SOCIAL DYNAMICS
2024, VOL. 50, NO. 3, 345–362
https://doi.org/10.1080/02533952.2025.2532355

Routledge
Taylor & Francis Group

Circular mobilities and health care seeking practices for perceived malaria illness among Nairobi residents in Kenya

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ABSTRACT

The flow of individuals between rural and urban spaces and vice versa has impacted the health of individuals. Nairobi, for instance, is a malaria low-risk area, yet studies report high malaria incidence rates in the city. Could this phenomenon be as a result of circular migration? Studies show that Nairobi's health facility utilisation rates are relatively high. Yet, observations indicate a high malaria incidence rate and that individuals seek other appropriate treatments, prompting this paper to show how experiences of perceived malaria shape individuals' healthcare-seeking practices in malaria low-risk areas of Nairobi. This article employs the concept of medical diversity that Krause, Alex & Parkin put forth. Medical diversity implies the mutual borrowing of ideas, practices and styles among the different therapeutic practices adopted by patients in search of a cure. Through narratives and secondary data from blogs, experiences and healthcare-seeking behaviour for perceived malaria in Nairobi were captured. This study found that perceived malaria experiences were based on the wealth of knowledge individuals had received orally through time. The medical knowledge received produced and established diversity in health care seeking. Individuals thus sought appropriate care, not alternative forms of care.

KEYWORDS

Perceived malaria; Nairobi; therapeutic practices; individual experiences; mobilities

Introduction

It is the beginning of another year; the skies are clear blue, and the sun is scorching hot in Nairobi city. I had an appointment with one of my participants who mentioned that she would be in town, so we would go home together from the city centre. On my way to meet her, I passed through Machakos country bus terminus (one of the busiest upcountry bus termini that mainly transports travellers from the city to the rural areas and back to the city). What caught my eye was the multitude of people arriving from upcountry. The streets of Nairobi city centre were bustling as I walked from the Country bus terminus towards the bus terminal heading to the Eastlands part of the city, where I met with Rose.[1] She had returned from the rural western part of Kenya three days before our meeting. She mentioned that

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> The beginning of the year comes with many things to be done and all these things also need money. For example, I have to buy school books for my children who were preparing to go to school. I am now done with the January queues at the bookshops and need to focus on other things. (Informal conversation with Rose, a 29-year-old woman)

We boarded a mini-bus to her place as we continued with our conversation on how she had enjoyed her festive season with her kin at their rural home. Having earlier explained the purpose of my study to her, Rose went ahead to narrate her experience of being at home/at the village home and her current experiences upon her return to Nairobi,

> Home was beautiful. I got to meet other relatives I had not seen for nearly a year. Going home was a good thing. However, I am just recovering from malaria. I was not feeling well and had to go to hospital. They found that I had malaria and gave me medicine. I have just completed the medicine and still feeling a bit tired, but my responsibilities as a mother have to be undertaken. (Informal conversation with Rose, a 29-year-old woman)

My conversation with Rose revealed the nature of individuals' travels from the city to their rural homes during the festive season. They return to the city in January just in time to resume work and have their children get back to school. January is a month marked by a beehive of activity as people who travelled resume their tasks, all in a rush to beat the timing for being back at work and school. However, in this context, travels to the malaria-endemic rural homes sometimes come with the challenge of being infected by malaria, as was the case for Rose.

The flow of individuals from the cities to the rural spaces and vice versa facilitates the spread of diseases (Karim 2004). As Salim Karim (2004) argues in his study of the migrant labour system in South Africa, circular migration significantly contributed to the rapid spread of HIV/AIDs. Rural-urban migration and vice versa affect the patterns of infectious disease occurrence among the human population. It is, therefore, critical to understand the linkages between rural-urban migration and infectious diseases such as malaria. This paper will focus on perceived malaria since testing for malaria was not one of the components of this study. Perceived malaria was identified through the various signs and symptoms that participants experienced and related to the disease. This paper further engages with malaria as an illness and not a sickness or a disease, focusing on how the sick person, family members and the wider social network perceive, live with and respond to the symptoms of malaria (Kleinman 1988).

Kenya's capital city, Nairobi, is widely considered in East Africa to be the region's economic and cultural hub, making circular migration predominant. In this paper, circular migration entails the movement of people and culture, which people carry with them as they continuously travel back and forth between rural areas and the city. This article captures individuals' circular movement to make a living while connecting with their kin in rural spaces. These movements are, however, also associated with the spread of infectious diseases such as malaria. High levels of mobility to and from the malaria-endemic rural areas and the periurban informal settlement communities in Nairobi are associated with almost all the significant factors associated with perceived malaria (Yé et al. 2007). Yazoumé Yé et al. (2007) further reveal that the age bracket of 25–40 report the highest incidence of malaria despite under-fives being the most susceptible. This age group (25–40) is also the most mobile (Zulu et al. 2006).

Evidence suggests that the people of the Luo and Luhya communities are more likely to travel to malaria-endemic areas with a high risk of transmission all year round (Kenya Ministry of Health 2016). They are more likely to frequently travel to their rural areas for family visits, and are therefore exposed to malaria infection. According to the Kenya Malaria Indicator Survey (2021), the main preventive measures provided for individuals include the use of insecticide-treated mosquito nets and indoor residual spraying for houses in malaria-endemic areas. However, government provision of insecticide-treated mosquito nets mainly targets expectant mothers and children under five. Indoor residual spraying is also not regularly provided by the Kenyan government. Malaria prevention is hence left in the hands of individuals. According to the Kenya malaria policy guidelines for the use of malaria prophylaxis, only expectant women in malaria-endemic areas receive this care (Kenya Malaria Indicator Survey 2021). Expectant women in malaria low-risk zones such as Nairobi may receive only one or two doses to prevent what the government calls misuse of commodities. For instance, the uptake of three or more doses of malaria prophylaxis in malaria low-risk areas such as Nairobi decreased from 13% in 2015 to 8% in 2020, since these are not targeted areas (Kenya Malaria Indicator Survey 2021). The World Health Organization (WHO 2023) recommends that future guidelines will need to consider the use of malaria prevention medications (chemoprophylaxis) among people growing up in areas without malaria (such as some urban settings) who then travel within their own country to places where malaria is endemic (for example, many rural settings).

Shanks et al. (2005) report that travelling from a low-risk to a high-risk malaria area is highly associated with the risk of disease. Yet, there remain gaps in the government's strategies on malaria prevention. Studies have also yet to explore individuals' experiences of malaria in low-risk areas, including their constant interactions with the hinterlands towards seeking treatment. This article explores how individual interactions with their malaria-endemic hinterlands provide them with a wealth of knowledge and cultural resources in an endeavour to seek care. Importantly, as members of these communities travel in and out of the city, they learn from and adapt to the various cultures they interact with in the different spaces. In coining the term transculturation, Fernando Ortiz ([1940] 1991) notes that cultural assimilation is not a one-way process but a two-or more-way exchange of cultural influences, layering upon each other in complex processes of power, loss, and production (Arroyo 2016). Ortiz uses transculturation to negotiate the ever-changing racial and social dynamics of modernity and capitalism in Cuba. This article draws on Ortiz to explain how people, through interactions with the rural and urban experiences, make meaning of perceived malaria in Nairobi. Understanding these experiences could explain the high malaria incidence rates vis-à-vis the high health facility utilisation rate (Kenya Demographic and Health Survey 2014). Theodore Trefon (2009) notes that as individuals move between the city and rural areas, they embrace new cultures without rejecting their traditional beliefs. The flow of people also entails the flow of culture, which includes health beliefs and practices (Smith 2016). Trefon (2009) notes that urban dwellers selectively reject the legacies of colonialism by combining global approaches to local problems, blending traditional belief systems and behaviours with their unique forms of modernity, such as biomedicine.

A report from the Kenya Demographic Health Survey (2014) indicates that the current investment in healthcare in Nairobi is impressive, with 32% of the country's doctors

based in the city. Nairobi spends 13 times more than other counties on disease programmes and reports the third-highest healthcare utilisation rate nationwide (Kenya Demographic Health Survey 2014). The health outcomes, including addressing the malaria incidence levels in Nairobi, do not match the level of investment made, calling for an understanding of the individuals' perceived malaria experiences and health-seeking behaviour in Nairobi. The Kenya Malaria Indicator Survey (2015) is one of the key performance monitoring tools used periodically to assess malaria control over time. Advice offered from this tool (Kenya Malaria Indicator Survey 2021) for Nairobi and its environs is mainly focused on case management, surveillance and health education. In contrast, other rigorous malaria prevention and diagnostic approaches are provided in rural malaria-endemic zones. This is despite individuals' regular visit to the malaria endemic areas and their return to the city within the malaria incubation period between 7 to 30 days (Global Health, Division of Parasitic Diseases and Malaria 2024). Therefore, they tend to experience the illness in the city rather than in the malaria endemic areas where the health care interventions have been intensified.

Krause, Parkin, and Alex (2014) note that most therapeutic traditions in Africa are passed on orally; hence, to understand their exact appropriations calls for a shift in their view as healthcare systems, which are perceived to be held together by a single logic (Parkin 2013), to one that embraces diversity. Culture influences health behaviours and patients' perceptions of the quality of life and meaning of illness (Bennett, Shive, and Coats 2020). This is evident in the patients' and practitioners' enactment of knowledge and attempting to practically solve their health issues by engaging with more than one paradigm of meaning (Krause, Parkin, and Alex 2014). Robert Bennett, Nadia Shive and Heather Coats (2020) acknowledge that individuals hold past, present and future narratives that shape their identity (Bennett, Shive, and Coats 2020). The combination of individuals' cultural influence and the lack of adequate intervention strategies offered to Nairobi as a malaria low-risk area calls for a rethinking of contemporary medical pluralism. This is particularly important given the high health facility utilisation in Nairobi, yet the malaria incidence rates remain high.

Individuals construct the meaning of illness through narrative practices in which sufferers, their families, healers and others in their social networks participate (Good 1994). From these narratives, we gain a better understanding of individuals' perceived malaria experiences and the dynamics involved in their health-seeking practices. Bennett, Shive, and Coats (2020) note that narratives also put patients in a world of medical imagination with many possibilities for care-seeking and healing. This article examines the experiences of perceived malaria among individuals and their family members in Eastlands, Nairobi, and the dynamics of healthcare seeking in a malaria low-risk zone as a reflection of how the urban and the hinterland divide is blurred.

Using qualitative techniques, the study purposefully selected 15 participants from Eastlands, Nairobi, specifically from Maringo, Jericho and Umoja estates. The participants were mainly of Luo and Luhya origin from the malaria-endemic Western part of Kenya. They were selected based on their history of travel to their rural homes in the last three months preceding the study, which began in mid-December 2022. The age range of 20–45 years was chosen based on previous studies (Yé et al. 2007; Zulu et al. 2006), which indicated that this was the most mobile age group. Participants within this age range or their nuclear family members, including their children, who had travelled to the malaria

endemic area and perceived malaria upon their return to the city, were considered for the study. Since children could not provide consent for the study, their parents consented and supplied the needed information on their behalf. Two health workers located in hospitals in the larger Eastlands area also provided key information on the healthcare system's role in managing perceived malaria. The perceived malaria was identified through the various signs and symptoms that participants experienced and related to the disease; hence, the study did not focus on the testing and proof of malaria positivity. Data was collected through informal conversations, which helped gather data in a relaxed environment, where the participants felt they could share their experiences (Swain and King 2022). This method worked well, considering the time of year, January, a busy period that allows observation of people travelling between rural spaces and the city. These informal conversations generated ideas that were further pursued through more formal methods (Swain and King 2022), such as follow-ups on the health policies and practices regarding malaria care in Nairobi. Information from blogs was used to further explore and corroborate individual malaria experiences in Nairobi. Blogs are characterised by reflective, descriptive, interpretive and exploratory content, which aligns with common qualitative research techniques (Denzin and Lincoln 2011) and this study's interest in capturing participant voices close to their vernacular intent.

The participants provided their data freely in both English and Kiswahili as they deemed comfortable. I translated conversations in Kiswahili to English since I am proficient in both languages. Gawlewicz (2019) suggests that if a researcher is bilingual, they may translate the transcript and compare the translation with the original data themselves. In this study, I discussed the translated data anonymously with the participants to establish its representative nature before transcribing and manually coding the data. For the data analysis, I teased out recurring themes, which I discussed with the participants during feedback sessions in the selected health facility to ensure they represented the findings. However, the health workers insisted on conducting more than informal discussions by obtaining formal interviews with other healthcare stakeholders. All participants were assured of confidentiality and privacy of their data by ensuring that their names did not appear in my field notes and during the recording. The participants were also assured that the information would only be accessible to me and that I would store it without any identification markers. They also provided verbal and written consent to participate and were free to leave the study at any point. Below, I discuss the central themes emerging from this study.

"The feeling of malaria:" illness experiences and therapeutic repertoires in Nairobi city

From my conversation with Rose and other participants in this study, the thought of visiting the malaria-endemic rural homes evokes mixed feelings. They experience a sense of joy when they go home, as they meet many of their relatives and friends who mostly live in the cities and other parts of the country and seldom see each other. At the same time, they feel that despite having travelled several times, they cannot fully trust that they have built the immunity needed to prevent them from contracting malaria. Among the study's participants, there is a mix of joy at reconnecting with their kin in the rural areas and the fear of contracting malaria, a killer disease if not treated promptly. The fear of

getting malaria is because the incubation period is between 7 and 30 days (Global Health, Division of Parasitic Diseases and Malaria 2024). The participants in this study visit the rural area for no more than 30 days since they stay, work and their children go to school in Nairobi. Naliaka had just come back from her rural home in Kakamega, Western Kenya, one week before our conversation. During our conversation, she told me that she was recovering from malaria. She looked restless, stretching most of the time while still reassuring me that we could continue our conversation. When I further probed her on how she knew she had malaria, she told me that she recognised the symptoms she was suffering from. According to her, they were synonymous with malaria. Naliaka emphasised that the symptoms started after her recent visit to her village in a malaria-endemic area.

> When I came back to Nairobi I had headaches, was sweating, had joint pains, and was feeling hot at one time and immediately feeling cold at the same time. I then knew that I have malaria because of all these things that I was experiencing after my visit from the village. (Informal conversation with Naliaka, a 33-year-old woman)

My conversation with Harriet, one of the health workers, further confirmed individuals' belief that malaria is mainly experienced after visiting the rural malaria endemic zone. She mentioned that upon returning to Nairobi, individuals associated the symptoms that they were exhibiting with malaria.

> Most patients come to us with a fixed mind before testing that they have malaria. "Daktari, mimi nasikia malaria" (Doctor, I am feeling malaria) is usually the first statement I receive upon asking the patient how they are feeling. When asked who told you that you have malaria even before testing, they state that it is the symptoms and feelings. They also mention that they were bitten by the mosquitoes which transmit malaria in the rural areas. Most patients mention that the malaria they have is because they travelled home. They keep stating that mosquitoes in Nairobi have no malaria and that mosquitoes in the rural areas they visited during the holidays have malaria. (Informal conversation with Harriet, Health Facility Worker)

Musyoka also mentioned that people experience malaria upon returning to Nairobi from malaria-endemic rural areas. He noted that Nairobi mosquitoes do not carry malaria unless they have bitten someone who has recently visited a rural area and contracted the disease. Moreover, Musyoka narrated how he started experiencing malaria symptoms immediately after visiting his neighbour to find out how they were doing after returning to Nairobi.

> I visited my neighbour who had just returned from the rural area to find out how their visit to the village was. A few days after my visit to the neighbours here in Nairobi, I started feeling malaria, as my neighbour also felt. When I visited Okoth, he told me that he was feeling malaria-like since he was so tired, had headaches, joint pains and was complaining of feeling cold despite the heat in January. I know a mosquito that had bitten him got to bite me and now I am also feeling malaria. Mosquitoes in Nairobi do not have malaria hence Okoth is the one who has given me malaria. (Informal conversation with Musyoka, a 30-year-old man)

Individual engagement with the health care system depends on the symptoms experienced differently by each person. In this study, individuals reacted to the feeling of malaria differently. They were guided mostly by the history of travel, medical history,

previous experiences with health facilities, and the influence of the therapy management group, among other factors. The self-diagnosis for most participants was based first and foremost on the travel history, which in turn influenced their healthcare-seeking behaviour. When I met Anyango, a caregiver to Oluoch, she narrated how she addressed the feeling of malaria for her child and herself. She especially narrated the first option of care.

> When "I feel malaria" or my child starts behaving like he has malaria after travelling from the village, I first take or give the child Panadol (paracetamol). Panadol helps with the hotness of the body. The body hotness can be very uncomfortable and is very bad for the child from my own past experiences with malaria. After having Panadol, I then visit the health facility for malaria testing and treatment. (Informal conversation with Anyango, a 28-year-old woman)

From the above narrative, self-administered medication is sought immediately for the feeling of malaria, given that the symptoms can often be very uncomfortable. The first resort for care varied among individuals, sometimes influenced by the therapy management group, as in Oluoch's case. The therapy management group is a set of individuals who coalesce around the sufferer through engagement in various illness-related activities that emerge through time (Nichter 2010).

The health facility workers, however, move beyond the feelings of individuals and their beliefs about malaria by testing for malaria and other illnesses that exhibit the symptoms explained by the patients. For example, the narrative below shows the need for health workers to consider testing for other ailments that present the same way as malaria to help the patient conclusively. However, they also relied on individuals' travel history to enable them to start their diagnosis, even as they eventually tested for malaria before treatment. The thread of thought by individuals that malaria is associated with travel, especially from malaria-endemic rural areas, and that it is not a disease associated with Nairobi continued. Associating malaria with rural travel is more so because people who complain of the ailment reside in Nairobi. Their stay in the rural area is usually not extended, making them experience malaria upon their return to Nairobi. Naomi, a health facility worker, narrated her experience with clients at the health facility:

> We experience a good number of patients in our facility presenting with malaria symptoms, mostly after long holidays when the patients return back from malaria-endemic zones. However, we look not only for malaria alone but also for other diseases with the same signs and symptoms as malaria, such as typhoid, a waterborne disease. (Informal conversation with Naomi, Health Facility Worker)

During further probing into the need to establish the travel history, Naomi explained that,

> [o]ur facility is located in a training institution that handles students from all over the country. We often train our students not only on how to prevent malaria when they travel to malaria-endemic areas, but we also sensitise them on the signs to check for just in case they suspect that they could have gotten malaria from their travel to the different parts of the country that have malaria. This education is important because most of our students travel to the rural areas during the holidays when the institution closes for a recess. (Informal conversation with Naomi, Health Facility Worker)

Harriet, a health facility worker, also mentioned the importance of having a travel history whenever they suspected malaria:

> For treatment, we first take the patient's history and the symptoms they are exhibiting and complaining about. We then ask for the travel history since we know that the incubation period for malaria is around 7 to 10 days, which helps us know what ailment to test. Immediately, patients tell us that they had travelled to malaria-endemic zones, we test for malaria. Whenever the patient tests malaria positive, we offer them treatment. (Informal conversation with Harriet, Health Facility Worker)

Wafula, one of the participants in this study, also associated malaria with travelling out of the city to rural areas:

> Whenever I returned to the city from the rural area, I often tested for malaria and it was always positive. But, when I visit the local hospital, the pharmacy does not always have medicines; hence, I get sent home without medications as the pharmacist tell me that the Government supply is over. The pharmacist will mostly ask me to go buy medicine from a pharmacy affiliated to him. (Informal conversation with Wafula, a 32-year-old man)

Wafula further explains the state of Government hospitals regarding equipment and commodity availability, stating that the lack of medication at the Government facility forces him to buy medication from a private pharmacy, which he suspects belongs to the Government health workers. This study also shows how it is not easy for the participants to discuss their illness experiences separate from care-seeking practices, especially given the deadly nature of malaria as an illness.

The excerpt from the blog One.org not only shows the association of malaria with travel from rural areas into Nairobi City but also reveals the various experiences and healthcare-seeking options that Joy's family took to secure treatment and eventually a cure for Joy.

> On December 1 2010, my wife Isabel, a high school teacher in Bungoma District, western Kenya, and our two daughters, Hope and Joy, were travelling to join me in Nairobi for the December holidays. At the time, I was working in Nairobi, which is about 240 miles from Bungoma. We greatly anticipated the exciting moment of reunion. When they arrived, Isabel informed me that Joy, then three and a half years old, complained of headaches. Initially, we thought the headache could have been caused by the six hours of travelling from Bungoma to Nairobi. That evening, we gave her some painkillers, but she still complained about having a headache the following day. Since the family had come from western Kenya, where malaria is common, we suspected she could be suffering from malaria and took her to a private clinic for treatment (One Campaign 2023).

This excerpt is a narration from 2010 but closely resembles the perceived malaria experiences and care-seeking options of the participants in my study, making it a relevant method to corroborate my findings from the other data sources. The blog reveals the various treatment repertoires that were sought by Joy's family towards securing a cure for her illness associated with travel from a malaria-endemic area to Nairobi:

> Three days after the malaria treatment, she started complaining of headaches again. She also ran a high temperature and had lost her appetite. We decided to take her to Nairobi Outpatient Hospital for further checkup. At the hospital, a number of tests were done, and she was found again to be suffering from malaria. She was treated and seemed to improve, although she still had a high temperature, and her appetite didn't improve. On the fifth day after treatment at Nairobi Outpatient Hospital, she started vomiting, and her

> temperature rose as high as 39 degrees Celsius (102.2 Fahrenheit). We took her back to the hospital, but we were referred to the Kenyatta National Hospital, the main public referral hospital in Kenya. At Kenyatta National Hospital, they diagnosed Joy with typhoid and treated her. Initially, the doctor who saw her had considered having her admitted, but due to congestion in the children's ward, she thought it best to have Joy treated as an outpatient. Joy was on typhoid treatment for the next three days but showed no sign of improvement. (One Campaign 2023)

In the search for a cure for Joy's illness, the family had to eventually return to the malaria-endemic area to seek treatment since she was not responding to the treatment in Nairobi.

> By good fortune, an in-law directed us to a doctor in Kisumu. Initially, I didn't support the idea of taking Joy back to Kisumu for treatment, but I later relented. The doctor recommended a number of tests, which led him to conclude that she was definitely suffering from malaria. By this time, her eyes appeared yellowish, and she was very weak. He prescribed malaria medications and some painkillers. A week later, Joy was up and running. Since then, she is doing well and ever joyful as her name. (One Campaign 2023)

In seeking healthcare for Joy, various treatment options were sought in Nairobi to no avail, to the extent that the family opted to seek care back in the malaria-endemic area. According to the Kenya Malaria Indicator Survey (2015), malaria care for Nairobi and its environs is mainly focused on case management, surveillance and health education, while rigorous malaria prevention and diagnosis approaches are provided in rural malaria-endemic zones. This is despite individuals' constant visits to the malaria endemic areas and experiencing the illness in the city upon return due to the malaria incubation period (Global Health, Division of Parasitic Diseases and Malaria 2024). Joy's family, therefore, sought the expertise of a health practitioner who had treated malaria back in the malaria-endemic area. Joy's story, like the other narratives, reveals various ways in which individuals in malaria low-risk areas seek treatment for the illness, even to the extent of returning to the malaria endemic area for care, a practice that calls for a rethinking of medical pluralism. Medical pluralism is a term coined by Charles Leslie (1980) and originally applied to the situation of medical revivalism in South Asian countries, consisting of separate systems (Penkala-Gawęcka and Rajtar 2016). It has been criticised for privileging the professionals' rather than the patients' perspective. However, this paper moves the focus to patients' experiences and how they use their agency and the circumstances around them to make decisions for care even beyond the biomedical sphere. By drawing from travel histories and information from the therapy management group (in this case, parents, in-laws and health practitioners), decisions on care for perceived malaria have been made.

Individuals in Nairobi seek the most appropriate care in diverse ways for the "feeling of malaria." Despite several stories of hope, some experiences of travel to Nairobi from the malaria-endemic areas have been grave and painful, mainly when death occurs due to malaria. As Zoe Alsop (2007) recounts,

> [s]hortly after Harriet arrived in the Nairobi slum of Kibera from the Kisii district in Kenya's western highlands two years ago, her youngest child came down with chills and fever. She used her savings to buy her one-year-old paracetamol, but the fever kept returning. After a week, she brought her daughter to a clinic where she was diagnosed with malaria. "By then, it was already too late," recalled Nurse Dora Nyanja, who said Harriet's daughter likely had

> been infected in Kisii. "The child died. Now, whenever her children have a fever, she brings them in to be tested." (Alsop 2007)

Nurse Nyanja highlights the risk of self-medicating for fever in children like Harriet's one-year-old. She further recommends that care be sought immediately for fever at the health facilities to avoid complications and even death due to suspected malaria or eventually malaria itself when tested positive.

Treatment without testing

The current study found that individuals opted to buy medications and treat themselves, stating that the public health facility near them did not have the equipment for malaria testing and medications. Wafula narrated some of the decisions he took when he experienced the "feeling of malaria." He exuded confidence in the belief that he could definitely tell when he had malaria. This, he said, came from his previous experiences with the illness, and when tested, he turned out positive for malaria. He further learned which signs to look out for and went ahead to buy the malaria medications over the counter.

> I know when I have malaria, especially after returning to Nairobi from my rural home. Whenever I go to the nearby clinic for a malaria test and treatment, the clinic mostly does not have the items needed for testing. The lab person asks me to go to a nearby private lab for testing. Getting medicine for malaria is also difficult since the hospital is always in short supply, or they do not have it. The nurse therefore asks me to go buy medicine from the chemist. The continuous problems of no lab test and medicines made me go to a chemist, buy the malaria medications, and treat myself. (Informal conversation with Wafula, a 39-year-old man)

Auma concurred with Wafula's statement, narrating that,

> [w]hen I feel malaria, I do not wait, but I immediately go to buy malaria medicines even without testing because I know that if I get tested, they will find malaria. Nowadays, I know how my body behaves, and when I feel malaria, I get malaria medicine and Panadol. (Informal conversation with Auma, a 41-year-old woman)

The participants in this study relied on how they felt to guide their steps towards seeking care. Their feelings and course of actions were guided by their previous experiences and the knowledge they gained over time, which was mainly passed down by the therapy management members, including family, friends and other relatives. Upon further inquiry into the role of history and cultural resources available in decisions about malaria treatment, Aluoch narrated how her parents had shown them what to do in case of certain malaria-like symptoms. She further recounted how they would test positive for malaria each time they went to the hospital with malaria-like symptoms and get medications after visiting their malaria-endemic rural home. With time, they started treating themselves by buying medicines from pharmacies without visiting the hospital for check-ups and tests and thus remaining unaware of their malaria status.

> All this while as I grew up in Nairobi and visited our grandparents in the village located in the rural area where there is malaria, my sisters and brothers and I would always get malaria. Our parents taught us that malaria kills and we had to know how you feel when you have malaria. When headaches came, Panadol was given immediately. If the headache continued and we started feeling pains in our joints, hotness in the body at one point and cold at

> another time, then we knew it was bad and went to hospital and were treated for malaria, which was found after lab tests. The doctor would ask if we had travelled home and record all the other issues before lab test. We started buying malaria medicines and treating ourselves after some time, since we knew the feeling and the medicine to buy. The chemists would just sell the malaria medicine to us and direct us on how to take it, and we would be fine after the treatment. (Informal conversation with Aluoch, a 29-year-old woman)

The lack of equipment for malaria testing and malaria medications was, at times, not the main reason why some of my participants chose to self-medicate with over-the-counter medications. Some explained how they got to know their bodies and the "feeling of malaria" to the extent that they just treated themselves without getting tested. Malaria, therefore, became an illness influenced by how the sick person, the family and the wider community perceive, live with and respond to symptoms (Kleinman 1988). Individuals, over time, develop explanatory theories to account for their circumstances. These explanations are designed and drawn from all sorts of knowledge and wisdom, some from their own experiences, while others are handed down by word of mouth from laypeople and trained practitioners (Laws 2016). Looking at explanatory models and illness experiences of people living with HIV in the Northeast United States, Laws (2016) notes that patients' explanatory models emerge from their experience with a particular episode of illness, and these explanations change over time. Arthur Kleinman (1980) examines the notion of explanatory models to include an episode of sickness and its treatment employed by all engaged in the clinical process. Patients' explanatory models tell us not only how patients and their families make sense of the given illness episode but also how they eventually choose and evaluate particular treatments (Kleinman 1980). The explanatory models thus interrelate illness beliefs, norms, and experiences, functioning as clinical guides to the various decisions on care individuals make (Kleinman 1980).

Participants mentioned the severity of the illness as the reason for seeking immediate care. For example, during my conversation with Otieno, he said that malaria could quickly kill:

> Malaria has killed many people. Before you know it the malaria can make you very very sick to the point of admission, and some people I know have even died. So immediately I feel like malaria I look for treatment and avoid getting very sick. (Informal conversation with Otieno, a 34-year-old man)

Over-the-counter medication without a confirmed malaria test is still a concern in Kenya despite the Kenyan Ministry of Health's Division of Malaria Control (DOMC) launch of the 2009 universal "test and treat" case-management policy as a key component of the new 2009–2017 National Malaria Strategy (NMS) (Ministry of Public Health and Sanitation 2009). The problem with the use of antimalarial without testing is that the overuse may promote drug resistance to current antimalarial drugs and increase health-care costs (Otambo et al. 2022, 2023). The health care system in Kenya is working towards curbing the misuse of malaria medications. Joyce narrated that some of the ways the government is working towards reducing the abuse of malaria drugs include pharmacists requesting positive results before medicating. The pharmacists have different explanations for the need for the patients to provide positive results before offering malaria medications, which need to be synchronised with scientific reasons. Joyce further mentioned that the government has helped reduce the long queues by setting up emergency sections at the sub-County hospitals.

> Whenever I felt like I had malaria, I just used to go to the pharmacy to buy malaria medications. Nowadays, some pharmacies do not sell medicines without a positive lab result. The pharmacists say that it is the dangerous to use malaria drugs without malaria. One pharmacist told me that too much use of the malaria drugs could damage my liver. This forced me to go to hospital before taking the medications. Previously, I didn't like going to the hospital because of the long queues. However, these queues have been reduced because the hospitals have separated the emergency section from the normal patient queues, making it easier to visit the sub-county hospital near me. (Informal conversation with Joyce, a 30-year-old woman)

However, at the doctors' discretion, some individuals received malaria medications despite having tested negative, as Anastasia's narrative reveals:

> Given the pain all over my body after returning to the city, I went to hospital and the doctor took the history of my illness. Then asked me if I had gone out of Nairobi recently, and I told him that I had just come back from home where there is malaria. The doctor then asked me to go and have some lab tests done including malaria. However, they did not get malaria, yet the doctor decided to still treat malaria as a precaution, which helped me. This is because after some days I got better. (Informal conversation with Anastasia, a 38-year-old woman)

When I further probed one of the health workers about the treatment of individuals with negative malaria test results, Harriet recounted that:

> Treatment is based on the history of travel, personal history of sickness and, eventually, the signs and symptoms. The decision to treat is often because some clients would visit the health facility after having taken the first dose of malaria medication, which makes it difficult to get a positive result. They, however, visit the health facility due to the continued severity of the symptoms despite having had the first dose of malaria treatment. (Informal conversation with Harriet, Health Facility Worker)

While the healthcare system acknowledges the agency of individuals to make decisions concerning their health, clinicians and doctors, as Harriet mentions, have the power to fulfil their duties regarding an individual's life as they deem necessary and helpful to their clients. Nyaoke, Mureithi, and Beynon (2019), in their study on "Factors associated with treatment type of non-malarial febrile illnesses in under-fives," note that for patients who present with fever without localising features, clinical diagnosis is difficult, and malaria may be the default diagnosis.

Care-seeking processes and relations between individuals and the health facility workers are critical aspects to consider within the healthcare system. These processes and relations influence the perception and individual satisfaction with the system. Nekesa, one of the caregivers, shared her experience during an admission case with her child, revealing the need for health workers to take their work seriously and be passionate, as expected of the medical profession. She stated that the passion for duty would make them work and assist the clients whenever necessary. Similarly, she thought that the nurses' lack of seriousness and passion resulted in them spending two additional days in the hospital after the doctor had discharged her child. Nekesa also sympathised with patients who did not know anyone at the health facilities and only depended on the mercy of the health practitioners.

> My experience with health workers is that they no longer take up their jobs as a calling but just a way to get money. However, those with a call to work with the patients are really different and dynamic in their work. They will do anything in their power to help their patients. For example, my child had been admitted and later on discharged, yet it took two

> days after the discharge for the nurses to realise that we were discharged. When we neither saw the doctor nor were tests being conducted, we called the doctor and he was surprised that we were still in the hospital and through our phone asked the nurse to read the file notes and discharge us. The greatest advantage we had was that the doctor was a personal friend. What about those who have no relations or contact with the doctors through phones like we did? (Informal conversation with Nekesa, a 34-year-old woman)

This narrative of passion for work was also brought up by Naomi, a health worker with extensive experience in the health sector. During our informal discussion, Naomi stated that

> Some workers may find it to be a lot of work going into the testing and treatment. These workers therefore may just diagnose without testing which could lead to a wrong diagnosis. (Informal conversation with Naomi, Health Facility Worker)

Individuals visit the health facility not just to be treated but to be cared for. Patients want to feel appreciated even as they receive care, which gives them confidence that the care they receive from public health facilities is geared towards their good.

The satisfaction of the patients is not the only important aspect within the healthcare system, but the health workers also need to be well appreciated, even as they offer their services. However, the motivation of health workers has dwindled over time, causing some of them to seek other means to ensure that they can also meet their needs, even as they help provide services to their clients. Ngatho Mugo et al. (2018) note some of the challenges, such as low staff motivation and perennial shortages of resources, which dampen staff morale. Wanyama narrated how some health workers would not be willing to test for malaria at the health facility. The health workers have instead opened their own laboratory facilities outside the health facility in order to get extra income.

> Most of the time, the local dispensaries do not have the testing materials for malaria. The doctor will refer us to a nearby laboratory to be tested then we bring back the results. The only problem is that most of these laboratories just belong to the government hospital employees, hence sometimes even when they can test for malaria, they will still refer us so that they can get money for themselves. (Informal conversation with Wanyama, a 39-year-old man)

The challenges at the Government health facilities have, in some way, helped to reduce the queues at those facilities. This is because when individuals realise that they will not get the laboratory testing and the medications they need, they opt to visit the nearby cost-effective private facilities, which have all the services they need. Apondi narrates how she navigates care, given the various dynamics in the health facilities in Nairobi.

> The long queues at the health facilities have reduced because of the many affordable private health facilities in this area. Instead of going to the public health facility, where they may not have the equipment to test for malaria or the medications, I would rather go to a private health facility where I will be attended to fully but still at a fair price. The public health facilities will keep sending you to the lab or medications outside the facility, yet at times I am feeling so sick to even walk again to those facilities outside the public health facilities. (Informal conversation with Apondi, a 32-year-old woman)

The above narratives reveal the struggles that both patients and health workers encounter, which need to be appreciated and addressed to achieve a stronger healthcare system. As Kleinman (1980) reveals, socially legitimised statuses, roles, power relations, interaction settings and institutions all influence the healthcare system.

Drawing on cultural resources in times of crises: rethinking medical pluralism

There were cases when malaria testing turned out negative. However, since individuals had travelled to the malaria-endemic rural areas, they believed that they were suffering from malaria. This belief would make them seek further testing and treatment from other care options in an endeavour to rule out that they did not have malaria. Individuals did not find peace until they established the cause of the discomfort in their bodies, especially after returning from the rural area to Nairobi. In the narrative below, Melvin outlines the various care options and how individuals can draw upon them as they desire, depending on their illness experiences.

> There was a time when I tested negative for malaria and was given paracetamol to take care of all the discomfort I felt in my body. My health did not improve much after the paracetamol dose; hence, I decided to seek care in a private facility, where they found that I had typhoid. (Informal conversation with Melvin, a 30-year-old man)

Byron Good shows how, through experiences with illness, the realities of life are constructed, deconstructed and reconstructed.

> In the everyday world, the self is experienced as the "author" of its activities, as the "originator" of on-going actions, and thus an "undivided total self." We act in the world through our bodies; our bodies are the subject of our actions that through which we experience, comprehend and act upon the world. (Good 1994, 124)

The body is, therefore, the site of illness, and it is out of control when illness is present. Therefore, illness experience brings with it a sense of loss in the feeling of totality, which is the feeling of wholeness within a person (Levy 2005). The meaning of illness is constructed through narrative practices in which sufferers, their families, healers and other people in their social networks all participate (Good 1994). It is from narratives that we understand health beliefs that influence care-seeking behaviours. Introducing narratives into everyday observations of clinical life opens up new spaces of care during the therapeutic process. Narratives also offer a new perspective on individuals' illness experiences and, hence, the therapeutic process.

During my interactions with my interlocutors, beliefs about being bewitched after visiting the rural area emerged, which differed from the usual perceived malaria narrative. The belief in bewitchment prompted one of the caregivers to seek alternative treatment when the health facility option failed. My conversation with Wakhungu further revealed that medicine men from the village are now residents of the city. Wakhungu just had to ask members of her community where to find the medicine man from her village, and could immediately establish his location and seek his services.

> Sometime back, I visited the village, and when I came back, my child was sick, but when she was tested for malaria, they did not get anything. I took her to a private facility, and they still could not find out what was wrong with my child. Then I remembered that in my village, there is the problem of people who look at children with bad eyes. I told a few of my village mates about my problem and they told me about a medicine man who came from our village who could help. The medicine man gave me herbs to wash the child with and drink, and after some time, the child got better for a while before becoming sick again. We then took the child to Kenyatta (National Referral Hospital), where they found out that the child had

> a severe infection and was admitted, but later on got better. (Informal conversation with Wakhungu, a 39-year-old woman)

Wakhungu's visit to the medicine man did not entirely resolve the illness; hence, Wakhungu eventually visited the highest level of care provision at the government health facility level, the National Referral Hospital. The child received comprehensive care at the hospital. Awinja, by contrast, told me that she did not believe in being bewitched, which she thought was a traditional way of thinking. Instead, she felt that religion, which for her represented the church, had played its part in educating her that she could not be bewitched. However, she believed in the power of prayer even when dealing with any form of bewitchment.

> I know there are people who believe that their children have been bewitched upon return from the village and seek medicine men for healing. I think that those are traditional ways of thinking because in these times that we are living, I think the church has taught differently. I personally do not believe in being bewitched and if they try, I will pray, and the charm or spell will not work on me or my children. When I am sick after having gone to the village, I just pray and seek the services of a doctor for my treatment. You know of the saying that "Doctors treat, but it is God who heals." (Informal conversation with Awinja, a 39-year-old woman)

The above narratives reveal how illness experiences make individuals think of the many possibilities of health care and healing. This resonates with Bennett, Shive, and Coats's (2020) study on illness narratives from persons of colour with serious illnesses, which reveals that narratives put both the patients and clinicians in a world of medical imagination with many possibilities for care-seeking and healing. Additionally, Isaac Sarfo (2015) notes that healthcare behaviour is not only dependent on affordability, accessibility or availability but also on many other factors, including culture.

Recently, scholars have addressed the eclectic nature of medical pluralism, with healers straddling multiple spaces and therapeutic repertoires (Hampshire and Owusu 2013). Despite having some therapeutic options intertwined in many ways, as seen in Mozambique (Rodrigues 2016), some have, however, been eschewed (Eves and Kelly-Hanku 2020). This calls for the need to examine not just the fluidness or reconfiguration of the therapeutic repertoires but also how these borders are demarcated and reinforced (Olsen and Sargent 2017). Borders of therapeutic repertoires can be demarcated and policed, as shown by Eves and Kelly-Hanku (2020) on how Pentecostal churches employ an anti-traditional rhetoric that condemns local practices, including vernacular therapies (Hampshire and Owusu 2013). According to Krause, Parkin, and Alex (2014), medical knowledge produces and establishes diversity; hence, there is a constant interchange and mutual influence of medical traditions across geographical and cultural spaces, as noted in Nairobi. Different medical practices overlap, all geared towards solving the medical problem.

Conclusion

The various methods of data collection helped this study to look retrospectively into the issues of perceived malaria in Nairobi. Through informal conversations and blogs that have addressed the issue of malaria in Nairobi over time, this study established that

perceived malaria is mainly attributed to circular mobility between Nairobi, a low-risk malaria area, and participants' rural homes in malaria-endemic zones. Perceived malaria in Nairobi is also attributed to symptoms appearing within the 7–30 day malaria incubation period. Over time, individuals experienced malaria in such a way that they were not surprised by the signs and symptoms, but they were fully aware when the illness set in and knew what they needed to do. The current study further established that the plurality of care is not based on separate entities; rather, healthcare-seeking forms constantly interchange and mutually influence one another across geographical and cultural spaces, embracing the concept of openness. This study noted that perceived malaria illness experiences were based mainly on the wealth of knowledge that individuals had received orally through time from their therapy groups and other sources, including the Ministry of Health. This medical knowledge fostered and established diversity. This meant that individuals sought appropriate care, not alternative forms of care. This study noted the interwoven appropriations of patients undergoing sickness and seeking care. The low level of investment by the government in malaria as an illness experienced in a malaria low-risk zone also influenced the individual care-seeking behaviour. To understand the use of different medical traditions in the context of experiencing perceived malaria in Nairobi, the concept of health systems needs to be reviewed to embrace the concept of diversity.

Note

1. All participant names have been changed. Names given here are not their real names.

Acknowledgments

This work is part of my work as a postdoctoral research fellow under the Andrew Mellon-funded project "Entanglement, Mobility and Improvisation: Urbanism and its Hinterlands" (Project reference Number P-1808-06063). My special thanks go to the entire team of African Urbanities who have helped me shape and reshape this work. I also want to take this opportunity to thank my respondents who participated in the study.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

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