

Research Article

Factors Influencing Nonrenewal of Health Insurance Membership in Ejisu-Juaben Municipality of Ashanti Region, Ghana

Kwawukume Mawumenyo Aku,¹ Kofi Akohene Mensah,¹ Peter Twum ¹, Peter Agyei-Baffour,¹ Daniel Opoku,¹ and Joseph Kwasi Brenyah²

¹Department of Health Policy, Management and Economics, School of Public Health, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

²Department of Global and International Health, School of Public Health, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Correspondence should be addressed to Peter Twum; twumpeter2000@yahoo.com

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Background. In the quest to prevent households from making catastrophic expenditures at the point of seeking healthcare, the government of Ghana introduced the National Health Insurance in 2003. However, people are reluctant to renew their membership. This study was, therefore, conducted to identify factors influencing the nonrenewal of National Health Insurance membership in the Ejisu-Juaben Municipality. **Methods.** A cross-sectional study was conducted among 427 respondents in the Ejisu-Juaben Municipality to ascertain factors influencing the nonrenewal of health insurance membership status. Data were entered and analyzed using Stata version 14. Univariate and multivariate analyses were performed to determine socio-demographic factors, household factors, and systemic factors influencing the nonrenewal of health insurance status. Statistical significance for all testing was set as $p \leq 0.05$. **Results.** Sociodemographic factors such as gender (AOR = 0.531; CI = 0.287–0.985) and educational level (AOR = 5.268; CI = 1.130–24.551) were associated with the nonrenewal of health insurance membership. Income levels in Ghana Cedis were 500–1000 (AOR = 0.216; CI = 0.075–0.617) and 1001–2000 (AOR = 0.085; CI = 0.019–0.383). Systemic decision on factors such as clients' satisfaction (AOR = 0.149; CI = 0.035–0.640), making copayment (AOR = 0.152; CI = 0.068–0.344), acquiring all prescribed drugs (AOR = 4.191; CI = 2.027–8.668), and awareness of mobile renewal (AOR = 3.139; CI = 1.462–6.739) was associated with nonrenewal of membership. **Conclusions.** The nonrenewal of health insurance membership was influenced by sociodemographic, household, and systemic factors. Therefore, the Municipal Health Directorate and the National Health Insurance Authority have to work on these factors to reach the target of 100% active coverage in the municipality.

1. Background

Health insurance coverage is an imperative aspect of achieving Universal Health Coverage (UHC) [1, 2]. In Canada, every citizen and legal residents of the country have basic health insurance coverage which is provided by the government [3]. The public programme, therefore, account for only 37.1% of residents. This shows that public-funded

health insurance as practiced by Canada is the way to go to ensure equity and financial protection.

Learning from the developed countries, some low- and middle-income countries have begun introducing health insurance to their populations. A study by Escobar et al (2010) in Costa Rica, Peru, Indonesia, Rural China, Columbia as well as Ghana on the impact of health insurance in low- and middle-income countries ascertained a positive

correlation between health insurance status and good health outcomes [4, 5].

In 2012, the Ghana Parliament made the membership of National Health Insurance Scheme (NHIS) mandatory for all residents in the country through an Act of Parliament [6]. However, out of the 18.5 million people who are registered into the scheme, only 10 million (40%) are active [7, 8]. This, if not addressed, could hamper the country's effort to attain 100% health insurance coverage for the Ghanaian population by the year 2030.

This calls for pragmatic measures in retaining the existing members in addition to enrolling the noninsured in order not to deter Ghana's effort to achieve UHC. Some studies have been conducted in the Eastern, Central, and Volta Regions of Ghana to ascertain factors that influence enrolment and retention into the health insurance scheme [9, 10]. However, Ashanti Region, the second largest and the most populated region in Ghana, had not benefited from such studies. In addition, for those regions, which have benefited from such studies, the investigations were facility-based, scheme-based, and based on individual factors influencing the nonrenewability of NHIS. How socio-demographic factors, household factors, and health system factors influenced the nonrenewability of NHIS membership had not been adequately explored in Ghana. Therefore, there was a need for such a study to be conducted in the Ejisu-Juaben Municipality as a lesson from the region could be used in other regions in the country and even in other countries in the subregion. This will help put measures in place to propel the country toward achieving its aim of 100% health insurance coverage.

2. Methods

2.1. Design. A cross-sectional study was conducted from 1 June 2019 to 31 December 2019 among 427 people in Ejisu-Juaben Municipality who have ever registered with NHIS to find out the factors that influence the nonrenewal of health insurance membership.

2.2. Sampling Method. Multistage sampling, involving cluster and simple random sampling methods, was used in this study. Ejisu-Juaben Municipality has five submunicipal health administrative areas. Each health administration was taken as a cluster. One community was selected from each cluster using a simple random sampling method. Here, the names of the communities in each submunicipality were written on pieces of a paper and put into a box and thoroughly shaken. One community was selected in each submunicipality resulting in a total of five communities sampled for the study. In each of these selected communities, 85 household heads were interviewed except in Ejisu, the capital town where 87 were interviewed.

In reaching each of the selected communities, the researcher stood at the center and span a pen. Houses the tip of the pen pointed at were chosen and the household heads were engaged once they were qualified to take part in the study. On leaving each house, the opposite houses were

selected and household heads who met the inclusion criteria were interviewed. In a house where there was no opposite house, the researcher span the pen again and repeated the same procedure to engage household heads. These processes were replicated across all selected communities till the required sample size for each community was attained.

2.3. Sample Size. Since the number of households in the Ejisu-Juaben Municipality from the 2010 census is 33,078, which is a relatively large population, the sample size was calculated using Cochran's formula:

$$No = \frac{Z^2 pq}{e^2}, \quad (1)$$

where No is the sample size, p is the assumed prevalence of renewal of NHIS membership in the Ejisu-Juaben district, q is $(1-p)$, Z is the significance level at 95% confidence interval read from the z table to be 1.96, and e is the margin of error, which is assumed to be 5%.

For this sample calculation, a 50% prevalence rate of renewal was assumed. Therefore, our sample size was calculated as

$$No = \frac{1.96^2 (0.5)(0.5)}{0.05^2} = 384. \quad (2)$$

Adjusting for a nonresponse rate of 10%, the final sample size was

$$\text{final sample size} = \frac{\text{effective sample size}}{(1 - \text{nonresponse rate anticipated})},$$

$$\text{final sample size} = \frac{384}{(1 - 0.1)} = 427 \text{ households heads.} \quad (3)$$

2.4. Data Collection Techniques and Tools. Data were collected using a semistructured questionnaire designed on the Kobo Collect application. Kobo Collect is Kobo Toolbox's data collection application that is used to collect survey data and can be used on any android phone. The questionnaires were administered by four trained research assistants who communicated in English and Twi (the local language of study participants).

Data on sociodemographic characteristics, such as age, educational level, ethnicity, marital status, occupation, religion, place of residence, and income, were collected. Data collected on the household level comprised of household income, the health status of a household, household size, the number of dependents in a household, the presence of a person with chronic disease in the household, and the wealth status of a household. Systematic factors assessed include distance to a health facility, road network, quality of care, copayments, and availability of medicines.

2.5. Data Handling and Analysis. Data were exported from the Kobo Collect application into Microsoft Excel for coding and further imported into Stata version 14.1 for analysis.

Data validation was done to ensure data quality. Descriptive data were presented using frequencies and percentages. Univariate and multivariate analyses were performed to establish associations between sociodemographic factors, household factors, and systematic factors influencing the nonrenewal of NHIS membership. Statistical significance for all testing was set as $p \leq 0.05$.

3. Results

3.1. Background Characteristics of Respondents. The mean age of the respondents was 36.3 ± 0.51 years, and a little over half (57.79%) were females. Those who completed Junior High School were 30.48% and traders constituted 26.14%. Vast majority (82.25%) of the respondents were Akan and Christians constituted 89.93% while 70.26% lived in urban areas as shown in Table 1.

3.2. Sociodemographic Factors Influencing the Nonrenewal of Health Insurance Membership. In univariate and multivariate regression analyses in Table 2, sociodemographic factors such as gender and level of education influenced a person's decisions not to renew their health insurance membership. Females were 0.531 less likely not to renew their health insurance membership compared to males (AOR = 0.531; 95% CI = 0.287–0.985). In addition, people with MSLC, as their highest level of education, were five times more likely not to renew their NHIS membership as compared to those with other levels of education (AOR = 5.268; 95% CI = 1.130–24.551).

3.3. Logistics Regression of Household Factors That Influence the Nonrenewal of Health Insurance Membership. In univariate and multivariate analyses, as shown in Table 3, household factors such as household income and household expenditure influenced a person's decision not to renew their health insurance membership. For instance, those with an average household income of GH¢500–1000 were 0.216 times less likely not to renew compared to those who earn less than GH¢500 (AOR = 0.216; 95% CI = 0.075–0.675) and those earning GH¢1001–2000 were 0.085 times less likely not to renew compared to those who earn less than GH¢500 (AOR = 0.085; 95% CI = 0.019–0.389).

3.4. Systematic Factors Influencing the Nonrenewal of Health Insurance Membership. Table 4 shows that the majority of the respondents (60.67%) lived 1–5 km away from a health facility, 83.45% had good road network to the health facility, 85.85% had a good experience on their last hospital visit, and 65.47% made some form of copayment though they were insured. The majority of the respondents (65.47%) were aware of the use of mobile phones to renew their national health insurance cards, but 75.06% of those aware did not know the code used to renew their membership.

A little over half of the respondents (50.84%) lived 1–5 km from the health insurance office, with 6.24% living less than 1 km, 37.65% lived 6–10 km away from the health

TABLE 1: Background characteristics of the respondents.

Characteristic	Frequency (n = 417)	Percentage
Age (mean ± SD)	36.3 ± 0.51	
Age		
18–27	76	18.23
28–37	191	45.80
38–47	90	21.58
48–57	39	9.35
>58	21	5.04
Gender		
Male	176	42.21
Female	241	57.79
Level of education		
None	41	9.83
Primary	53	12.71
JHS	127	30.46
SHS	90	21.58
Tertiary	87	20.86
MSLC	19	4.56
Ethnicity		
Akan	343	82.25
Ewe	13	3.12
Northern ethnic groups	36	8.63
Ga	6	1.44
Others	19	4.56
Marital status		
Single	96	23.02
Married	239	57.31
Divorced	36	8.63
Widowed	23	5.52
Cohabiting	15	3.60
Separated	8	1.92
Employment		
Employed	370	88.73
Unemployed	47	11.27
Occupation		
None	17	4.08
Trading	109	26.14
Farming	69	16.55
Civil/public servant	76	18.23
Hairdresser	19	4.56
Seamstress	15	3.60
Businessperson	20	4.80
Others	92	22.06
Place of residence		
Rural	124	29.74
Urban	293	70.26
Religion		
Christianity	375	89.93
Islam	41	9.83
Traditional	1	0.24

insurance office, and 5.28% lived more than 10 km away from the health insurance office.

Only 49.40% of the respondents received all the drugs prescribed while 50.60% not received all the prescribed drugs.

3.5. Logistic Regression Analysis of Systemic Factors Influencing Health Insurance Renewal. The univariate and multivariate logistic regression analyses in Table 5 show that the

TABLE 2: Sociodemographic factors influencing the nonrenewal of health insurance membership.

Characteristic	Univariate logistic regression			Multivariate logistic regression		
	Odds ratio (OR)	95% confidence interval	<i>P</i> value	Adjusted odds ratio (AOR)	95% confidence interval	<i>P</i> value
Age			0.90			0.34
18–27	Ref			Ref		
28–37	0.912	0.465–1.789	0.79	1.387	0.585–3.287	0.46
38–47	1.237	0.587–2.611	0.58	1.733	0.606–4.958	0.31
48–57	0.889	0.329–2.403	0.82	0.743	0.199–2.768	0.67
>58	0.957	0.281–3.263	0.94	0.621	0.120–3.231	0.57
Gender	Ref		0.01	Ref		
Male	—	—	—	—	—	—
Female	0.496	0.304–0.808	0.01	0.531	0.287–0.985	0.04
Level of education			0.32			
None	Ref			Ref		
Primary	2.340	0.759–0.721	0.14	2.388	0.704–8.104	0.16
JHS	1.678	0.596–4.725	0.33	1.349	0.435–4.187	0.61
SHS	1.800	0.618–5.240	0.28	1.571	0.483–5.117	0.45
Tertiary	1.500	0.505–4.453	0.47	1.837	0.483–6.993	0.37
MSLC	4.200	1.121–15.731	0.03	5.268	1.130–24.551	0.03
Ethnicity			0.76			
Akan	Ref			Ref		
Northern ethnic groups	0.766	0.307–1.912	0.57	0.971	0.322–2.928	0.96
Ga	1.915	0.344–10.669	0.46	2.110	0.332–13.396	0.43
Others	0.718	0.203–2.533	0.60	0.515	0.133–1.993	0.34
Marital status			0.19			
Single	Ref			Ref		
Married	0.718	0.397–1.297	0.27	0.634	0.285–1.410	0.26
Divorced	0.862	0.331–2.244	0.76	0.794	0.232–2.712	0.71
Widowed	0.992	0.329–2.988	0.99	0.903	0.221–3.693	0.89
Cohabiting	3.125	1.016–9.615	0.04	2.027	0.544–7.550	0.29
Separated	1.190	0.224–6.336	0.84	1.592	0.254–9.984	0.62
Employment			0.29			
Employed	Ref			Ref		
Unemployed	1.469	0.726–0.975	0.29	1.836	0.742–4.542	0.19
Occupation			0.24			
None	Ref			Ref		
Trading	0.475	0.149–1.513	0.21	0.809	0.198–2.311	0.77
Farming	0.557	0.167–1.859	0.34	0.870	0.197–3.845	0.86
Civil/public servant	0.450	0.134–1.512	0.20	0.672	0.127–3.564	0.64
Hairdresser	0.282	0.047–1.706	0.17	0.613	0.082–4.595	0.63
Seamstress	0.369	0.060–2.274	0.28	0.784	0.096–6.420	0.82
Businessperson	0.424	0.085–2.121	0.30	0.824	0.121–5.606	0.84
Others	0.997	0.320–3.104	1.00	1.173	0.282–4.870	0.83
Place of residence			0.01			
Rural	Ref			Ref		
Urban	0.519	0.314–0.856	0.01	0.751	0.394–1.429	0.38
Religion			0.64			
Christianity	Ref			Ref		
Islam	0.824	0.371–1.920	0.66	0.891	0.320–2.485	0.83

level of clients' satisfaction, making copayment, receiving all prescribed drugs, proximity to the health insurance office, and awareness of the mobile phone for the renewal of membership influenced a person's decision not to renew their health insurance membership. For example, those who had a good and very good level of satisfaction in their last hospital visit were 0.149 times (AOR=0.149; 95% CI=0.035–0.640) and 0.290 times (AOR=0.107;95%

CI=0.107–0.785), respectively, less likely not to renew their health insurance membership as compared to those who had a poor experience. In addition, those who made no copayments in their last hospital visit were 0.152 times less likely (AOR=0.152; 95% CI=0.068–0.344) not to renew compared to those who made copayments. Those who did not receive all their drugs were 4 times likely (AOR=4.191; 95% CI=2.027–8.668) not to renew compared to those who

TABLE 3: Logistics regression of household factors that influence the nonrenewal of health insurance membership.

Characteristic	Univariate logistic regression			Multivariate logistic regression		
	Odds ratio	95% confidence interval	P value	Odds ratio	95% confidence interval	P value
Income			0.05			0.01
Below 500	Ref			Ref		
500–1000	0.655	0.337–1.270	0.21	0.216	0.075–0.617	0.01
1001–2000	1.323	0.673–2.600	0.42	0.085	0.019–0.382	0.01
2001–3000	2.426	0.704–8.368	0.16	0.197	0.027–1.433	0.11
Over 3001	3.882	0.231–65.303	0.34	0.369	0.010–13.241	0.58
Expenditure			0.01			
Below 100	Ref			Ref		
100–200	1.150	0.235–6.608	0.86	1.662	0.284–9.721	0.57
201–500	2.732	0.602–12.39	0.19	7.344	1.094–49.263	0.04
501–700	2.824	0.594–13.424	0.19	20.720	2.398–179.066	0.01
701–1000	8.625	1.796–41.408	0.01	46.278	4.686–457.004	0.01
Above 1000	5.367	1.108–29.003	0.04	23.890	2.219–257.156	0.01
Health status	Ref		0.01	Ref		
Excellent						
Very good	0.488	0.115–2.053	0.33	0.852	0.189–3.849	0.84
Good	0.134	0.032–0.564	0.01	0.266	0.057–1.250	0.09
Fair	0.353	0.066–1.873	0.22	0.439	0.062–3.097	0.42
Poor	0.500	0.0313–7.994	0.63	0.222	0.006–8.736	0.42
Presence of chronic disease in household			0.07			
Yes	Ref			Ref		
No	1.868	0.916–3.808	0.09	2.073	0.852–5.044	0.11
Number of individuals in a household			0.01			
1–3	Ref			Ref		
4–6	0.462	0.276–0.775	0.01	0.625	0.258–1.514	0.30
7 and above	0.873	0.351–2.170	0.77	0.796	0.140–4.515	0.80
Number of children in a household			0.01			
0	Ref			Ref		
1	0.937	0.460–1.910	0.85	1.008	0.442–2.297	0.97
2	0.318	0.156–0.652	0.01	0.644	0.236–1.758	0.39
3	0.419	0.196–0.893	0.02	0.782	0.250–2.448	0.67
4	0.518	0.190–1.140	0.20	0.919	0.229–3.696	0.91
5	0.806	0.152–4.278	0.80	0.981	0.105–9.199	0.99
6	1.450	0.321–6.553	0.63	1.156	0.097–13.791	0.91
Number of aged in household			0.01			
0	Ref			Ref		
1	0.353	0.177–0.704	0.01	0.718	0.312–1.653	0.44
2	0.239	0.111–0.652	0.01	0.901	0.294–2.760	0.86
3 and above	4.234	0.691–25.935	0.12	9.415	0.704–125.87	0.90
Wealth status of household			0.19			
Poor	Ref			Ref		
Middle class	0.478	0.216–1.059	0.07	0.488	0.1556–1.533	0.22
Rich	1.050	0.084–12.995	0.97	1.146	0.039–33.246	0.94

received all their drugs. In addition, those who were not aware of the mobile renewal were 3 times more likely (AOR = 3.139; 95% CI = 1.462–6.739) not to renew compared to those who were aware.

4. Discussion

The results of the study show gender and level of education as sociodemographic factors that influence the renewal of health insurance membership. Females were more likely to renew their insurance compared to their male counterparts. This could be attributed to the fact that females use healthcare services frequently due to reproductive health

issues. Another reason could be assigned to the free maternal health policy under the national health insurance. Under this policy, pregnant women are registered with the health insurance without paying for registration and premium; hence, women appear to be renewing their health insurance membership more than men. This finding is consistent with findings from previous studies which reported that females were more likely to have active health insurance compared to males [11, 12].

In addition, in this study, there was no association between age and renewal of health insurance membership. This is inconsistent with previous studies that report that those who were older were more likely to renew their health

TABLE 4: Systematic factors influencing the nonrenewal of health insurance membership.

Characteristic	Frequency (<i>n</i> = 417)	Percentage
Distance from health facility		
>1 km	136	32.61
1 km–5 km	253	60.67
6 km–10 km	11	2.64
More than 10 km	17	4.08
Nature of road		
Excellent	2	0.48
Very good	63	15.11
Good	348	83.45
Poor	4	0.96
Experience at hospital		
Excellent	1	0.24
Very good	33	7.91
Good	358	85.85
Poor	25	6.00
Made copayment		
Yes	273	65.47
No	144	34.53
Received all drugs prescribed		
Yes	206	49.40
No	211	50.60
Close to the health insurance office		
<1 km	26	6.24
1 km–5 km	212	50.84
6 km–10 km	157	37.65
More than 10 km	22	5.28
Awareness of mobile renewal		
Yes	284	68.11
No	133	31.89
Knowledge of mobile renewal code		
Yes	104	24.94
No	313	75.06

insurance membership [13, 14]. On the other hand, educational level showed a significant relationship between renewing health insurance status and educational attainment. This is in consistence with previous studies which suggest that those with some form of formal education were more likely to renew their health insurance membership [11]. Our study, however, showed that those with MSLC were more likely not to renew their insurance status contrary to a finding by a previous study which reports that there was no significant relationship between education and individual's decision to renew insurance membership [9].

The study showed no significant relationship between ethnicity and health insurance status contrary to a previous study [11]. Marital status also did not show any statistically significant association with the health insurance status. This is similar to a finding by a previous study [15] but inconsistent with other studies [9, 11] which suggest that females who are not married are less likely to have active health insurance compared to the married. This study also did not

find any statistically significant relationship between employment and the renewal of health insurance membership. This is similar to a finding reported in a previous study [9]. However, findings in our study were not in line with a study which reported that there is an association between employment and the renewal of health insurance membership [12].

Religion did not have an association with the renewal of health insurance membership. This is inconsistent with other studies that show that Christians are more likely to renew their insurance compared to Muslims and people from other religions [11]. The results of the study did not show statistically significant relationship between the place of residence and the health insurance status. This is inconsistent with a study conducted in Kenya [16] as well as in Ghana [11].

Household income was found to influence a person's decision to renew or not to renew their health insurance. Those who earned more were more likely to renew their health insurance compared to those who earned less. This result affirms a previous study conducted in Ethiopia which found that high-income earners are more likely to renew their health insurance than low-income earners [17]. A similar finding is reported in a study carried out in Ghana [11, 14]. However, a study carried out in the Dormaa Municipality in Ghana reported findings contrary to those in our study [18].

The study shows a statistically significant relationship between household expenditure and renewal of health insurance status. The multivariate analysis indicates that those who spend more have higher odds of not renewing their health insurance. This could be attributed to the fact that they spend their money on other things which they consider to be more important to them than renewing their health insurance. This is contrary to a previous study which reported that household with higher expenditure have a higher likelihood to renew their health insurance [12].

Health system factors found to influence health insurance nonrenewal were the quality of care at the health facility, making copayments, acquiring all drugs prescribed, closeness to the insurance office, and awareness of mobile renewal. The distance to a health facility did not show any statistical significance. This is contrary to previous studies which showed that those who lived far away from a health facility were less likely to subscribe to the health insurance. If the health facility is far from the individuals, it might cause the person to seek other sources of healthcare, thereby deterring the person from renewing the health insurance [17, 19].

The quality of care was found to be statistically significant with the health insurance status. The adjusted odds ratio shows that those who felt they had good and very good quality of care were more likely to renew their health insurance status compared to those who had poor quality of care. The quality of care has been identified as a major factor that affects health insurance use [10, 19, 20].

In this study, it was found that availability of the prescribed drugs influenced people's decision on the renewal of the health insurance status. Those who did not receive all the

TABLE 5: Logistic regression analysis on systemic factors influencing health insurance renewal.

Characteristic	Univariate logistic regression			Multivariate logistic regression		
	Odds ratio	95% confidence interval	<i>P</i> value	Odds ratio	95% confidence interval	<i>P</i> value
Distance from health facility			0.10			0.01
>1 km	Ref			Ref		
1 km–5 km	1.671	0.945–2.956	0.08	0.576	0.747–3.212	0.24
6 km–10 km	2.309	0.582–9.484	0.25	0.186	0.012–2.774	0.22
More than 10 km	3.359	1.111–10.157	0.03	0.340	0.021–5.594	0.45
Nature of road			0.01			
Poor	Ref			Ref		
Very good	1.725	0.169–17.563	0.65	3.18	0.109–93.19	0.50
Good	0.600	0.061–5.870	0.66	0.85	0.031–23.44	0.92
Satisfaction level			0.01			
Poor	Ref			Ref		
Very good	0.148	0.045–0.488	0.01	0.149	0.035–0.640	0.01
Good	0.136	0.058–0.319	0.01	0.290	0.107–0.785	0.02
Made copayment			0.01			
Yes	Ref			Ref		
No	0.356	0.196–0.652	0.01	0.152	0.068–0.344	0.01
Received all drugs prescribed			0.01			
Yes	Ref			Ref		
No	2.33	1.406–3.885	0.01	4.191	2.027–8.668	0.01
Closeness to the health insurance office			0.07			
>1 km	Ref			Ref		
1 km–5 km	0.831	0.293–2.351	0.73	0.558	0.159–1.958	0.36
6 km–10 km	1.118	0.392–3.188	0.84	2.373	0.672–8.379	0.17
More than 10 km	2.908	0.797–10.601	0.11	53.828	3.097–937.410	0.01
Awareness of mobile renewal			0.63			
Yes	Ref			Ref		
No	1.136	0.681–1.894	0.63	3.139	1.462–6.739	0.01
Knowledge of mobile renewal code			0.01			
Yes	Ref			Ref		
No	2.209	1.144–4.263	0.02	1.458	0.675–3.151	0.33

prescribed drugs were 4 times more likely not to renew their health insurance compared to those who received. This affirms a previous study [9].

5. Conclusion

The health insurance nonrenewal rate was low and was influenced by sociodemographic, household, and systemic factors. Therefore, the Municipal Health Directorate and the National Health Insurance Authority need to work on these factors to reach the target of 100% active coverage in the municipality.

Data Availability

All data generated or analyzed during this study are included within the article.

Ethical Approval

Ethical clearance was sought from the Kwame Nkrumah University of Science and Technology Ethics Review Committee on Human Research Publication and Ethics.

Consent

Permission was sought from the Ejisu-Juaben Health Directorate before data collection began. At the community level, participants were asked to read and sign the consent form prior to the interviews. Participants were assured of the confidentiality of their response and their null association with it at present or in the future. In addition, they were assured that their participation would not affect their relations with the NHIS at present or in the future and that refusal to participate would not attract any penalty.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

KMA and KAM conceived and initiated the study. KMA designed the study, provided training and guidance for data collection and analysis, and further prepared the original draft of the manuscript. PA-B and DO assisted with supervision, editing, and technical support in all areas of the

study. PT and JKB assisted with the data collection and monitored the entire team for data collection. The draft manuscript was critically reviewed by PT. All authors made significant contributions to the final work and approved the manuscript for submission. All authors have read and approved the manuscript.

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