DETERMINANTS OF THERAPEUTIC ROUTES FOR MALARIA PATIENTS IN IVORY COAST

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Abstract

Malaria patients in Ivory Coast pursue a wide variety of treatment routes, depending upon how they understand the aetiology of their illness, their association of illness with supernatural causes, their ability to afford standard consultation fees, their access to conventional health care facilities, and their confidence in traditional African therapies. This research took place in the context of the government's policy of providing free management of 'simple malaria' for all. Working with four conventional doctors and four traditional African medical practitioners, treatment choices of 161 malaria patients were analysed at Kennedy-Clouétcha, a busy urban health care centre in Abidjan. Almost half (77) of the patients in the study cited mosquito bites, general poor health, and stagnant water sources as the causes of their malaria. A greater number of patients (84) indicated fatigue, sun exposure, mysticism, and diet as the cause. The scope of therapies sought by these patients covered conventional biomedical treatment, traditional African medicine, and prayer. When patients were not cured through methods of their first resort, they pursued second options for care. Despite the availability of free care in centrally located public health systems, the therapeutic trajectory of many patients diverted away from conventional treatment. The data suggests that a patient's orientation away from the conventional biomedical model may be best explained by confusions surrounding the diagnostic label 'simple malaria'.

Keywords: *malaria, patient choices, therapeutic routes, free treatment, traditional African medicine*

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Introduction

Because of its pervasive endemic persistence, malaria is central among the various pathologies affecting people around the world. This contagion is a major public health problem in Ivory Coast due to its frequency, lethality, and socio-economic impact on the whole population, particularly children. About 3.5 million children under five, and one million pregnant women, are currently exposed to malaria in Ivory Coast; and it constitutes 62 per cent and 36 per cent of the reasons for hospitalising children under five years and pregnant mothers, respectively. Malaria is also the leading cause of death among children under five years, and is responsible for 11.8 per cent of infant mortality (Chadi 2014: 55). Malaria accounts for 33 per cent of deaths in Ivorian hospitals (Bamba 2011: 42); and it represents 57 per cent of all recorded states of morbidity. Malaria is the chief reason for consultation visits to Ivorian health care centres (43 per cent), undermining the professional efficiency and economic productivity of working adults, as well as causing high rates of absenteeism in the schools.

Faced with this situation, the Ivorian Ministry of Health in collaboration with the World Health Organisation, put malaria on the list of priority diseases in the National Health Development Program as early as 1996 (Ministry of Health and Public Hygiene of Côte d'Ivoire 2016a). Such cooperative health endeavours are intended fight the illness through timely intervention by responding adequately to reported cases of malaria, thereby reducing the number of deaths attributed to it.

This political decision resulted in the creation of the National Malaria Control Program [NMCP] by order N^0 133 MSP/CAB/AS of 9 May 1996. The action plan of the NMCP is comprised mainly of prevention, including the distribution of insecticide-treated mosquito nets to the population, and the management of reported cases. To this is added the 'free targeted' malaria care for pregnant women, for children under five, and now 'free malaria treatment for everyone' in all public health facilities of Ivory Coast. These efforts at the national level have enabled the hospital prevalence of this pathology to reduce from 50.17 per cent in 2011, to 33 per cent in 2015 (Ministry of Health and Public Hygiene of Côte d'Ivoire 2016b).

However, despite the efforts of the Ivorian state and its partners to develop sanitation and sewerage systems, malaria continues to persist throughout the national territory. From 2014 to 2016, health facilities in the Abobo municipality of the Abidjan District (the Ivorian economic capital), recorded 298,943 cases of malaria. In that two year period, 323 recorded deaths

were attributed to this pathology (Ministry of Health and Public Hygiene of Côte d'Ivoire 2017).

In accord with the administrative division of health regions throughout the country, the municipality of Abobo is endowed with two health districts: the Abobo-West Health District and that of Abobo-East. The entire urban area has twenty one public health facilities, not counting several private medical care operations. The region has also fourteen public pharmacies and forty-eight private pharmacies. In accord with the World Health Organisation standard of one nurse per 5,000 inhabitants, the community benefits from one nurse for every 2,910 inhabitants. In terms of accessibility, 92 per cent of the population lives within five kilometres of a health facility (Ministry of Health and Public Hygiene of Côte d'Ivoire 2015).

The government register also lists about 428 registered traditional medicine practitioners who legally practice their activities. As far as traditional medicine is concerned, practitioners receive an average of fifteen patients per day and find themselves scattered in all sub-districts of the municipality, streets, markets, bus stations and other public places frequented regularly by the general public (Ministry of Health and Public Hygiene of Côte d'Ivoire 2014).

This study was conducted in the Kennedy-Clouétcha sub-district of the municipality of Abobo, falling under the Abobo-East Health District which has an average attendance rate of its health facilities of 55.72 per cent. The use of health services in this area is recorded as 38.46 per cent (Ministry of Health and Public Hygiene of Côte d'Ivoire 2017a), where the most common pathologies are recorded as malaria, diarrheal diseases, and respiratory infections. During the period 2014 to 2016, 170,174 cases were recorded for malaria, with 267 deaths and an incidence of 126 per 1000. Malaria represented 28 per cent of the reasons for seeking consultation in the hospital facilities of this Health District (Ministry of Health and Public Hygiene of Côte d'Ivoire 2017a).

In response to the persistence of this particular pathology in their environment, the patients and the groups organising therapy use various therapeutic resources related to their healing traditions. This disease is, in fact, interpreted according to the experience and perception of afflicted individuals. Its diagnosis has a multidimensional aspect because it is expressed through the biological, the psychological, the social and the cultural (Mannoni 1998: 55). The objective of the study is to investigate the factors and rationales associated with the variety of therapeutic routes followed by malaria patients – in this particular context where where conventional biomedical management options are widely publicised, readily accessible, state-funded and organised, and are available to all free of charge.

Tracking various beliefs about the causes of malaria

Perceptions explain and prescribe the care-related choices and actions of individuals. That is to say, the individual's intentional pursuit of therapeutic help, and the varied receptions that individuals reserve for the care-services that are available to them, will depend very crucially upon their perceptions of their illness (Massé 1995: 242). To cure malaria, Kennedy-Clouétcha patients have been using the health care systems that always been available in their community. Today, there is the recent emergence of public discourse about a treatment regime which is promulgated as 'free access to basic malaria treatment for all' available in all public health facilities in the Ivorian territory. However, despite the very pro-active measures of the central state to ensure free medical care as a conventional treatment of choice for simple malaria in health facilities, the use of other therapeutic models to cure malaria persists. So the question arises, given the public health initiative organised and funded by the central state to ensure that conventional medicine is provided to all Ivorian citizens who need it, what explains the variety of therapeutic trajectories that significant percentages of people afflicted with malaria continue to pursue?

To answer this question, the research presented here was limited to neighbourhoods of Kennedy-Clouétcha, a district of Abobo commune, in neighbourhoods where malaria is endemic and residents are highly susceptible to contracting the contagious illness.[2] These neighbourhood environments are precarious and generally unhealthy, characterised by the flow of wastewater through their streets, so that malaria is present at all times of the year and remains the primary reason for consultation in the health facilities of the district (Ministry of Health and Public Hygiene of Côte d'Ivoire 2017b).

Over a period of one month, from May 1 to May 31, 2018, we went through the Kennedy-Clouétcha district to conduct the surveys, identifying patients and practitioners in various health systems existing within the community, observing the organisation of their care delivery activities, relying on socio-demographic data collected from specialists, and through our own circulated questionnaires and interviews. A non-probability sampling method 'by convenience' ensured the data pool would be comprised of individuals who would have articulable views about the aetiology of their illness.

[2] Neighbourhoods in the study included the southern sub-district Sans-Miss, in the eastern sub-district Abobo Baoulé, in the west Agbeikoi, and northern neighbourhoods as well. The primary data and details of the demographics involved, the tools used, and the research instruments distributed, are available on request from the corresponding author Dr. Felix N'dia: <felixndianon[at]yahoo.fr>.

The resulting data was collected from 161 individuals, both men and women over the age of fifteen at the time of the study, who had undergone at least two episodes of malaria, and who were enrolled in some methodical healing process in a health facility, or were presenting to a traditional African herbal medicine practitioners, and were patronising either conventional or street pharmacies. Our key resource persons were selected for their expertise as specialists either in modern medicine or in traditional medicine.

For the populations living in Kennedy-Clouétcha, the views we collated regarding the aetiology of malaria cluster into two groups: on the one hand, as cited by 77 patients interviewed and surveyed, malaria is caused by mosquito bites, insalubrious and unwholesome living conditions, and stagnant water locates. These aetiologies are consistent with those listed by biomedical experts. On the other hand, 84 patients cited fatigue, sun, mysticism, and diet as causes of their malaria. Thus, in Kennedy-Clouétcha, less than half of the respondents in this study gave an explanation of malaria that fits with the western scientific biomedical account. The larger portion of the canvassed individuals understood malaria differently, although with great consistency and similarity, as an endemic disease attributed to another set of factors. Primarily, for this majority of patients, malaria was understood to be a dysfunction of the body related primarily to fatigue and overexposure to the sun. This distribution is depicted in figure 1.

In the words of one interviewee, E.T., a 48 year old female:

> I am a shopkeeper and I move a lot because of my activities. It's when I'm very tired that I get sick. And it's always malaria that makes me tired.

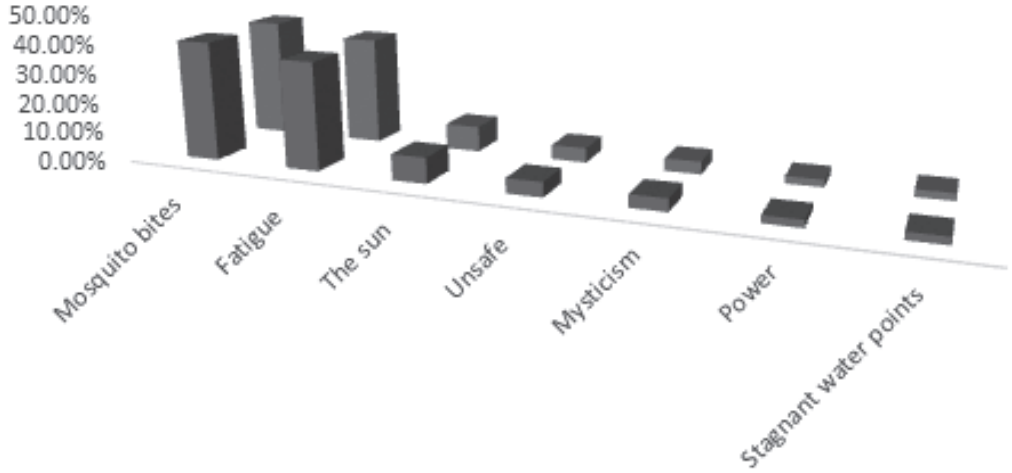

Figure 1: *Overall distribution of the different causes of malaria understood in Kennedy-Clouétcha*
Source: Our investigation, 2018

Education level as a determinant of beliefs about malaria aetiology

Of the 161 ill individuals who were surveyed, 48 were non-literate; 32 had a primary level of education level; 42 had schooled to the secondary level; and 39 received some higher education. The data falling into these two categories or series of aetiological model reflected these correlations as depicted in figure 2: for those individuals with upper and the secondary level education, 29 and 26 patients, respectively (that is, more than half of the informants) cited mosquito bites as the cause of their malaria. Only five of the non-literate and five patients with a primary school level of education cited mosquitoes as the cause. The patients with the highest level ('superior') formal education described the cause of their malaria consistently with the aetiology promulgated by conventional western biomedical medicine. These results indicate that formal school education is a contributing factor to a conventional scientific understanding of the disease. See figure 2.

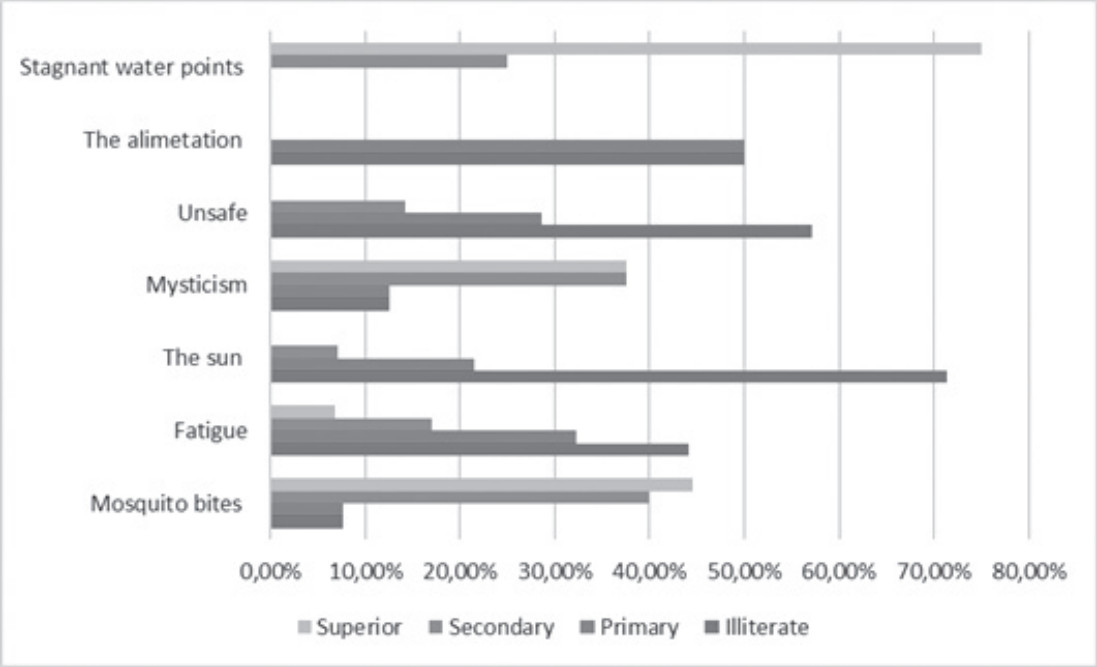

Figure 2: *Distribution of beliefs about the causes of malaria by level of education*

Source: Our investigation, 2018

Formally educated respondents told us:

> If the neighbourhood is dirty and the sewage flows from everywhere, there will be mosquitoes that will sting us. That's what gives us malaria here in Kennedy-Clouétcha. – D.T. (23 years old), a student at a major school.

On the other hand, twenty non-literates cited fatigue and ten others referred to the sun as the cause of their malaria. Individuals with a low level of education linked the causes of malaria to factors guided by popular beliefs or social imaginaries that demonstrate their lack of formal exposure to international readings of this pathology.

Thus the level of education influences the determination of the explanatory factors of malaria among the populace of Kennedy-Clouétcha, who construct their personal representations of malaria based on their social background and upon the quality of formal education that their social status affords them. On the other hand, formal education instils an element of denialism and disassociation from the broader context of chronic contagion and high mortality rates that afflict many African majorities; this denialism and distancing are not privileges that people in lower socio-economic classes enjoy. This absence of a buffer for some sectors of the general population is reflected in different understandings of aetiology and divergent levels of confidence in conventional forms of hospital based medical care.

The neighbourhoods of Kennedy-Clouétcha where malaria is prevalent are severely compromised economically, and thus they suffer from poor or absent infrastructure and little or no municipal services such as sanitation and sewerage systems. In these areas where the central state has not provided attention to the status quo, the most rampant pathology remains generally understood as related to factors such as sun, fatigue and diet. Other explanatory factors for malaria collected during the study included mysticism, food. Conventional medicine recognises mosquito bites, unwholesome living conditions and stagnant water points as explanatory factors for malaria. These conventionally confirmed scientific factors accounted for 47.9 per cent of the opinions, indicating that less than half of the malaria patients in the study area subscribed to these conventional biomedical causes.

On the other hand, 52.1 per cent of these patients mentioned fatigue, sun, mysticism and diet, which are aetiologies that are not recognised as having a direct link with the pathogenesis of malaria. The opinions of this proportion of patients testify to their perceptions of the causes of malaria in a broader context of understanding chronic contagion and the shocks to public health in severely depreciated economic environments.

Moreover, in the neighbourhood, the level of education influences an individual's beliefs about the aetiology of these diseases in the sense that the most educated individuals, i.e. those who have attained 'superior' or higher level and secondary school level, asserted aetiological factors that are enlisted by conventional biomedical knowledge frameworks; and those whose levels

of study were limited or weak (primary level and non-literate or 'illiterate') evoked causes learned as part of their family upbringing or other informally acquired, untutored perceptions of malaria.

For example, on the use of insecticide-treated mosquito nets, the Memain (2010: 199) study in Abidjan records that, despite several years of sensitisation, Abidjan populations seemed to dwell on popular perceptions of mosquitoes, hearsay about malaria, and mosquito nets. The aetiologies that Memain's subjects attributed to malaria remained almost the same as those of our informants. These causes could be grouped into (i) natural causes (sun, food, flies, fatigue) which occupy three quarters, i.e. 75 per cent, of the causes cited; and (ii) one quarter or 25 per cent as supernatural causes (sorcery, divination, curse, bewitchment). The Memain study reinforces our results collected eight years later, which indicate that more than half of the patients in our study area, also located in Abidjan, continue to attribute the causes of malaria to factors such as sun, diet, and fatigue. In addition, Bamba (2011: 92), by studying the causes of the persistence of malaria in children under five at the health centre of Kossou in Côte d'Ivoire, reveals that unwholesome, septic, substandard living environments and stagnant sewage are the factors that promote the proliferation of mosquitoes and so too the persistence of this pathology.

The results of these different independent studies suggest that in order to account for the aetiologies of malaria, the population continues to appropriate the sociocultural explanatory and interpretative models that include non-biological factors, including the economic, urban geographic, and politico-historical facts and features of their wider living environment. These aetiological logics therefore affirm the reasonableness of the indigenous therapeutic healing approach, since it takes into consideration the entire environmental and socio-cultural context of an individual's illness, as we will reveal in the next section.

Determinants of first treatment choice of malaria patients

When the abnormal situation of malaria arises, the management of the disease is pursued through several therapeutic remedies: the conventional biomedical model, the traditional care system, and prayer. Figure 3 provides an overview of the various therapeutic treatments sought by malaria patients occupying different socio-economic situations in the community of Kennedy-Clouétcha.

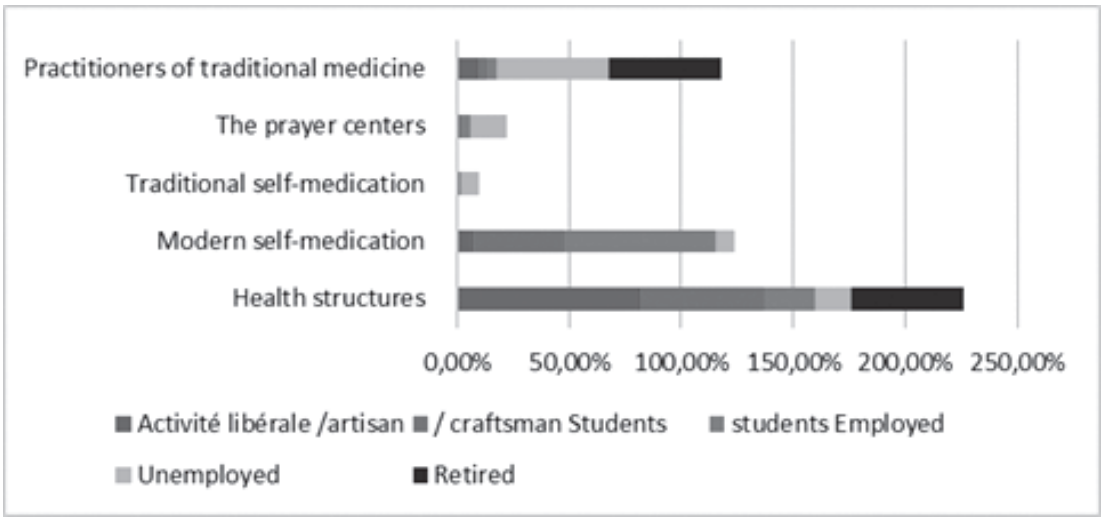

Figure 3: *Distribution of therapeutic remedies of first resort according to socio-professional status*
Source: Our investigation, 2018

The use of biomedicine in health facilities (government structured)

This methodology is reinforced by the fight against malaria Ivory Coast which has instituted 'free healthcare for all' in the biomedical management of uncomplicated malaria. Following this government decision, 'simple malaria' is treated free of charge in all public health facilities throughout the country. This strategic axis is expected to lead malaria patients to public health facilities. Dr. M. K, Chief Medical Officer of the Kennedy-Clouétcha District Health Centre, led us to believe that "since the State of Ivory Coast has begun treating malaria free of charge in public hospitals, our community health centre [has received an increase in] cases of malaria." This comment is reinforced by nursing staff in the same facility, who also believe that a high proportion of patients gravitate to health facilities in Kennedy-Clouétcha because of the free treatment they receive. For malaria treatment, the protocol includes an examination (Rapid Screening Test) and medications. More generally, free health care delivery for this one widespread ailment is understood as a public health policy to motivate ill people more generally to choose as their first resort a hospital facility for their care. It is believed by conventionally trained and government paid health practitioners that this will significantly reduce the high rate of death from this disease in Ivory Coast and have a knock-on effect of improving public health overall.

In Kennedy-Clouétcha, 138 patients carry out the management of malaria by this system of hospital administrated biomedical care as their first therapeutic resort. Several factors explain and justify this group's choice of

the biomedical model. When queried about their use of health facilities, the determining factors that our informants cited were (i) accessibility of these health facilities and (ii) the government policy of 'free basic malaria care for all'. This is what the mechanic, D.S., 33 years old, claimed:

> The hospital is not far from my home; and there are also medical clinics and hospitals all over our neighbourhood here. So when I'm sick, whether it's malaria or other illness, I go there directly. It's closer to us and so very easy to access.

When the health facilities are close to the population's residence, individuals refer to those facilities quite readily in cases of illness. To this is added the free treatment of malaria pathology instituted by the Ivorian government.

The use of traditional African herbal medicine

Nineteen patients that we surveyed resort to traditional African therapy based on herbal medicines and magical-religious healing practices (divination) to treat their malaria. The two factors that lead patients to this type of health care when ill are (i) the absence of consultation fees and (ii) the individual's confidence in the effectiveness of traditional therapies. Most practitioners of this medical model whom we met during the study confirmed that they charge no consultation fee at their level. This is what Mr. O.O, aged 61, a practitioner of traditional medicine in Kennedy-Clouétcha, told us:

> Here, when you come (sick), you pay nothing at first; it is after our exchanges that you just pay in francs for the drugs; this constitutes a symbolic payment for your overall treatment.

This therapeutic approach involves directly consulting with the patient who solicits the healer's services, for incidents of abnormality felt in the body. Following the description of the pain experienced by the patient himself, and the patient's responses to some questions asked by the traditional practitioner to understand the type of dysfunction, the therapies are delivered directly to the patient then and there. Some malaria patients use these specialists of traditional African medicine because with them, apart from there being no consultation fee, they can avoid the imposing confrontations and degrading experiences that occur within health facilities where fees are required. The biomedical therapies are assumed to be not only costly but for some ill patients; but patients from backgrounds where such fees are difficult to pay, expect to be treated in a derogatory way. The traditional healers' services are openly accessible to all social strata; it is assumed that the traditional model

will allow everyone to benefit without stigmatisation due to social status or economic class.

Regarding the belief in the effectiveness of indigenous African therapies, it is important to understand that the African therapeutic model is not limited to circumscribing pain as it is located physically in the patient's body. The origin of the illness is sought in the society where the patient lives. Clearly, it involves the socio-economic and physical environment to sustain an epidemic; so to be sick with a contagion which is a rampant and chronic disease in one's neighbourhood is a reflection of this whole gestalt. The traditional African therapeutic model implicitly highlights the relationship between this whole context in all its ramifications, the negative impact this has on the patient presenting the illness, and the persistence of the disease itself. From the moment of presentation, therefore, the patient is perceived within a wider holistic context, as a failing organism that requires careful observation. Because of this tacit understanding of illness in a wider and more inclusive, realistic and non-isolating framework, the patients interviewed recognised that traditional therapy is effective because it deals in depth with the sick individual's symptoms and their actual causes.

This respondent, a 29 year old saleswoman at the Kennedy-Clouétcha market, remarked:

> When I had malaria, I went to the hospital at first to look after myself. There, they could not heal me. I was seen by traditional healers and I had total healing. Their drugs woke up other supernatural diseases in me that biomedicine could not handle. African therapy has treated all diseases of my body and today, I feel definitely good.

Thus, the individual's perception of the reasons why she became ill rationally determines her confidence in, and her pursuit of, different types of appropriate care.

In African countries, the cultural dimension of health and well being is very strong. Disease is assumed to involve both the body and the mind, and one's relations within the family and the community. That is why a complete cure in cases of illness in African societies requires the invocation of the supernatural. In a pragmatic logic aimed at maximising the chances of recovery, Kennedy-Clouétcha malaria patients make use of the African therapeutic model, which deals with both the visible and the invisible aspects of the disease in individuals. Traditional therapy is effective in the treatment of so-called 'African diseases' according to some patients in the sense that it

is able to effectively treat both natural causes as well as those causes called supernatural or 'evil spirits' that prevail outside the field of conventional biomedical experts, which limit their diagnoses and their treatments only to biological disorders.

The capacity of local indigenous therapies to treat and cure even conditions of disease that are regarded as mysterious or anomalous in the biomedical field, is one of the factors that lead the patients of Kennedy-Clouétcha to judge the traditional African therapeutic model as effective. When queried, patients who frequent traditional healers clearly perceived the conventional biomedical model as excluding altogether the social contours of evil. They regarded this as a defining impotence of biomedicine, and regarded traditional African practitioners as more reliable because they effectively address and treat the evil in all its organic, psychological and social aspects.

The use of prayer

Malaria is also perceived by many patients as a disease which is linked to a spell. For this category of people, the causes of malaria are supernatural and magico-mystical. This perception of the disease leads them to a therapeutic process which is focused upon magical-religious practice including prayers and healings by divination. Four patients we interviewed used this therapeutic model as their method of first resort. This is what we were told Mr M. C, a 43 year old butcher at Kennedy-Clouétcha market:

> I use prayer when it comes to curing malaria. Because it can also come from spells launched by evil people and in this case, the hospital can do nothing. My religious guides tell me what I need to do to heal and it works well.

These patients project the causes of the dysfunction of their bodies onto the ill will and negative influence of others. That is, they identify in a directly personal way the causes of their illness as originating outside their own bodies and beyond the compass of their individual capacity to control. As a result, they perceive only religious practices as able to heal them. When asked about the thinking behind their preference for supernatural or religious treatment regimes, these patients draw attention to the fact that officially endorsed therapeutic treatments of first recourse do not always manage to make malaria disappear; this observation is corroborated by follow up testing of patients treated by conventional drugs in hospital facilities worldwide. Some of them also indicate their awareness of the inadequacy of the biomedical model due to its narrow focus on the physical body and its internal processes in isolation of the wider and broader, indirect and unseen

contextual forces that perpetuate chronic illness for individuals living in a generally underserviced municipality.

Health care approaches in the context of 'free access to simple malaria for all'

Data collected at Kennedy-Clouétcha indicate that in their quest for healing, 85.7 per cent of malaria patients use the biomedical system through attendance at health facilities. 11.8 per cent of the patients are oriented towards traditional medical knowledge, and 2.5 per cent towards prayer centres. Contrary to our results where the biomedical system is the most solicited by patients, Granado (2007: 199) revealed that during that study, more than 60 per cent of the Abidjan population affected by malaria used leaves and barks to treat their disease. Pharmaceutical products have therefore not replaced the 'indigenous' category of traditional treatments; but they are recognised as additional resources in this urbanised environment.

Similar results were obtained in another study conducted in Cameroon more recently (Moungbakou 2012: 129). This researcher revealed that when the populations are having a malaria crisis, they are moving first towards local medicines; then they resort to the healers who deliver care through techniques unrelated to modern medicine. According to him, this preponderance of alternative medicine over officially endorsed initiatives suggests that biomedical medicine has become unfit for purpose.

Populations in our study area in 2018 are using biomedical products and regimes much more frequently to treat their episodes of malaria than these previous studies indicated. In connection with biomedical care, two routes are taken by patients. There are conventional government run health facilities that are attended by 60.2 per cent of patients because of their easy accessibility and the free treatment of simple malaria that is available there. 11.8 per cent of patients observed in our study use traditional medicine. The absence of consultation fees and the habitus of healing by this type of medical practitioners are the factors that are most often cited as determining the choice of this therapeutic model.

For those who perceive malaria as a disease related to mysticism (2.5 per cent), its aetiologies involve the realm of the supernatural and magico-mystical. These beliefs lead these individuals, quite consistently, to intentionally pursue a therapeutic process involving magico-religious practices.

In addition, Sougoudou (2010: 15) reports that following his research on the therapeutic treatments used by mothers of children with malaria in Cameroon, of all children under five suffering from malaria, only 45.3 per

cent benefited from conventional biomedical recourses while those treated with self-medication were on the order of 21.3 per cent. Similarly, 33.4 per cent of the children under five suffering from malaria had not been treated or self-medicated, even less of these were seen by a health professional. As the present study did not include children with malaria, this aspect remains a subject for future research.

The dissatisfaction engendered by the failure of first lines of treatment leads patients towards traditional medicine, solicited now by 36.64 per cent of the patients we studied. With this indigenous therapy, medical practices engage a combination of biophysical and symbolic, as well as the psychological and social, factors contributing to chronic contagion and potentially fatal illness.

Conclusion

At the end of the study, we noted that the determination of accepted aetiologies of malaria in Kennedy-Clouétcha is based on natural factors that are found in the social environment of individuals, rather than magico-mystical factors. The aetiologies of malaria as explained by the biomedical model remained unknown by 52.1 per cent of the patients we studied. Our results indicated that knowledge of these aetiologies depends on the level of education of individuals. The accessibility of public health facilities and the implementation of the government free measure of malaria treatment for all, leads in the first place to patients seeking hospital administrated public health care systems as their line of first recourse to treatment. However, when the disease persists, patients predominately go outside conventional hospital facilities for an alternative source of treatment. Traditional medical care systems and prayer are the most sought-after medical models pursued as second resorts for malaria treatment.

We are witnessing this reconfiguration of therapeutic trajectories not only because of the shortage of therapies for the effective care of patients in public health facilities, but also because of misunderstandings that arise between health professionals and their patients, for whom confusion and dissatisfaction persist about the conventional aetiology of the illness labelled 'simple malaria'. These misconceptions and dissatisfactions undermine patients' confidence in the conventional treatment model. These dissatisfactions with the conventional treatment model and the hospital experience account for persistent choice to use more culturally embedded and longer established therapeutic approaches. This dissatisfaction detracts the public from relying upon the free services provided by the government.

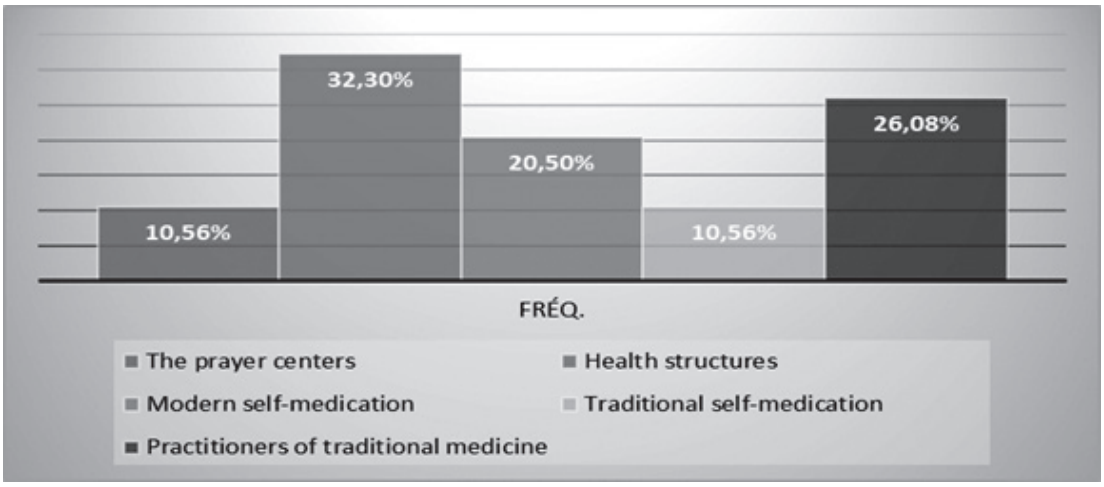

Figure 4: *Different therapeutic remedies chosen as a second resort in Kennedy-Clouétcha*
Source: Our investigation, 2018

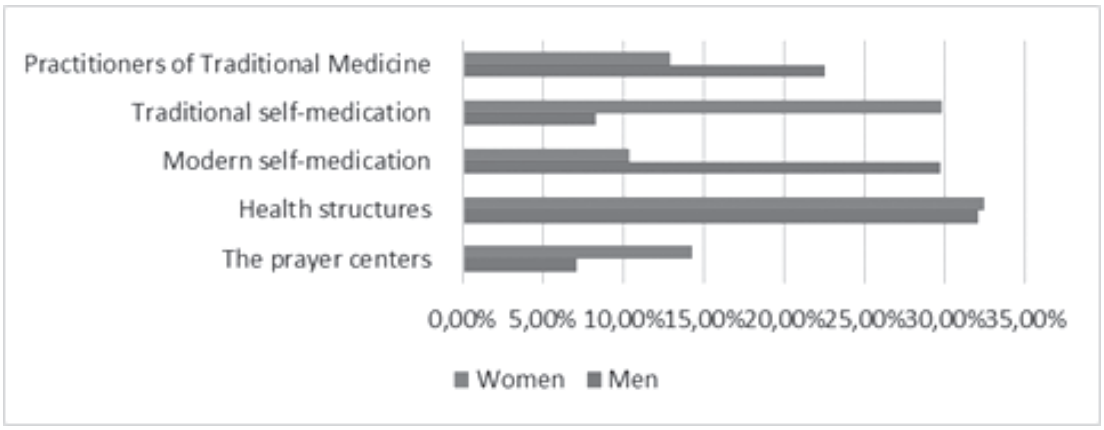

Figure 5: *Distribution of second therapeutic claims by gender*
Source: Our investigation, 2018

Ivorian health policy makers should respond to this situation by establishing better communications about the public health measures they have taken to reduce the incidence and to treat the causes of malaria occurring in these communities. Training in patient-practitioner relations will also enhance the value of professional care-giving funded by the Ivorian state, to sensitise public health practitioners' awareness of the disaffecting professional behaviour patterns in hospital settings that discourage members of some socio-economic classes from seeking the free quality care available to them at government facilities. The government might also consider providing their staffs training in the limitations of bio-medical model of explanation, given its narrow focus upon the physical body and the individual patient's predicament

in isolation of the broader socio-economic, not to mention geo-political, causes of chronic illness in economically compromised African communities.

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