

To cite this article: Bolekaleka Singa Valentin, Lomboto Isilonga Papy, Kombozi Yaya Dieu Merci, Saliki Lifita Michel, Lyongo Bolongola Gustave, LIFITI LIKAY Markita, Walala Atshaina Jean Luc, Basandja Longembe Eugène, Tagoto Tengapume Alliance, Yaaya Liagologa Victor, Atoba bokele Camille, Batina Agasa Salomon and Losimba Likwela Joris (2026). ETIOLOGICAL PERCEPTIONS OF CERTAIN SYMPTOMS AND DISEASES BY THE POPULATION OF THE ISANGI HEALTH ZONE AND USE OF TRADITIONAL MEDICINE THERAPEUTIC PRACTICES DURING A MORBID EPISODE, International Journal of Applied Science and Engineering Review (IJASER) 7 (3): 120-132 Article No. 270 Sub Id 383

ETIOLOGICAL PERCEPTIONS OF CERTAIN SYMPTOMS AND DISEASES BY THE POPULATION OF THE ISANGI HEALTH ZONE AND USE OF TRADITIONAL MEDICINE THERAPEUTIC PRACTICES DURING A MORBID EPISODE

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DOI: <https://doi.org/10.52267/IJASER.2026.7309>

ABSTRACT

Introduction: The World Health Organization (WHO) recognizes, in certain respects, the importance of Traditional Medicine (TM) in managing various health issues among the population. Nearly one-third of the population in low-income countries lacks access to essential medicines. In the Democratic Republic of the Congo (DRC), two out of ten families utilize this medical approach during an episode of illness. This recourse is believed to be linked to values, beliefs, and philosophical orientations regarding health and life. The objective of this study is to describe the perceptions of the causes of specific symptoms or diseases and to identify the primary traditional therapeutic practices used by the population of the Isangi health zone during morbid episodes.

Methodology: A household survey was conducted from August 10 to November 30, 2023, involving patients or their guardians. Data collection was performed using interview guides and observation checklists. The collected information was processed using a bilingual approach: quantitative data were encoded in Microsoft Excel, while qualitative data were recorded through structured note-taking.

Regarding the biological inventory, specimens (fauna and flora) were first recorded by their vernacular names in the Topoke language, before being systematically identified by their respective scientific names.

Conclusion: The persistence of mystico-religious beliefs directly influences the etiological perceptions of certain symptoms and diseases, leading to a "medicine of survival" where ancestral knowledge and modern pharmacology intertwine. The therapeutic arsenal relies on a wide variety of botanical species (e.g., *Ocimum gratissimum*, *Vernonia amygdalina*, *Mimosa pudica*) and the hybridization of care.

KEYWORDS: Etiological perceptions, traditional medicine, healthcare seeking, symptoms and diseases.

1. INTRODUCTION

Traditional medicine (TM) is based on the theories, beliefs, and experiences of a culture that are used to maintain good health and to treat and cure physical and mental illnesses(1) . Since 1990, it has made a notable appearance in many low-income countries and is sometimes the main complementary mode of health care delivery(1).

The World Health Organization (WHO) recognizes in some respects the importance of TM in the management of certain health problems of the population(1)

The use and demand for this type of traditional medicine is growing strongly. Faced with this observation, and in view of the increasing number of populations (rural and urban) using it, the WHO ended up asking the governments of low-income countries to effectively integrate this traditional medicine into their health systems (2).

Nearly a third of the population in low-income countries does not have access to essential medicines. In the Democratic Republic of Congo (DRC), two out of ten families use this medical approach during an episode of illness. This recourse is linked to values, beliefs and philosophical orientations relating to health and life (1).

Some studies show that 30% of the population of Kinshasa use traditional plants for certain treatments (1).

The objective of this study is to describe the perceptions of the causes of certain symptoms or diseases and to identify the main therapeutic practices of traditional medicine to which the population by the population of the Isangi health zone resorts during a morbid episode.

2. MATERIAL AND METHOD

2.1. Scope of the study

This study was conducted in the Isangi health zone, located 125 km west of the city of Kisangani, Tshopo Province in the Democratic Republic of Congo. Self-medication with modern and traditional medicines is the first therapeutic recourse in case of illness.

2.2 Study population and sampling

The population of this descriptive study, which covered a period from August 10 to November 30, 2023, consisted of sick people in households or their guardians.

We used a multi-stage sample. Simple random sampling was used to select 13 health areas from the 23 health zones in the health zone, to select villages and avenues, and systematic sampling was used to select individuals from households.

2.3 Inclusion criteria

The following criteria were used: Subject who had been ill or their guardian during the study period or in the last 3 months prior to the study, who had used traditional medicine and agreed to answer the questions.

2.4 Data Collection Procedure

Data collection was carried out using interview guides and observation grids. The information collected was processed bilingually: the quantitative data was encoded on Microsoft Excel software, while the qualitative data was the subject of structured note-taking. Concerning the biological inventory, the specimens (fauna and flora) were first listed by their vernacular names in the Topoke language, before being systematically identified by their respective scientific names.

2.6 Data Processing and Analysis

The quantitative data were analysed and entered in Microsoft Excel before being analysed with the STATA 13 software. This analysis included a descriptive component based on the calculation of means and standard deviations. For the qualitative component, a thematic analysis was carried out in order to identify the main perceptions of the respondents as well as the determinants of the use of care.

All information presented is based on the statements of the participants. The symptomatology associated with each patient and each condition was grouped into broad pathological categories, with a focus on the most frequently mentioned diagnosis. Finally, when the diversity of symptoms did not allow for a specific classification, the pathology was listed in the category "ill-defined signs and states".

3. RESULTS

3.1 Household characteristics

Feature	Terms and conditions	Frequency(n=27)	Percentage
Age	33±9		
Gender	Male	12	44,44
	Female	15	55,56
Religion	Catholic	8	29,63
	Protestant	6	22,22
	Revival Churches	11	40,74
Occupation	Other	2	7,41
	No occupation	1	3,70
Tribe	With occupancy	26	96,30
	Topoke	18	66,67
	Lokele	4	14,81
Number of persons in the household	Turumbu	5	18,52
	7±3		
Number of meals per day	1±0,2		
Monthly income	15±8		
Water source	Well/Developed Spring	1	3,70
	Well/Undeveloped Spring	26	96,30
Toilet Type	Arab pit with lid	3	11,11
	Arab pit without lid	24	88,89

The average age of the heads of households or respondents is 33 ± 9 years, with a slight predominance of women in the sample, with 55.56% of women compared to 44.44% of men.

The family structure is characterized by a large household size, with an average of 7 ± 3 people. Ethnically, the Topoke tribe is in the majority (66.67%), Regarding religious beliefs, the Revival Churches predominate (40.74%).

Almost all respondents (96.30%) say they have an occupation. However, this activity does not seem to guarantee sufficient financial security, with the average monthly income amounting to only 15 ± 8 USD. This economic precariousness has a direct impact on food security: the frequency of food consumption is extremely low, with an average of only one meal per day (1 ± 0.2).

Indicators related to the health environment are of particular concern: The vast majority of households (96.30%) obtain their supplies from undeveloped springs or wells, and the mode of excreta disposal is mostly precarious, with 88.89% of households using Arab pits without lids.

3.2 Characteristics of the morbid episode

Feature	Terms and conditions	Frequency(n=27)	Percentage
Pathological categories	Infectious/parasitic	17	62,96
	Respiratory	7	25,93
	Ill-defined states	1	3,70
	Dermatological	2	7,41
Severity	Less serious	21	77,78
	Serious	6	22,22
Therapeutic failure	Yes	10	37,04
	No	17	62,92
Processing time (days)	5 ± 3		

The data in this table show a marked predominance of infectious and parasitic diseases, which affect 62.96% of the cases recorded. This category is followed by respiratory diseases (25.93%). Dermatological pathologies (7.41%) and poorly defined clinical conditions (3.70%) represent a marginal share of the morbidity observed.

In terms of severity, the majority of morbid episodes are perceived by respondents as less serious (77.78%), while 22.22% of cases are classified as serious.

Regarding response to treatment: the average duration of treatment is 5 ± 3 days, which generally corresponds to standard protocols for common infections in tropical settings and a treatment failure rate of 37.04% is reported.

3.3 Etiological perception of the few diseases and recourse to therapeutic practices of traditional medicine

Symptom or Pathology (Vernacular Name)	Etiological perception	Citations (n=27)	Preparation and therapeutic practice	Route of administration	Dosage and duration
Ascite (Monama)	Evil spells	13	Juice extracted from the bark grind of <i>Pertesianthus macrocarpus</i> (Bosogo) and from the fruits of <i>Aframomum alboviolaceum</i> (Soso).	Oral	2 tablespoons/day for 5 days.
		5	A mixture of <i>P. macrocarpus</i> bark, chili pepper (<i>Capsicum annuum</i>) and water.	Anal	Enema every 3 days for 1 month.
Tropical myositis (Haima)	Foreign body, bad luck	12	Paste made from the shredded fruit peel of <i>Calamus deerratus</i> (Libelulikau) or <i>Oncoba welwitschii</i> (Lisende).	Massage	2 times/day for 5 days.

			Aqueous macerate of bark of <i>Ficus gillettii</i> (<i>Lomela</i>) and <i>Manniophyton fulvum</i> (<i>Gondebongosa</i>), or mixture of <i>caladium bicolor</i> tuber (<i>Liseka yam</i>) and water.	Anal	Enema (1 pear/day for 8 days or 2 pears/day for 5 days).
Jaundice (<i>Bokembe</i>)	Contact with a patient's urine	18	Watery mixture of <i>Vernonia amygdalina</i> (<i>Kongobololo</i>) and <i>Elaeis guineensis nuts</i> .	Anal	Daily enema until healed.
		19	Cold macerate of yellow mushroom (<i>Craterellus lutescens</i>).	Eyepiece	2 drops/eye, 1 time/day for 5 days.
Panaris (<i>Lokutsha</i> or <i>Lihomba</i>)	Trauma, foreign body, bad luck	15	Paste of "Boat" root or mixture of <i>Aframomum alboviolaceum</i> (<i>Logogo</i>) with lemon juice.	Massage	2 times/day for 5 days.
		14	Insertion of the infected finger into the vaginal opening.	Application	As needed.
		16	Mixture of <i>Mimosa pudica</i> (<i>Ifonyafonya</i>) leaves, chili pepper (<i>C. annum</i>) and native	Application	2 times/day for 5 days after scarification.

salt.					
Tropical ulcer (<i>Ibondjo</i>)	Bad luck		Crushed safou bark (<i>Dacryodes edulis</i>) mixed with palm oil.	Massage	2 times/day for 8 days.
Sexual impotence (<i>Ilembeta</i>)	Heavy work, bad luck, coitus interruptus	21	Ash of <i>Agama agama</i> head burned with native salt and root powder of <i>Piptadeniastrum africanum</i> (<i>Bokungu</i>).	Application	Monodirectional scarification on the penis, followed by a sharp shock.
Neuritis (<i>Bokau</i>)	Heavy work, bad luck	11	Native salt powder, parrot feathers and charred roots of <i>Sida acuta</i> (<i>Iteina</i>).	Application	2 times/day for 5 days after scarification.
Breast lesion (<i>Ngolo</i>)	Bad luck (targeting the breastfeeding woman)	9	A mixture of soiling waters and native salt.	Application	2 times/day for 5 days after scarification (sugarcane leaves).
Vertige (<i>Lotimbia</i>)	Blood imbalance, bad luck	16	<i>Hua gabonii</i> (Lugo) bark powder with added water.	Eyepiece	2 drops/eye for 5 days.
Grippe (<i>Likolo</i>)	Physical overexertion	25	Décoction complexe (<i>Ocimum gratissimum</i> , <i>Citrus limon</i> , <i>Alchornea cordifolia</i> , <i>Piper</i>	Inhalation	Steam bath under sheet (fumigation).

guineense, Costus afer).

Angina (Lifou)	Cervical injuries, bad luck	12	Root powder of <i>Giengenge, Pycnanthus longifolius (Lombia)</i> and <i>Pentadiplandra brazzeana (Botimatima)</i> filtered in water.	Nasal	2 drops/nostril, 1 time/day for 3 days.
Epilepsy (Liboo)	Hereditry, bad luck	21	Macerate of <i>Mbiletee</i> leaves with <i>E. guineensis nuts.</i>	Eyepiece	1 drop/eye, 2 times/day for 5 days.
Rheumatism (Bengai)	Heavy work, bad luck	11	Roots of <i>Bryophyllum pinnatum (Lisolo)</i> calcined with native salt.	Application	Scarification (duration not specified).
Cerebral malaria (Fonoli)	Bad luck	18	Juice extracted from the leaves of <i>Ocimum gratissimum (Bolulumba).</i>	Eyepiece	2 drops, 2 times/day until healed.
Infantile anal ulceration	Contact with the ground	24	Leaf juice of <i>Solanum lycopersicum</i> combined with antibiotics (Chloramphenicol or Penicillin).	Anal	Suppository, 2 times/day until healed.

This table shows that the majority of the pathologies identified are attributed to "bad spells". This perception is almost systematic for serious or chronic conditions such as ascites (*Monama*), epilepsy (*Liboo*) or cerebral malaria (*Fonoli*).

At the same time, a significant proportion of the population identified physical or environmental causes: overwork: "heavy work" was implicated in the onset of influenza, sexual impotence and rheumatism, and environmental contagion: Jaundice was perceived as the result of contact with a patient's urine, while infantile anal ulceration was linked to direct contact with the ground.

The therapeutic arsenal is based on a wide variety of botanical species (e.g. *Ocimum gratissimum*, *Vernonia amygdalina*, *Mimosa pudica*). The medicinal recipes bear witness to a complex know-how: the traditional galenic: We observe the use of extracted juices, decoctions, grind pastes, but also more elaborate forms such as calcination ashes (used for neuritis and rheumatism). And the hybridization of care: A striking fact appears in the treatment of anal ulceration, where endogenous knowledge (tomato juice) is associated with modern pharmacology (antibiotics such as Chloramphenicol).

Therapeutic practices are distinguished by the frequent use of invasive or direct routes of administration: scarification and the ocular route.

Citation frequency: Influenza and anal ulceration are the most cited conditions, which could indicate a high prevalence.

4. DISCUSSION

4.1 Socio-economic profile and health risk

The income of USD 0.50/day per household places this population well below the international poverty line. This precariousness, coupled with the lack of sanitation facilities, creates a "vicious circle of poverty", where structural conditions dictate the epidemiological profile. Our results corroborate those of Mbonigaba in rural Congo, highlighting that water insecurity is the primary determinant of infectious morbidity (2).

4.2 Episode morbide

There is an incomplete epidemiological transition, the predominance of infectious and parasitic diseases (62.96%) confirms that the pathological profile remains dominated by so-called "poverty" or environment-related diseases. The importance of respiratory diseases (25.93%) could be explained by environmental factors (dust, indoor pollution, seasonality). These results corroborate those of *Traoré et al*, in Mali, who reported a predominance of infectious diseases at 58%.

These results are contrary to those found by FICHIR where the most cited neonatal conditions are convulsions, jaundice, fever, fontanelle depression and dermatoses. Those considered to be the most serious are dermatoses, breathing difficulties and conjunctivitis(2)

Although infections dominate, 77.78% of cases are considered "less severe". This may reflect a habituation of the population to recurrent morbid episodes (simple malaria, influenza, parasitosis). However, this can lead to a delay in consultation, as patients only seek formal care when symptoms become disabling.

The average duration of treatment (5 ± 3 days) is in line with WHO standards for acute infections, with a failure rate of 37.04% significantly higher than that observed by *N'Guessan et al* in Côte d'Ivoire, who reported an overall failure rate of 18% in primary care.

4.3 Cultural representations of the disease

The perception of "bad luck" for diseases such as ascites or cerebral malaria (Fonoli) testifies to the persistence of the traditional African etiological model. As pointed out by Benoist, illness is not only a biological dysfunction but a rupture of the social or spiritual order. This interpretation explains the frequent use of traditional healers before or in parallel with the health centre (8). Two initial factors to the disease are therefore to be detected; according to Horton, the creative object of evil (sorcerer, divinity, spirit) and the historical fact, the vehicle of this evil (transgression of prohibitions, relational conflict(3)

In many traditional belief systems in Africa, including the DRC, if the diseases are long-lasting and especially if the causes are identified as metaphysical and supernatural, only traditional healers are considered to have the expertise to address these causes(1).

4.4 Therapeutic Practices and Hybridization

The use of scarification and the ocular tract carries major infectious risks (HIV, hepatitis, keratitis). The combination of tomato juice and chloramphenicol illustrates a phenomenon of "Medical syncretism". This hybrid self-medication, reported by WHO, raises the issue of antibiotic resistance and the potential toxicity of plant-drug mixtures. The treatment is done by using plants, minerals and others. Antibiotics are medications used to treat and prevent bacterial infections. Resistance occurs when bacteria evolve in response to the use of these drugs(4). The bark is the most used part of the plant with almost 39.36%, followed by roots 30.85% and leaves 27.65%. The most frequent method of use is maceration of the plants (75%) with water and the oral voice is also the most frequent voice with nearly 80%(5)

Data reported to WHO's Global Surveillance System for Antimicrobial Resistance and Use (GLASS) in more than 100 countries show worryingly that the rise of resistance to essential antibiotics is a growing threat to global health(4)

5. CONCLUSION

The study shows that morbidity is dominated by infectious diseases, which are favoured by extreme economic insecurity and an unfavourable hygienic environment.

The persistence of mystical-religious beliefs directly influences the etiological perceptions of certain symptoms and diseases, leading to a survival medicine where ancestral knowledge and modern pharmacology are intertwined. The reported treatment failure underscores the urgent need for increased health education and better integrated traditional medicine into the primary health care system. Improving access to drinking water remains the priority lever for reducing the burden of disease.

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