

COVID 19 Immunization (Vaccine) Reticence and Traditional Healthcare Resilience among the Mbororos of the North-West Region (Cameroon), 2020-2022

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Abstract

Review Article

Western societies such as the United States, the European Union and the United Kingdom among many received news of vaccines as a revolutionary phase to complement extant barrier strategies like social distances and respect for hygienic conditions to curb the ravaging effects of the COVID-19 pandemic while some communities cast doubts on the genuineness of the scheme. Among those who have been reticent to the vaccine solution are the Mbororo Fulani, a relatively hermitic ethnic group in the North West Region of Cameroon. This paper discusses the perceptions of the Mbororo Fulani about the COVID-19 vaccines and projects the options they made with indigenous traditional medicine in the local fight against the pandemic. The article traces the outbreak and spread of the pandemic in Cameroon and highlights the overwhelming influence of anti-vaccination information in triggering and sustaining an ensuing characteristic of vaccine hesitancy among the Mbororo communities in the North West Region of Cameroon. The research relied on primary and secondary sources. Primary sources, mainly oral interviews were collected from seven Mbororo communities; Acha Tugi, Baba II, Banjah, Nkambe, Nkwen, Sabga and Santa. The data was analyzed following the qualitative descriptive analysis. This paper argues that misinformation sowed the seeds of an enduring shared characteristic of COVID-19 vaccine hesitancy among the Mbororos which accelerated a reliance on traditional healthcare services. The findings revealed that most of the Mbororos did not believe in the reality of COVID-19 and so associated any public health measure to propagate information on barrier measures and administration of vaccines as conspiracy theories destined to exterminate the Mbororo communities in the North West Region. More so, the prominence and relative ease with which traditional medicine was introduced to tackle the COVID-19 related symptoms sustained the deep state of denial and adherence to anti-vaccine conspiracy theories. On the other hand, it legitimated indigenous response mechanisms to global health threats in spite of internationally well formulated and approved scientific protocols.

Keywords: COVID-19, immunization, Mbororo, reticence, traditional medicine.

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INTRODUCTION

Public health challenges have been characteristic of human societies across time and circumstances. The persistence and sometimes recurrence of diseases such as malaria, river blindness and HIV/AIDS among many in some geographic areas are what laid the foundation for health researchers to establish a dichotomy between endemic and pandemic diseases. Throughout human history, communities, countries, continents and the world as a whole have been shaped by the unending reality of health challenges. At every time when faced with one disease or the other, the response was coordinated at the community level, national level and between countries

in a shared effort to find effective cure and prevention. This paper therefore, delves into the Mbororos response to COVID-19 pandemic. It starts by telling who and where the Mbororos are in Cameroon. Besides, it discusses the split between immunization optimists and pessimists, the outbreak and spread of COVID-19, global anti-vaccine pessimism, Mbororos appropriation of the immunization pessimism and their ensuing indigenous treatment against the pandemic.

BACKGROUND

The Mbororos are predominantly nomadic people located almost exclusively within the savannah zone of west and central Africa, and whose original

home is said to be the Senegambia region [1]. Both as nomadic and sedentary people, they have played an important part in the history of West Africa. The Mbororos were found throughout West Africa and were given different names in different places such as *Peul, Fulbe, Foulah, Ful, Fellata Pullo*. The Mbororo-Fulani arrived in Cameroon in the early 18th century, entering through the Adamawa and Northern Regions [2]. They arrived Adamawa in sub-ethnic groups bearing various names like; *Mbewe, Illega'en, Jafu'en and Kiri'en* [3]. They later migrated and settled in eight of Cameroon's ten regions to the exception of the South and Littoral Regions which are not suitable for cattle rearing. They entered the Grassfields around the 1900s and in 1924, they were established in Sabga of the Tubah Subdivision, Mezam Division in the North-West Region of Cameroon. The Mbororo-Fulani are found in all the seven administrative Divisions of the North West Region of Cameroon. These are Mezam, Ngoketunjia, Bui, Boyo, Momo, Menchum, and Donga Mantung Divisions. In Cameroon the Mbororo-Fulani are divided into three major ethnic groups identified by the color of their cattle, style of decorating their bowls and migratory movements. These are the *Aku-en, Bodaabe* and the *Jafun-en*. They are found all over the national territory under four Laminates (the paramount traditional institution) under which are found community leaders called Ardos. The four Lamidats are found in Fuigil in the North Region, Lompta in the Adamaoua Region, Sabga in the North West Region and Didango in the West Region [4].

The Mbororos share a number of characteristics with the other pastoralist Fulani ethnic groups including the Fulfulde language, Hamitic 'racial' origin, Islam, and a cultural code of contact known as *Pulaaku*. This *Pulaaku* social construct views women as treasured beings that are solely the property of the husband. It prohibits Mbororo women to be touched by any other man. This made Mbororo women to be introverted and deny seeking medical services

1. Jabiru Muhammadou Amadou, "The Mbororo Problem in North West Cameroon: A Historical Investigation" *American Scientific Research Journal for Engineering Technology and Sciences* vol. 33, number 1, 37-48.
2. Fanso, V. G. Cameroon History for Secondary Schools and colleges, Vol. from pre-Historic Times to the Nineteenth Century, London, Macmillan publishers, 1989, 32.
3. Njeuma, M. *Fulani Hegemony in Yola (Old Adamawa) 1809-1902* (Yaounde, CEPER, 1978), 3-4.
4. Ramatu Abdu, Indigenous Healthcare Practices among the Mbororos of the Bamenda Grassfields of Cameroon ca.1900 To 2019, Unpublished Ph.D. Thesis, Department of History and Archaeology, Faculty of Arts, University of Bamenda, 2022, 46-47.

from without their communities. So, indigenous health care practices like the consumption of herbs were seen as "honor to the culture of *pulaaku*". Moreover, it also made the Mbororos not to eat and drink with the *Haabes* (sedentary farmers) in public. As an established way of life, *Pulaaku* shaped the perception of the Mbororos in the North West Region of Cameroon across generations. Within the context of health and healthcare, *Pulaaku* had so much to interfere with. First of all, *Pulaaku* is rooted in conservatism and constitutes significant brick walls to progressive change and acceptance of conventional medical norms. While being immersed in their culture of silence, the very foundations of *Pulaaku*, the Mbororos have never been at liberty to express themselves with non-Mbororos, the latter comprising the majority of doctors and nurses in contemporary modern medicine. Such unwillingness to live pass the boundaries of the tradition of *Pulaaku* has prevented a majority of Mbororos from seeking medical help and advice from without, and this make up the many underlying factors that have driven the wheels of auto centric healthcare ingenuity amongst them [5]. *Pulaaku* prevented the Mbororos from seeking healthcare services outside their communities. This therefore sowed the seeds that bred the high degree of vaccine reticence among the Mbororos in the face of the reality of COVID 19.

Conceptual Framework

The fight against COVID-19 has greatly revealed the long-standing split in the debate of immunization [6]. The divergent views of both immunization optimists and immunization pessimists have echoed in many directions while influencing the choices of many people [7]. In 2020, the WHO coined infodemic (an overabundance of information and the rapid spread of misleading or fabricated news, images and videos) as a way to break lose the firm grip of immunization pessimism. In as much as many people were in concord with scientific findings, safety guidelines and recommendations, a small proportion supported contradictions that bred their pessimism against COVID-19 immunization. As WHO Director General Tedros Adhanom Ghebreyesus reiterated, "we are not just battling the trolls and conspiracy theorists that push misinformation and undermine the outbreak response [8]." While the WHO and lead scientists were pushing for a global immunization campaign, they had to tackle the differences that bred vaccine reticence. Among indigenous people like the Mbororo of the North West Region of Cameroon, immunization hesitancy was also sustained by their social constructs.

5. *Ibid.*
6. Rougayatou Abdou, 37 years, CRHACERH Yaounde, 18 January 2022.
7. Ekfui Godlove, 37 years, Head of Service for the Baptist Health Service, Sabga, 6 April 2021.
8. World Health Organization, "Immunizing the Public against Misinformation," 2020, 1.

In the case of the Mbororos, *Pulaaku* greatly influenced their pessimism towards immunization. It was this wide vaccine reticence that accelerated their traditional response towards COVID-19.

Outbreak and spread of COVID-19

COVID-19 is an airborne disease that is very transmissible from one person to another. Particularly, the disease transmits when people breathe in air contaminated by droplets and small airborne particles containing the virus. The risk of transmission is highest when people are in close proximity but however, the contaminated air can be inhaled over long distances, especially indoors. The first case of the corona virus disease 2019 (COVID-19) was reported in Wuhan China on December 8, 2019 [9]. The World Health Organization (WHO) declared this highly contagious and fast spreading disease as a public health international menace on January 30, 2020 and later as a pandemic on March 11, 2020 [10]. Since its outbreak from China in December 2019, COVID-19 has evolved rapidly into a global pandemic [11].

Following the first reported case of the COVID-19 in Africa (Egypt), on February 14, 2020, just few days after the World Health Organization (WHO) had declared the outbreak of the pandemic, a total of 47 African countries had been affected by the virus, with 77087 deaths recorded as of the 27th of March 2021 [12]. Considering the unprecedented surge of the pandemic and the structural weaknesses of African health systems to provide appropriate response mechanism, scientific health think-tanks predicted a devastating COVID-19 wave in sub-Saharan Africa if the magnitude was to be similar [13] to what was

ongoing in Asia, America and Europe. The pandemic in Africa occurred several weeks behind Europe and Asia and ironically has a slower transmission [14]. Although the rate of hospitalizations and COVID-19 related death toll differed between countries in Africa, no country could effectively boast of a panacea to the scourge.

In Cameroon the first COVID-19 case was reported in the capital city Yaoundé on March 6, 2020 [15] and ever since has spread across the entire country with high rate of infections, hospitalizations and death toll. Since then, the number of cases has rose constantly, rising from 2062 cases at the end of April 2020 to 7392 cases by 4 June 2020, making Cameroon the seventh most infected countries in Africa [16]. Between 15 and 22 September 2021, the Minister of Public Health reported 2974 new COVID-19 cases and 83 deaths. By 27 October 2021, the country had recorded 104348 cumulative cases and 1774 related deaths [17]. Due to lack of COVID-19 vaccines for a large-scale vaccination operation, the third COVID-19 immunization campaign was postponed to 17 November 2021 [18]. On January 22, 2022 the WHO estimated that since 2020 there were cumulatively 114113 COVID-19 cases, 78224 recoveries and 1867 COVID-related deaths [19].

Like in several African countries the Cameroonian health system preparedness was not up to the magnitude of the pandemic. However, medical aid poured in from many of the strategic international partners of Cameroon and the vaccination campaign has been ongoing since November 2021. With a variety of vaccine doses in stock at various government hospitals and clinics around the country, a larger proportion of the population has refused to be inoculated. Like in all countries around the world, vaccine hesitancy which has been sustained by an unending web of conspiracy theories has been a major stumbling bloc against this shared immunization campaign.

Global Anti-Vaccine Pessimism

For almost a year, COVID-19 was managed without an approved and/or effective vaccine. Like other countries, Cameroon's Minister of Public Health has been responding to the COVID-19 outbreak through active surveillance, screening at points of entry, laboratory testing, and case management at designated

9. Jovanny Tsuala Fouogue, "Poor Knowledge of COVID-19 and Unfavourable Perception of the Response to the Pandemic by Healthcare Workers at the Bafoussam Regional Hospital (West Region-Cameroon)," *Pan-African Medical Journal* 37(1):19 (2020), 1-14.
10. Chung Sing Lam, Ho Kee Koon, Vincent Chi-Ho Chung and Yin Ting Kong, "A Public Survey of Traditional, Complementary and Integrative Medicine Use during the COVID-19 Outbreak in Hong Kong," *PLOS One* 16(7), (2021), 1-14.
11. Rachel Sing-Kiat Ting, Yue-Yun Aw Yong, Min-Min Tan and Chee-Khong Yap, "Cultural Responses to COVID-19 Pandemic: Religions, Illness Perception and Perceived Stress," *Frontiers in Psychology* 12:634863 (2021), 1-19.
12. Mbah. "Community Health Education for Health Crisis Management: The Case of COVID-19 in Cameroon,"2.
13. Fouogue, "Poor Knowledge of COVID-19 and Unfavorable Perception of the Response to the Pandemic by Healthcare Workers at the Bafoussam Regional Hospital (West Region-Cameroon)," Unpublished Paper, 1-14.

14. *Ibid.*
15. *Ibid.*
16. International Labor Organization, "Cameroon – Rapid Evaluation of the Impact of COVID-19 on Employment and Labor Market in Cameroon," *ILO Policy Brief* (2020), 1-10.
17. UNOCHA, "COVID-19 Situation Report from 1 September to 31 October 2021," (2021), np.
18. *Ibid.*
19. WHO, "Cameroon Coronavirus (COVID-19) Cases," Unpublished Paper(2022), 1.

isolation and treatment centers. The WHO and the United States Centers for Disease Control (CDC) are providing technical support to control the outbreak in Cameroon [20]. Although Cameroon has not been able to produce its own vaccine against COVID-19, the country has however benefited from the generosity of its mutually supportive partners in their shared resolve to fight the pandemic.

By December 2021, Cameroon could boast of Johnson and Johnson, Oxford Astrazeneca, BioNTech Pfizer and Sinopharm vaccines which were donated by its allies especially the United States, United Kingdom and China [21]. As of October 18, 2021, only 490604 COVID-19 vaccine doses, with the rate of 1812 doses per 100000 inhabitants had been administered, representing 1.2 percent of the target population [22]. The minister of Public Health attributed the low vaccination rate to the small number of health staff administering vaccines, and the reluctance of the population to get vaccinated [23].

Nearly 2.5 billion COVID-19 cases have been administered worldwide. Despite progress, significant obstacles stand in the way of ensuring global access to the vaccines. Vaccine reticence, driven in part by misinformation, represents a key obstacle. In West Africa, vaccine reticence is a particularly worrisome issue. Negative information about vaccination online in and in social media platforms has been an important cause of vaccine hesitancy [24]. The equivocal nature of anti-vaccination information on the internet contributes to an increase in vaccine hesitancy [25]. In an Afro-Barometer survey of five West African countries from March 2021, 60 per cent of respondents said they were unlikely to try to get vaccinated [26]. Foreign narratives and conspiracy theories- initially developed and popularized in North America- are taking hold in West Africa, further eroding trust in institutions in the region [27]. Particularly,

...pro-Russian disinformation networks and American anti-science websites are pushing anti-vaccine content that is reaching large West African Facebook Pages and Groups. These networks are spreading social media posts and articles that contain misleading messages about COVID-19 Vaccines. These messages are amplifying wider narratives that could erode trust in key actors and institutions connected to vaccines.... Networks of French disinformation websites are playing a crucial role in enabling this content to reach West African social media. These websites are artificially amplifying English-language articles by publishing translated versions. Each version features slight modifications to the title, imagery or source quoted. The resulting variety of articles increases the chance that these messages will reach diverse online communities.... These include conspiracy theories about depopulation programs, a totalitarian, one-world government known as the New World Order.... [28]

These anti-vaccine entities built their arguments on their skepticism against science. Such beliefs did not accept the conclusions of the world's lead scientists about the seriousness of COVID 19.

Mbororo Appropriation of Immunization Pessimism

Since the outbreak of COVID-19, immunization pessimism has been very characteristic of the Mbororo communities in the North West Region of Cameroon. Within these indigenous communities, there are many limitations to modern healthcare services. The near absence of hospitals and clinics could have been supplemented by a robust government response that, “since December 2021, they have resorted to contain the spread of COVID-19 through mass vaccination. The ensuing grip of anti-vaccine conspiracy theories on the Mbororo communities has been quite serious. Like the rest of persons who heard these anti-vaccination campaigns from social media outlets, some of the Mbororo among others have taken the lead in fueling vaccine hesitancy in their communities.

Access to social media messages through mobile phones bred, nurtured and sustained the unwillingness of a majority of Mbororo people in the Bamenda Grassfields to get vaccinated. Since December 2021, there have been strong believes that the vaccine reduces the lifespan of anyone that takes it. As Abdou Munrim recounted in great despair, I have not taken the vaccine. I am not going to take it now or any other time no matter what. I hear that if anyone takes COVID19 vaccine that person would not live long. Anyone that has taken the vaccine will die in five years’ time. I cannot risk my life for something that will kill me. I want to live long enough to take care of

20. US Embassy in Cameroon, “COVID-19 Information for Cameroon,” Unpublished Paper (2021), 1.
 21. Rabiadou Sule, 32 years, Nurse, District Hospital Nkambe, 22 February 2022.
 22. US Embassy in Cameroon, “COVID-19 Information for Cameroon,” 1.
 23. *Ibid.*
 24. Jerome Nyhalah Dinga, Leontine Kouemou Sind and Vincent P.K. Titanji, “Assessment of Vaccine Hesitancy to a COVID-19 Vaccine in Cameroonian Adults and its Implication Global Implication,” *Vaccines* volume 9 number 175 (2021), 1-14.
 25. *Ibid.*
 26. Carlotta Dotto and Seb Cubbon, “Disinformation Exports: How Foreign Anti-Vaccine Narratives Reached West African Communities Online,” Unpublished Paper, 2022.
 27. *Ibid.*

28. *Ibid.*

my children and see my grandchildren. This vaccine is not for me and my family [²⁹].

Abdou Munrim was just one among many voices in the Mbororo community of Nkambe in the Northwest Region of Cameroon. These stories were triggered and amplified through social media networks for the sake of discrediting the vaccination campaign which still is the one thing that the world hopes for in order to successfully fight the COVID-19 pandemic. Just like Abdou Munrim another Mbororo recounted with conviction that,

I will not take the vaccine. I hear it is a plan conceived by china and the United States to reduce the population of the world. I have watched videos and read messages on the internet which say that anyone that takes the vaccine shall die. I have told my family and friends not to get vaccinated because I do not want to lose them. I am very convinced because it was China that started this virus to kill its citizens and reduce its population. Later on they produced this vaccine to kill even those who would be spared by the virus. We are living in a very wicked world [³⁰].

In a situation like this, in a world where such misinformation has been firmly rooted in the minds of many people, the rejection of vaccines has been decried by health experts as the greatest obstacle to the containment and elimination of the virus. As Kimberly Halket reported after Joseph Biden took over as American President, COVID-19 has become the virus of the unvaccinated people. Similar opinions have argued that unvaccinated people who obviously have paid attention to misinformation for too long are a health hazard to those vaccinated.

Other opinions about COVID-19 vaccines can be very hilarious. Among the Mbororo of the Bamenda Grassfields of Cameroon, there is misconception by internet propaganda that COVID-19 vaccines would cause irreversible infertility in both men and women. Such opinions argue that COVID-19 was conjured by China to reduce its population. While hanging on this propaganda, Adama Hawe points out in resentment that, The COVID-19 vaccines are not what they say. The vaccines cause sterility in anyone that takes them. The real story behind these vaccines have been told by well-wishers through Whatsapp and Facebook [³¹]. People have heard these true stories and watched other people who are regretting their decision to have taken the vaccine. I do not have a smart phone but I have heard these stories from people that I trust. My family and I would not take the vaccine because we do not

want to lose our ability to have children in the future [³²].

The prominence of anti COVID-19 vaccine sentiments in the Mbororo communities of the Bamenda Grassfields was made even worse by a shared occultic propaganda. As Aee Garadima recounted what she heard,

All COVID-19 vaccines are means which occultic disciples have devised to get everyone initiated. I heard that it was the devil himself that delivered the vaccine from the sea and instructed how it should be administered. There are videos and audio messages that are circulating in WhatsApp Groups and warning everyone that care to listen. Initially, out of ignorance I was waiting to get vaccinated. Thanks to these internet warning messages, I now know better than to get myself initiated into some sort of occultism. I will not be a part of this demonic conquest [³³].

From the onset of the vaccination campaign in Cameroon, there were hosts of conspiracy theories that have caused significant impediments to the efforts made by the government to combat the pandemic. These testimonies of anti-vaccine convictions which were triggered and sustained by the contagion effect of the social media platforms rendered the fight against the raging pandemic daunting, especially among conservative indigenous peoples like the Mbororo. However, the resistance to COVID-19 vaccines was largely due to the plausible option that was at hand to check the pandemic. This option resided on traditional medicine and healthcare practices.

Indigenous Treatment against COVID-19

The persistent phenomena of diseases among the Mbororos like other societies all over the world made them to take recourse to multifaceted indigenous diagnostic, treatment and preventive therapies dictated by various situations [34]. In the same way, divergent perceptions held by the Mbororo people provided additional impetus for the proliferation of multiple diagnostic means at different times and circumstances [³⁵]. The diagnostic and treatment therapies evolved across time and circumstances with one generation succeeding and bequeathing to another the indigenous knowledge protocols on managing individual and community based health issues.

29. Abdou Munrim, 75 years, Mbororo Fulani, Nkambe, 22 June 2021.

30. Abraham Mahmala, 55 years, Traditional Healthcare Practitioner, Sabga, April 2019.

31. *Ibid.*

32. Adama Hawe, 51 years, Mbororo Fulani, Baba II, 10 May 2021.

33. Aee Garadima, 48 years, Mbororo Fulani, AchaTugi, 15 May 2021.

34. Musa Ndayo, 56 years, Traditional Healthcare Practitioner, Sabga, 5 January 2021.

35. Hadija Alinu 35-year-old Traditional Birth Attendant and Herbalist, Sabga, 03 March 2021.

Such treatment procedures often incorporated the germ theory and spiritual causations of diseases, among the Mbororo communities. Divided in faith based organizations between nominal and faith-based Muslims, the Mbororo differed in their perceptions and understanding of health and disease causations. While nominal Muslim Mbororos incorporated the traditional African system of thoughts which attributed diseases principally to spiritual forces, Islamic devotees cling on the germ theory which presumed that diseases are caused by the invasion of the body by certain microorganisms which could be checked by containing their actions. In spite of the dichotomies, the Mbororos vacillated between the germ theory and spirituality in determining the causes of and dealing with diseases within their communities. This dual paradigm set the basis for the proliferation of both physical and spiritual therapies in managing health and wellness related concerns.

In the context of the enraging COVID-19 pandemic, a significant section of the Mbororo communities of the North West Region easily heeded to the rhetoric of anti-vaccination conspiracy. As an alternative to the vaccine rejection, the Mbororo Fulani made appeal to their wealth of traditional healthcare services which they were familiar with and believed in [36]. As a response to the fight against COVID-19, the Mbororo communities greatly benefited from the services of their numerous herbalists [37]. In their resolve to fight the spread of the virus, they were aware but did not implement quarantine measures against suspected COVID cases [38]. As Oumarou Babruka, Lamido of Sabga, recounted, I acknowledge that COVID-19 is real. I have been following the news on national television and other foreign news channels and there is no doubt about the reality of the virus. However, the preventive, measures are very unrealistic. I do not support that anyone should be kept in some sort of solitary confinement just because he/she is infected with this disease. I have not seen anyone in isolation in this community ever since the pandemic started. However, we have been using our traditional medications and they have proven very effective against sore throat and catarrh which I hear are the main symptoms of the disease [39].

While many of the Mbororos did not submit themselves to quarantine prescriptions of the WHO and the Cameroon Ministry of Health, as a preventive strategy to mitigate the propagation of the COVID-19

pandemic, they however did not spare any herbal prevention that was available for consumption [40].

There was the perception that COVID-19 is not real in Cameroon and most especially in Mbororo communities [41]. In this general state of denial, the signs of COVID-19 that were described by WHO and the Cameroon Ministry of Public Health were quickly dismissed as pertaining to common flue which has been prevalent among the Mbororos for as long as their communities have existed. The previous reality of respiratory tract diseases, especially asthma, also aided the denial of respiratory difficulties to be COVID-19 related. Notwithstanding, the Mbororos of the Bamenda Grassfields of Cameroon prioritized several traditional concoctions prescribed by their trusted traditional healers and derived from different mixtures of herbs [42].

The wide consumption of Lemon Grass by the Mbororos and non-Mbororos during the pandemic made the herb to be described as the cure for COVID-19 [43]. Since 2020 when COVID-19 was declared in Cameroon, Lemon Grass has been cherished not only by the Mbororo communities but by many as the lifesaving antidote against the virus. The demand for this herb unprecedentedly heightened. However, being a herb that has always been grown by almost all the Mbororos and a cross section of the inhabitants in the North West Region, it was easy to lay hands on as a therapy to check the damaging effects of the virus on human health. The herb, although believed to possess medicinal potency against the COVID 19 virus was never sold but gifted by those who had in abundance to those who did not have or in need. This greatly showed African solidarity in combating the pandemic. The consumption of Lemon Grass was complimented with many other herbs which were much valued across the Mbororo communities to have high therapeutic properties to arrest the COVID 19 pandemic.

The (shared) perception that COVID-19 is like any other case of common cold that manifests in the form of cold, sore throat and sometimes light fever, made the Mbororos to respond to these isolated or collective signs with the full force of their wealth of traditional medicine [44]. Like any other time when a patient was treated for common cold, the use of hot juice derived from herbs was imperative. As such, to

- 36. Hadija Alinu 35-year-old traditional birth attendant and herbalist, Sabga, 03 March 2021.
- 37. Ah-Iahatu Magaji, 61 years, Mbororo Fulani, Baba II, 10 May 2021.
- 38. Mallam Jibo, 60 years, traditional healthcare practitioner, Sabga, 5 January 2021.
- 39. Oumarou Babruka, 67 years old, traditional leader of Sabga, 19 April 2022

- 40. Ah-Iahatu Magaji, 61 years, Mbororo Fulani, Baba II, 10 May 2021.
- 41. Aishatu Buba, 62 years herbalist, Sabga, 03 July 2021.
- 42. Aishia Mama, 32 years, Mbororo Fulani, Sabga, 10 November 2020
- 43. Chi Isa, 55 years, traditional healthcare practitioner, Santa, 13 April, 2021.
- 44. Amwa Bi Adamu, 51 years, Mbororo Fulani, Baba II, 10 May 2021.

fight these signs that the WHO and the Cameroon Ministry of Public Health identified as symptoms of COVID-19 malaise, the Mbororos derived hot juice from a mixture of Lemon Grass with ginger [45]. Ginger is a food supplement which is also quite dominantly produced and consumed in the North-West Region. Ginger is spicy and its spiciness is recommended by herbalists in Mbororo communities to be effective against sore throat [46]. The juice that is derived from the boiled mixture of ginger and lemon grass is drank hot to burn away sore throat and contain catarrh which are all known to be COVID-19 related [47]. This indigenous therapy has not only been useful to the Mbororos but also to the communities in the North West Region irrespective of their actions against the COVID-19 propagation.

Besides, lemon grass is also being consumed in collection with black jack, pineapple skin, guava leaves and plum leaves [48]. Previously, this combination of herbs and leaves was used in the fight against malaria fever which usually manifests itself in the form of common cold that at times degenerates into catarrh and sore throat [49]. Like any other time when herbalists had to prepare these herbs for consumption by a patient, proper cleaning was observed. Sometimes this collection of herbs and leaves was boiled with ginger so that the spicy ginger taste could heal sore throat. In the midst of the global fight that came with the reality of COVID-19, this therapy became the refuge of many who suspected themselves of having contracted the virus. The Mbororos reticence to take part in the national COVID-19 screening, diagnostic and treatment campaign left them with no other option than to rely on their local readings, accurate or approximate, of the associated symptoms heralded by the WHO and the Cameroon Ministry of Public Health [50].

Moreover, the consumption of spirituous liquor was also considered as a significant therapy against COVID-19 among the Mbororos of the North-West Region. Locally brewed liquor, known as “*chuku-die*” was a major anti COVID-19 therapy consumed by many Mbororos as counterpoise to immunization reticence. This liquor was commercialized in different parts of the Region by Mbororo vendors and other non-

Mbororo peddlers [51]. The demand for the product greatly surged during the COVID-19 context as many persons consumed it as part of the preventive measures. The consumption of this distilled liquor was used alongside other herbal concoctions that targeted particular symptoms of the pandemic. One of those who have been consistent in consuming *chuku-die* was Amina Musa. She posits that “I have always drunk “*chuku-die*” against cold, catarrh and sore throat. Right now, they say these signs are COVID-related, so I have intensified my consumption in order to avoid the infection before it even reaches me [52]”. One can therefore say that although the consumption of this spirituous liquor was an old habit among the Mbororos and the rest of the inhabitants of the North-West Region of Cameroon, the outbreak and spread of COVID-19 accelerated its consumption [53].

CONCLUSION

This paper discusses the perceptions of the Mbororo Fulani about the COVID-19 vaccines and projects the options they made with indigenous traditional medicine in the local fight against the pandemic. The article traces the outbreak and spread of the pandemic in Cameroon and highlights the overwhelming influence of anti-vaccination information in triggering and sustaining an ensuing characteristic of vaccine hesitancy among the Mbororo communities in the North West Region of Cameroon. The outbreak and fight against COVID-19 on the world stage did not command the same approach in some local settings. While barrier measures and especially immunization prescriptions were formulated and introduced by WHO and the Cameroon Ministry of Public Health, the Mbororos of the North-West Region responded to the pandemic in their own manner. Most of them aligned with immunization pessimists and related all the symptoms to ordinary common cold. They sought traditional healing methods by exploiting herbs around them. On the other hand, an insignificant proportion mostly directed by a few who had western medical training and exposure to science, started socializing some of these Mbororos about the reality of COVID-19 and the urgent need for immunization. Despite these divergent views on COVID-19, the Mbororos largely relied on traditional medicine and are progressively appropriating western medicine to complement their efforts.

45. Awalu Karimu, 56 years, Mbororo Fulani, Banja, 5 January 2021.
46. Baba Hamadou, 66 years Traditional Healer, Nkambe, 22 January 2021.
47. Biba Guidado, 57 years, Herbalist, Nkwen-Bamenda, 23 July 2021.
48. Biba Guidado, 57 years, Herbalist, Nkwen-Bamenda, 23 July 2021.
49. Abraham Nuh, 45 years Old, Traditional Healer, Sabga, 10 May 2021
50. Musa Ndungou, 65 years, Traditional Healthcare Practitioner, Acha Tugi, 30 May 2021.

51. Ali Buba, 27 years, Local Brewer and Spirituous Liquor Vendor, Old Town Bamenda, 10 November 2021.
52. Amina Musa, 40 years, Mbororo Fulani, Baba II, 10 May 2021.
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