

Access to and Utilisation of Primary Healthcare Services among North-South Migrants in Kumasi, Ghana: A Cross-Sectional Mixed-Methods Study

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Abstract

Background

Access to healthcare is critical for migrant well-being, yet limited evidence exists on the level of access and determinants of health facility utilisation among internal migrants in Ghana. This study evaluates the level of access migrants have to health facilities and examines the determinants influencing their use of health facilities among north-south migrants in Metropolitan Kumasi.

Methods

A convergent parallel mixed-methods design was employed with 389 north-south migrants selected from five satellite markets in Metropolitan Kumasi. Quantitative data were collected using structured questionnaires and analysed using descriptive statistics and Pearson correlation analysis. Qualitative data from focus group discussions and in-depth interviews provided contextual depth.

Results

Physical access to health facilities was high, with respondents reporting proximity to facilities (Mean = 4.09), ease of reaching facilities (Mean = 4.05), and availability of transportation (Mean = 4.11). However, utilisation remained low due to financial barriers (Mean = 2.86 for affordability), inadequate NHIS coverage (Mean = 2.07 for service coverage), long waiting times (Mean = 3.27), and cultural/language barriers. Key determinants of healthcare utilisation included gender (females less likely to use hospitals, $r = -0.192$, $p < 0.001$), marital status (married migrants more likely to use hospitals, $r = 0.114$, $p = 0.025$), employment stability (increased hospital use, $r = 0.137$, $p = 0.007$), and duration of stay (strongest predictor of pharmacy/OTC use, $r = 0.241$, $p < 0.001$). Ethnicity significantly influenced clinic utilisation ($r = 0.164$, $p = 0.001$) and pharmacy use ($r = 0.155$, $p = 0.002$).

Conclusion

Physical access does not guarantee healthcare utilisation. Addressing the determinants of healthcare use requires interventions targeting financial barriers, NHIS reform, cultural sensitivity, and structural efficiency. The study provides evidence for policymakers to strengthen health insurance coverage, reduce waiting times, and improve culturally responsive healthcare delivery for migrant populations.

1. Introduction

Access to healthcare is a fundamental human right and a critical determinant of population health and well-being. It is a multidimensional concept that includes the availability, geographic accessibility, affordability, acceptability and quality of services [1, 2]. These dimensions are particularly important for populations whose social and economic circumstances can limit the ability to convert the physical presence of health services into actual use. Vulnerable populations, such as migrants, may face overlapping financial, occupational, institutional, and cultural challenges that may affect both healthcare access and utilisation [3, 4]. Internal migration in Ghana, particularly the north-south migration stream, has grown significantly over the past decades, with migrants moving from the impoverished northern regions to urban centres in the south, including Accra and Kumasi, in search of employment

and livelihood opportunities [5, 6]. At destination, many migrants work in insecure informal-sector occupations and may live in precarious conditions, which can increase exposure to health risks while limiting the resources available for seeking care [7–12]. Studies in Ghana have documented barriers including healthcare costs, incomplete or inactive health insurance coverage, waiting times, language differences and sociocultural concerns [7, 13–16].

Urban residence can improve geographic access to health facilities, but geographic access alone does not necessarily translate into utilisation. In Ghana, health insurance status, household resources, employment conditions, social networks, gender and migration status can shape whether and where individuals seek care [13–15, 17–20]. Understanding these mechanisms is particularly relevant for primary and community healthcare because pharmacies, clinics, licensed chemical sellers and first-contact health facilities often form the initial points of care for mobile and informal-sector populations.

2. Conceptual framework

The study was informed by Andersen's Behavioural Model of Health Services Use and its extension for vulnerable populations [21–23]. The model groups influence on utilisation into predisposing characteristics, enabling resources and need factors. For migrant populations, the vulnerability extension is useful because it also draws attention to competing needs, unstable living conditions and other social circumstances that can impede care even when services are physically available [23].

Fundamental Cause Theory provides a complementary structural perspective [24, 25]. It proposes that inequalities in access to flexible resources such as money, knowledge, social connections and power can reproduce health inequalities across changing disease and service contexts. In this study, the theory helps explain why limited income, insecure employment and weak access to social resources may constrain healthcare utilisation despite relatively good geographic access.

The study therefore aimed to (1) evaluate the level of access north–south migrants have to health facilities in Metropolitan Kumasi and (2) examine socio-demographic and socio-economic factors associated with their use of hospitals, clinics, pharmacies/OTC medicines, traditional herbal healers and faith healers.

3. Methods

Study design and setting

The study employed a convergent parallel mixed-methods design, combining a quantitative cross-sectional survey with qualitative focus group discussions (FGDs) and in-depth interviews [26]. The two strands were collected and analysed separately and were integrated during interpretation, with qualitative findings used to contextualise quantitative patterns in healthcare access and utilisation. [26, 27]. The philosophical foundation of this study is pragmatism, which emphasises the use of multiple approaches to understand a research problem rather than being confined to a single methodological orientation [26]. This approach was appropriate for capturing both the breadth of healthcare access patterns and the depth of migrants' experiences and perceptions.

The study was conducted in Metropolitan Kumasi, the capital of the Ashanti Region and Ghana's second-largest city. The metropolis covers approximately 214.3 km² and is a major destination for migrants from northern Ghana [5, 28]. Data were collected in the Central Business District (CBD), Bantama Market, Asafo Market, Suame Market

and Tafo Market, which were purposively selected because north–south migrants commonly work in these commercial areas [20, 29].

Study population, sample size and sampling

The study population comprised migrants from the Savannah, North East, Northern, Upper West and Upper East regions who were working and residing in Metropolitan Kumasi. The minimum quantitative sample size was estimated using Cochran's formula for large populations at a 95% confidence level, an assumed proportion of 0.50 and a 5% margin of error, giving 384 respondents [31]. The target was increased to 389 to account for non-response.

Table 1
Distribution of the Quantitative Sample by Study Market

Study Market	Frequency (n)	Percentage (%)
Central Business District (CBD)	164	42.2
Suame Market	64	16.5
Asafo Market	64	16.5
Tafo Market	65	16.7
Bantama Market	32	8.2
Total	389	100.0

A multistage approach was used. First, the five markets were selected purposively. Second, the sample was allocated across markets to obtain representation from each site. Third, eligible migrants were approached at their workplaces and selected using systematic and random procedures where feasible. Because no complete sampling frame of migrants was available, snowball referral was used as a supplementary approach for migrants who were difficult to identify through workplace-based recruitment.

Data collection instruments

The quantitative instrument was a structured questionnaire covering socio-demographic characteristics, socio-economic conditions, healthcare access and health-seeking behaviour. Five-point Likert scales were used for frequency items (1 = never to 5 = always) and attitudinal items (1 = strongly disagree to 5 = strongly agree). Healthcare providers considered in the utilisation analysis included hospitals, clinics, pharmacies/OTC medicines, traditional herbal healers and faith healers.

Qualitative data were collected using FGD and in-depth interview guides. Four FGDs were conducted, each with six to eight participants, organised by gender and market location where feasible. In-depth interviews were conducted with key informants, including migrant association leaders and health officials. The guides explored barriers to care, perceptions of service quality, provider choice and the role of social networks.

Validity and reliability

The instruments were developed from literature on migration, healthcare access and health-seeking behaviour and were reviewed by experts in migration and public health. A pre-test was conducted with 30 migrants who were not included in the main sample. Internal consistency was assessed using Cronbach's alpha. Reported alpha

coefficients were 0.760 for health-seeking behaviour, 0.833 for health outcomes, 0.706 for patient satisfaction, 0.819 for healthcare service, 0.819 for financial status and 0.874 for social status, all meeting the study's minimum criterion of 0.70.

Data collection

Data collection took place from November 2023 to May 2024. Questionnaires were administered face-to-face by the researcher and trained research assistants in Dagbani, Twi, Hausa or English, depending on participant preference. FGDs lasted approximately 60–90 minutes, while in-depth interviews lasted approximately 30–60 minutes.

Data analysis

Quantitative data were analysed using IBM SPSS Statistics version 20. Descriptive statistics (frequencies, percentages, means and standard deviations) were used to summarise participant characteristics and healthcare-access indicators. Pearson correlation analysis was used to examine bivariate associations between the coded socio-demographic and socio-economic variables and utilisation of the five provider categories. Statistical significance was assessed at $p < 0.05$ and $p < 0.01$, as indicated in the correlation tables.

Qualitative audio recordings were transcribed verbatim and analysed using thematic content analysis. Coding used both deductive and inductive approaches, after which related codes were grouped into themes. Illustrative quotations were selected to show how migrants described financial, institutional and sociocultural influences on healthcare use. The qualitative themes were compared with the quantitative results during mixed-methods interpretation.

Use of generative AI in manuscript preparation

During manuscript preparation, ChatGPT (OpenAI) was used to assist with language editing, restructuring and formatting to align the manuscript with journal requirements. The authors reviewed and edited the resulting text and take full responsibility for the content of the manuscript.

Ethical considerations

This research involved human participants and was reviewed and approved by the Humanities and Social Sciences Research Ethics Committee (HuSSREC) of Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana (Approval No. HuSSREC/AP/246/VOL.4). All methods and procedures were performed in accordance with the relevant institutional ethical guidelines and regulations governing research involving human participants. Prior to participation, all participants were informed about the purpose and procedures of the study, the voluntary nature of participation, their right to decline or withdraw without adverse consequences, and the measures adopted to protect confidentiality and anonymity. Written informed consent was obtained from adult participants. For participants below 18 years of age, informed consent was obtained from a parent and/or legal guardian, together with the participant's assent where appropriate. All information obtained from participants was treated confidentially and used solely for the purposes of the study.

4. Results

4.1 Demographic Characteristics of Respondents

Table 2
Demographic Characteristics of Respondents

Characteristic	Category	Frequency	Percentage
Gender	Male	133	34.2
	Female	256	65.8
Age	10–19 years	81	20.8
	20–29 years	190	48.9
	30–39 years	99	25.4
	40–49 years	15	3.9
	50 + years	4	1.0
Age at Migration	10–19 years	215	55.3
	20–29 years	158	40.6
	30 + years	16	4.1
Education	No formal education	122	31.4
	Primary	85	21.9
	JHS	76	19.5
	SHS/Voc/Tech	80	20.6
	Tertiary	26	6.7
Marital Status	Single	191	49.1
	Married	152	39.1
	Co-habitation	37	9.5
	Divorced	9	2.3
Years in Kumasi	< 1 year	127	32.6
	1–3 years	128	32.9
	4–6 years	43	11.1
	7–10 years	48	12.3
	> 10 years	43	11.1

The findings in Table 2 reveal a predominantly female respondent population, with women constituting 65.8% of the sample compared to 34.2% men. This gender distribution underscores the growing trend of women in north-south migration, driven largely by the pursuit of economic opportunities in urban centres such as Kumasi. In terms of age, nearly half of the respondents (48.9%) were within the 20–29-year age bracket, followed by those aged 30–39 years (25.4%). Respondents aged 10–19 years accounted for 20.8% of the sample, while only 4.9% were aged 40 years or older. Regarding age at migration, more than half (55.3%) moved to Kumasi before reaching 20 years, while 40.6% migrated between ages 20 and 29. Only a small proportion (4.1%) relocated after age 30. Educational

attainment was generally low: 31.4% had no formal education, 21.9% completed primary school, and 19.5% attained Junior High School level. Those with Senior High School, vocational, or technical education represented 20.6%, while only 6.7% had tertiary qualifications. Concerning marital status, nearly half (49.1%) were single, 39.1% were married, 9.5% were cohabiting, and only 2.3% were divorced. In terms of length of residence in Kumasi, approximately one-third (32.9%) had stayed for one to three years, and a similar proportion (32.6%) had been in the city for less than a year. Those residing for four to six years accounted for 11.1%, while 12.3% had lived in Kumasi for seven to ten years. Only 11.1% had remained in the city for more than a decade.

4.2 Level of Access to Healthcare Facilities

This section evaluates the level of access migrants have to health facilities in Metropolitan Kumasi.

Table 3
Level of Access to Healthcare Facilities among North-South Migrants in Metropolitan Kumasi

Indicator	N	Min	Max	Mean	Std. Dev.
There is a health facility close to where I live	389	1	5	4.09	1.086
Transportation to health facilities is not a barrier	389	1	5	4.11	.806
I find it easy to get to a health facility when I need care	389	1	5	4.05	.906
I know where to go in case of an emergency	389	1	5	4.05	1.068
I can access health services within 30 minutes of my home	389	1	5	4.02	1.200
Access to health services has improved since migration	389	1	5	4.00	1.171
It is easy for me to reach a health facility when I need care	389	1	5	3.91	1.168
I am aware of the health facilities in my area	389	1	5	3.82	1.053
In emergencies, I can quickly access appropriate healthcare	389	1	5	3.77	1.066
My overall access to healthcare in Kumasi is satisfactory	389	1	5	3.73	.988
I can access healthcare services at any time (day/night)	389	1	5	3.70	1.293
The type of health facility available meets my health needs	389	1	5	3.68	1.279
I can access a primary healthcare facility without travelling far	389	1	5	3.64	1.071
I feel comfortable sharing my health issues with staff	389	1	5	3.64	1.133
The operating hours of health facilities suit my schedule	389	1	5	3.64	1.211
I have a valid National Health Insurance Scheme (NHIS) card	389	1	5	3.55	1.717
The health facilities in my area are adequately equipped	389	1	5	3.43	1.254
I live within 5 kilometres of a health facility	389	1	5	3.43	1.325
I have easy access to a district or regional hospital	389	1	5	3.34	1.189
I feel respected by healthcare staff	389	1	5	3.34	1.317
I often use health facilities when I am sick	389	1	5	3.36	1.320
I avoid going to the hospital due to long queues or delays	389	1	5	3.27	1.562
The current distribution of health facilities in my area is fair	389	1	5	3.23	1.226
Health workers are sensitive to my language and culture	389	1	5	3.18	1.323
I have experienced discrimination at health facilities	389	1	5	2.95	1.571
I can easily access specialist services when needed	389	1	5	2.93	1.342
There are enough health facilities in my district	389	1	5	2.89	1.232
I can afford healthcare services in Kumasi	389	1	5	2.86	1.475
I worry about the cost of healthcare services	389	1	5	3.45	1.457
Health insurance makes healthcare more accessible	389	1	5	2.98	1.256

Indicator	N	Min	Max	Mean	Std. Dev.
I know what health services are covered by NHIS	389	1	5	2.57	1.591
NHIS covers most of the services I need	389	1	5	2.07	1.272

According to Table 3, the respondents generally perceived that health facilities are physically accessible. Respondents strongly agreed that there is a health facility close to where they live (Mean = 4.09), that transportation to health facilities is available and reliable (Mean = 4.11), and that they can access health services within 30 minutes of their residence (Mean = 4.02). Respondents also found it easy to reach a health facility when healthcare is needed (Mean = 4.05) and were aware of emergency service locations (Mean = 4.05). The relatively low mean scores for distance-related barriers confirm that geographical accessibility is not a significant barrier, with respondents disagreeing that they delay seeking care due to long distances (Mean = 2.18) or avoid facilities due to travel costs (Mean = 1.84). These findings suggest that disparities in healthcare utilisation are more likely influenced by other factors, such as financial constraints, employment conditions, health insurance status, time limitations, and socio-cultural barriers, rather than the physical availability of healthcare facilities. Financial barriers emerged as a major constraint. Respondents generally disagreed that they could afford healthcare services in Kumasi (Mean = 2.86), while many expressed concern about the cost of healthcare services (Mean = 3.45). Despite a moderate level of NHIS card ownership (Mean = 3.55), respondents expressed strong dissatisfaction with the extent of NHIS coverage (Mean = 2.07) and demonstrated limited knowledge regarding services covered (Mean = 2.57). Health insurance was only perceived to moderately improve healthcare accessibility (Mean = 2.98).

A respondent at Bantama explained:

"The health insurance can only remove the card and pay for paracetamol."

This narrative suggests that migrants perceive significant gaps in insurance coverage, contributing to out-of-pocket healthcare expenditures and financial vulnerability.

During the FGD among female migrant group at Pampaso, they indicated that the presence of a nearby clinic and recommendations from friends encouraged them to seek treatment from that facility whenever they became ill. One participant described the clinic experience as follows:

The clinic is very good because they treat us well and we can pay because is not expensive and you don't need to go and queue, and when they give you medicine, and you take it as they have told you, you get well.

This narrative suggests that migrants' perceptions of clinics are influenced not only by accessibility and affordability but also by positive experiences communicated through social networks.

While most migrants reported positive experiences with healthcare providers (Mean = 3.34 for respect, Mean = 3.64 for comfort sharing health issues), significant gaps remain. Migrants were less likely to report that healthcare providers understood their culture and language (Mean = 3.18), and some reported experiencing perceived discrimination (Mean = 2.95). These barriers, though subtle, affect migrants' willingness to utilise formal healthcare services.

Long waiting times constituted a significant deterrent to healthcare utilisation (Mean = 3.27 for avoiding facilities due to long queues). Respondents reported a relatively low tendency to utilise health facilities when sick (Mean =

3.36). The findings suggest that barriers to utilisation are not primarily associated with geographical accessibility but rather with efficiency and perceived service quality.

The qualitative findings support these results. A respondent at Suame Market explained:

"When you go to the hospital, and you do not know any staff, they will delay you and be calling those you know that you arrived there before them."

4.3 Determinants Influencing the Use of Health Facilities

This section examines the determinants influencing the utilisation of different healthcare providers among north-south migrants in Metropolitan Kumasi. Pearson correlation analysis was conducted to determine the relationships between respondents' socio-demographic and socio-economic characteristics and their utilisation of hospitals, clinics, traditional herbal healers, pharmacies/over-the-counter (OTC) medicine, and faith healers.

4.3.1 Socio-Demographic Factors and Healthcare Provider Utilisation

Table 4
Correlation between Socio-Demographic Factors and Healthcare Provider Utilisation

Healthcare Provider	Age	Gender	Religion	Education	Marital Status	Ethnic Group
Hospital	.002	– .192**	– .093	.041	.114*	– .029
Clinic	.018	– .094	– .046	.029	.070	.093
Traditional Herbal Healer	.007	– .178**	– .059	.082	.047	.097
Pharmacy/OTC	.110*	– .147**	– .013	.023	.171**	.155**
Faith Healer	.104*	– .162**	.087	– .003	.136**	.000

Table 4 presents the relationship between respondents' socio-demographic characteristics and their utilisation of various healthcare providers. The results indicate that healthcare utilisation differs according to the type of provider, with only a few socio-demographic factors showing statistically significant relationships. Hospital utilisation was significantly associated with gender ($r = -0.192$, $p < 0.01$), and marital status ($r = 0.114$, $p < 0.05$). The negative relationship with gender suggests that hospital utilisation differs between males and females, while the positive relationship with marital status indicate that married respondents were more likely to utilise hospital services. However, age ($r = 0.002$), religion ($r = -0.093$), education ($r = 0.041$), and ethnic group ($r = -0.029$) were not significantly associated with hospital utilisation, suggesting that these characteristics did not influence migrants' decisions to use hospital services. No statistically significant relationships were found between clinic utilisation and age, gender, religion, education, marital status, or ethnic group. The utilisation of traditional herbal healers was significantly associated with gender ($r = -0.178$, $p < 0.01$). This suggests that the use of herbal healers varied by gender. None of the remaining socio-demographic variables showed significant relationships with herbal healer utilisation. For pharmacy and over-the-counter (OTC) medicine, age ($r = 0.110$, $p < 0.05$), gender ($r = -0.147$, $p < 0.01$), marital status ($r = 0.171$, $p < 0.01$), and ethnic group ($r = 0.155$, $p < 0.01$) were all significantly associated with utilisation. These findings mean that pharmacy and OTC medicine use is influenced by a wider range of socio-demographic characteristics than other healthcare providers. Religion and education were not significantly related to pharmacy utilisation. Faith healer utilisation was significantly related to age ($r = 0.104$, $p < 0.05$), gender ($r =$

-0.162, $p < 0.01$), and marital status ($r = 0.136$, $p < 0.01$). However, religion, education, and ethnic group did not significantly influence the use of faith healers. The results indicate that gender was the most consistent socio-demographic determinant of healthcare utilisation, influencing the use of several healthcare providers. Marital status also played an important role, particularly in hospital, pharmacy/OTC, and faith healer utilisation, whereas education and religion did not significantly influence the choice of healthcare provider.

4.3.2 Socio-Economic Factors and Healthcare Provider Utilisation

Table 5 presents the relationship between respondents' socio-economic characteristics and healthcare provider utilisation. The findings reveal that several socio-economic factors significantly influenced migrants' healthcare choices, although the determinants varied across healthcare providers.

Table 5
Correlation between Socio-Economic Factors and Healthcare Provider Utilisation

Healthcare Provider	Employment Status	Number of Children	Income	Duration of Stay	Kind of Job	Place of Residence	Savings	NHIS Status
Hospital	.056	-.029	.144**	.094	.137**	-.003	-.046	-.074
Clinic	-.043	.093	.164**	.073	.088	.002	-.039	-.099
Traditional Herbal Healer	.033	.097	.112*	.044	.153**	-.143**	-.018	.000
Pharmacy/OTC	.076	.155**	.115*	.241**	.172**	.176**	-.042	.060
Faith Healer	-.063	.000	.081	.074	.119*	-.089	.018	.064
*** $p < 0.05$, * $p < 0.01$								

As seen in Table 5, hospital utilisation was positively associated with income ($r = 0.144$, $p < 0.01$) and kind of job ($r = 0.137$, $p < 0.01$). This indicates that migrants with higher incomes and those engaged in more stable forms of employment were more likely to utilise hospital services. Employment status, number of children, duration of stay, place of residence, savings, and NHIS status were not significantly associated with hospital utilisation. Clinic utilisation showed a significant positive relationship with income ($r = 0.164$, $p < 0.01$), suggesting that respondents with higher incomes were more likely to seek care from clinics. None of the other socio-economic variables demonstrated statistically significant relationships with clinic utilisation. Traditional herbal healer utilisation was positively associated with income ($r = 0.112$, $p < 0.05$) and kind of job ($r = 0.153$, $p < 0.01$), while place of residence showed a significant negative relationship ($r = -0.143$, $p < 0.01$). This indicates that utilisation of herbal healers differed according to respondents' income, occupation, and residential location. The remaining socio-economic variables were not significantly associated with herbal healer utilisation. Pharmacy and OTC medicine utilisation exhibited the highest number of significant relationships among all healthcare providers. Number of children ($r = 0.155$, $p < 0.01$), income ($r = 0.115$, $p < 0.05$), duration of stay ($r = 0.241$, $p < 0.01$), kind of job ($r = 0.172$, $p < 0.01$), and place of residence ($r = 0.176$, $p < 0.01$) were all positively associated with pharmacy utilisation. Among these variables, duration of stay recorded the strongest relationship, suggesting that migrants who had resided longer in Kumasi were more likely to rely on pharmacies and OTC medicines. Faith healer utilisation showed only one statistically significant relationship, namely kind of job ($r = 0.119$, $p < 0.05$). Employment status, number of children, income, duration of stay, place of residence, savings, and NHIS status were not significantly associated with faith

healer utilisation. These findings demonstrate that income and kind of job were the most consistent socio-economic determinants of healthcare utilisation, influencing the use of hospitals, clinics, traditional herbal healers, pharmacies/OTC medicines, and faith healers. Pharmacy and OTC medicine utilisation was influenced by the greatest number of socio-economic characteristics, whereas NHIS status and savings showed no significant relationship with the utilisation of any healthcare provider. These findings suggest that migrants' economic circumstances play a greater role in determining healthcare utilisation than financial savings or insurance status.

4.4. Discussion

The findings reveal a paradox in healthcare access among north-south migrants in Metropolitan Kumasi. While physical access to health facilities is high, with respondents reporting proximity to facilities, ease of reaching them, and availability of transportation, actual utilisation remains relatively low. This access-utilisation gap is consistent with findings from Ashiagbor and others, who identified that the population within Metropolitan Kumasi lives within the recommended 5km distance from formal health facilities, with a mean distance of 1.09km from residence to facility [30]. However, the present findings contradict studies that identified long distances as a major barrier to healthcare access [20]. The difference may be due to the study's scope and the nature of migrants examined. The findings suggest that poor healthcare utilisation among migrants cannot be attributed primarily to physical inaccessibility. Rather, financial limitations, employment insecurity, inadequate health insurance, and opportunity costs associated with seeking healthcare play more significant roles in shaping migrants' health-seeking behaviour. These findings support the Fundamental Cost Theory, which posits that healthcare utilisation is determined more by the total economic, time, and opportunity costs of accessing healthcare than by the physical availability of health facilities [24]. Although migrants perceived hospital services to be effective, high direct and indirect costs discouraged formal healthcare utilisation and encouraged greater reliance on pharmacies and licensed chemical sellers.

Financial barriers emerged as the most significant obstacle to healthcare access, with respondents unable to afford healthcare services and expressing concern about costs. This finding corroborates extensive literature documenting healthcare costs as a major financial barrier preventing internal migrants in Ghana from accessing formal healthcare services [7, 13, 14, 31, 32]. The limited effectiveness of the NHIS further compounds financial barriers. Although 56.8% of respondents had active NHIS cards, they expressed strong dissatisfaction with coverage and limited knowledge of benefits. These findings align with studies that identified a large gap between having health insurance and receiving healthcare access, as respondents are often required to pay additional fees despite being enrolled [14]. The inability to afford healthcare means that illnesses that could have been treated at an early stage are allowed to progress, leading to more severe health conditions and higher treatment costs.

Institutional barriers, particularly long waiting times, discourage migrants from seeking timely medical attention. For migrants engaged in informal economic activities, time spent waiting for healthcare services represents a substantial opportunity cost. This finding is consistent with studies identifying long queues and excessive waiting times as major barriers to healthcare utilisation among migrants [7, 16, 33]. Cultural and language barriers further limit access. While most migrants reported respectful treatment, healthcare providers were perceived as insensitive to migrants' culture and language (Mean = 3.18), and some migrants experienced discrimination. These barriers, though subtle, affect migrants' willingness to utilise formal healthcare services. This finding aligns with previous studies showing that most internal migrants could only speak their local dialect and lacked confidence in communicating effectively to seek healthcare services [32, 20, 7].

The finding that female migrants are less likely to utilise hospital services ($r = -0.192, p < 0.001$) indicates that migration-related vulnerabilities expose female migrants to economic and social barriers that hinder access to hospital-based care. While previous studies have shown that women generally demonstrate better health-seeking behaviour [34], the present findings suggest that the migration experience may alter these patterns, exposing female migrants to unique vulnerabilities. The positive relationship between marital status and hospital utilisation ($r = 0.114, p = 0.025$) confirms the importance of social support networks in facilitating healthcare access. Married migrants benefit from spousal support, joint decision-making, and access to family resources, consistent with studies identifying marital status as an important determinant of healthcare utilisation [35].

The significant relationship between stable employment and hospital utilisation ($r = 0.137, p = 0.007$) highlights the role of economic security in accessing formal healthcare. Migrants with stable jobs possess greater financial resources and social networks that facilitate healthcare access, consistent with existing literature [36, 11]. The absence of a significant relationship between duration of stay and hospital utilisation ($r = 0.094, p = 0.064$) challenges the assumption that prolonged residence automatically leads to greater healthcare use through social integration. Instead, structural barriers and socio-economic vulnerabilities appear to persist regardless of the duration of migrants' stay, consistent with findings that migrants face persistent barriers to healthcare leading to increased self-medication [7]. The significant influence of ethnicity on clinic utilisation ($r = 0.164, p = 0.001$) and pharmacy use ($r = 0.155, p = 0.002$) highlights the importance of cultural integration and ethnic social networks in shaping healthcare decisions. Migrants often rely on recommendations from family, friends, and ethnic group members when choosing healthcare providers, consistent with the broader literature on socio-cultural factors influencing healthcare utilisation [18].

4.4.1 Theoretical Implications

The findings of this study provide strong empirical support for Andersen's Behavioural Model of Health Services Use for Vulnerable Populations [23]. The study confirms that healthcare utilisation among north-south migrants is shaped by the interaction of predisposing factors such as gender, marital status, ethnicity, and cultural beliefs; enabling factors including income, employment, health insurance, transportation, and geographical accessibility; and need factors related to perceived and evaluated health conditions. The study also validates the inclusion of vulnerability-specific domains in the expanded model, as migrants' healthcare decisions were significantly influenced by poverty, insecure employment, poor housing conditions, and competing needs such as daily survival and remittance obligations. The finding that physical access to health facilities was high yet actual utilisation remained low demonstrates that healthcare utilisation is not determined solely by the availability of services but by the complex interplay of individual characteristics and structural socio-economic conditions.

Furthermore, the findings support the Fundamental Cause Theory [24, 25], which posits that socio-economic status remains persistently associated with health outcomes and healthcare utilisation because individuals with greater resources can deploy them flexibly to avoid risks and minimise disease consequences. The study demonstrates that migrants with limited access to flexible resources such as income, education, stable employment, and social networks are more likely to rely on informal healthcare providers such as pharmacies, herbalists, and faith healers, while those with greater resources are better positioned to utilise formal hospital and clinic services. The persistence of healthcare inequalities despite physical access to facilities reflects the theory's proposition that socio-economic status determines the ability to avoid risks and access quality care. Together, these theories provide a comprehensive framework for understanding how socio-economic vulnerability, structural barriers, and

resource access shape healthcare utilisation among migrant populations, reinforcing the need for interventions that address both individual and structural determinants of health.

5. Conclusion and Recommendations

The study has revealed that north-south migrants in Metropolitan Kumasi have good physical access to health facilities, yet actual utilisation remains low due to significant financial constraints, inadequate NHIS coverage, long waiting times, and cultural and language barriers. The study further establishes that healthcare utilisation is influenced by multiple determinants, including gender (females are less likely to use hospitals), marital status (married migrants are more likely to use hospitals), employment stability and income (which increase formal healthcare use), duration of stay in the city (which strongly predicts pharmacy/OTC use), and ethnicity (which influences clinic and pharmacy choices). These findings demonstrate that physical access alone does not guarantee healthcare utilisation. Addressing the healthcare needs of migrants requires integrated interventions that simultaneously tackle financial barriers, strengthen health insurance coverage and benefit packages, improve service quality and efficiency, promote culturally sensitive healthcare delivery, and address the broader socio-economic vulnerabilities that shape migrants' healthcare decisions. Therefore, improving healthcare utilisation among migrants demands a comprehensive approach that goes beyond simply providing health facilities to addressing the structural, financial, and socio-cultural determinants that constrain access to care. As a result, the Ministry of Health and the Kumasi Metropolitan Assembly (KMA) should implement subsidised healthcare programmes for low-income migrants, including waiver of user fees and reduced consultation charges. Mobile health clinics should be deployed to migrant communities and workplaces to reduce transportation costs and opportunity costs associated with seeking care.

The Health Facilities Regulatory Agency (HeFRA) should strengthen the regulation, licensing, and monitoring of pharmacies, licensed chemical sellers, and herbal practitioners. Formal referral systems should be established between informal providers and hospitals to promote early diagnosis and appropriate treatment, with public health education campaigns discouraging unsafe self-medication. The Ghana Health Service should intensify culturally appropriate health promotion programmes targeting migrants, covering preventive healthcare, healthy nutrition, routine medical screening, and occupational health and safety. Community outreach services and mobile clinics should be expanded in migrant communities.

6. Implications

The study has significant social implications for addressing the vulnerabilities of migrant populations. The findings revealed that female migrants are less likely to use hospitals, highlighting the need for gender-sensitive health policies and social protection programmes that address the unique barriers women face. The influence of ethnicity on healthcare utilisation underscores the importance of supporting migrant associations and community-based organisations to facilitate health information access and advocate for migrants' health rights. The study also highlights migration as a social determinant of health, revealing that the concentration of migrants in low-paying, insecure informal sector jobs and poor housing conditions reflects broader structural inequalities that perpetuate health disparities. Addressing these determinants requires coordinated efforts across employment, housing, education, and social protection sectors. The persistent reliance on informal healthcare despite physical access to facilities suggests social exclusion within the healthcare system, reinforcing the need for anti-discrimination policies and culturally responsive healthcare delivery.

7. Originality

This study makes several original contributions to the literature on healthcare access and utilisation among internal migrants in Ghana. First, it provides a systematic evaluation of the level of access migrants have to health facilities, revealing a significant gap between physical access and actual utilisation. It examines the determinants of healthcare utilisation among a diverse sample of migrants across multiple satellite markets in Kumasi, moving beyond the predominant focus on female head porters in Accra. It also applies Andersen's Behavioural Model for Vulnerable Populations and the Fundamental Cause Theory to the Ghanaian migration context, demonstrating how predisposing, enabling, need, and vulnerability-specific factors interact to shape healthcare utilisation. It further provides evidence-based recommendations for policy interventions targeting both healthcare access and utilisation among migrant populations.

Declarations

8. Consent statement

Informed consent was obtained from all adult participants prior to participation. For participants below 18 years of age, informed consent was obtained from their parent and/or legal guardian, together with the participant's assent where appropriate. Participation was voluntary, and all participants were informed of the purpose of the study, their right to withdraw at any stage, and the measures taken to protect the confidentiality of their information.

9. Data Availability Statement

The data that support the findings of this study are available but restricted for public due to ethical reasons. The datasets used and analysed during the current study are available from the corresponding author on request

10. Funding Declaration

The authors received no financial support for authorship, and publication of this article.

11. Disclosure statement

The authors disclose no possible conflicts of interest.

12. Ethics Approval Declaration

This research involved human participants and was reviewed and approved by the Humanities and Social Sciences Research Ethics Committee (HuSSREC) of Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana (Approval No. HuSSREC/AP/246/VOL.4). All methods and procedures were performed in accordance with the relevant institutional ethical guidelines and regulations governing research involving human participants. Prior to participation, all participants were informed about the purpose and procedures of the study, the voluntary nature of participation, their right to decline or withdraw without adverse consequences, and the measures adopted to protect confidentiality and anonymity. Written informed consent was obtained from adult participants. For participants below 18 years of age, informed consent was obtained from a parent and/or legal guardian, together with the participant's assent where appropriate. All information obtained from participants was treated confidentially and used solely for the purposes of the study

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