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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**

Anastasia M. Kituku and Evans Amata



Determinants of the Uptake of NHIF Medical Cover by Informal Sector Workers: A Case of UNAITASSACCO Members in Murang'a County

^{1*} Anastasia M. Kituku

^{1*} Post graduate student

Daystar University

***Corresponding Author's Email: AManyara@forbes.co.ke**

^{2*} Evans Amata Lecturer

Daystar University

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 study adopted a descriptive survey design. 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 questionnaire was used to collect quantitative data. Statistical package for social science (SPSS) was used to draw inferences from the coded data.

Results: Results revealed 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: *NHIF medical cover, informal sector workers, UNAITAS SACCO members*

1.0 INTRODUCTION

Many countries have been seeking for ways of how their health financing systems can provide sufficient financial risk protection to all of the population against the costs of health care (Gitau&Junge, 2005). Proper health care financing ensures the population not only has access to health care but also use the health services when they need them. A well-functioning health financing system also determines whether the health care services exist. Out of this recognition, Member States of the World Health Organization (WHO) committed in 2005 to develop their health financing systems so that all people have access to services and do not suffer financial hardship paying for them (WHO, 2010). Achieving this goal is in effect a move towards universal health coverage.

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 (Mahaletal., 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).

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).

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 (OseiAkoto&Adamba, 2011).

The mandate of the National Hospital Insurance Fund (NHIF) is to enable all Kenyans access quality and affordable health services since it's the primary provider of health insurance in Kenya. The policy was restructured by the repeal of the National Hospital Insurance Act (CAP 255) and the enactment of the National Hospital Insurance Fund Act No. 9 in 1998 in order to accommodate the changing healthcare needs of the diverse Kenyan population, employment and the continuous restructuring in the health sector. NHIF is responsible for enrolling and registering all eligible members from the formal and informal sectors (JNL, 2011;NCLR, 2012) The Health Insurance Act of 1998 does not distinguish between those employed in the formal and the informal sector but indicates that membership is mandatory for all Kenyans at least 18 years of age. In practice, however, an evaluation study conducted by Deloitte (2011) indicated that NHIF has achieved high levels of coverage of the formal sector up to almost 100%, but the coverage of the informal sector has proved more challenging. The informal sector is a concept that was first coined in an International Labor Organisation (ILO) following the study of urban labour markets in Ghana (Hart, 1973), this concept was subsequently used by ILO when reporting on labour market conditions in other African cities and by the World Bank in a series of studies of urbanization and poverty throughout the Third World (SNA, 2008).

1.2 Problem Statement

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).

Arasa (2002) did a survey of environmental development and firm's responses in the health insurance sector in Kenya while Alumila (2004) surveyed distribution strategies used by health

maintenance organizations in Kenya. None of these studies have focused on factors affecting uptake of social health insurance among employees in informal sector. While research in the demand for insurance has attracted much attention since the 1960s, most studies have focused on international cases or well-established markets in developed countries. As a result of crossnational variations in health insurance uptake, it has been argued that factors shaping the uptake of health insurance are varied from one country to another. It is in this light that the researcher aims to fill the existing research gap by carrying out a study on determinants of uptake of medical cover at Kenya's National Health Insurance Fund by informal sector workers with a special focus on UNAITAS SACCO members in Murang'a County.

1.3 Study 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

2.1 Theoretical Literature 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).

2.1.2 Social Exchange Theory

Thibaut and Kelley (1959) advanced this theory which uses the economic metaphor of cost and benefits to predict behaviour. The theory assumes that individuals and groups choose strategies based on perceived rewards and costs, where they factor in the consequences of their behaviour before acting in order to keep their costs low and rewards high.

2.1.3 Adverse selection theory

This can be defined as strategic behavior by more informed partner in a contract against the interest of the less informed partner(s). It's relevant in the health insurance market because each individual chooses among the set of contracts offered by the insurance company according to their probability of using health services. In other words, those who foresee an intense use of health services will tend to choose more generous plans than those who expect a more limited use of them. The high risk individual will seek health insurance while a low risk individual will avoid health insurance up to the point of requiring medical services to be paid (Morris et al.,2007; Wagstaff, 2010).

2.1.4 Moral Hazard Theory

This stipulates that people or organisations with insurance may take risks that are greater than what they would have taken if they did not have insurance because they know that they have monetary protection from the adverse effects that might arise out of the risky behaviour. This leads to the insurer facing excessive claims than anticipated. Moral hazard can be found on both the demand and supply side of a health care transaction (De Allegrietal.,2008).

Demand side moral hazard consists of consumer triggered increase in consumption of services due to their low actual price to the insured patient. It includes excessive spending on the initiative of the consumer who knows that the cost burden will be shifted to the insurance provider(De Allegrietal.,2008). Supply side moral hazard is oversupply at the initiative of the medical care provider who takes advantage of the near absence of any financial consideration on the part of the consumer when he agrees to buy the excessive health care by overcharging and ordering unnecessary medical tests and procedures, because the costs will be transferred to the health insurance provider (De Allegrietal.,2008).

2.1.5 Conventional Health Insurance Theory

This theory was developed by Pauly (1968) who stipulated that economists viewed moral hazard negatively since the additional health care spending generated by insurance represented a welfare loss to society. This is because insurance reduces the price of health care to zero leading to consumers purchasing more health care than they would have at normal price, revealing that the value of this care to consumers is less than the market price even though the additional care is still costly to the producer.

The difference between the high costs of the resources used to produce this care is reflected in high market price and its low apparent value to insured consumers asreflected in low insurance price and this represents inefficiency. The theory provided an apparent policy solution to this moral hazard by imposing coinsurance payments, deductibles and capitations to increase the price of medical care to insured customers and reduce the inefficient expenditures. The managed health care system we have now is a product of this theory (Besley, 1991).

2.2 Empirical Literature 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).

The most critical barrier to NHIF enrollment was found out by (Mathauer, 2008) to be lack of knowledge of informal sector workers on its enrollment options and procedures. Communication and marketing strategies by the scheme has mostly been employed in targeting those in the formal sector as NHIF has always been viewed as a statutory deduction with no immediate benefits by many contributors leading to possible underutilization by those in this sector.

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

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).

Laura (2013) sought to determine the barriers to access of National Health Insurance for informal Workers in Ghana. The study concentrated on the interactions between three groups of women informal workers and the scheme, focusing particularly on the barriers to accessing the scheme that they encounter and on their participation in the development and management of the scheme. The study is based on a desktop review of existing literature on the NHIS as well as three small, highly focused qualitative research studies that were conducted in Ghana during 2009 and 2010 with informal workers from three different sectors of the economy: traders, kayaye (headload porters), and indigenous caterers (also known as chop bar operators). The findings showed there are significant barriers to them accessing the scheme fund which included cost of the premiums,

chaotic administration of the district schemes and lack of direct involvement of informal workers in either the design or the ongoing management of the scheme.

The study by Laura (2013) concluded that the NHIS reflected the wider inequalities of Ghanaian society and itself reproducing them. **2.3 Conceptual Framework**

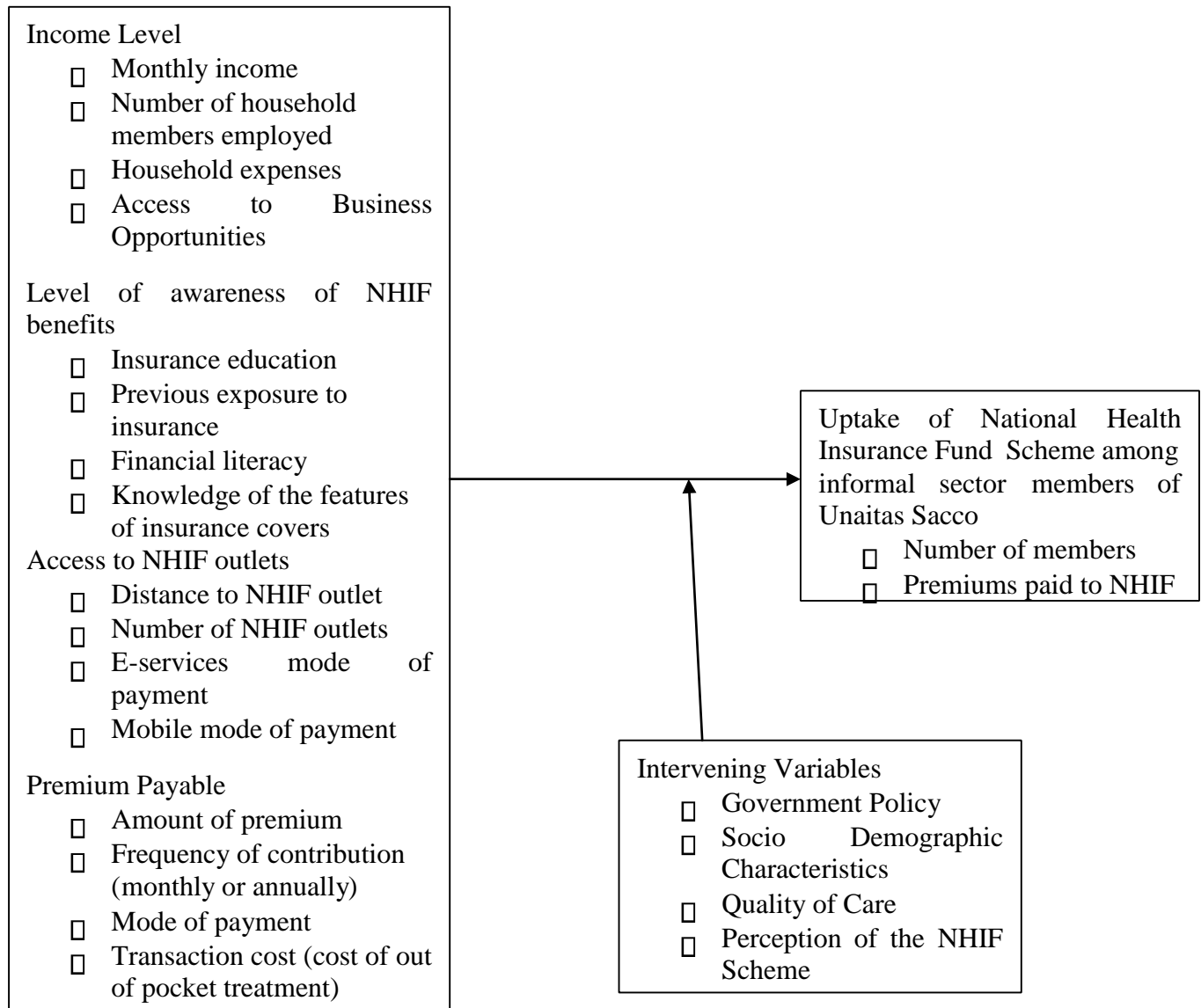


Figure 2.1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

This study adopted a descriptive survey design. The target population was 68,000 informal sector members who were in existence as at December 2014 (SASRA, 2014). This study used stratified random sampling technique (a random sampling technique) to select 150 members in the informal sector participating in the study. The study relied on primary data as this was collected from the respondents using questionnaires. The researcher collected quantitative data and this implied that a quantitative method of data analysis was used. Ten informal NHIF members were involved in the pre testing. The study used both descriptive and inferential statistics in data analysis. The results were presented using frequency distribution tables, pie charts and percentages.

4.0 RESULTS AND DISCUSSIONS

4.1 Response Rate

The number of questionnaires that were administered was 150. A total of 129 questionnaires were properly filled and returned. This represented an overall successful response rate of 86% as shown on Table 1.

Table 1: Response rate

Response	Frequency	Percent
Returned	129	86%
Unreturned	21	14%
Total	150	100%

4.2 Demographic Characteristics

4.2.1 Gender of the Respondents

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.



Figure 1: Gender of Respondents

4.2.2 Age of the Respondents

The respondents were asked to indicate their age as in figure 2.

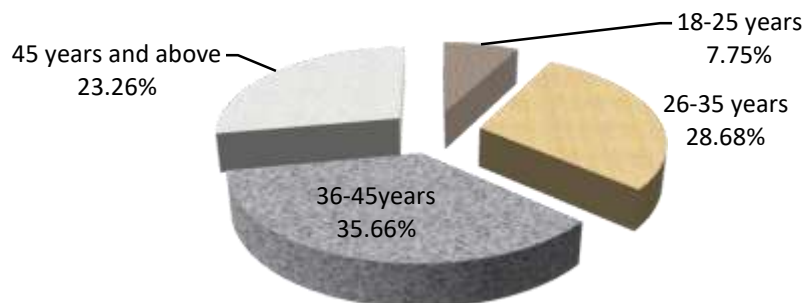


Figure 2: Age of respondents

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.

4.2.3 Marital status of respondents

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.

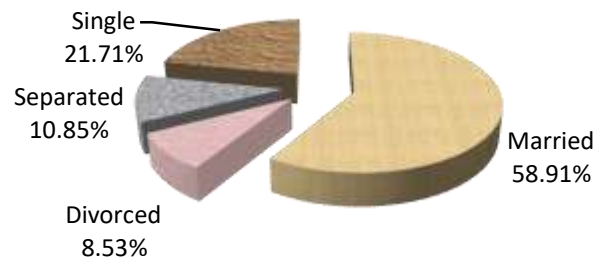


Figure 3: Marital status of respondents

4.2.4: Level of education of respondents

The respondents were asked to indicate their level of education. Results findings were indicated in figure 4. 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.

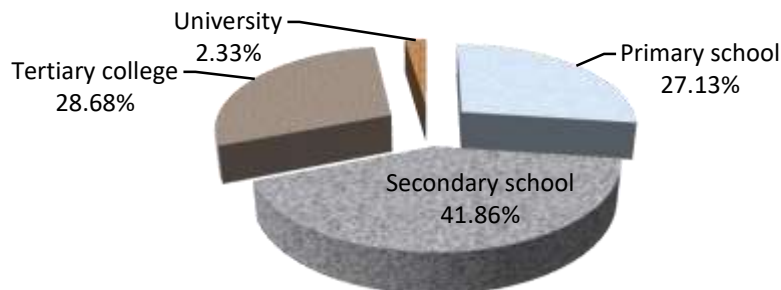


Figure 4: Level of Education

4.2.5: 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.

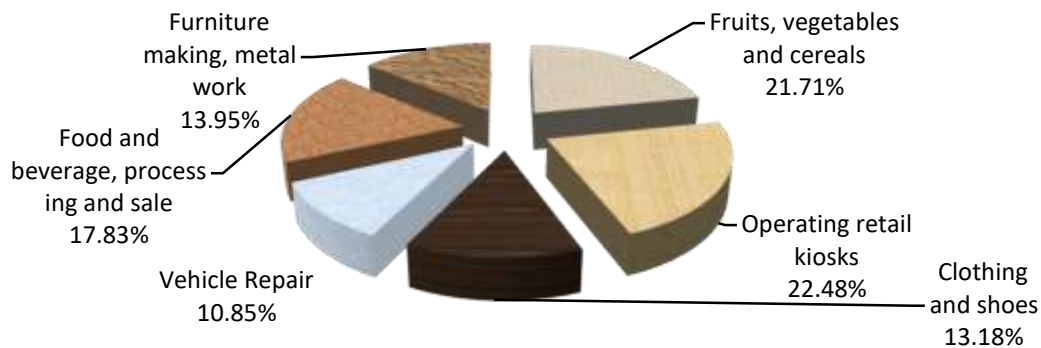


Figure 5: Type of Business

4.2.6 Uptake of NHIF Scheme

The respondents were asked to indicate whether they had enrolled in the NHIF medical scheme. Results findings were indicated in figure 6. 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.

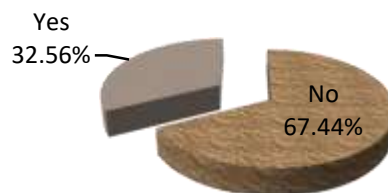


Figure 6: Uptake of NHIF

4.2.7 Uptake of other Health Insurance Scheme

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. Results findings were indicated in figure 7.

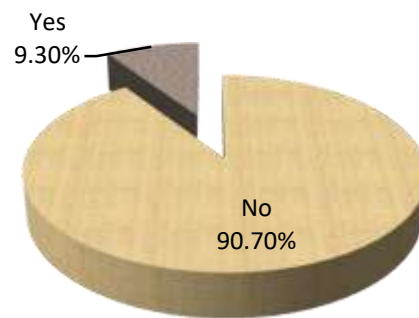


Figure 7: Uptake of other Health Insurance Scheme

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.

4.3 Descriptive Statistics

4.3.1 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 2 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 2: 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%

4.3.2 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 were shown in table 3.

Table 3: Access to NHIF Outlet

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 scheme.	4.70%	7.80%	10.90%	45.70%	31.00%
Mobile mode of payment influences uptake of NHIF scheme.	0.80%	3.10%	12.40%	45.70%	38.00%

Results in table 3 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 Eservices 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.

4.4 Inferential Statistics

4.4.1 Multiple Odd Ratio Regression

Results in table 4 revealed that income level was positive and statistically significant in influencing the odds of uptake of NHIF medical scheme.

Table 4: 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

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 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, the results 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, 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.

5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

The study sought to assess the major determinants in the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. The results revealed that the income level influenced the uptake of NHIF medical scheme among people in the informal sector within Murang'a County. These findings agree 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 were factors which could explain the current low insurance penetration in Kenya as they had large negative contribution on uptake of insurance services.

The study also sought to assess the relationship between the determinants and uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County. The correlations results between income level and uptake of NHIF medical scheme were positive and significant at 0.05 levels of significance. From the regression results, income level was positive and statistically significant in influencing the odds of uptake of NHIF medical scheme at 0.05 levels of significance. From these results it can be inferred that the income level influenced the uptake of NHIF medical scheme within the informal sector workers among UNAITAS SACCO members in Murang'a County.

5.2 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.

5.3 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. Also, the study 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.

5.4 Areas for Further Studies

Further study should be conducted on the same topic but in an urban sector so as to give a clear comparison. Similarly, a study on the determinants of the uptake of other health insurance covers should be conducted so as to show their relationship with NHIF scheme. Additionally, a study on the determinants of uptake of NHIF scheme should be conducted within the formal sector.

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