



Weak decision-making power of senoufo women and limitation of mothers' actions in diarrheal management

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Abstract

The persistence of diarrhea in children aged 0 à 5 years remains a public health problem in Côte d'Ivoire, particularly in the Korhogo department. Despite the various programs of WHO, UNICEF and those of Côte d'Ivoire, diarrhea persists and constitutes one of the main causes of consultations among children under 5 years old. This research analyzes the role of sociocultural factors in the persistence of diarrhea. To do this, the methodology was based on semi-structured interviews in the villages of Tioniaradougou and Torgokaha, with mothers, fathers, doctors, healers and all people likely to provide us with information on the reality studied. Also, we used data from the regional directorate of Korhogo, in cycle reports obtained in the various health centers and previous documents. This research shows that the unavailability of the mother, cohabitation with animals and the authority of the male spouse explain the persistence of childhood diarrhea in the Korhogo department. These social practices, which are preserved in Senoufo country, are detrimental to the health of children under 5 years old.

Keywords: Ethnography, childhood diarrhea, unavailability of mothers, persistence of diarrhea, senoufo, korhogo

Introduction

Diarrheal disease, which impacts socio-economic development at the global, sub-regional, and national levels, represents a major source of suffering for political authorities, researchers, national and international organizations. Consequently, action plans for the Sustainable Development Goals focus on the factors responsible for childhood illnesses (UNICEF, 2013, p.1). In light of this data, and with the aim of reducing infant mortality in line with the fourth Millennium Development Goal, the WHO recommends vaccination as a fundamental intervention strategy (D. Hoestlandt, 2015, p.20).

Côte d'Ivoire is not spared from the situation described above. Indeed, diarrheal diseases represent a significant proportion of illnesses and deaths in both children and

adults. Exacerbated by high rates of malnutrition and limited healthcare, including basic rehydration, the burden of morbidity and mortality associated with diarrheal diseases is also high. Several factors are linked to the excessive rate of diarrheal diseases (WHO, 2010, p.2). In order to protect children and their rights, Côte d'Ivoire implemented the National Child Health Program in 1996, with the objective of combating childhood diseases. Prior to this, there was a program to combat diarrheal diseases, created in 1991. Its objective was to minimize diarrheal morbidity. Despite these efforts, childhood diarrhea persists in this part of Côte d'Ivoire (N. Kouassi, 2016, p.1).

The Korhogo department is also a cause for concern due to the high rates of diarrhea recorded in its districts from 2016 to 2021. This is presented in the following table:

Table 1: Distribution of diarrhea cases from 2016-2021

Districts	Dikodougou	Korhogo1	Korhogo 2	MBengué	Sinématiali	Total
2016	465	2194	164	565	532	4325
2017	1441	5727	1045	1046	1485	10744
2018	1345	4861	891	917	1322	9336
2019	835	4823	910	1267	1218	9053
2020	980	3617	947	660	859	7063
2021	185	601	177	464	000	1427

Source: Data, field survey, 2022

The objective of this research is to analyze the role of socio-cultural factors in the persistence of childhood diarrhea among the senoufo. Specifically, it aims to: (i) explain the limited decision-making power; (ii) analyze the limitations on women's actions in managing diarrhea. This research is based on a specific methodology.

Methodology

1. Study site

This research was conducted in Tioniaradougou, a locality situated in Korhogo department, 12 km from the city and 600 km from Abidjan (on the Kanawolo-Korhogo road). It was created by decree number 75-772 of October 29, 1975,

following the administrative organization of the Korhogo department. Through decree number 95-941 of December 13, 1995, establishing new municipalities, it was formally established as a fully functioning municipality. Geographically, it is bordered to the north and west by the Korhogo sub-prefecture, to the south by the Guiembé sub-prefecture, and to the east by the Napié and Karakoro sub-prefectures. The Tioniaradougou constituency covers a total area.

The second study area is the village of Torogokaha, located 3 kilometers from the town, on the Korhogo-Napié road. The vegetation in the district consists mainly of shrubby and wooded savannas and a few scattered forest clearings. The

indigenous population is predominantly made up of the Tchebara (N.A. Kouakou, 2020, p.126-127) [7]. We focused our analysis on the Korhogo 1 district due to the high rate of access to healthcare within a 5 km radius (77%), compared to 61% in Dikodougou, 72% in Korhogo 2, 69% in Mbengué, and 76% in Sinematiali. The figures for childhood diarrhea in this part of the Poro region are alarming. The Korhogo 1 district had 4,823 children under 5 years old diagnosed in 2019 and 3,617 in 2020. The localities of Tioroniaradougou and Torogokaha had 116 children with diarrhea in 2017 and 267 in 2020, respectively. The service utilization and attendance rates are lower than those of the four districts, at 33% for utilization and 37% for attendance. This explains the prevalence of diarrhea among children in this part of the region. The choice of these two locations allowed us to understand the factors that determine this prevalence in children.

2. Data collection and analysis

The primary target group consisted of mothers, as they are closest to their children from pregnancy to childbirth. They also share in the children's daily lives including their health and illness. Secondary target groups included traditional authorities, fathers or heads of households, community health workers, traditional healers, and healthcare professionals. The choice of traditional authorities was justified because they represent the community and they are the guardians of tradition. They provided us with information on the village's history, socio-political and cultural organization, relevant to our research topic. This included, for example, understanding the taboos that could trigger diarrhea in children aged 0 to 5. Fathers were chosen because of their multifaceted and constantly evolving role. They hold decision-making power within families. Their data, for instance, allowed us to gather information on their decision-making power related to childcare.

Healthcare professionals were chosen because they are involved in the modern management of diarrhea. They can guide communities in combating and preventing diarrheal diseases in children under five. Traditional healers are also of interest to this research because their therapeutic methods, inherited from ancestral customs and traditions, differ from those of conventional medicine for treating and preventing diarrhea. Community health workers were selected because they are essential actors in improving public health and the well-being of populations. Their close ties with communities allow them to adapt interventions to local needs and strengthen trust between residents and the healthcare system. Data were collected from the target groups through semi-structured interviews, focus groups, and observations. They were processed using content analysis, defined as:

« A set of communication analysis techniques aimed at obtaining indicators (quantitative or not) through systematic and objective procedures for describing the content of messages, enabling the inference of knowledge relating to the conditions of production/reception (inferred variables) of these messages » (L. Barding, 2018, p.30) [3].

This analysis aims not only to provide researchers with a set of techniques enabling them to obtain qualitative and quantitative indicators, but also to draw logical deductions based on available information, which is not necessarily contained within the content itself. The application of this analysis has helped to identify socio-cultural factors that determine the persistence of diarrhea in children aged 0 to 5 years.

Résultats

Two results related to our specific objectives were presented:

1. Limited decision-making power of senoufo women

The limited power of women is rooted in tradition, even socio-cultural values and religious beliefs. Indeed, the constitution in Africa, as elsewhere, is a normative framework for political life that claims to govern, and fully justifies its study, the exegesis of its texts and ruling, its analysis, and the monitoring of its evolution. It is a strategic resource for promoting and defending a number of values that underpin democracy. However, constitutionalism is also an instrument for seizing or maintaining power, both in democratic regimes and in those that exploit its appearance and semantics for authoritarian, 'illiberal purposes. Three dimensions underlie this limited decision-making power.

2. Historical dimension

The senoufo people's attachment to agriculture stems from their history, which stipulates that their known ancestors were the Pallaka (or Falafala) and the Myoro, who lived by hunting and gathering. This latter activity, primarily undertaken by women, maintains their involvement in the processing of nandigue fruit into soubara (a type of fermented milk) and waloume (a type of fermented milk) into shea butter. Their interest in the *nééré* (African locust bean) arises from cultural considerations, which each woman seeks to perpetuate. The ecological logic of those involved in the *nééré* process is protective and conservative. This connection to the forest also explains the use of certain plant and animal species in the treatment of diarrhea in children under five. Among the senoufo, a breastfeeding woman must not consume eggs until weaning is complete. She must also avoid stepping on eggshells after they hatch. If this happens inadvertently, the resulting diarrhea in the child is treated locally. This is supported by this interviewee: "The waste from the hatching, we put it in the water and make the child drink it" (Focus group, woman from Tioro).

The senoufo people's original habitat and their handling of certain trees fostered a certain medical knowledge. The complexity of forest life developed their intelligence, enabling them to tame animals and plants used for consumption and medicine. This way of doing, feeling, and thinking has been passed down from their origins to the present day, from generation to generation. It has become a social construct that renders women socially vulnerable.

3. Cultural dimension

The senoufo society is governed by rules perceived by the community as prohibitions. We distinguish five:

« First, adultery is forbidden. When a woman is married, no other man has the right to have relations with her. Second, you must not have sexual relations with a woman in a woman in the bush. Third, there are totems linked to families. Fourth, there are days when going to the fields is forbidden. Fifth, if there is a funeral, there are rites and ceremonies to be performed » ((Individual interview, men from Tioro).

Transgression of the prohibitions is punished according to severity of the act:

The punished person offers a chicken, a goat, a sheep, a dog, an ox, and money. There are acts that require public humiliation. For example: If you have sexual relations with

a woman in the bush, this fault is very serious, because it prevents the rain from falling (Individual interview, Notable of Tioro).

Society is fundamentally governed by taboos. In short, certain heinous acts can bring a curse upon the community, the individual who committed the offense, or children under five. Most often, the person most likely to bring a curse upon the community remains the woman. Faced with this uncomfortable situation, traditional healers occupy a prominent place in this part of Côte d'Ivoire. The diviner-healer specializes in communicating with the invisible world. As a therapist, he consults people to require about occult attacks responsible for certain illnesses, particularly childhood diarrhea. His contact with spirits allows him to detect the root cause of the ailment and treat it based on knowledge of traditional medicine. Faced with these cultural demands, *senoufo* women are powerless, forced to submit so as not to bring a curse and the wrath of the community upon themselves.

Religious dimension

In *senoufo* society, in addition to their biological origins, individuals possess a religious dimension. Their lives demand a symphonic harmony with their entire environment, both visible, which is governed by rules that must be observed. This is why, from the very beginning, the *senoufo* place great importance on the lives of children. Their future, whether glorious or miserable, is foreseen before adulthood. Anything that could hinder their development is suppressed at its source. Indeed, when we speak of religion, we are referring to the spiritual aspect represented by the *poro*. Only men are eligible for admission to this training. It is exceptionally open to elderly women, those who have ceased menstruating. The *poro*, in its structure, unfolds in three phases: the *Poworo*, the *Kwonro*, the *Tyologo*, and comprises five generations in total, a fact confirmed by those interviewed:

Those who are here, the initiates, are called *Tchôlôbélé*. Their elder brothers are the *gnanfôré*; that is to say, we start with the current generation to establish the hierarchy. The *Tchôlôbélé* are the initiates who currently hold power in *Poro*. They will serve for seven years. Their elder brothers, who passed the throne to them, are called the *gnanbélé*. After the elder brothers of their elder brothers are the *tandjôbélé*. Finally, there are the *Cousloubélé*; those who ask for forgiveness, because they are wise. So, when others have to act, it is they who ask for their forgiveness. (Individual interview, patriarch of Tioro).

The structuring of the different age groups excludes women in one way or another from social life. It is a world managed by men. Initiation into the *Poro* is a gradual process, guided by renowned masters chosen from among the older initiates, and follows a seasonal format, lasting 30 days in the sacred grove. At each stage, the initiate receives a ritual name. The name given at the final stage is kept until death. The initiate undergoes various endurance tests (flagellations, deprivation of food and sleep...). They pay tribute and fines to dignitaries or the village community. Finally, they learn a secret language that uses the same words as everyday speech, but with different meanings. The teachings are shrouded in secrecy. No one has the right to reveal any aspect of them to non-initiates, under penalty of death or severe sanctions.

This description, which characterizes the *Poro* initiation, established the status of the women admitted to it, because they have their own sacred grove. Young girls have not yet menstruated, as well as menopausal women, have the right to be initiated into the first cycle of *Poro*. This implies that the factor excluding women from this religious ceremony is blood. A woman of childbearing age passes through blood before conceiving. The same phenomenon occurs during childbirth. Through the prescriptions of Leviticus (1: 25), the Bible also forbids a bleeding woman from entering holy places: « A woman who has a flow of blood for several days outside her regular periods, or whose flow lasts longer than usual, is unclean all the days of her impurity » (L. Segond, 1975, p.87). This makes her socially weak, because it excludes her from any training that would give her the right to make decisions.

To embody the intangible world of this initiation ceremony, several masks exist, including "Lafarê kpo" It can trigger diarrhea in uninitiated if they see it: « Lafarê kpo, the name of mask that no one should see except the initiated » (Individual interview, Notable of Tioro). Transgressing this social rule is said to cause diarrhea in children. Those called upon to carry out social actions are the "Cousloubélé", because they represent the elders of the community. The *poro* is a kind of social constitution.

Consequently, these restrictions are often used to maintain male dominance and preserve traditional gender norms. In her analysis, she states that Bourdieu's research highlights the negative impact of honor systems on women. These systems are often used to maintain male dominance and preserve traditional gender norms. Women may be subjected to severe restrictions regarding their behavior and interaction with men, which can have serious consequences for their mental and physical health. To combat these inequalities, it is important to raise awareness within communities about these issues and to promote gender equality.

Ultimately, the social structure, through its historical, cultural, and religious dimensions, determines women's limited decision-making power. These socio-cultural and religious factors restrict their actions in the care of children with diarrhea.

4. Limitations of women's actions in managing diarrhea

Limitations related to the choice of treatment pathway

In *senoufo* culture, the man remains the head of the family. Consequently, the woman and children are under his authority. This is supported by the interviewee:

As a father, when a child is born, he is first and foremost in the mother's care. It is the mother who knows when the child is healthy or sick. When she observes this, she informs the husband. The husband then directs her. He provides the means to go to the hospital or to see a traditional healer. In our culture, healers for children are generally elderly women. We say, go see this old woman, and she will give you medicine to treat the child. We see the old woman, and if what she offers doesn't meet the child's needs, we refer them to the hospital (Focus group, Men of Tioro).

It follows from the above that it is the husband, as head of the family, who guides the mother when the child is ill. This can lead to delayed treatment, because it is necessary to consult a traditional healer before resorting to modern medicine when there is no improvement. Since men have significant

influence over family decisions, they must be aware of their role as father, educator, and guide. Thus, both parents are responsible for the growth and development of their offspring. Economic and cultural factors appear to be determining factors in explaining variations in infant mortality. Indeed, the results of logistic regression show that parental education is statistically significantly linked to infant mortality at the 5% level. When the husband is more educated than his wife, the risk of death for their children decreases by 32% compared to that of children of illiterate parents.

Couples with a secondary education or higher experience lower infant mortality than parents with no education. If all parents attained at least a secondary education, their children's mortality would decrease by 64%. Parental social position does not appear to be a determining factor in infant mortality. This would imply that parental economic activity and household living standards do not directly influence the relationship between parental education and infant mortality. Similarly, H. Kouamé (1997, p.750) did not demonstrate an impact of women's economic activity on infant mortality. This could mean that parental social position is correlated with their education, insofar as educational level more or less determines an individual's social status in society.

Parental social position is correlated with parental education, as educational attainment more or less determines an individual's social status in society. Parental education retains a significant effect on infant mortality, but this effect decreases slightly when parental social position is taken into account. According to various studies, place of residence is a variable that can influence the risk of infant death. This finding is not supported by data from the DHS (1994, p.751), as parental place of residence does not appear to be a significant factor. In the presence of social position, place of residence has no effect on the relationship between parental education and infant mortality.

Speaking of authority and power, B.T. Gnoumou (2014) ^[5] argues that major household expenses must be covered by the man so that he retains his decision-making power and authority within the household. To safeguard his status as head of the family, the man must also control the woman's spending to reduce her influence. According to men, when the woman contributes to the household income, she becomes independent and less submissive. This is the position of this interviewee: « Even if the man accepts the woman's contribution, it is reluctantly, because if a woman contributes to the construction of the house, he is dead, so I prefer that she keep her money » (Interview, Head of household from Torgokaha).

Furthermore, the cleanliness of the family's home is one of the criteria used by respondents to define a powerful man, who, for men, is the one who manages to provide for his family's needs (his credibility in the community depends on it). The woman contribution to household expenses is seen as the results of an agreement within the couple, but the man always seeks an arrangement that allows him to maintain his position as head of the household, his authority, and above all, to control his wife. Although this relationship is not statistically significant, a difference is nevertheless observed between children whose parents reside in other cities. When the place of residence is controlled for (introduced into the model), parental education is no longer statistically significantly correlated with infant mortality. This explains

why the observed differences in morality between parents where the man is more educated than the woman, or between those with at least a secondary education and illiterate parents, are due to variations in their educational level according to their place of residence.

Thus, the parents' place of residence appears to be one of the factors that mediates the effect of parental education on the risk of death before 12 months. Parental religion is linked to infant mortality at the 1% threshold. Parental religious affiliation is also a differentiating factor in mortality during the first year of life. Children whose parents are Christian have lower risk of mortality than those whose parents are Muslim. They are 37% less likely to die before their first birthday than their Muslim counterparts. Their lower risk of infant death can be explained by the existence of a link between schooling and the Christian religion on the one hand, and by the openness of this religion to the western model on the other (E. Akoto, 1990, p.975) ^[1].

Conversely, children whose parents practice traditional religions have a higher risk of dying before the age of 12 months than children of Muslim parents. The former are 43% more likely to die before their first birthday than the latter. The influence of cultural values and beliefs on mothers' behavior proves detrimental to children's health. Furthermore, parental education has no significant effect on infant mortality in the presence of religion. In other words, the influence of parental education on infant mortality appears to be mediated by the parents' religion.

Like religion, ethnicity appears to be a factor influencing the risk of infant mortality. It exerts an influence on mortality rates. Children of southern mandé parents experience higher mortality than children of other ethnic groups. When a child of southern mandé parents is compared to a child of northern/Voltaic mandé parents, the risk of dying before the age of one increases by 76%. Even when all these socio-economic and cultural variables are taken into account, parental education no longer has a significant effect on infant mortality. This demonstrates that the effect of parental education on infant mortality is mediated by these variables. Regarding place of residence, the city of Abidjan has an influence on infant mortality when ethnicity is controlled for. It contributes to reducing the probability of dying before 12 months by 39% compared to other cities.

In the Cameroonian socio-cultural context, Bassa culture defines a child as any human being possessing four aspects: the physical body (Nyù), the body empowered by speech (Mbù), the cognitive and emotional body (nèm), and the shadow (Titi), an esoteric dimension representing esoteric dimension representing subtlety and mastery of time. Therapeutic approaches are influenced by the community's definition of illness. It is sometimes considered natural and sometimes magico-religious, which explains this latency (C. Leport, 2011, p.49-50) ^[11].

Limitations regarding decisions concerning environmental remediation

For a long time, new infectious diseases have continually emerged around the world (S. Morand, 2016, p.7) ^[13]. While the medical community believed it could close the chapter on the infectious burden thanks to vaccines, antibiotics, and other therapies, we have moved from an era that seemed to encompass only a few "major" diseases (primarily tuberculosis, malaria, and childhood illnesses) to a period in

which numerous little-known, or even unobserved, diseases are emerging and re-emerging with increasing frequency (B. Roche, 2022, p.4) [15]. Indeed, these diseases stem from the handling of animals and close proximity to them, due to livestock farming practices. These respondents maintain:

There is chicken, pig, cattle, and goat farming. Food hygiene and the advice given to them are not being followed. It is the women (mothers) who benefit from the advice. The fathers are not there. Unfortunately, even if the mothers want to take all these measures into account, they have no power. The man is not going to move the animals away from the yard. Woman has no authority to move them away. She cannot say that latrines need to be dug so that the children don't go outside. Perhaps she can maintain cleanliness, but the rest is out of her hands. We are in an area where animals are used extensively, for example, for fieldwork in the village; even in town, animals roam freely (Focus group, Men of Tioro).

From these remarks, we understand that the mother's actions in childcare are limited due to the authority of her husband as head of the household and the proximity of animals such as cattle, goats, sheep, and poultry. The presence of animals in their daily lives hinders hygiene practices and even preventative and curative measures. The increasing flow of people, animals, and goods is a primary contributing factor. In an increasingly globalized economy, the rapid, long-distance transport of animals, animal products, and people facilitates the introduction of exotic germs, sometimes via an anthropod such as the tiger mosquito. *Aedes albopictus*, native to southeast Asia and identified in several European countries, including France.

Contamination begins with sporadic cases, and dissemination continues through secondary outbreaks via contiguity from one area to another. Zoonoses are often considered neglected diseases. A recent study showed that 60,3% of emerging infections in the last 60 years are animal-related (D. Balk, 2008, p.1.) [2]. In developing countries, the burden of zoonotic diarrheal diseases is estimated at 9% of disability-adjusted life years due to infectious diseases. Contact with animals is a risk factor for infectious diarrhea, both in developing countries, especially for human and zoonotic causative agents. The role of *Campylobacter* is well-established in zoonotic diarrheal diseases. Numerous studies have demonstrated an association between contact with animals, whether occupational or otherwise (in rural areas), and the occurrence of *Campylobacter* infection. *Campylobacter* is a regular inhabitant of the digestive tract of many warm-blooded animals, particularly poultry (R. Randremana, 2012, p.21-22) [14].

Poultry appear to be important in the epidemiology of *Campylobacteriosis* because they are frequently infected and can shed the bacteria in very large quantities, but other animals such as cattle, pig, and sheep are also reservoirs of *Campylobacter*. Simple descriptive studies have led to the conclusion that human *Campylobacter* infection likely has a zoonotic origin, by comparing the frequency of species isolated from humans and poultry. Currently, with molecular genetic techniques, it is possible to search for genetic similarities between human isolates and isolates from animals in order to assess the origin of human infection (B. Mohamed, 2021, p.4) [11].

Campylobacteriosis is considered one of the major foodborne zoonoses in humans worldwide. In most

industrialized countries, *Campylobacter* infections have become the leading cause of acute bacterial diarrhea, surpassing salmonellosis. The main route of transmission of raw or undercooked foods from contaminated meat, or consumption of raw or undercooked meat. Although the infection is generally mild, *Campylobacter* enteritis can progress to serious complications including bacteremia, extraintestinal infections, and Guillain-Barré syndrome. *Campylobacter* is one of the main infectious agents involved in the development of this acute polyradiculoneuropathy. There is increasing resistance to antibiotics, largely due to their use in livestock, particularly quinolones (G. Macaigne, 2017, p.398).

Infectious diseases in animals are a reality and represent a public health problem. S Morand (2014, p.21) [12] addressed this issue, making recommendations. For them, the health of wildlife, some species of which have seen their populations increase significantly over the past twenty years, has become a critical issue in terms of both animal and public health. The best examples of contagious diseases whose organized control plans are hampered by the presence of a wild reservoir are bovine tuberculosis, Aujeszky's disease (similar to porcine brucellosis), bluetongue, and brucellosis in ruminants. Classic swine fever and avian influenza also have a wild reservoir, which poses a clear threat to the poultry and swine industries.

In all cases, the fight against contagious diseases in wildlife is a complex undertaking, as it relies on the participation of volunteers (hunters, naturalists). It is insufficiently regulated, costly, and lacks truly effective means of controlling wild animal populations. Large-scale drug treatments should be avoided. Mass vaccination is a valuable tool, but difficult to implement. Controlling wild animal populations is most often necessary to prevent the persistence and spread of diseases. Consequently, it is difficult to manage in the long term and lead to unintended consequences such as a post-regulation population rebound or an expansion of the wild outbreak. Biosecurity measures implemented on farms are often the only way to reduce the risk of contamination. However, they cannot guarantee the complete absence of contact between wild and domestic animals and the risk of transmission. In short, the limited power of Senoufo women is linked to their history, values, and religion. These cultural factors make them unavailable and, at the same time, exclude them from the rigorous monitoring of children under five.

Conclusion

This research analyzes the limited decision-making power of Senoufo women. Historical, cultural, and religious dimensions contribute to explaining this reality. We then demonstrated that this limited decision-making power hinders the mother's ability to effectively manage the diarrheal condition in her children. These obstacles stem from the fact that mothers are not free to choose their child's treatment plan, and from the difficulty of maintaining a clean environment to prevent childhood diarrhea. Thus, women's limited decision-making power contributes to the persistence of childhood diarrhea in Senoufo society. To address this challenging situation, a deconstruction of social construct and perceptions is necessary. It will allow political and health authorities to combine biomedical perceptions and socio-cultural representations in the fight, and even the treatment and prevention (prophylaxis) of childhood diarrhea among the Senoufo.

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