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# Screening for chronic non-communicable diseases among migrants living in informal settlements in Ghana: a qualitative study of attitudes, barriers and strategies

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**Screening for chronic non-communicable diseases among migrants living in informal settlements in Ghana: a qualitative study of attitudes, barriers and strategies**

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## Abstract

**Objectives:** Chronic non-communicable diseases (CNCDs) such as cancers, diabetes and chronic respiratory diseases remain the leading cause of death globally (74% of all deaths) with 77% of these occurring in low-middle-income countries (LMICs) such as Ghana. Screening is a critical and proactive measure to detect and prevent severe health outcomes, but remains poor among marginalised populations such as migrants living in informal settlements within cities in LMICs. Thus, this exploratory qualitative study explored attitudes and barriers to CNCDs screening among migrants living in informal settlements in Ghana.

**Methods:** Thirty (30) participants were purposively selected from two popular informal settlements, including Aboabo and Moke, within the Asokore Mampong Municipality. Semi-structured interviews were conducted in-person, face-to-face with the participants. The interviews were transcribed verbatim, and the data were analysed thematically.

**Results:** The thematic analysis identified three main themes from participants' perspectives and experiences. The main themes were a positive attitude towards chronic disease screening; multilevel barriers to chronic disease screening services; and strategies to promote chronic disease screening services. Barriers included financial costs, cultural issues, fear of bad news (iatrophobia), misconceptions about health screening, time constraints, competing interests and priorities, and the healthcare environment. Strategies to improve screening as suggested by the participants included bringing screening services closer to people, lessening financial barriers to essential screening services, promoting a friendly healthcare environment and in-language and culturally appropriate screening, education and campaigns**.**

**Conclusion*:*** Reducing financial barriers, community-based screening, and in-language and community-led education are essential to improving screening uptake.

**Keywords:** Non-communicable disease; migrants; informal settlements; screening; attitudes; Kumasi; Ghana

## Introduction

Chronic non-communicable diseases (CNCDs) are health conditions that affect individuals over a long period and are not transmitted from person to person through infectious agents (Upadhyay, 2022). CNCDs have become one of the highest disease burdens on the healthcare system and a major cause of mortality and disability worldwide (Bennett et al., 2018; Upadhyay, 2022). Globally, about 41 million mortalities of CNCDs are recorded every year (Piovani et al., 2022), accounting for 71% of all deaths (Bennett et al., 2018). CNCDs also account for 44% of premature deaths globally (Cao et al., 2018; Malta et al., 2020). About 80% of CNCD deaths occur in low-and middle-income countries (LMICs) (Abebe et al., 2020), driven by increasing incidence of cardiovascular risk factors, including reduced physical activities, unhealthy diets, diabetes, obesity, hypertension, and air pollution (Goswami, 2024). Rapid unplanned urban growth, ageing population, and unhealthy lifestyles are among the driving factors of CNCDs (Mehmood, 2025).

The prevalence of CNCDs in urban informal settlements in LMICs has received significant attention, along with efforts to address the specific needs of residents (Ramani et al., 2024). As the global population continues to grow, the share of residents who live in informal settlements is projected to increase from current estimates of about 1 billion to about 3 billion by 2050 (Mahabir et al., 2016; UN SDG, 2023). Therefore, this population has become a major hub of growing health problems that require the attention of healthcare providers (Riley et al., 2007). Although residents of urban informal settlements are heterogeneous social groups (Okwei et al., 2025), health service providers are only aware of health issues affecting informal populations at relatively advanced stages of illness (Riley et al., 2007). This is particularly worrying for residents of informal settlements in African cities, which account for about 56% of the over 1 billion people worldwide living in informal settlements (UN-Habitat, 2022).

In informal settlements, migrants face significant health risks due to cultural, political, social, and economic conditions as they settle in a new environment (Agyemang & van den Born, 2019). In informal settlements, residents face poor environmental conditions, limited social services, and inadequate institutional responses (Okwei et al., 2025). As migrants adapt to life in new environments, they are often exposed to diseases and infections, which are also linked to factors such as gender, adaptation, economic, psychological, and climatic conditions. In South Africa, for example, the risk of CNCDs among migrants (19.81%) was higher than that of non-migrants (16.69%) (Ajaero et al., 2021). As argued by Pop and Iorga (2021), the stress and anxiety of unstable work, acculturation, and the adoption of urban dietary patterns significantly increase the risk of developing chronic conditions among migrants. In Haiti, households in the informal communities in Port-au-Prince needing medical care for children suffering from CNCDs, such as respiratory and gastrointestinal illnesses, were unable to access it, mainly due to financial constraints (McNairy et al., 2019).

The informal and slum population in Ghana has increased from 5.5 million in 2017 to 8.8 million in 2020, representing a 60% increase (National Development Planning Commission, 2022). As elsewhere, migrants in Ghanaian cities are constrained to informal and slum areas characterized by inadequate sanitation, overcrowding, unemployment, poor housing, and limited social services (Bandauko et al., 2025; Banks et al., 2020; Okwei et al., 2025). However, while there is a growing body of literature on CNCDs, the specific case of migrants in informal are missing. For instance, a cross-sectional study by Konkor and Kuuire (2023), assessed the relationship between the time spent and mobility of residents of residential neighbourhoods in Ghana and their CNCD status. Also, Minicuci et al. (2014), examine the socio-demographic and socio-economic patterns of CNCDs among older adult population (aged 50 years and above). Within the context of informal settlements, Bawah et al. (2019) investigated the

association between diabetes prevalence and the socio-demographic status among homeless residents in Nima and Agbogbloshie. While these studies deepen scholarly understanding of CNCDs in Ghana, the association between CNCDs and migrants, particularly those residing in informal areas, remains unexplored. This oversight is problematic because interventions designed for the general population may fail to account for the unique structural and cultural barriers faced by migrants residing in informal settlements.

Meanwhile, Konkor et al. (2025), underscored that understanding the factors driving CNCD screening, such as cultural beliefs, health campaigns, and cost implications, can greatly inform the development of tailored interventions to improve screening uptake. Therefore, it is crucial to examine the attitudes, barriers, and strategies affecting the screening for CNCDs in migrant informal settlements. Insights from this study can inform healthcare systems and providers, guide the expansion of screening programmes in informal contexts, and help policymakers and healthcare practitioners develop effective strategies to increase the uptake of CNCD screening in Ghana and other similar geographic contexts.

## Methods

### Study context

The study sites are in the Asokore Mampong Municipality. The municipality was created by Legislative Instrument (LI 2112) with Mampong as its first administrative capital. With a population of 304,815, the municipality covers a land area of 24.17 sq. km and lies within at least 10km of the Kumasi central business district (Asokore Mampong Municipality, 2023). Due to its proximity to the central business district, the municipality has witnessed growing economic activities and a high migrant population, especially from Northern Ghana. This has placed pressure on already strained social services and city authorities to provide adequate housing, infrastructure, and amenities (National Development Planning Commission, 2022). To conduct this study, two informal settlements (Aboabo and Moke) were selected. Both study communities are located in the Asokore Mampong Municipality of the Ashanti Region (Ofosu et al., 2023; Quaicoe, 2025). Aboabo is an urban informal settlement which has become a primary destination for migrants, especially those from the northern regions. The settlement is characterized by widespread poverty, low literacy, high unemployment, overcrowded living conditions, substandard housing, and poor sanitation (Ofosu et al., 2023).

Similarly, Moke has served as a home for many migrants from northern Ghana seeking better socioeconomic opportunities in cities like Kumasi (Quaicoe, 2025). Like Aboabo, Moke is characterized by extreme poverty, wooden and tin-shed structures, poor environmental conditions, and the absence of proper drainage, all of which contribute to flooding and health risks. Due to the poor housing quality, the settlement has been very vulnerable to fire hazards (Quaicoe, 2025). Both settlements lack official recognition because they are not formally acknowledged in urban planning systems. Therefore, residents and the housing within them exist outside the formal planning and regulatory system (Ofosu et al., 2023). Therefore, residents have largely been ignored by municipal authorities in the provision of essential social services and infrastructure. These factors contribute to the overall unhealthy and hazardous living environment faced by its residents, emphasizing the urgent need for targeted health intervention and policy focus.

## Participant recruitment

Participation in this study was restricted to community residents who were at least 18 years old and had lived in the community for at least 5 years. This ensured the inclusion of participants with insights and experiences to contribute to the study. Participants who had either been personally diagnosed or had a relative diagnosed with a chronic condition, such as a lump in the breast or diabetes, were purposively selected because such experiences often influence perceptions, awareness, and engagement with screening services.

## Data collection

This study employed an exploratory qualitative design, using semi-structured interviews to understand migrants' perceptions of CNCD screening. The interview guide was developed for this study (see supplementary file 1). Semi-structured interviews were conducted with residents from June 2025 to August 2025. Interview locations were selected based on participants' preferences and included homes, community gathering centres, and workplaces. With the help of a local research assistant, potential participants were first approached and informed of the study's primary objectives. To ensure the credibility and dependability of the data collection instrument, the semi-structured interview guide was pilot-tested in Asawasi (an adjoining community) with five randomly selected residents. Feedback and insights gained from the pilot test were subsequently utilized to refine the questions and contextual strategies to facilitate understanding among study participants.

The interviews were conducted in Twi (the local dialect of Kumasi) and Hausa (spoken widely by ethnic groups from Northern Ghana). This was done to accommodate the diverse needs of participants and ensure that all participants can effectively engage in and benefit from the research activities, regardless of their individual language barriers. Each interview lasted on average 60 minutes. Participants were asked questions such as: Do you think screening/check-ups for diseases such as cancer help prevent these diseases? What do you think is the reason why you or others do not like doing screening/check-ups? What will help you or others do a screening/checkup for these diseases? In all, 30 interviews were conducted with 15 participants from each study site. The sample size was determined by thematic saturation, a point at which data collection continued until no new themes emerged from successive interviews (Guest et al., 2006), and was considered sufficient to reflect the variety of perspectives.

In addition to taking detailed notes, the interviews were audio-recorded with participants' consent. This approach enabled the interviewer to accurately document the participants' statements in their own words, thereby facilitating a precise analysis of the content discussed during the interviews. To protect participants' anonymity, we used pseudonyms instead of their real names. Participants were identified numerically by the order in which they were interviewed (e.g., Participant 1, Participant 2, Participant 3…Participant 30).

## Data analysis

Two of the researchers (PP and RO) who are trained and experienced qualitative researchers re-listened to the recordings immediately after the interviews ended. Re-listening allowed further reflection on responses. The researchers personally transcribed the recordings and noted detailed thoughts and reflections about the transcripts. All transcripts were checked for accuracy by comparing them to the original audio and were de-identified to ensure that any identity-revealing information was deleted. Transcripts were then uploaded to QSR NVivo, computer software for qualitative data management. Thematic data coding and analysis approaches were used for coding and analysis (Bruan and Clarke, 2006; Bruan and Clarke, 2019). The analysis followed six iterative steps: data familiarisation, initial code development,

theme searching, theme review, definition, naming, and report. An integrated approach to coding involving both inductive and deductive development of codes was adopted (Bradley et al., 2007). After several rounds of reading through the transcripts, coding began, and a coding frame was developed with four transcripts. This flexible coding frame was revised based on new insights from the remaining transcripts. Thus, the coding frame served as a starting point, but new codes were freely generated as needed to be integrated into or revised the existing coding frame structure. These codes were merged into categories, which were checked across the dataset, and additional codes were included when identified. The themes were iteratively developed by searching, identifying, integrating and refining codes and categories.

## Results

### Background characteristics of the participants

| Demographics | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 19 | 63.3 |
| Female | 11 | 36.7 |
| **Age (years)** | | |
| 18—29 | - | - |
| 30—39 | 17 | 56.7 |
| 40—49 | 7 | 23.3 |
| 50+ | 6 | 20 |
| **Education** | | |
| None | 15 | 50 |
| Basic | 6 | 20 |
| Junior high | 6 | 20 |
| Secondary | 3 | 10 |
| **Ethnicity** | | |
| Frafra | 3 | 10 |
| Konkomba | 10 | 33.3 |
| Dagati | 1 | 3.3 |
| Dagomba | 13 | 43.3 |
| Mamprusi | 1 | 3.3 |
| Kusasi | 2 | 6.7 |
| **Length of stay (years)** | | |
| <5 | - | - |
| 6—10 | 6 | 20 |
| 10+ | 24 | 80 |
| **Monthly income (GHS)** | | |
| < 500 | 5 | 16.7 |
| 500—1000 | 19 | 63.3 |
| >1000 | 6 | 20 |
| Total | 30 | 100 |

### Themes

The thematic analysis identified three main themes from participants' perspectives and experiences. The main themes were *a positive attitude towards chronic disease screening; multilevel barriers to chronic disease screening services; and strategies to promote chronic disease screening services*. The themes, subthemes and associated relationships have been demonstrated in Figure 1.

***Theme 1***

**Positive attitude towards chronic disease screening**

This theme captures participants' general attitudes and views about health screening. It highlights their perspectives on screening services. The interviews revealed positive attitudes towards health screening among the participants. It was clear from the interviews that participants take part in health screening activities organised by NGOs, churches, and community-based organisations such as keep-fit clubs. Participants consistently reported that health screening activities and services, such as blood pressure and cholesterol checks for cardiovascular disease and sugar level checks for diabetes, are necessary for understanding one's health status and taking steps to prevent disease.

> *Screening is a kind of pre-treatment and the most essential part of staying healthy. Myself I have been doing some. We have a susu group; after a year, they will pay high-qualified doctors and let us, the members, go through health screening. They will check your blood, your heart, and every part of your body. If you have any health problems, they will give you medicine and tell you what to do. So, please check yourself, because it lets you know your health status. [Participant 6]*

Early detection and treatment were repeatedly mentioned by participants as key benefits of health screening. Participants talked about their personal experiences in which the screening they took part in helped them identify and treat their chronic health conditions as early as possible. They opined that without the screening, they wouldn't have been able to identify their conditions, as they had not experienced any signs or symptoms beforehand.

> *Very helpful. If you know something early, you have a better chance of treating it. I remember when the clinic nearby offered free blood pressure and diabetes screenings. I took part, and that was when I found out my pressure and sugar levels were very high, like several other people who also took part in the screening exercise. They gave me medicines and also referred me to the hospital. I would never have known, and who knows, it would have been worse than it is now. [Participant 17]*

One participant shared an instance where a screening exercise organised by a church helped to identify a lump in a woman's breast:

> *My church once brought some nurses during a women's program. They did breast screening. That day, one woman found a lump. She didn't even feel anything before that. But because of that early check, she started treatment quickly. Today, she's still alive. Anytime I remember that, I always ask myself what would have happened to her later if she hadn't gone for that screening? [Participant 5]*

Participants reported that early detection and treatment save lives, as they increase survival chances. One participant shared an example of a church-organised screening exercise that saved someone from developing an advanced-stage breast cancer.

> *Let me tell you, one of my cousins, a woman in her early Forties, went for a free screening at her church. That was when they found something in her breast. At that*

*time, she was not feeling any pain, but the nurse said they should check further. Thank God, it was early-stage cancer. She got help quickly, and now she is doing fine. If she had waited till the pain started, maybe she would not be here today. That is why I always say screening is life-saving. You might not feel sick, but something could be growing inside you. These checks help us catch it before it becomes dangerous. [Participant 7]*

Participants believed that, apart from early detection and treatment and life-saving, health screening also helps people avoid excessive healthcare costs. They argued that once diseases are detected and treated early, people are saved from spending money on advanced treatment, which is often associated with a substantial financial burden.

*Yes, screening is vital. Screening tells you what is going on in your body before it is too late. Most people wait until they collapse before going to the hospital. By then, it will be more expensive and more complex to treat. If we had more regular screenings, we could prevent many deaths and save a lot of money. [Participant 22]*

Participants' positive perspectives and attitudes towards health screening reflect their lived and past experiences and knowledge of chronic health conditions and their management.

*Screening, to me, is very good. I always use my case as an example. I went for a breast screening once when they came to the market, which was just free. They checked me and saw lumps in my breast. They referred me for further tests, and it was breast cancer, but it was in the early stages, so it was treated. Since then, I have come to see screening as an essential part of everyone's care. [Participant 15]*

Based on participants' positive attitudes toward health screening, they generally encouraged people to make regular check-ups and screenings a habit.

*It's always good to do screening, and people should be encouraged to do so because screening helps in early detection of sickness before it gets worse. So, people should always go for it regularly, like weekly, if they can. [Participant 11]*

***Theme 2***

**Multilevel barriers to health screening**

This theme describes the various issues that serve as barriers to access and uptake of chronic disease screening services. Multilevel barriers, including financial costs, cultural issues, fear of bad news (iatrophobia), misconceptions about health screening, time constraints, competing interests and priorities, and the healthcare environment, hinder access to and use of chronic disease screening services. These barriers have been presented with supporting quotes as subthemes.

***Cost***

Participants consistently reported that most screening and check-up services are not free but require payment. However, they also noted that such services are expensive to pay for. As a result, the cost of the screening services was reported as a significant barrier to chronic disease screening. Participants therefore mostly rely on free screening services organised by NGOs and churches due to the cost of clinic- and hospital-based services.

*Money is one thing. Even small check-ups cost something. When you go to the clinic to check your sugar and pressure, they charge money. These are basic things, but you have to pay for them. For stuff like scans, we do not even discuss them. So you end up not*

*going at all, especially if you feel you are well or wait for when they organise a free one. [Participant 1]*

Other participants also added to the issue of cost by arguing that even with free services, one needs to pay for medications and transportation:

*Money is the problem. Even when screening is free, people worry about what comes after, like the cost of medicine, transport, and follow-ups. Everything costs money. So, you will say, "I will go later," which often never comes. [Participant 21]*

It was revealed through the interviews that though some of the participants had valid public health insurance, the cost of screening services such as Mammograms for breast cancer, Pap smears for cervical cancer, dental checks and other tests are not usually or substantially covered by health insurance.

*Money is another reason. Many people, including myself, cannot afford the cost of check-ups. Many of the things are not covered by the insurance. My insurance card is valid, but it cannot pay for tests and scans that the doctors use to see if you have cancer or not. So, how can I go? [Participant 13]*

**Cultural issues**

Interviews revealed cultural and religious issues that prevent participants from accessing and using health screening services. Specifically, the participants view screening as involving physical examination and touching of private bodies such as the breast, by the opposite gender, as embarrassing and culturally inappropriate.

*I think it is quite embarrassing and culturally not right for a male doctor to examine your breasts. I think some of the checks require you to be naked or half-naked for the examination, which is quite challenging, especially if the doctor is of the opposite sex. Knowing this, you prefer not to go unless you feel unwell. [Participant 11]*

**Fear of bad news (iatrophobia)**

Almost all the participants reported fear of bad news as a barrier to chronic disease health screening. This was common among the participants, causing them to delay accessing screening services, ignore symptoms, and dread doctor visits. Fear of bad news was commonly due to anxiety and fear of being told about an incurable illness.

*Yes, some people don't like going for screening because they're afraid of being told something bad. They do not want to hear that, so they will not go. I know my husband is one. When I was going, I told him to let us go, but he refused, saying he would not go for them to discover some significant sickness in his body. So far, he has not undergone any screening, and the same applies to most of my colleagues in the SUSU group. A lot did not go. Saying they won't go to be told about some scary sickness in their body, which will leave them thinking. [Participant 6]*

It was evident during the interviews that some participants preferred not to know about their health condition to learning about any condition. Such participants believed that 'you are rather safe' if you do not understand any incurable conditions than being aware of them, which can cause you unbearable thinking that will result in early death.

*Fear. I am afraid to find out that I am sick. You know, sometimes hearing bad news will make it worse. If I don't know, I won't worry about it. Sometimes, the thinking alone can*

*kill you early. If I do not hear, I am not worried. Ignorance might be safer sometimes… so yeah, you tend to avoid it. [Participant 30]*

**Time and competing priorities**

Most participants stated that, due to their work schedules as informal workers, they do not have time to attend health screenings. Participants were engaged in informal economic activities such as street trading, head potters, transport operators, and hawking, which require long hours of work to support themselves and their families. They mentioned that their work is everything to them, and foregoing work for screening could mean their children might not have their daily needs met. It was also noted that, especially in public health facilities, it can take more than 2 hours to be seen by a doctor, and they cannot wait, especially as they know they are not sick.

*I cannot close my shop and spend more than two hours in the clinic for a check-up. If I am sick, that is fine, but just for a check-up, I cannot do that. If I close my shop today, it means my children are not eating today. So, I do not have time for that; I would like to do it, but I cannot close my shop. I think my case is like that of many people in a similar situation. [Participant 7]*

**Misconceptions about health screening**

Interviews revealed several misconceptions about health screening among participants, which prevented them from attending screening activities and services. For instance, some participants held the view that screening is for people who are sick. To these participants, you attend screening or check-ups only when you feel pain or notice something unusual in your body or during daily activities. Others also believed that screening is for the rich, as they can afford such services.

*Why have a screening or check-up if you are fine? I think screening is only for people who are already sick because they need it, or the rich because they have money. [Participant 15]*

Interestingly, the interviews also showed that some participants believe that screening for health conditions suggests 'inviting' sickness into one's body.

*If you attend a screening when you are well, it is like inviting or calling sickness into your body. Sometimes doctors find a way to say you are sick, even though you might be very well. So, it might not be necessary when you are well. [Participant 11]*

**The healthcare environment**

Participants reported that healthcare staff's attitudes also serve as a barrier to accessing chronic disease screening services. They noted that some health professionals are sometimes unfriendly and rude when providing care to patients. Participants shared some perceived unpleasant past experiences that have influenced their screening decisions and behaviours.

*One general concern is that some health workers are not friendly. They shout and insult people. And most people complain about that a lot, so I think it can also scare some people away from getting a screening. I have my own experience to share. I remember one nurse shouted at me and called me names when I went for pressure and sugar testing. It was like I did not know what I was doing there. She was like, do you people think we don't have anything to do here? You can't just come here to check your*

*pressure. We have an important thing, let me tell you if you do not know. I felt embarrassed. [Participant 9]*

Some participants also mentioned that the health centres and clinics are often crowded with patients, and it takes time to be seen.

*There are too many people there when you go. You spend hours there, so you are not even motivated to go because of the environment. [Participant 10]*

***Theme 3***

**Strategies for promoting uptake of chronic disease screening services**

This theme highlights some of the suggestions and strategies participants shared to promote access to and uptake of chronic disease screening services. These strategies reflect participants' experiences, especially the various barriers to services they shared. The strategies have been described below as subthemes.

***Bringing screening services closer to people***

Participants in screening services should be close to communities so people can attend and use them. They mentioned that such services are primarily in leading hospitals, but they should be in community health centres and clinics. One option mentioned by the participants was community outreach services, in which trained healthcare professionals visit communities to organise screening services. For participants, bringing screening services to people's doorsteps will encourage them, as the costs of transportation to health centres and hospitals are high.

*I think the hospitals and clinics should prioritise community outreach services. They should come to the community once or twice a year to screen people. I think people may prefer it that way so they don't have to travel to the hospital or clinic all the time. Sometimes we are busy, and sometimes you might feel lazy to travel. So, coming to the community would be a great thing. [Participant 5]*

Some participants noted that community events and places, such as market days, marketplaces, and churches and mosques, are essential settings for organising screening services to promote awareness and uptake.

*If check-ups were held close to home, more people would attend. Maybe, like health workers visiting churches, mosques, and marketplaces during market hours and church periods, I am sure more people will attend. These places are where many people go on holidays, weekdays, and weekends to meet others. [Participant 9]*

*They should bring it closer to us, like setting up tents during clean-up days or church services. Let nurses come into the community markets and lorry stations to reduce distance and cost. [Participant 4]*

Another participant similarly added to the above:

*You see, if they want more people to participate in screening, they need to bring it to the people. Come to where we live and work, like at markets, churches, mosque grounds, and even school compounds. During our community clean-up days, it is a perfect time. People are already gathered and active, so you just set up a tent and explain, and then people will come to do it. [Participant 7]*

Some participants particularly noted that organising screening activities and exercises with community-based organisations and religious groups, such as churches, promotes trust and uptake.

> *Religious bodies or groups should also do it. If it is done close to the community or through churches and mosques, it will help, as some people's shyness and fear keep them from going for screening. Organising it by their religious faith will help them build trust in it and remove the shyness and anxiety. [Participant 26]*

***Lessening financial barriers to essential screening services***

Most participants believed that removing or reducing financial barriers to essential screening services, especially for people from low socioeconomic backgrounds, would help promote access and uptake of these services in hospitals and clinics. The participants consistently mentioned that cancer screening services, such as Mammograms and Pap Tests, are expensive and are mostly not covered by their health insurance. They suggested that adding such services to the insurance subsidy would help people to screen as early as possible.

> *You know, most of the services we are talking about aren't covered by the insurance. I can say that when you want to know your breast status or cervical cancer screening, the hospitals charge money, which we do not have, so you end up not going. It would be good if they could address that. [Participant 11]*

***Promoting a friendly healthcare environment***

Participants commented on the attitudes of healthcare professionals who undertake health screenings. They mentioned that healthcare professionals should treat people with respect and kindness. This will make people feel comfortable attending screening services.

> *And most importantly, treat people with respect. When nurses talk down to people, they don't come back. But if they are kind and explain things clearly, people will trust them. Respect goes a long way. When people are treated well, they will appreciate the importance of good health. [Participant 21]*

Other participants commented on friendliness and transparent communication by the healthcare professionals.

> *And please, let the nurses and doctors treat us with kindness. Because some health workers behave poorly, they can sometimes make you feel like you are not a human being. We are already struggling. If they smile and explain things well, we will listen. If they insult us, we will not go back. [Participant 16]*

***In-language and culturally appropriate screening, education and campaigns***

Participants discussed raising awareness and public education about the importance of screening, especially in deprived communities. It was their opinion that many people in these areas do not understand health screening or know its benefits. Public education, campaigns, and awareness-raising on TV, radio, and within communities will help people understand why they should attend screening services. Education and awareness will also help people know where such services are available within their communities.

> *Also, the screening should be explained in simple terms for understanding. Some people do not know what "screening" means. People should be made to understand why screening is important and how it can save their lives. Because some people still do not*

*know why they should get screened if they are not sick. TV, shows, radio, and even visiting the communities to do this will help. [Participant 19]*

Participants noted that public campaigns and awareness-raising should be conducted in languages that communities understand. They mentioned that many health campaigns and education materials are often in predominant languages such as Twi and English; however, as they are migrants, not all of them understand these languages. As a result, they mentioned that community elders, youth leaders, trusted people and church leaders who speak their language should be recruited to lead such activities.

*Local languages, such as the commonly spoken ones here, like Hausa and Dagbani, should be used so people can understand the screening well. Saying things like "body check" or "health check" in the local language can increase understanding among us, but I think they use English and Twi a lot, so many do not understand what they mean. [Participant 7]*

Participants expressed that when such people lead campaigns and education, it not only helps with effective communication but also promotes trust and uptake of screening services.

*We need community leaders, Imams, and pastors to talk about it because people listen when it comes from someone they trust. If someone I trust tells me about it and explains things clearly, I will go. We also need community leaders and imams to talk about it because people listen when it comes from someone they trust.*

Participants also shared that such campaigns, awareness creation and public education exercises and activities should include people with stories regarding how early and routine screening saved them from severe chronic health conditions and death. They mentioned that such stories can encourage people to attend screening.

*Also, people who have gone and benefited from it should be part of the education and share their stories; others will follow. Sometimes it takes hearing from someone like you to feel encouraged. If someone from the community shares how screening helped them, others will listen and follow. [Participant 12]*

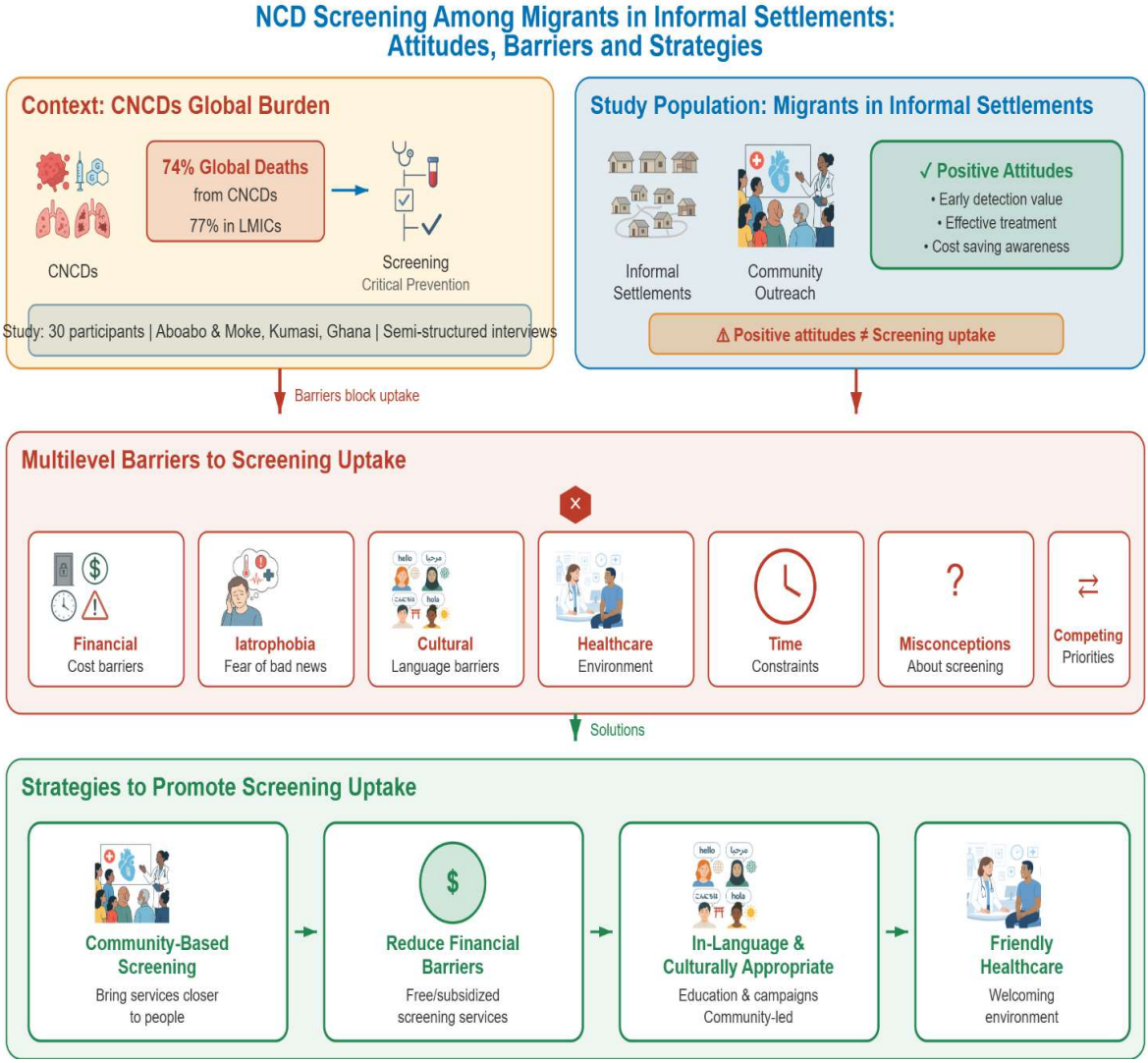


**Figure 1: Themes, subthemes and associated relationships**

## Discussion

This study examined the attitude, barriers, and strategies towards CNCD screening among migrants living in informal urban settlements in the Asokore Mampong Municipality of Ghana, Ghana. The findings demonstrate the complex interaction between individual awareness, structural constraints, and health system elements that influence preventive health behaviours in marginalised urban environments.

Participants overwhelmingly recognized the value of chronic disease screening in identifying health risks early, preventing severe illness, and reducing high healthcare costs. This aligns with several studies that have consistently highlighted the relevance of early interventions and prevention of CNCDs (Chien et al., 2020; Christe et al., 2020; Konkor et al., 2025). Although residents value screening, access to such services is limited. Therefore, the reliance on outreach activities by NGOs or faith-based organizations, rather than on routine facility-based screening, underscores existing gaps within the healthcare system. Indeed, prior research demonstrates that community-based initiatives often serve as vital entry points for preventive health services in underserved urban areas (Riley et al., 2007). However, this reliance on external initiatives

underscores the fragility of access to health screening in marginalized environments where healthcare provision is often limited.

Despite this positive attitude towards screening, this study identified a range of barriers that limited the use of chronic disease screening services. These barriers operate at multiple levels, including financial, social, cultural, and institutional domains. In Ghana, screening services and tests of non-communicable diseases, such as breast and cervical cancer, are not covered by the National Health Insurance Scheme (Konkor et al., 2025). The inadequate finances among informal migrants extended beyond the tests. It encompasses supportive costs such as transport and potential medications. This creates a cascade of costs that deters poor people from accessing healthcare. This finding resonates with other studies, which cite cost as a central obstacle to accessing healthcare for the urban poor in low and middle-income countries (Haque et al., 2020). Parikh et al. (2014), also observed that financial barriers limited participants with diabetes and coronary heart disease from accessing healthcare compared with participants without financial difficulties. This emphasizes the profound impact of financial constraints on health-seeking behaviours in marginalized urban settings.

Participants also identified cultural perceptions and fear of diagnosis as deterrents to screening. A similar concern has been documented in past studies, in which individuals refused screening because of fear that hidden chronic risks would be revealed (Nielsen, 2004; Rising et al., 2016). Cultural sensitivity, including bodily exposure and gender interaction, such as breast screening by a male practitioner, further inhibited service uptake. This compromises trust in health services and discourages preventive care. While such fears are not exclusive to low-income settings, they may be particularly acute where treatment costs are high and social support systems are limited.

Time constraints and competing livelihood priorities also emerged as barriers to screening. Informal urban residents predominantly rely on daily earnings from informal and low-income economic activities. Informal activities, including street trading, petty trading, and transport services, require continuous presence to sustain daily income (Bandauko et al., 2024; Okwei et al., 2025). Attending a health screening can require several hours or an entire day away from work, resulting in immediate income loss essential for daily survival. Therefore, it was not surprising that many residents reported prioritizing daily income-generating activities over preventive health services. In India, for example, a study on the care-seeking of informal residents with diabetes and hypertension in Mumbai reported struggles and delays in diagnosis (Ramani et al., 2024). Other scholars have confirmed similar findings in studies in Taiwan (Chien et al., 2020) and Denmark (Nielsen, 2004), where participants reported that time constraints reduced their willingness to participate in chronic disease screenings and badly affected treatment initiation.

The unfriendly healthcare environments characterized by long waits and perceived disrespect from the staff also discourage participants from future health-seeking behaviour. The expression "*they shout and insult people,"* as recounted by some participants, paints a picture of a negative experience and the bad attitudes of health officials that deter participants from going to the hospital. This bad attitude, coupled with the cost of accessing screening services, is a disincentive for informal migrants to participate in the formal health sector (Peprah et al., 2024). Previous studies have similarly documented that health providers' attitudes are an important influence on people's willingness to participate in chronic disease screening (Chien et al., 2020; Haddad et al., 2016; Wändell et al., 2018).

In response to these barriers, the participants suggested contextual and pragmatic strategies to promote and improve screening uptake. A prominent suggestion was to decentralize screening

services to ensure such health services are closer to the people. Community-based screening programmes are widely regarded as more accessible, as they minimize transportation costs and reduce the time commitment required to obtain care. Convenience screening programmes initiatives have been shown to substantially increase detection rates in underserved populations, particularly within informal urban settlements (Chien et al., 2020; Ramani et al., 2024). Thus, expanding such community-level approaches could play a pivotal role in strengthening preventive healthcare systems in rapidly urbanizing cities. This aligns with the call for innovative service delivery models to reach marginalized populations (Haque et al., 2020; Rawal et al., 2017).

Participants further emphasized the importance of reducing financial obstacles to screening services. Offering subsidized or free screening programmes for common chronic conditions could facilitate earlier detection, particularly among individuals from lower socioeconomic backgrounds. This recommendation aligns with global public health strategies that prioritize equitable access to essential health services within the framework of universal health coverage (McNairy et al., 2019; Parikh et al., 2014). Additionally, residents underscored the significance of respectful and compassionate treatment by healthcare professionals. Constructive patient–provider interactions are fundamental to building trust and motivating individuals to engage with health services over time. Enhancing communication and interpersonal care within healthcare settings could therefore improve both screening uptake and the long-term management of chronic diseases (Chien et al., 2020).

Finally, participants advocated the need for culturally and linguistically appropriate health education. Participants suggested delivering health information in languages that residents understand and through communication channels accessible to diverse migrant populations. This indicates that knowledge distribution must be coupled with trust-building to be effective, especially among migrant groups that may face social and linguistic exclusion (Peprah et al., 2023; Peprah et al., 2024. Shaw and colleagues (2009) review on culture and health literacy reported that cultural identities such as ethnicity and language are core to how patients understand healthcare services. Therefore, health literacy programmes that ignore these beliefs are unlikely to fully meet the health needs of populations. This suggestion indicates that culturally and linguistically tailored health education is crucial for promoting preventive health behaviours among low-income urban settlements (Peprah et al., 2025).

Despite this study's scholarly contributions, its limitations should be acknowledged when interpreting the findings. First, while the study provides insights into participants' perceptions and experiences of CNCDs screening, the findings are drawn from two informal communities in Kumasi. Therefore, it may not fully capture the heterogeneity of experiences among all migrants of informal settlements in Ghana or other LMICs. Second, the provision of self-reported data rather than actual clinical health outcomes by participants introduces potential biases. Hence, participants may have inadvertently misreported their experiences with health screening services and genuine health-seeking practices, which affects the comprehensive understanding of screening experiences among informal migrant populations.

## Implications

The findings have implications for public health policy and practice in marginalized urban settlements. First, positive views of chronic disease screening indicate that migrants living in informal settlements recognize the benefits of early detection and prevention. However, various barriers, such as financial constraints, fear of diagnosis, cultural beliefs, time constraints from informal work, and negative experiences, have implications for interventions aimed at addressing structural obstacles within the healthcare system. Therefore, there should be a move

beyond a one-size-fits-all national CNCD strategy to develop targeted, migrant-sensitive interventions. The findings also present the urgent need to review and expand the NHIS to include preventive screening for high-burden CNCDs among economically vulnerable groups. There is a need to strengthen community-based health providers and formalize partnerships with faith-based and NGO organisations that have already earned community trust. Health workers' training should include modules on empathetic communication, cultural competency, and the challenges migrants face to address barriers to care, including fear and poor treatment. Collectively, these implications highlight the critical need to implement context-specific, community-centred strategies to prevent chronic diseases in rapidly urbanizing environments, where migrants from informal settlements frequently encounter intersecting social, economic, and institutional barriers that impede access to preventive health services. Finally, by emphasising the need for early detection of CNCDs through screening and providing insights to address structural and financial barriers to access to screening services, this study contributes to achieving Sustainable Development Goal 3, which aims to ensure healthy lives and promote well-being for all, regardless of age and gender.

## Conclusion

This study shows that migrants residing in informal settlements hold positive attitudes towards CNCDs screening and understand its importance for early detection, effective treatment, and cost saving. This positive attitude, however, may not consistently translate into screening uptake due to several intersecting barriers. These barriers reflect broader structural inequalities associated with migrants, urban poverty, and limitations of the health system. The findings indicate the need for targeted and migrant-sensitive interventions. Reducing financial barriers, community-based screening, and in-language and community-led education are essential to improving screening uptake. Addressing CNCDs among the migrant population residing in urban informal areas is important to promote health equity and strengthen the response to the growing burden of chronic diseases.

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## Disclosure statement

The authors report there are no competing interests to declare.

## Consent for publication

Not applicable

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## Ethical approval and informed consent statement

This study observed all ethics procedures in accordance with the Declaration of Helsinki. Ethical approval for this study was granted by the Western University Institutional Review Board (Project ID: 126597) and the Kwame Nkrumah University of Science Humanities and Social Science Research Ethics Committee (Project Ref: HuSSREC/AP/186/VOL. 4). All participants provided informed consent prior to participating in the study. Participation was

voluntary, and participants were informed of their right to withdraw at any point. To maintain confidentiality and privacy, all data were anonymized, and pseudonyms were used to present the results.

**Data availability**

All datasets used and/or analysed during the current study are available upon request. Please contact the corresponding author [Prince Peprah] if you want to request the data from this study.

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