BURULI ULCER IN BANKIM, CAMEROON: PERCEPTIONS, AETIOLOGY AND TREATMENT AMONG HEALERS, PATIENTS AND BIOMEDICAL PRACTITIONERS

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Abstract

The study aims to examine how some traditional healers, infected persons with Buruli Ulcer (BU), and biomedical health staffs of Bankim perceive the aetiology and treatment of the condition. In partnership with the Ministry of Public Health of Cameroon and Lepra.ch, the Swiss Association for Assistance to Leprosy Patients, I participated in a formative study on BU in the wider Bankim Health District in December 2009 and BU was found to be a significant public health issue. These partners have developed a number of initiatives to combat the illness. Upon confirmation, patients were given free medical and surgical care in clinics. Despite these efforts, traditional treatments still predominate over biomedical treatments. Local perceptions and traditional healing practices typically connected to a supposedly mystical origin of the disease have been linked to this lateness. This qualitative research studied 30 traditional healers, 15 infected persons and 10 modern health practitioners. The aetiological perceptions of the disease by healers and infected persons were linked to supernatural causes. More than 75% of traditional healers said that only those with mystical powers bewitched people into having BU and they are the ones capable of curing it. Over 50% of patients visit traditional healers for treatment. The methods and therapy offered to patients are culturally sensitive to the way the illness is perceived in local cosmologies. However, there is high need to establish collaboration between biomedical practitioners and traditional healers to promote mutual trust to enhance early detection and immediate referral to specialized treatment centers.

***Key words**: Perceptions, Buruli Ulcer, Bankim, Cameroon.*

Résumé

L'étude vise à examiner comment certains guérisseurs traditionnels, les personnes infectées par l'ulcère de Buruli (UB) et le personnel de santé biomédical de Bankim perçoivent l'étiologie et le traitement de la maladie. En partenariat avec le ministère de la Santé publique du Cameroun et Lepra.ch, l'Association suisse d'assistance aux malades de la lèpre, j'ai participé à une étude formative sur l'UB dans le district sanitaire élargi de Bankim en Décembre 2009 et l'UB s'est avéré être un problème de santé public important. Ces partenaires ont développé un certain nombre d'initiatives pour lutter contre la maladie. Après confirmation, les patients recevaient des soins médicaux et chirurgicaux gratuits dans les cliniques. Malgré ces efforts, les traitements traditionnels prédominent encore sur les traitements biomédicaux. Les perceptions locales et les pratiques de guérison traditionnelles généralement liées à une origine supposée mystique de la maladie ont été liées à ce retard. Cette recherche qualitative a étudié 30 guérisseurs traditionnels, 15 personnes infectées et 10 praticiens de la santé moderne. Les perceptions étiologiques de

la maladie par les guérisseurs et les personnes infectées étaient liées à des causes surnaturelles. Plus de 75% des guérisseurs traditionnels ont déclaré que seuls ceux qui avaient des pouvoirs mystiques ensorcelaient les gens pour qu'ils aient l'UB et qu'ils soient capables de le guérir. Plus de 50 % des patients consultent des guérisseurs traditionnels pour se faire soigner. Les méthodes et thérapies proposées aux patients sont culturellement sensibles à la façon dont la maladie est perçue dans les cosmologies locales. Cependant, il est fortement nécessaire d'établir une collaboration entre les praticiens biomédicaux et les guérisseurs traditionnels pour promouvoir la confiance mutuelle afin d'améliorer la détection précoce et l'orientation immédiate vers des centres de traitement spécialisés.

***Mots clés** : Perceptions, Ulcère de Buruli, Bankim, Cameroun*

Introduction

In Africa, there is said to be one traditional healer to every 200 people; an estimated 80–90% of people in the continent turn to traditional healers for traditional medicine as a source of primary health care in most Sub-Saharan communities (WHO, 2002, 2008) including those with Buruli Ulcers. In settings that are characterized by shortcomings in health care provision and resources, traditional healers are making careful selective use of biomedical knowledge and language to enhance the perceived effectiveness of their treatments. They are part of local settings and they function within a specific setting whose cultures are well known to them where their fame and success enables their popularity locally as well as in other ethnic groups. It is so because every ethnic group has its own lenses, perception, beliefs and healing methods used for health, illness and disease which are explained by the fact that the practice of traditional medicine is highly rooted in the culture and religion of most African countries.

This is why WHO/Africa Centre for Disease Control and Prevention - a 25-expert advisory committee was launched to provide independent scientific advice and support to countries on the continent to enhance the safety, efficacy and quality of traditional medicine therapies. The WHO traditional medicine strategy (2014–2023) was developed and launched in response to the World Health Assembly resolution on traditional medicine (WHA62.13, 2013:19-21). The strategy aims to support Member States in developing proactive policies and implementing action plans that will strengthen the role traditional medicine plays in keeping populations healthy. Addressing the challenges, responding to the needs identified by Member States and building on the work done under the WHO traditional medicine strategy: 2002–2005, the updated strategy for the period 2014–2023 devotes more

attention than its predecessor to prioritizing health services and systems, including the potential contribution of traditional and complementary medicines to health and wellness as well as the promotion and integration of traditional medicine products, practitioners and practice into health systems.

A traditional healer refers to a person who does not have any formal medical training, but is considered by the local community as being competent to provide health care using animal, plant and mineral-based medicines, spiritual therapies and certain other techniques based on social, cultural and religious background as well as the knowledge, attitudes and beliefs that are prevalent in the community regarding physical, mental and social well-being and the causation of the disease and disability. These therapies may be used separately or in combination. Millions of people around the world often consult traditional healers first to help meet some of their primary healthcare needs and only those who are not given satisfactory care go to biomedical health services (Qazi et *al*, 2016:8). In westernized countries, adaptation of traditional medicine is called "alternative or complementary" medicine. Traditional medicine might provide as much as 80% of healthcare in Africa (Victor et *al*, 2010: 1).

In Africa in general and Cameroon in particular, as it is the case in other developing nations, local perceptions of disease and health vary depending on many variables including residence (urban or rural) and the socio-economic status of the person. Access to modern clinics and hospitals in many rural communities is limited and this makes traditional healers the preferred choice of the indigenes (Haque et *al*, 2018: 18). WHO (2019) reports show that there is an increasing trend across the world for the use of alternative and traditional medicines. WHO (2003) and importantly, the Cameroonian local government is beginning to acknowledge the role of traditional healers in health care delivery whose concoctions are either used alone or in combination with modern therapy (Fokunang et *al*, 2011: 8).

Traditional medicine enjoys great popularity in Cameroon (Bodeker et *al*, 2005:12). In 2002, the ministry of Public Health of Cameroon estimated that the population allocates 7% of their household health budget to traditional medicine with the poor people relying twice as often on traditional healers as rich people (Hillenbrand, 2006:15). Studies in the South West and North West regions of Cameroon showed that in case of acute illness, seeking care from traditional healers was more often the

first choice than consulting a public health care facility (Ryan, 1998:46). Another survey similarly from a rural Cameroonian region reports that in case of acute diarrhea, mothers tend to suspect a spiritual cause first and therefore resort to a traditional healer (Nkwi, 1994:12).
Many public health programs however rely on the interaction of patients with institutions that represent the modern medicine approach. Several studies identified consulting traditional healers as a main cause for delaying appropriate modern treatment (Scott et *al*, 2000:355); Awah et *al*, 2008:8) and Barker et *al*, 2006:10). To increase the effectiveness of public health programs, a better understanding of the reasons why patients consult traditional healers first is important. Other authors suggest that patients' perception of quality of care i.e. the quality of the interaction with traditional healers was the main determinant for consulting a representative of traditional medicine (Adelekan et *al*, 2001:78).

Care for Buruli ulcers and traditional medicine

Buruli Ulcer according to the biomedical paradigm is an infectious disease caused by bacteria called *Mycobacterium ulcerans*. It begins with a nodule, an edema, plaque and progresses to serious ulcerations and disabling sequelae. The disease is prevalent in the humid inter-tropical regions, mainly on the African continent, particularly in the coastal countries of West Africa and the countries of Central Africa (Buntine et *al*, 2001). The National Program for the Fight Against Buruli Ulcer (NPFBU) advises patients in endemic areas to detect cases early and seek immediate treatment at the first signs of the disease. Medical and surgical treatments are offered free of charge to patients. Notwithstanding this political will, official recommendations are not strictly followed by patients. As in many African countries, patients prefer traditional medicine to any other form of treatment (WHO, 2017). For example, most Buruli Ulcer patients in Benin adopt many remedies favoring self-medication and the use of traditional treatment. Hospital treatment is only a last resort. Despite the creation of the Buruli Ulcer Screening and Treatment Center in the Health District patients continue receiving treatment from traditional healers (Johnson et *al*, 2004: 64). The NPFBU reports that in Côte d'Ivoire, in 2011, out of 1659 patients, 972 patients had recourse to African medicine before attending treatment centers. In rural Ivorian areas, traditional medicine is the primary source of

consultation for more than half of Buruli Ulcer patients. For example, in the health district of Yamoussoukro, treatment with plants is a therapeutic remedy favored by patients (Adjet et *al*, 2016:26).

According to traditional beliefs of people in the Bankim area, every illness has a cure. In the context of these beliefs, the scientific description of Buruli ulcer as a germ related disease without giving attention to the sociocultural aspects of the disease exposes the limitations of biomedical medicine and motivates people who subscribe to these widely held beliefs to turn to traditional healers. In these traditional belief systems, Buruli ulcer is classified into four categories: naturally occurring, man-made (via witchcraft), *Mgbati* Ulcer meaning (power, ulcer using for cooking, ulcer using for flashlight and ulcer using as means of transport during nocturnal trips); and ancestral. The first category fits the biomedical explanations, the second, third and fourth point at the causal agents such as supernatural beings (ancestors or a deity) or witchcraft and supernatural power – a being with *mgbati* power who can inflict BU on somebody.

Diagnostic methods and folk models of illness are based on oral traditions that emphasize supernatural causes more than natural ones. Studies have found various explanations for the popularity of traditional healers. The most frequently cited reasons are their consistency with local cultural values and beliefs, a better healer patient relationship as well as proximity and lower cost compared to western health care facilities (Heintzerling, 2005:35). Traditional healers spend much time listening to their patients and discussing the causation of their disease and the possible course of treatment. These make the patients feel well taken care of and get involved in their treatment, a key social factor often lacking in the local modern clinics and hospitals. As a result, patients tend to consult traditional healers in parallel with being on modern medication and follow-up in clinics.

Despite the popularity of traditional healers, the biomedical health workers view the perception and care of various diseases by traditional healers as being fake and unscientific (Irene et *al*, 2021: 18). Meanwhile given the great number of people seeking care from traditional healers, numerous health programs have tried to involve traditional healers especially for HIV/AIDS education and patient care (King and Homsy 1997:217; Mills et *al*, 2006:17), the treatment of diabetes in Cameroon (Ashu et *al*, 2011:7; Awah, 2006), reproductive health activities in Ghana (Mercy et *al*, 2019:14) and they played a vital role in stabilizing patients

and keeping them within the treatment and health care networks. But for Buruli Ulcers, they were completely kept aside in Cameroon. Meanwhile traditional healers contribute to fight against this disease using their ethno-remedies, magico-religious care and prevention at their disposal. However, this therapeutic choice is not recommended to patients by the official institutions for the fight against this biological pathology. The local perceptions and the various traditional treatments traditional healers offer are poorly documented. Therefore, we wonder: what are the perceived etiologies of these ulcers by traditional healers, infected patients and health staff? What are the different treatments offered by traditional healers and hospitals to BU infected persons? What is the particularity of traditional healers that attract patients seeking traditional care rather than free biomedical treatment from the clinics?
In order to contribute to the knowledge of traditional treatment of Buruli Ulcer related diseases, this study analyzes the perceptions of the etiology and treatment of these diseases as well as the underline symbolic role of healers that prevent the biomedical counterpart to include them into Bucare in the Bankim area.

Methods

Study setting

The study was carried out in Bankim Health District which is one of the two Health Districts of Mayo-Banyo Division in Adamawa Region of Cameroon. The Health District is located SW of the Adamawa Region with a surface area of 2.700 km2 and an estimated population of 70.132 inhabitants. This Health District has seven integrated health areas which includes people from different ethnic groups, although a majority are Tikar. For the purpose of this study, we conducted research in Ngatti rural, Bankim urban and Nyamboya integrated health areas. The choice of these health areas was informed by the fact that part of the area was constantly flooded by water from the Mape Dam which local populations suspected was responsible for bringing the disease. Also in these health areas were many traditional healers and who had a functioning healer group association. To add to these, Bankim urban was the district headquarters where the hospital was based and the two health areas were neighbouring communities with infected persons expected to subscribe

to either treatment paradigms. Nyamboya was a Baptist integrated health area which is private and other two were governmental.

Study design

The study design was purely descriptive and qualitative. Fieldwork was conducted in both communities and clinical settings for a period of three months from December 1st 2009 to February 30th 2010. Semi structured interview guides with open-ended questions were used, and the course of the interviews were left open so that any new themes which emerged could be fully explored.

Sample size

The sample size used for the research was 55 participants; 30 traditional healers, 15 suspected or BU patients and 10 modern health practitioners selected from the three endemic integrated health areas**.**

Qualitative Data

Data collection

Qualitative data were collected during our ethnographic fieldwork. It was a formative research and we needed to explore the perceptions and beliefs of the etiology of Buruli ulcers and its treatment trajectory from traditional healers, infected persons and western trained practitioners.

Interviews

We conducted open-ended interviews in the three health areas and when possible at the convenience of the informants, information was tapped and transcribed fully afterwards. During the interviews, photographs of the four different stages of Buruli ulcers were shown to the informants to help interviewees discuss their knowledge, perceptions and healthcare practices for the various stages of the disease. Interviews lasted approximately 35 - 40 minutes. French was the official language used during the interviews and Fulfulde – the local lingua franca. We made used of translators in *Tikar* and *Kwanja* communities for key informants who did not understand French or Fulfulde. Interviews with traditional

healers were carried out in their traditional clinics, infected persons both in healers' clinics and private homes while those with trained health personnel in modern health facilities.

Direct observation

With this technique, it consisted of observing directly in everyday activities of informants. For example, we visited traditional healers at traditional healing shrines and watched them consulting and treating their patients and through that we had the opportunity to conduct interviews with patients and booked appointments for focus groups. In biomedical clinics, we visited every morning and observed health personnel during their routine consultations of patients with wounds, washing, and administration of injections and for interviews as well. Through it, we were able to observe the kind of medication used for patients in the clinic as well as the types of herbal medication, powdered concoctions and incantations used by traditional healers in the care of spiritual and natural BU.

Focus Group discussions

Concerning focus group discussions, we held separately with traditional healers, infected persons and clinic staff. Group discussions were tape recorded and fully transcribed before data analysis.

Ethical considerations

An ethical clearance was obtained from the Cameroon National Ethical Committee and an authorization to conduct research from the Ministry of Public Health of Cameroon for fieldwork. The district medical officers were informed and local administrative authorization obtained for the project before fieldwork began. Informed consent and voluntary participation were sought from our informants. Pseudonyms are used to protect the identities and privacy of participants, taking liberty with ethnographic facts, in order to disguise identities, doing all to retain contexts and arguments.

Data management and analysis

Data analysis of the study started soon after our field work. Information taped recorded during interview sessions were transcribed and arranged according to the different informants interviewed.

Results

We interviewed 45 participants: 30 traditional healers, 6 people with ulcers, 9 BU patients and 10 modern health staff. Traditional healers were mostly male (28/30). The two female traditional healers were 37 and 45 years of age, and had worked as traditional healers for more than five years. The median age of male traditional healers was 53 years, ranging from 30 to 75 years, and they reported practicing traditional medicine for a median number of 28 years ranging from 5 to 50 years. All of the traditional healers used in this study were natives. BU patients were predominantly men (7/9) and those with suspected ulcers had an equal sex ratio (3/6). All the biomedical health staff were males. Five main themes emerged during data analysis: (1) the experience and practices of traditional healers in managing painless boils, simple ulcers, *Mgbati* ulcers and BU; (2) relationship dynamics between traditional healers and their patients; and (3) knowledge and perceptions of BU and its treatment practices. (4) relationship dynamics between traditional healers and modern healthcare practitioners (5) BU prevention.

The experiences and practices of traditional healers in managing painless boils, simple ulcers, *Mgbati* ulcers and BU in Bankim.

Traditional healers reported that they played specific roles in the community, were well known, trusted and believed that their healing skills were understood and appreciated in the different health areas where they lived and worked: "Every young man or old man in this health area knows me as a traditional healer and trust me for my work. I diagnose illnesses through divination, cure nodules and all types of ulcers as well as mystical ones" (55 year old traditional healer, Ngatti village).

Traditional healers' specializations

Many traditional healers reported acquiring their skills in different ways; through dreams, spirits from ancestors and from family members: "I first inherited my traditional healing knowledge from my grand maternal mother and later acquired others from other traditional healers" (39-year-old traditional healer, Bankim town).

Treatment practices and anthropogenic sources

These diseases were reportedly treated by traditional healers with a variety of methods and composition of magico-religious and ethnomedicinal plants. A cure is believed to be available for each of these types of Buruli Ulcer. Most of the remedies offered were obtained from sources surrounding their dwellings and inspiration from ancestors. Among others, healers got herbs from home herbal gardens, village forests, shrines, tree bark, and other plants. Remedies included dried herb concoctions to put in boiled water, milk and drink, ointments to rub on the skin and skin scarification. In conjunction with other aspects of their healing, healers used spiritual beliefs, incantations and pouring of water for purification.

Relationship dynamics between traditional healers and their patients

Patients' perceptions about traditional healers

Patients reported seeking care first from traditional healers and where their problems are not adequately handled from traditional care before they seek modern care. Some said they use traditional healers' healthcare services because they were effective, accessible and affordable. "Some people prefer traditional healing when sick as they will quickly get treatment on time and cheaper than clinics" (33 year old patient, Ngatti village).

Trust and confidentiality

Patients who had visited traditional healers for general health issues noted a positive relationship with them and described the type of care

offered as efficient: "I and my second daughter had wounds that were resistant to biomedical care in the modern clinic. Somebody referred me to a traditional healer who revealed its causation, gave medicines to use while avoiding sex until treatment has finished. We respected it as recommended, our wounds got healed" (47 year old patient and daughter, Nyamboya village). The same positive relationship was noted by traditional healers: "Many people are coming here in my clinic, get medicines for their different health problems and come back to appreciate me when they go and get better or healed" (51 year old traditional healer, Ngatti village).

Knowledge, perceptions and treatment options for Buruli ulcers

Both traditional healers and patients perceived Buruli Ulcers as "*mgbati*". It is known commonly within the Health District as a mystical illness (maladies mystique), incurable ulcer or illness (plaie ou maladie inguérissable) and has perceived origins such as: man-made illness, witchcraft, ancestral wrath, curse, spiritual resulting from theft and dishonoring of the dead as well as sometimes being a natural illness (maladie simple). To them, *mgbati* is power or mystical power which resides in the human body in the form of a painless boil, nodule and ulcers. Those with such powers can inflict people and cure them. People with *mgbati* ulcers use them during nocturnal trips as pots to cook food; as torch or flashlight and as means of transport. This kind of ulcer cannot be treated by biomedicine.

Traditional treatment options for Buruli Ulcers

Patients reported seeking care primarily from traditional healers and rarely in biomedical clinics. The pathway to care was at times complex and time-consuming. Traditional treatments involve herbal care, application of dried concoctions, spiritual bath and skin protection. A patient describes the start of his sickness as: "It was a swollen painless nodule which was the starting point of the disease, i discovered that my left hand was swollen and the outer skin has started peeling off and then i went and consulted a traditional healer for treatment. Before going there we had first tried some pain killers from drug vendors to no avail. My treatment took seven months and the wounds got healed and Ii was

offered protection against re-attack" (30 year old patient, Nyamboya village).

Plate 1: *Infected BU patient on traditional treatment*

Photo 1 : Traditional healer bandaging the *mgbati* ulcer of his patient after treatment

Photo 2: Showing clearly the two ulcers on the patient's two legs.

Source Koin (Nyamboya village, fieldwork January 2010)

The above photo shows *Mgbati Ŋgíàr nyèm* (horn of an animal) and calabash placed between the affected legs of the patient. The horn pinned to the ground representing the legs – meaning it has to get healed to be as strong as the horn. The calabash represents a bathing bucket into which medicine is put to wash the ulcers. The reddish substances on the horn represent the eyes of the power inside the horn watching to see if the ulcers are as a result of *cə̀ə́b mɨ̀ nyîn báŋtɨ́* (an evil eye) caused by a *wùàr mbíàr* (wizard) or *gwɨ̌ mbíàr* (witch) blocking healing process in the two BU of the infected person. **Knowledge transfer and referrals** Traditional healers reported utilizing referral system to other healers for unknown ailments, or conditions they felt would be best treated elsewhere by other colleagues. 'For the diseases I cannot treat, I will send them to traditional doctors who can treat them" (30 year old traditional healer, Ngatti village). One patient reported being referred to one healer by another traditional healer, who stated treating him and later said, "This disease is beyond my power, go to Ngatti rural and meet

the traditional healer there for your treatment" (Patient, Nyamboya village).

Relationship dynamics between traditional healers and modern healthcare practitioners

When asked whether they would be interested in interacting with modern health staff in their respective health areas in healthcare related issues healers said they would be willing to collaborate but with conditions if only there was mutual trust and respect and not seen as illiterates.

Biomedical perception of BU and treatment

Findings from biomedical staff reported that Buruli Ulcer is an environmental pathogen, a disease of the skin, underlying tissues and sometimes the bone. With this approach, the cause of the disease is biologically confirmed to be Mycobacterium ulcerans that lives in slow running or stagnant water. Treatment is with appropriate and free WHO recommended antibiotics (Rifampicin and Streptomycin) as its only standard treatment. "Biologically confirmed Buruli Ulcer is an illness that no traditional medication can treat its infection. Traditional medicine only helps to delay quick medical intervention and enable the infected persons to undergo long suffering. Traditional medicine cause more harm than effective care" (34 year old health staff, Bankim hospital). Studies show that this disease is the third most common mycobacterium infection of the immune-competent hosts after tuberculosis and leprosy, and it is the most poorly comprehended of the three diseases (Amofah et *al*, 2002: 8), Meyers et *al*, 1996: 134), Sizaire et *al*, 2006:6).

Discussion

Exploring the perceptions, aetiology and treatment of Buruli ulcer and *mgbati* in Bankim Health District has been a concern for many actors: healers, patients, biomedical health staff and policy makers. Exploring these will not only encourage where to seek care in Bankim, but it will also widen awareness of the different types of BU affecting people in the

Health District. Nonetheless, the problem requires a holistic examination.

Traditional herbal medicine, magico-religious and biomedical treatment options exist. Many healers and their patients; as well as community people have positive attitudes towards traditional care and seek these treatments most for their different health related problems. Seeing BU as *mgbati* - having a mystical causality, these healers have formulated concepts about BU and incorporated it into their traditional healing cosmological frameworks. They see BU as an ancient disease that ancestors have bestowed them with the ability to cure which (Justin, 2010: 17) in his study exploring the potential for a culturally relevant HIV intervention project in Swaziland, supported this idea by saying that traditional healing beliefs appear to be as much the formation of historical processes as they are a set of practices handed down to healers directly from their ancient ancestors. New illnesses such as BU get incorporated into a cosmological framework that gets re-interpreted as traditional and their meaning is transformed by that process. Many biomedical practitioners argued that traditional healers are less effective and could cause more harm than good to BU infected persons. Others maintained that healers use secrecy and spirituality as a cover-up to claim medical knowledge for BU. These perceptions among biomedical health practitioners could be influenced by their lack of information and knowledge about healers and what they do, thereby confirming previous findings (Krah et *al*, 2018; Aziato and Antwi, 2016). Equally, several studies have reported physicians' negative attitudes toward healers in Cameroon (Wamba and Groleau, 2012), Ghana (Asante and Avornyo, 2013; Gyasi et *al*, 2011, 2016), Nigeria (Isola, 2013), and elsewhere (Chang and Basnyat, 2015; Hall et *al*, 2018; and Helman, 2007).

Another issue is centered on concerns over traditional medicines' efficacy and safety, as are reported in several other studies (Barimah, 2013; Aziato and Antwi, 2016; Gyasi et *al*, 2011 and Carrie et *al*, 2015). Traditional medicines are perceived to have low quality and safety with poor dosages, no expiry dates, is prepared under poor environmental conditions, and hence positioned as substandard and problematic. These perceptions make many biomedical practitioners feel reluctant to consider healers as health care providers or being capable of treating patients. These assumptions about traditional medicine and practices can effectively constrain efforts toward accepting working in collaboration with them in Bankim. In spite of that, sustained trust and relationships,

public education, collaborative knowledge sharing, and basic training practices among traditional and biomedical practitioners can mediate and inform more positive perceptions about healers and their care (Krah et *al*, 2018). Our findings showed that traditional healers are trustworthy, accessible, affordable care providers (AbuhariA, 2021:31) who offer culturally sensitive specialized forms of care for specific conditions and offer guidance on referral options amongst themselves. Buruli Ulcer is perceived as having many possible causes including: witchcraft, ancestral wrath, curses, spiritual resulting from dishonoring of the dead as well as simple ulcers (Idrissa et *al,* 2019:1).

Traditional healers reported referring patients to other healers when they were unable to treat a specific condition, and a few of the traditional healers interviewed stated that they would be willing to collaborate with biomedical staff if only there would be reciprocal trust with biomedical staff not regarding healers as primitive people who do not have anything to contribute as far as healthcare is concerned. Herbal treatment of Buruli Ulcer takes into account the physical, social and cultural ecology of the patients in a rural area. Traditional healers use fresh leaves, dry bark of trees and their roots, powdered concoctions from plants and animals accompanied with magico-religious ritual to treat all forms of Buruli ulcer. The bodies of the patients are protected through scarification as well as offering them talismans to prevent both the visible or invisible spirit from reintegrating into the same person or to facilitate the healing process of their ulcers.

Our findings corroborate the report of (Krah et *al,* 2018:7) which revealed that traditional healers are the first point of care for many people, especially those living in rural areas with little access to biomedical health facilities and which (Elise et *al*, 2020: 12) also reported that the first line of treatment for about 80% of patients living who do not only suffer from all sorts of ulcers but as well as any other health problem would be traditional medicine. The pluralistic nature of the Cameroon health system, where biomedical and traditional care are offered together in a dynamic system, is not unique to this setting and has been seen in other contexts, including Ghana and South Africa.

Our study showed that patients trusted traditional healing methods and that care was sought from traditional healers due to the belief in its quality within their context, as also seen in a study from Ghana (Abuhari, 2021:31). Treatments offered by the traditional healers in our study, such as *mgbati* ointments, powdered herbs and other concoctions were similar

to those offered by healers in other studies as were the diversity of the diseases treated.

Due to the coexistence of traditional and biomedical paradigms in Bankim, collaboration between them should be encouraged if only for the sake of healthcare of the population. For this, can ensure that with the rapid evolution of environmental pathogens or magic-religious illnesses, victims would receive early the appropriate treatment (antibiotics, wound cleaning, spiritual cleansing and protection) during the reversible stages of the illness. Some traditional healers reported recognizing and treating the earlier stages of ulcers and other related health issues and this, along with the fact that patients reported seeking care at traditional healers first, reinforces the importance of ensuring that traditional healers and biomedical staff work together to detect cases of illness early and refer them to the appropriate healthcare facilities.

Partnering with traditional healers in order to set up robust referral networks for diseases has been implemented in a variety of settings. Traditional healers had been tried with the treatment of diabetes in Cameroon (Ashu et *al*, 2011: 7) and reproductive health activities in Ghana (Mercy et *al*, 2019:14) and they played a vital role in stabilizing patients and keeping them within the treatment and health care networks. But for Buruli Ulcers, they were completely kept aside. Yet their contributions in care for BU patients warrant research and documentation. A South African study noted that referrals by traditional healers were affected by the attitudes, perceived subjective norms and perceived behavioral controls as influences on behavior, which would need to be studied at a more in-depth level in our setting (Sorsdahl *et al*, 2013:16). The willingness of traditional healers to be a part of referral networks and take part in a training course, their geographical proximity to patients and patients' positive views of traditional healing provides a unique opportunity to build such partnerships. This could increase the frequency with which patients are detected at a community level and the speed with which they are referred, thus leading to efficient access to treatment in the crucial early, reversible stages of the disease.

Our study limitations include traditional healers and health staff working out of Bankim, vending mobile traditional healers and patients without suspected nodules or ulcers.

Conclusion

Our research has identified several different actors involved along the pathway to care of Buruli Ulcer patients, including traditional healers, who need to be included in medical intervention activities. Our findings show that traditional healers are the key healthcare providers in the Bankim area. They provide holistic treatments to patients. This enriches healers with social capital and popularity in ways that biomedicine does not have. Free biomedical medications expire unused in clinics while infected persons cling onto the use of paid traditional medicines and only report to clinics at the last resort. This lateness has been blamed by medical staff on the healers and this is the main reason for the unwillingness of medical staff to include them into official BU management in Bankim. Healers would be willing to collaborate and attend training on the biomedical concept of the disease and be part of referral partnerships given mutual trust and respect for each other. If partnership is possible, then this collaboration could expedite care provision from the community level, which would ultimately encourage early detection, diagnosis, referral, saving lives and reducing the severity of the complications associated with BU in particular as well as related illnesses.

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