 (p=0.711)
	26-35 years	30	7	37		
	36-45years	16	30	46		
	45 years and above	32	4	36		
Total		87	42	129		
Marital Status	Married	36	40	76	X^2=34.252 (p=0.000)	R=-0.450 (p=0.000)
	Divorced	11	0	11		
	Separated	14	0	14		
	Single	26	2	28		
Total		87	42	129		
Level of Education	Primary school	34	1	35	X^2=38.944 (p=0.000)	R=0.543 (p=0.000)
	Secondary school	40	14	54		
	Tertiary college	13	24	37		
	University	0	3	3		
Total		87	42	129		
Type of Business	Fruits, vegetables and cereals	20	8	28	X^2=2.199 (p=0.821)	R=0.033 (p=0.708)
	Operating retail kiosks	19	10	29		
	Clothing and Shoes	13	4	17		
	Vehicle repair	8	6	14		
	Food and beverage, processing and sale	14	9	23		
	Furniture making, metal work	13	5	18		
Total		87	42	129		

4.4 Descriptive Statistics

4.4.1 Income Level and Uptake of NHIF Scheme

The objective of the study was to establish whether income level affects uptake of NHIF scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

Results in table 4.4 demonstrated that 89.2% of the respondents agreed that the amount of income per month influences the uptake of NHIF medical scheme, 92.3% of the respondents agreed that the number of household members employed influence the uptake of NHIF medical scheme, 86.9% of the respondents agreed that household expenses influence the uptake of NHIF medical scheme, 86% of the respondents agreed that access to credit extension influences the uptake of NHIF medical scheme while 89.9% of the respondents agreed that access to business opportunities influences the uptake of NHIF medical scheme. This implies that the income level influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

Table 4: Income Level

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The amount of revenue per month influences the uptake of NHIF scheme.	0.00%	0.00%	10.90%	47.30%	41.90%
Number of household members employed influence the uptake of NHIF scheme.	0.00%	1.60%	6.20%	50.40%	41.90%
Household expenses influence the uptake of NHIF scheme.	2.30%	3.10%	7.80%	41.90%	45.00%
Access to credit extension influences the uptake of NHIF scheme.	0.00%	0.00%	14.00%	49.60%	36.40%
Access to business opportunities influences the uptake of NHIF scheme.	0.00%	0.80%	9.30%	49.60%	40.30%

4.4.2 Awareness of NHIF Benefits and Uptake of NHIF Scheme

The objective of the study was to assess whether awareness of NHIF benefits affects uptake of the scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Results in table 4.5 revealed that 61.3% of the respondents agreed that insurance education increased awareness of NHIF medical scheme thus influencing uptake of the scheme, 90.7% of the respondents agreed that technical assistance in insurance knowledge increased awareness of NHIF medical scheme thus influencing uptake of the NHIF medical scheme, 87.6% of the respondents agreed that previous exposure to insurance increased awareness of NHIF medical scheme thus influencing uptake of the scheme, 61.2% of the respondents agreed that financial literacy increased awareness of NHIF medical scheme thus influencing uptake of the scheme while 91.5% of the respondents agreed that knowledge of features of insurance cover increased awareness of NHIF medical scheme thus influencing uptake of the scheme. This implies that the awareness of NHIF benefits influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

Table 5: Awareness of NHIF Benefits

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Insurance education increases awareness of NHIF scheme thus influencing uptake of the scheme.	16.30%	14.70%	7.80%	38.80%	22.50%
Technical assistance in insurance domain knowledge increases awareness of NHIF scheme thus influencing uptake of the scheme.	0.80%	1.60%	7.00%	46.50%	44.20%
Previous exposure to insurance increases awareness of NHIF scheme thus influencing uptake of the scheme.	0.8%	3.10%	8.50%	45.70%	41.90%
Financial literature increases awareness of NHIF scheme thus influencing uptake of the scheme.	12.4%	16.30%	10.10%	36.40%	24.80%
Knowledge of features of insurance cover increases awareness of NHIF scheme thus influencing uptake of the scheme.	0.8%	0.00%	7.80%	45.00%	46.50%

4.4.3 Access to NHIF Outlets and Uptake of NHIF Scheme

The objective of the study was to determine whether access to NHIF outlets affected the uptake of the scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Results in table 4.6 revealed that 84.5% of the respondents agreed that distance to NHIF outlet influenced uptake of NHIF scheme, 87.6% of the respondents agreed that the number of NHIF outlets influenced uptake of NHIF medical scheme, 76.7% of the respondents agreed that E-services mode of payment influenced uptake of NHIF medical scheme while 83.7% of the respondents agreed that mobile mode of payment influenced uptake of NHIF medical scheme. This implies that the access to NHIF outlets influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

Table 6: Access to NHIF Outlets

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Distance to NHIF outlet influences uptake of NHIF scheme.	0.80%	3.10%	11.60%	46.50%	38.00%
Number of NHIF outlets influences uptake of NHIF scheme.	0.80%	0.00%	11.60%	45.00%	42.60%
E-services mode of payment influences uptake of NHIF	4.70%	7.80%	10.90%	45.70%	31.00%

scheme.					
Mobile mode of payment influences uptake of NHIF scheme.	0.80%	3.10%	12.40%	45.70%	38.00%

4.4.4 Premiums Payable and Uptake of NHIF Scheme

The objective of the study was to establish whether premiums payable influence the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Results in table 4.7 revealed that 91.4% of the respondents agreed that the amount of premium influenced uptake of NHIF medical scheme, 88.3% of the respondents agreed that the frequency of contribution (monthly or annually) influenced uptake of NHIF medical scheme, 89.1% of the respondents agreed that the mode of payment influences uptake of NHIF medical scheme while 82.9% of the respondents agreed that transaction cost (cost of out of pocket treatment) influenced uptake of NHIF medical scheme. This implies that the premiums payable influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

Table 7: Premiums Payable

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Amount of premium influences uptake of NHIF scheme.	0.80%	0.80%	7.00%	41.10%	50.40%
Frequency of contribution (monthly or annually) influences uptake of NHIF scheme.	0.00%	0.00%	11.60%	48.80%	39.50%
Mode of payment influences uptake of NHIF scheme.	0.80%	0.80%	9.30%	46.50%	42.60%
Transaction cost (cost of out of pocket treatment) influences uptake of NHIF scheme.	0.80%	4.70%	11.60%	46.50%	36.40%

4.4.5 Other Determinants

The respondents were asked to indicate whether there were other determinants of uptake of NHIF medical scheme. Results in figure 4.8 revealed that a majority (58.14%) of the respondents indicated that there were other determinants. These included gender of the head of the household, the level of education, presence of children, age and marital status.

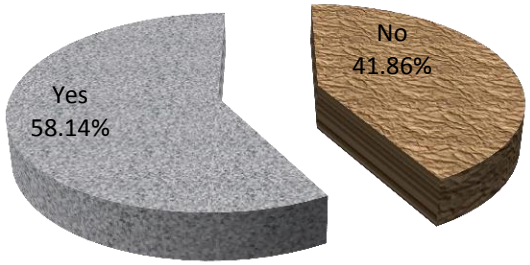

Figure 8: Other Determinants of Uptake of NHIF Scheme

4.5 Inferential Statistics

4.5.1 Correlation

The Table 8 below presents the results of the correlation analysis. The results show that income level and uptake of NHIF medical scheme were positively and significant related (r=0.501, p=0.000). This implies that a one unit increase in income would result to 0.501 units increase in the uptake of NHIF medical scheme. The table further indicates that awareness of NHIF benefits and uptake of NHIF medical scheme were positively and significant related (r=0.184, p=0.037). This implies that a one unit increase in awareness of NHIF benefits would result to 0.184 units increase in the uptake of NHIF medical scheme. It was further established that access to NHIF outlets and uptake of NHIF medical scheme were positively and significantly related (r=0.374, p=.000). This implies that a one unit increase in access to NHIF outlets would result to 0.374 units increase in the uptake of NHIF medical scheme. Similarly, results showed that premiums payable and uptake of NHIF medical scheme were negatively and significantly related (r=-0.383, p=.000). This implies that a one unit increase in premiums payable would result to 0.383 units decrease in the uptake of NHIF medical scheme. Further, the findings imply that the amount premiums payable is the most significant determinant of uptake of NHIF medical scheme among the people in the informal sector.

Table 8: Correlation

Variable		Uptake of NHIF scheme	Income Level	Awareness of NHIF Benefits	Access to NHIF Outlet	Premiums Payable
Uptake of NHIF scheme	Pearson Correlation	1				
	Sig. (2-tailed)					
Income Level	Pearson Correlation	0.501	1			
	Sig. (2-	0.000				

	tailed)					
Awareness of NHIF Benefits	Pearson Correlation	0.184	0.125	1		
	Sig. (2-tailed)	0.037	0.158			
Access to NHIF Outlet	Pearson Correlation	0.374	0.027	0.051	1	
	Sig. (2-tailed)	0.000	0.762	0.568		
Premiums Payable	Pearson Correlation	-0.383	0.43	0.042	0.421	1
	Sig. (2-tailed)	0.000	0.000	0.638	0.000	

4.5.2 Multiple Odd Ratio Regression

Results in table 9 revealed that income level was positive and statistically significant in influencing the odds of uptake of NHIF medical scheme. This was supported by a p value of 0.000. This implies that an increase in the income level would result in a higher uptake of NHIF medical scheme.

Results in table 4.9 also revealed that awareness of NHIF benefits was positive and statistically significant in influencing the odds of the uptake of NHIF medical scheme. This was supported by a p value of 0.013. This implies that an increase in awareness of NHIF benefits would result in a higher uptake of NHIF medical scheme.

Further, results in table 4.9 revealed that access to NHIF outlet was positive and statistically significant in influencing the odds of the uptake of NHIF medical scheme. This was supported by a p value of 0.009. This implies that an increase in the number/ easier access of NHIF outlets would result in a higher uptake of NHIF medical scheme.

Additionally, results in table 4.9 revealed that premiums payable was negative and statistically significant in influencing the odds of uptake of NHIF medical scheme. This was supported by a p value of 0.025. This implies that an increase in the amount of premiums payable would result in a lower uptake of NHIF medical scheme.

Table 9: Regression

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Income Level	2.367	0.579	16.684	1	0.000	10.665
Awareness of NHIF Benefits	0.634	0.419	2.291	1	0.013	1.885
Access to NHIF Outlet	1.717	0.658	6.813	1	0.009	0.18
Premiums Payable	-1.632	0.730	4.995	1	0.025	5.114

Constant	12.298	2.857	18.527	1	0.000	0.000

5.0 CONCLUSIONS AND RECOMENDATIONS

5.1 Conclusions

Based on the findings the study concluded that income level influenced the uptake of NHIF scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Similarly, the study posited that awareness of NHIF benefits influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

In addition, the study asserted that access to NHIF outlet influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. The study also concluded that premiums payable influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Further, the study found out that gender of the head of the household, the level of education, presence of children, age and marital status influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. Conclusively, the study indicated that the amount of premiums payable was the most significant determinant of uptake of NHIF medical scheme.

5.2 Recommendations

The study recommends that the government should educate the people operating within the informal sector on better ways of accessing finance so as to increase their capital and as result increase their levels of income. This would result to increased uptake of the NHIF medical scheme.

The study also proposes that the government should ensure that all the people working within the informal sector are registered with NHIF, the government should carry out an advocacy campaign aimed at educating them of the need of social health insurance and how they can contribute.

The study also suggests that the government should increase the number of NHIF outlets so as to ensure that all the people working within the informal sector are registered with NHIF. In addition, better and faster modes of payment should be introduced which will increase the accessibility of the NHIF medical scheme.

Further, the study advocates that the amount of premium should be reduced particularly for the informal sector workers. There is need for a policy to make the NHIF increase the uptake in order to take advantage of economies of scale, to provide the people with an accessible, affordable, and reliable health insurance. The study further recommends that the government should consider co-funding the premium so that the medical scheme can be affordable to both the informal sector and the wider public.

The study does advice that an outpatient cover should be co-opted into the NHIF medical scheme for the informal sector workers as the current cover only caters for inpatient/hospitalization cases.

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