

Qualitative Analysis of the Perceptions of Modern Medicine among the Indigenous Pygmy People of Yahuma; in the Democratic Republic of Congo

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Abstract

Background: Modern medicine, with its technological and scientific advances, occupies a central place in contemporary healthcare systems. However, its adoption and integration vary considerably according to cultural and social contexts. Among the indigenous Yahuma pygmy peoples, whose medical traditions are deeply rooted in a holistic relationship with nature and spirit, the encounter with modern medicine raises complex questions.

Objective: this qualitative study aimed to explore the perceptions and representations that these communities have of modern medicine, highlighting the cultural, social and symbolic dynamics that influence their relationship to these practices.

Methods: using a phenomenological qualitative approach, the study focuses on issues of identity, logics of trust or mistrust, and interactions between local knowledge and biomedicine. This work thus contributes to a broader reflection on the plurality of healthcare systems and the need to devise inclusive models that respect cultural diversity.

Results: Perceptions of modern medicine vary, from a strong preference for its effectiveness to criticism of its undesirable effects and inaccessibility. Attitudes towards the modernization of health care thus reveal a duality, with part of the community ready to embrace biomedicine if it is made accessible, while others insist on the importance of preserving traditional knowledge.

Conclusion: an inclusive approach that takes into account the socio-economic and cultural realities of the Yahuma Pygmies is necessary. It seems appropriate to promote complementarity by developing strategies adapted to local needs and specificities.

Keywords: Perceptions; Modern medicine; Indigenous people; Pygmy; Yahuma

Introduction

Indigenous peoples (IPs), along with Eskimos, Tuaregs and Papuans, have attracted the most attention from other communities since the dawn of time. Throughout the centuries, they have raised questions, first about their existence (myth or reality?), then about their identity (men or apes?), and finally, at the end of the 19th century, about themselves. Aboriginal peoples have always fascinated the rest of the human community [1].

The indigenous peoples of Africa are often forest peoples, commonly known as Pygmies, who are both famous (for their culture and way of life) and threatened with acculturation, as they undergo gradual changes to their traditional way of life. These peoples are renowned for their knowledge of forest life and the use of medicinal plants. They have built up an exceptional society through their ability to adapt to the natural environment, specifically the forest, where they live in small nomadic or semi-nomadic communities with very little hierarchy, each moving within clearly defined living spaces [2].

Until recently, they practised hunting, gathering and fishing. The forest is not only their motherland, but also the fundamental space in which they express their socio-cultural behaviour [3].

In several African countries, such as Burundi, Cameroon, two Congos (Congo Brazzaville and the Democratic Republic of Congo), Gabon, the Central African Republic and Equatorial Guinea, indigenous peoples are threatened with extinction; following efforts to preserve the environment and protect nature by creating protected areas or reserves against hunting, deforestation, armed conflicts and bloody inter-ethnic conflicts. These situations are forcing IPs to change their way of life, to become sedentary in villages; and their health situation is affected by negative stereotypes, exclusion and domination imposed on them by their neighbours and host societies [4, 5].

The accelerated destruction of natural areas is making it increasingly difficult to conserve their phyto-genetic resources with medicinal properties [6].

Most Pygmy women give birth without any medical assistance or medication, surrounded by their own kind. Several cases of abortion and maternal and infant mortality have been recorded in this community, due to the lack of qualified health personnel. Fewer of them attend antenatal and curative consultations [7].

In Uganda (Twa) and the Central African Republic (Aka), the mortality rate among pygmy children is high. Mortality in the first year of life is 25% and 20.22% respectively. It is 27% before the age of five among the Mbendjele in northern Congo and 40-59% among the Twa in Uganda. These rates are twice as high as among non-Pygmies in the region. Infant mortality is similar among other hunter-gatherers such as the Kung and Yanomami. Measles is one of the main causes of infant mortality among Pygmies, accounting for 8-20% of Aka children in the Central African Republic. In Congo, it is 5-6 times higher than in neighbouring non-Pygmy communities [5].

Lewis (1999) noted that the infant mortality rate among children under five in Mbendjele communities (located in Likouala and Sangha) was too high at 27%. Measles was the leading cause of this rate. In addition, just 16% of women of childbearing age and 21% of teenage girls said in a CAP survey that they had had a prenatal consultation during their last pregnancy. The same survey noted that nearly 75% of adult women and teenage girls gave birth at home, compared with only 25.8% and 22.2% respectively who gave birth at the maternity hospital [8].

In the Democratic Republic of Congo, most IPs are sedentary or semi-sedentary. Only a minority live a nomadic lifestyle (hunting or gathering). However, hunting traditions and semi-nomadic hunting are still common. Despite this move towards a more sedentary lifestyle, the IPs have preserved their traditions and are fighting to preserve their specificity, their technical know-how and their ancestral knowledge [9].

In the province of Tshopo, particularly in the Territory (Health Zone) of Yahuma, IPs are sedentary or semi-sedentary, with a health situation that is even less clear-cut and similar to that of their counterparts in the region.

In the literature, very few if any studies have explored how Pygmy peoples perceive and interact with modern medicine. It is therefore essential to undertake a study to promote inclusive approaches to healthcare that respect cultural specificities, particularly those of the Yahuma 'Pygmies'.

Materials and methods

Type of study

We conducted a qualitative study using a phenomenological approach to identify the perceptions of modern medicine by the Yahuma Pygmies. The study was conducted over a period of seven months, from 01 August 2023 to 31 March 2024.

Study environment

Our study took place in the Yahuma Health Zone, which covers the entire territory of the same name, one of the seven Territories of the province of Tshopo in the DRC.



The Yahuma territory is made up of three sectors (BOLINGA, BOSOKU and BUMA) and one chiefdom, that of MOMBESA. The Territory of Yahuma is mainly inhabited by the Mongando tribe, which makes up the majority of the population; there is also another minority tribe called Mombesa. Yahuma also has a special population from various backgrounds, known as 'Pygmies', the subject of our study.

Yahuma is located 314 km from Kisangani, the capital of Tshopo Province, downstream from the Congo River. This territory, which is equivalent to a single health zone, has 27 health areas (HAs), one HGR, 4 CSRs and several health posts. All of the 2nd level facilities (the HGR and the four CSRs: MOSITE, KORET, BONDAMBA and MOMBONGO II) are located off-centre in the ZS, making access to quality care difficult for some inhabitants.

Study population

Our study population included all the indigenous 'Pygmy' peoples living in the Yahuma Health Zone, divided between the BUMA

Sector (settled in Yalonde Village) and the MOMBESA chiefdom (in around 17 encampments scattered around the villages, the main ones being : LOINZI, TONDENGO, IWE, etc.).

Selection of participants

The participants in the study were key informants selected by reasoned choice from among the 'Pygmies'. An indicative sample size of 11 key informants was used as a starting point.

Only adult 'Pygmy' men and women who were recognised community leaders and identified by the community as such, who had lived for at least the previous three years in the Yahuma HZ, who were present at the time of the research, and who could speak French, Lingala and/or Swahili were included in the study.

Data collection

The data (opinions) concerning our study were collected from key informants with the status of community leaders, using the technique of individual in-depth semi-structured interview (IISDI), using a pre-tested interview guide, and in face-to-face mode.

The interviews took place at a place convenient to each person and were recorded (after approval) on a Dictaphone, then transcribed immediately on returning from the field.

We manually recorded direct observations in the field using a semi-structured observation guide, concerning care-seeking behaviour, initiating an informal conversation to capture circumstantial perceptions.

The observation situations were recorded (with the approval of the participants) using a camera, and then developed into a transcript in the hours following their collection, on return from the field.

Analysis and interpretation of the data

The interview transcripts and developed observation notes were analysed, grouped by site and coded. The interview transcripts and observation notes were read and re-read several times.

The themes of interest were: therapeutic recourse in the event of illness, Pygmies' perception of modern medicine, Pygmies' requests and recommendations, and attitudes to the modernisation of healthcare.

The process of reduction, textual exposure and postulation was carried out iteratively until maximum accumulation and reduction of data was achieved.

The opinions gathered from our respondents were analysed manually.

Ethical considerations

The protocol for this research was submitted to the Tshopo Province/University of Kisangani Ethics Committee, and we obtained the latter's approval before starting the research.

Research authorizations were obtained from the Decanal authorities of the Faculty of Medicine and Pharmacy of the University of Kisangani, and from the Provincial Health Division of Tshopo. They were approved, in terms of visas, by the Yahuma Territorial Office, the Central Office of the Health Zone, and the civil authorities of the "Pygmies" of the Yahuma Territory. Informed consent was sought and obtained from key informants prior to each interview. During data collection, we respected confidentiality, personal dignity and free participation. The language used to collect interview data was mainly Lingala.

When processing the data, we required anonymity by assigning codes to the transcripts, so that no link could be established between the data and the individuals.

Results

Socio-demographic characteristics of respondents

The study involved 11 respondents (3 women and 8 men), recruited from among hunters and farmers in the entities concerned. All were anonymized under the codes EN01 to EN11, and none were able to indicate their age precisely.

The majority of respondents (7 out of 11) came from the Yalonde site, making this area the most represented in the sample. The other four participants were spread across different localities and camps, reflecting geographical diversity: Loinzi, Tondengo, Yahuma and Yasamola.

This distribution provided an insight into potential differences linked to the respondents' origins. Although the sample is limited, it covers several areas, offering varied perspectives.

Experiences of the therapeutic itinerary in the event of illness

For most of the people we spoke to, the first therapeutic recourse in the event of illness is plants. This method of treatment can even be harmful, for example by using chillies in enemas.

'We live by divine grace; we do enemas with chillies, lots of chillies. We really suffer. To heal, we sometimes need a lot of chillies, enemas, some beverages made from plant leaves, our indigenous suppositories, the leaves and bark of the trees that are all around us here.'

An isolated case was recorded among our interviewees, who spoke of the hospital as a first resort in the event of illness:

'If I fall ill, I make an effort to go to hospital first. If at the hospital you don't get on well with the nurse, especially when it comes to the fees to be paid, at the moment I go home for ancestral care. But first I'm going to hospital.'

Despite the initial recourse to traditional pharmacopoeia in the event of illness, the subjects interviewed all mentioned modern medicine as an alternative, especially when it doesn't work with traditional care; and this, with the money and influence of the Bantus.

'If it doesn't work, we go to the hospital or health centre.'

All our respondents said they knew where the CS or hospital was located:

'..... The HS is some distance from us here in Yalonde.'

YAHUMA IPs' perception of Modern Medicine

For the vast majority of our respondents, modern medicine is considered the best, and heals quickly if compared to their ancestral pharmacopoeia:

'Your medicine is better than ours. Our ancestral pharmacopoeia is no good. We are being exterminated on the basis of our ancestral pharmacopoeia. Sometimes when you go to hospital and you meet good nurses, they will treat you and, with God's help, you will heal quickly.'

A divergent and isolated view was recorded during our interviews:

'White people's medicines do nothing in our organism, you can give a sick person these medicines, when he takes it he vomits, and soon won't take it again, and will even throw it all away, It's embarrassing.'

IPs' perception of the benefits of modern medicine

Most of our respondents' testimonies indicate that modern medicine is perceived as offering a faster and more effective cure than the pygmies' traditional pharmacopoeia:

'...You have several types of device that can be used before treating. You start with examinations to find out if it's one thing or another. Even microbes, even worms, you will discover and decide to attack the causes that you have studied for our organism.'

Disadvantages of Modern Medicine for IPs

All the people we spoke to spoke of the lack of disadvantages associated with modern medicine:

'We don't see any disadvantages, any harm. We just don't have a good nurse who can stay with us to look after us properly here at home.'

A different and isolated voice was also heard, but in reality this is a minor side effect of certain medicines.

'You can give a patient modern medicines, but when he takes them he vomits, and soon he won't take them any more, and will even throw them all away.'

Attitudes towards healthcare modernisation

The possibility of a serious commitment to healthcare modernisation among the YAHUMA Pygmies reveals varied and nuanced attitudes, as shown below.

'Yeah, it could happen that I could start straight away with your medicine and abandon the traditional pharmacopoeia, but for that to happen we need to set up the CS or the Hospital here, I even want to throw the indigenous medicines into the river.'

A contrary position was noted:

'No! If we're in the forest if we're ill, to get out, we first need our ancestral treatment to tranquillise us so we can get home safely. It's our custom to abandon our traditional pharmacopoeia.'

Discussion

The results presented above deserve to be discussed:

Experiences of the therapeutic itinerary in the event of illness

The Yahuma pygmies give priority first and foremost to traditional pharmacopoeia, using plants, tree bark, tattoos and enemas made from chilli pepper as the main means of treating illness. This observation is in line with the work of Lévi-Strauss cited by Michel M [10], who emphasises that the medicinal knowledge of indigenous societies is based on in-depth empirical knowledge of nature, integrated into a symbolic and spiritual framework. As our testimonies show, traditional medicine is not only therapeutic, but also an act of community and identity.

However, our results also highlight a dynamic of hybridisation between traditional and modern medicine. When a traditional treatment fails, pygmies consider modern medicine, provided they have the necessary resources or are encouraged by external actors, particularly the Bantu. This situation is comparable to the findings of Langwick [11], who showed in Tanzania that African populations often combine traditional medicine and biomedicine according to their perceived efficacy and financial accessibility.

Furthermore, the presence of an isolated case where the hospital is chosen as first resort (EN10) highlights an ongoing transition in Pygmy care practices. However, this transition is hampered by factors such as the cost of care and the quality of interaction with medical staff. Augé [12] has already pointed out that the hospital is often perceived as a place of negotiation and power, where marginalised populations do not always feel welcome, which may explain the return to traditional practices in the event of a bad experience.

YAHUMA IPs' perception of Modern Medicine

The results of our study reveal a broadly favourable perception of modern medicine over traditional pharmacopoeia among Yahuma pygmies. This preference is based mainly on the perceived efficacy of biomedical treatments, their speed of action and their ability to treat certain pathologies considered difficult to treat with traditional medicine, such as anaemia. These findings are in line with the work of Feerman and Janzen [13], who emphasise that the adoption of biomedicine in certain indigenous communities is often motivated by its rapidity of action and the recognition of its effectiveness in acute cases.

Other studies carried out in sub-Saharan Africa, notably by Langwick [11], have shown that traditional medicine is often perceived as being 'behind the times' in the treatment of illnesses, which is in line with the testimonies gathered in our study. The need to prepare herbal remedies, the waiting times for observing therapeutic effects and the absence of emergency facilities are factors that may explain this perception. This perception is reinforced by the progress of biomedicine and the spread of its successes throughout the health services, as demonstrated by the research of Prince and Marsland [14].

However, there was a discordant voice in our study, indicating that some individuals do not find modern medicine effective and report adverse effects, such as vomiting after taking medication. This finding echoes the work of Etkin and Ross [15], who point out that the effectiveness of a treatment is not limited to its pharmacological properties but is also influenced by cultural perceptions and patient experience.

It is also important to place these perceptions in the context of historical and social dynamics. Researchers such as Feerman [16] and Mbembe [17] have shown that the preference for modern medicine among certain indigenous populations may be the result of a process of marginalisation of traditional medicine, amplified by colonial and post-colonial discourses which value biomedicine as being more 'scientific' and 'effective'.

Attitudes towards the modernisation of healthcare

The results reveal a dual perception of modern medicine and traditional pharmacopoeia among the Yahuma pygmies. Some of those questioned expressed a willingness to abandon ancestral remedies in favour of biomedicine, provided that a health centre or hospital was established locally. This clear commitment to modern medicine is consistent with the observations of Lévesque et al [18], who noted that access to biomedical care has a strong influence on the adoption of modern medical practices in indigenous communities. Similarly, Etkin and Ross [15] explain that when quality healthcare services are available, some communities tend to gradually abandon their traditional therapeutic practices, which are often perceived as less effective or more restrictive.

However, an opposing position was also observed. Some respondents stressed the importance of traditional pharmacopoeia as a first resort, particularly in situations where access to modern healthcare structures is limited. This reluctance to abandon indigenous medicinal knowledge corroborates the findings of Bussmann and Sharon [19], who show that in several indigenous societies, traditional medicine remains a cultural and identity pillar, serving not only to treat but also to preserve social and spiritual balance. Langwick [11] reinforces this idea by explaining that the use of medicinal plants is often perceived as a continuation of ethnic identity and not simply as a therapeutic choice.

The ambivalence expressed by some respondents (EN11) is also in line with Foster and Anderson's [20] findings on the complementarity between modern and traditional medicine in several societies. Rather than a categorical rejection, some populations adopt a pragmatic approach in which the two systems coexist according to needs and circumstances.

Conclusion

This study has just shown that perceptions of modern medicine vary among Yahuma pygmies; on the one hand, they recognize its undeniable efficacy and appreciate the speed of action of modern treatments. On the other, they express reservations about its perceived side effects.

The Yahuma Pygmies recognize the advantages of modern medicine, particularly its rapid effectiveness in treating common illnesses and the accuracy of its diagnoses.

The Pygmies are calling for concrete solutions: community health centers in their villages or camps, free or subsidized essential care, and a medical approach that respects their cultural particularities. The permanent presence of local nurses would facilitate acceptance of care.

Declaration of conflicts of interest and ethical considerations

- ***Financial and institutional conflicts of interest***

We declare that we have no financial or institutional conflicts of interest that could influence the design, execution or interpretation of this study. No financial support was received from organizations with a commercial or political interest in the results of this research.

- ***Ethical commitment and community collaboration***

This study was conducted in partnership with the Yahuma pygmy community, in accordance with the principles of social justice, autonomy and informed consent. Participants were fully informed of the research objectives and the intended use of the data. Their contribution was recognized and valued without instrumentalization.

- ***Potential biases and reflexivity***

As researchers from a DRC academic setting, we recognize that our own perspectives may influence the interpretation of local perceptions. To mitigate this bias, we have adopted a decolonial approach, incorporating participatory methods and working closely with cultural intermediaries from the community.

- ***Transparency and thanks***

We would like to thank the members of the Yahuma pygmy community for their generous participation and valuable insights. This research would not have been possible without their trust and collaboration. No undue financial incentives were offered for their participation.

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