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Original Research Article

Knowledge and enrollment in the social health insurance fund: evidence from informal sector workers in Homa Bay County, Kenya

Beatrice Akinyi Onyango*, Gideon O. Mauti, Douglas S. Okenyoru, Vincent Matoke

Department of Community health and Development, Faculty of Science Catholic University of Eastern Africa, Nairobi, Kenya

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***Correspondence:**
Beatrice Akinyi Onyango,
E-mail: bakinyi200@gmail.com

ABSTRACT

Background: Access to affordable healthcare remains a global challenge, with many facing catastrophic out-of-pocket costs. Universal health coverage (UHC) relies on prepayment and risk-pooling schemes like health insurance. In Africa, social health insurance exists in countries like Ghana and Nigeria, but knowledge gaps limit enrollment. Kenya's 2023 social health insurance fund (SHIF) mandates coverage, yet informal workers show low participation. This study explores knowledge factors influencing SHIF uptake in Homa Bay County.
Methods: The study employed a descriptive cross-sectional design. Using stratified random sampling, 284 respondents were recruited. Data were collected via questionnaires with informed consent. Ethical approval was obtained from KNH/UoN, and permits from NACOSTI. SPSS v26.0 was used for descriptive and Chi-square analyses at a 95% confidence level.
Results: The study found SHIF uptake at 50.4% among informal sector workers in Homa Bay County. Awareness of SHIF benefits was low at 45.8%, while only 40.5% were familiar with the enrollment process. Key factors significantly associated with uptake included knowledge of benefits (p=0.0001), familiarity with enrollment (p=0.0003), sources of information such as healthcare providers and media (p=0.0074), and positive perceptions of SHIF (p=0.0035).
Conclusions: SHIF uptake among informal sector workers was moderate (50.4%), with enrollment significantly influenced by knowledge of benefits, familiarity with the process, information sources, and perceptions. The study recommends enhancing awareness, simplifying enrollment, leveraging trusted communication channels, and promoting positive perceptions to improve coverage and advance progress toward universal health coverage.

Keywords: Homa Bay County, Informal sector workers, Knowledge factors, Social health insurance fund, Uptake

INTRODUCTION

Globally, access to affordable healthcare is a major public health concern, with millions of households incurring catastrophic health expenditures due to reliance on out-of-pocket (OOP) payments.[1] The World Health Organization (WHO) emphasizes that reducing OOP spending through risk pooling and prepayment schemes is essential for achieving universal health coverage (UHC).[2] In low- and middle-income countries, health insurance schemes have been introduced as a means of protecting households from financial hardship while promoting access to timely and quality healthcare services.[3] Despite these efforts, enrollment into such schemes remains low, particularly in the informal sector, where workers often lack awareness and understanding of health insurance processes.

In Africa, several countries have expanded social health insurance schemes beyond the formal sector to address inequities in access to healthcare. For instance, Ghana

and Nigeria have introduced reforms aimed at increasing insurance uptake among vulnerable groups, with varying levels of success.[4] However, studies consistently highlight that knowledge gaps including limited awareness of benefits, misconceptions about premiums, and lack of clarity on administrative processes remain key barriers to enrollment.[5]

Kenya has recently transitioned from the National Health Insurance Fund (NHIF) to the social health insurance fund (SHIF) under the Social Health Insurance Act of 2023. SHIF is designed to ensure that every Kenyan, including dependents, is covered through mandatory contributions. While formal sector workers are automatically enrolled, informal sector workers who constitute nearly 16 million of Kenya's labor force compared to 2.5 million in the formal sector are expected to voluntarily register and contribute.[6] This voluntary model poses challenges, as low and irregular incomes coupled with limited knowledge reduce the likelihood of enrollment. Consequently, about 74% of Kenyans remain uninsured and continue to depend on OOP payments.[6]

In Homa Bay County, informal sector workers, including taxi drivers, market vendors, artisans, and small-scale farmers, face heightened vulnerability to financial shocks from illness.[7] While SHIF offers a pathway to financial protection, uptake has remained low despite government efforts. This study therefore focuses on knowledge factors influencing SHIF uptake among informal sector workers in Homa Bay County, Kenya.

METHODS

The study adopted a descriptive cross-sectional design to assess SHIF uptake and associated knowledge factors among informal sector workers in Homa Bay County. The study was conducted between February 2025 and June 2025 in Rachuonyo North sub-county which was randomly selected from the eight sub-counties using folded pieces of paper, with wards and sublocations randomly chosen from which a sample of 284 respondents was proportionately selected using stratified random sampling, based on Fisher's (1935) formula. Eligible participants were informal workers aged 18 years and above, residents of the area, with valid national identification, and who gave written informed consent. Data was collected by the help of trained research assistants. Those who consented were included in the study. However, those who were sick and thus unable to participate were excluded from the study. Ethical approval was obtained from KNH/UON Ethics and Research Committee, with permits from NACOSTI and county authorities. Data were analyzed using SPSS version 26.0 for descriptive and inferential statistics, including Chi- square tests at a 95% confidence level and a 0.05 margin of error. Results were presented in tables, charts, and graphs.

RESULTS

Distribution of socio-demographic factors (n=284)

The found that most respondents were aged between 31-40 years (49.6%), followed by those over 40 years (27.8%). Females comprised a slightly higher proportion (58.8%) compared to males (41.2%). Nearly half of respondents (47.9%) perceived themselves to be at high health risk. The majority (61.6%) lived in households with 3-5 members, while only 9.5% had households with six or more members. In terms of education, 45.0% had secondary education, 32.7% primary education, 13.7% had no formal education, and 8.5% had post-secondary training. Results are as shown in Table 1 below.

Table 1: Respondents' socio-demographic characteristics and SHIF uptake (n=284).

Variable	Category	Total N (%)	Registered n=143 (50.4%)	Not Registered n=141 (49.6%)
Age in years	18-30	64 (22.5)	11 (3.9)	53 (18.7)
	31-40	141 (49.6)	58 (20.4)	83 (29.2)
	Over 40	79 (27.8)	74 (26.1)	5 (1.8)
Gender	Female	167 (58.8)	87 (30.6)	80 (28.2)
	Male	117 (41.2)	56 (19.7)	61 (21.5)
Health risk	High risk	136 (47.9)	96 (33.8)	40 (14.1)
	Low risk	148 (52.1)	47 (16.5)	101 (35.6)
Household size	1-2 members	82 (28.9)	54 (19.0)	28 (9.9)
	3-5 members	175 (61.6)	77 (27.1)	98 (34.5)
	6 and above	27 (9.5)	12 (4.2)	15 (5.3)
Education level	No formal education	39 (13.7)	2 (0.7)	37 (13.0)
	Primary	93 (32.7)	43 (15.1)	50 (17.6)
	Secondary	128 (45.0)	79 (27.8)	49 (17.3)
	Post-secondary	24 (8.5)	19 (6.7)	5 (1.8)

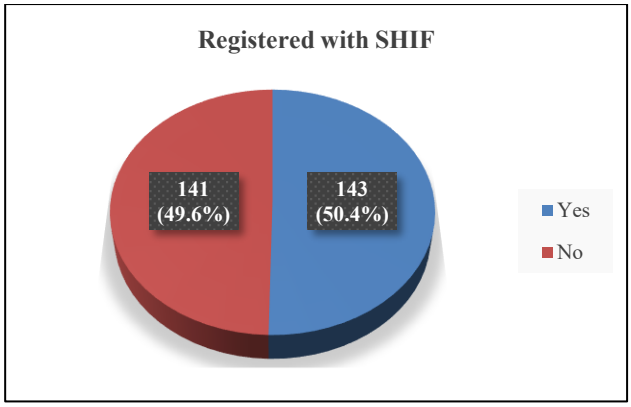

Figure 1: Registered with SHIF.

Uptake of SHIF

The study sought to determine the proportion of informal sector workers enrolled in the SHIF. More than half of the respondents, 143 (50.4%) reported being registered with SHIF, while 141 (49.6%) were not enrolled. Results are presented in Figure 1.

Distribution of knowledge factors among respondents and uptake of SHIF

The study revealed notable variations in knowledge-related factors influencing SHIF uptake among informal sector workers. Results showed that less than half (45.8%) of respondents were aware of SHIF benefits. Familiarity with the enrollment process was reported by 40.5% of participants, with uptake nearly evenly distributed between those familiar and unfamiliar with the process. Sources of information played a critical role, with healthcare providers (36.9%) being the leading channel, followed by the media (31.3%). Perceptions of SHIF were generally positive (56.3%), although nearly a third of respondents expressed neutral views. Results are as shown in Table 2.

Table 2: Distribution of knowledge factors among respondents and uptake of SHIF (n=284).

Variable	Category	Total N (%)	Registered n=143 (50.4%)	Not Registered n=141 (49.6%)
Knowledge of SHIF benefits	Yes	130 (45.8)	65 (22.9)	65 (22.9)
	No	154 (54.2)	75 (26.4)	76 (26.8)
Familiarity with enrollment process	Familiar	115 (40.5)	57 (20.1)	58 (20.4)
	Not familiar	169 (59.5)	86 (30.3)	83 (29.2)
Source of information	Media (TV/radio/newspapers)	89 (31.3)	45 (15.8)	44 (15.5)
	Healthcare providers	105 (36.9)	53 (18.7)	52 (18.3)
	Social networks (friends/family)	90 (31.7)	45 (15.8)	45 (15.8)
Perception of SHIF	Positive	160 (56.3)	80 (28.2)	80 (28.2)
	Neutral	80 (28.2)	40 (14.1)	40 (14.1)
	Negative	44 (15.5)	23 (8.1)	21 (7.4)

Table 3: Relationship between knowledge factors and uptake of SHIF (n=284).

Variable	Category	Total N (%)	Registered n=143 (50.4%)	Not registered n=141 (49.6%)	Statistical Significance
Knowledge of SHIF benefits	Yes	130 (45.8)	65 (22.9)	65 (22.9)	χ^2=22.10; df=2 p=0.0001
	No	154 (54.2)	75 (26.4)	76 (26.8)	
Familiarity with enrollment process	Familiar	115 (40.5)	57 (20.1)	58 (20.4)	χ^2=19.75; df=2 p=0.0003
	Not familiar	169 (59.5)	86 (30.3)	83 (29.2)	
Source of information	Media (TV/radio/newspapers)	89 (31.3)	45 (15.8)	44 (15.5)	χ^2=9.80; df=2 p=0.0074
	Healthcare providers	105 (36.9)	53 (18.7)	52 (18.3)	
	Social networks (friends/family)	90 (31.7)	45 (15.8)	45 (15.8)	
Perception of SHIF	Positive	160 (56.3)	80 (28.2)	80 (28.2)	χ^2=11.30; df=2 p=0.0035
	Neutral	80 (28.2)	40 (14.1)	40 (14.1)	
	Negative	44 (15.5)	23 (8.1)	21 (7.4)	

Relationship between knowledge factors and uptake of SHIF

The study established significant associations between knowledge-related factors and SHIF uptake among informal sector workers. Respondents who reported knowledge of SHIF benefits (45.8%) were more likely to be registered, with a strong association (χ^2=22.10, p=0.0001). Similarly, familiarity with the enrollment process (40.5%) was positively linked to registration

(χ^2=19.75, p=0.0003). Sources of information also influenced uptake, with healthcare providers (36.9%) and media (31.3%) emerging as the main channels, and this relationship was statistically significant (χ^2=9.80, p=0.0074). Perceptions of SHIF further shaped decisions, as those with positive perceptions (56.3%) showed higher uptake compared to those with neutral or negative views showing strong association to uptake (χ^2=11.30, p=0.0035). Results are as shown in Table 3.

DISCUSSION

Uptake of SHIF

The study demonstrated that uptake of the social health insurance fund (SHIF) among informal sector workers in Homa Bay County was modest, with just over half (50.4%) of respondents enrolled. The findings suggest that structural and informational barriers continue to hinder uptake despite SHIF being positioned as a flagship mechanism for financial risk protection.[8,9] While this proportion is higher than reports from some other regions of Kenya where health insurance coverage among informal workers remains below 20%, it still falls short of the national target for universal health coverage.[9]

Relationship between knowledge factors and uptake of SHIF

Knowledge factors emerged as critical determinants of SHIF enrollment. Respondents who reported awareness of SHIF benefits were significantly more likely to be registered, underscoring the importance of health insurance literacy in shaping health-seeking behavior.[10] This finding aligns with earlier studies in Sub-Saharan Africa which show that individuals with higher levels of awareness and understanding of social health insurance schemes are more willing to contribute and enroll.[11] Similarly, familiarity with the enrollment process was strongly associated with uptake, indicating that procedural knowledge- such as knowing where to register, the required documents, and payment modalities- reduces uncertainty and encourages participation.[11]

The study also highlighted the influence of information channels. Healthcare providers and the media (radio, TV, and newspapers) were the dominant sources of SHIF information, both showing significant associations with enrollment.[8] This suggests that trusted messengers and accessible platforms remain key drivers of behavior change.[12] Social networks, although less formal, also played an important role, confirming evidence from community-based health financing models where peer influence and family recommendations increase trust in health schemes.[13]

Perceptions of SHIF further shaped decisions, with more than half of respondents expressing positive views, which correlated with higher registration levels. However, the persistence of neutral and negative perceptions signals underlying concerns such as affordability, mistrust in fund management, or limited perceived benefits.[14] These perceptions mirror challenges reported in the implementation of health insurance schemes in similar low- and middle-income contexts, where scepticism about sustainability and service delivery quality often constrains enrollment.[15]

The study's cross-sectional design prevents establishing causality, and data were collected from informal workers in only one county, Homa Bay County, which may limit the generalizability of the findings to other regions or populations in Kenya.

CONCLUSION

There is lack of awareness and inadequate knowledge The study concluded that uptake of SHIF among informal sector workers was 50.4%, with knowledge-related factors showing statistically significant associations with enrollment. Respondents knowledgeable about SHIF benefits (p=0.0001). Similarly, familiarity with the enrollment process (p=0.0003). Sources of information (p=0.0074). Perceptions of SHIF further determined participation (p=0.0035). The study recommends that health authorities should strengthen awareness of SHIF benefits, simplify enrollment processes, and leverage trusted channels like healthcare providers and media to shape positive perceptions, thereby improving uptake among informal sector workers and advancing universal health coverage.

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