



Social perceptions and therapeutic practices of mothers towards infant diarrhea in Ahougnansou, Bouake Commune

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Abstract

This research analyzes the social perceptions, therapeutic practices, and factors justifying the recurrence of childhood diarrhea in Ahougnansou, in the municipality of Bouake. To achieve this, the qualitative research employs various techniques (documentary research, observation, semi-structured interviews) and data collection tools (analysis grid, observation grid, interview guide). To further analyze the results, the theory of representations and theory of habitus were used. The research first identified mothers' perceptions for diarrhea in children aged 0 to 5 years. Then, it analyzes the mothers' practices in response to diarrhea. Finally, the research explains the recurrence of diarrhea in children aged 0 to 5 years in Ahougnansou. Given this challenging situation, a deconstruction of the approach to combating childhood diarrhea is necessary in the community.

Keywords: Social perception, therapeutic practice, childhood diarrhea, deconstruction, Bouake

Introduction

Every year, the world faces diseases that cause death. These include HIV/AIDS, respiratory illnesses, malaria, Ebola, COVID-19, diarrhea and others. These diseases are a major concern for political authorities, researchers, and national and international organizations. They have attempted to understand and explain this reality through various theoretical approaches (demographic, anthropological...).

According to the WHO (2017), diarrhea is the second leading cause of death in children under five. It is responsible for 525000 child deaths annually. This illness can last for several days, dehydrating the body and depriving it of the minerals necessary for survival. In the past, for most people, severe dehydration and fluid loss were the primary causes of death from diarrhea. From now on, other causes such as septic infections of bacterial origin will likely be responsible for a growing proportion of deaths due to diarrhea. Every day in the world, 1300 children die from acute diarrheal diseases; most of the children are under five years old and live in sub-Saharan Africa and South Asia (MSF, 2022).

In Burkina Faso, rotavirus diarrhea has been subject to sentinel surveillance since 2013 following the introduction of the vaccine. According to Kaboré (2023), a total of 1776 suspected cases of rotavirus diarrhea were recorded. The median age was 12 months (range 2-48 months), with a male predominance of 55.80%. The prevalence of confirmed rotavirus diarrhea was 26.30%. The dry season was associated with a higher risk of positive rotavirus diarrhea cases (RP : 1.43 (IC=1.36-1.50)), and malnutrition was associated with a higher risk of death among suspected rotavirus diarrhea cases (RP : 2.28 (IC=1.40-3.71)).

This is also the position of Ouedraogo (2025). The author argues that combating infant and child mortality in sub-Saharan Africa remains a pressing concern. Its inclusion among the Sustainable Development Goals attests to this fact. Studies suggest that reducing infant and child mortality can be achieved by controlling the factors contributing to childhood mortality. Indeed, diarrheal diseases remain a significant cause of childhood morbidity. According to the Burkina Faso Demographic and Health Survey (EDSBF),

15% of children under five years old suffered from diarrhea in 2021.

Côte d'Ivoire is not immune to this situation. Indeed, following several meetings with the population and a participatory launch workshop including all stakeholders, a cross-sectional household survey using a questionnaire (n = 205) administered to housekeepers, a geographical survey, well water analysis, observations and focus group were conducted in August 2006 to determine the prevalence of diarrhea diseases and identify major risk factors. A total of 1.234 people were surveyed in the 205 households. Seven percent of these individuals (85/1.234) had experienced a diarrheal episode in the two weeks preceding the survey date. The under-five age group was the most affected, with a prevalence of 14% (Brama, 2014)^[3].

Ahougnansou, a neighborhood in Bouaké, is not spared. Diarrhea is the third leading cause of medical consultations for children under five, after malaria and respiratory illnesses. Indeed, from 2019 to 2020, this neighborhood saw more than 600 cases of diarrhea (CSU Report, 2020). Despite control strategies (campaigns, advertising...), diarrhea persists among children under five.

The objective of this research is to analyze mothers' perceptions, treatment practices and the factors explaining the persistence of childhood diarrhea. Specific objectives are linked to this objective: (i) to identify mothers' perceptions of diarrhea in children aged 0 to 5; (ii) to analyze mothers' practices in the face of diarrhea; (iii) to explain the recurrence of diarrhea in children aged 0 to 5 in Ahougnansou. This research is based on a specific methodology.

Material and Methods

1. Survey Site

Bouaké is located in the center of the country, in the Gêkè region, on the Abidjan-Niger railway line, approximately 350 km north of Abidjan and 100 km northeast of Yamoussoukro. Its population is estimated at 835,556. Bouaké is the second most populous city in Côte d'Ivoire (RGPH, 2024). The research was conducted in the Northwest area, specifically in Ahougnansou, due to cases

of diarrhea observed in the locality. Indeed, from 2019 to 2020, this neighborhood experienced more than 600 cases of diarrhea (CSU Report, 2020). Despite control policies, the disease persists in Ahougnansou among children under 5 years of age.

Mothers', the primary target group, were selected because of their close relationship with children under five. They share their daily lives, care for their education and health and learn about their experiences with illness. These are senoufo mothers. They were chosen based on criteria such as age, education level and occupations, with often make them unavailable. This raises the question of monitoring the children and their exposure to diarrhea. Secondary target groups (resource persons) included community health workers, traditional healers, healthcare professionals (doctors, nurses...) and elderly women who are close relatives. This segment of the population (specialists) is able to provide precise information related to childhood diarrhea through medical examinations. Furthermore, the choice of healers (traditional therapists) is explained by their involvement in the management of diarrheal disease (ancestral methods). Older women constitute a library, due to their experiences, regarding illnesses and infant care.

To select the interviewees, we used a snowball sampling technique. Starting with one mother (a friend), we contacted other mothers. In this way, 25 mothers of children suffering from diarrhea were chosen and interviewed. A doctor from the local health center, a traditional healer and a community health worker were also selected for the study. Through various techniques (documentary research, observation, semi-structured interviews) and data collection tools (analysis grid, observation grid, interview guide...), qualitative information about the illness was gathered. Social representation theory and habitus theory were used to further analyze the data. For data analysis, the MAXQDA software was used to organize, code and analyze the textual data.

Results

Three results related to the specific objectives were analyzed.

1. Mothers' perceptions of infantile diarrhea

The senoufo society considers diarrhea to be an illness. While modern medicine defines it as having physical causes, this is not the case in traditional senoufo society, where physical and metaphysical factors are intertwined.

Physical reasons

1. Teething

"Ganguleyirile" in senoufo means teething: teeth are coming in. During teething, diarrhea is perceived as a normal process in a child's life. Among the senoufo, a child's growth is accompanied by teething, which is a common occurrence of diarrhea. Therefore, diarrhea is not alarming, as it is a transition. For senoufo mothers, most children experience diarrhea to signal the arrival of their new teeth, which is normal. The women interviewed confirmed: "It is between the fifth and sixth months after birth that the roots of the teeth erupt. It should therefore come as no surprise that the child has diarrhea." (Y.K., market gardener in Ahougnansou).

2. Internal wound or abdominal wound

The internal wound, "foungonamingue" in senoufo, meaning "abdominal wound", is characterized by diarrhea. It is also a way of thinking and feeling (perception, imagination, representation) specific to senoufo mothers, when teething is not mentioned or when the child experiences it as part of the diarrhea. It is characterized by copious stools mixed with blood and mucus, a fact confirmed by the women interviewed: "As soon as the child starts having diarrhea, we, mothers, immediately think of an internal wound" (F.T., vendor).

This is also the position of these mothers: "the child has a stomach wound. This diarrhea is different from other ordinary diarrhea. If the child has a stomach wound, they will have frequent bowel movements and often have bloody stools, often with mucus" (S.K., shopkeeper; T.L., market gardener).

These comments indicate that a stomach wound is the second cause identified by mothers, once teething is ruled out. Unlike the first type of diarrhea, which does not require special care, this one is quite particular. It is a bloody or mucous diarrhea, a worrying condition that mobilizes various stakeholders, including mothers and healthcare workers. In short, two causes or factors are mentioned by mothers in the occurrence of diarrhea of physical origin. In their interpretations, they highlight a transition related to the child's development, which is linked to teething. When abdominal wounds are mentioned, they are perceived as dangerous because of their characteristic signs or symptoms. But the causes are not only physical.

Metaphysical reasons

1. The intervention of the invisible hands

Among the senoufo, invisible hands and social taboos play a role in diarrhea diseases. The persistence of diarrhea, known as "foro", can have a mystical origin. A malevolent member of the family, or a third party, may use the winnowing basket to cast a spell on another. Through the perforated winnowing basket, known as "segbanlèli", the malevolent draws water from the river or a clay pot, then performs incantations. The person with malevolent intentions pours the water on to the ground through the perforated part of the basket. In the senoufo community, the winnowing basket is widely used in cooking. This reflects the importance of water and food in human life. Since the winnowing basket is essential in the daily lives of women, it will work in favor of the malevolent person and against the victim. The diarrhea resulting from this curse is dangerous, as it kills within hours. N.C (49 years old) confirms: "the illness is not simple. The sorcerer is responsible. But often, failure to follow the rules causes diarrhea in children".

Here, diarrhea rhymes with the power of persecution exercised by invisible hands. This version contradicts the deconstruction of illness undertaken by the prophet Atcho Albert. For him, man is responsible for, even the author of, his illness. This is why it is important to repent by confessing one's sins (Paulme, 1977) [10]. Consequently, Husserl's definition of phenomena takes on its full meaning when he maintains that phenomena do not appear to the actors but are experienced by them. Conversely, Scrimshaw (1987) shows that external factors are at the origin of diarrhea, among which is the eye of the devil. This means that illness, in our case diarrhea, is not always the consequence of the actions committed by the person afflicted.

2. Food prohibitions

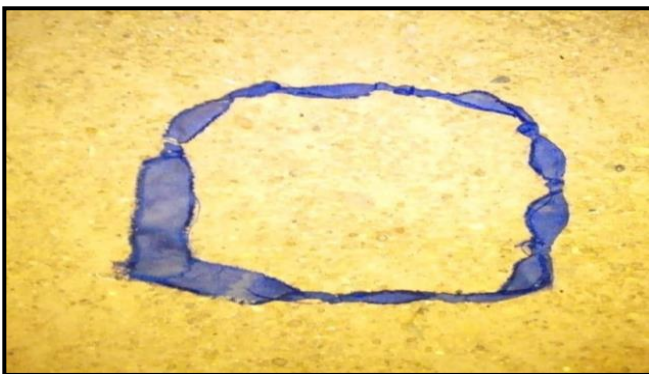
Among the Senufo, a breastfeeding woman (the wet nurse) is not permitted to consume the egg "gotchan-ni" until weaning is complete. She must also avoid stepping on eggshells after hatching. If this happens inadvertently, the child will develop diarrhea. This prohibition is essential because breast milk is made from everything the mother consumes. This diarrhea is called "gotchari foungui lafanra," meaning diarrhea caused by rotten eggs. C.F. (33 years old) states in this regard: "When a breastfeeding mother eats eggs, the child will inevitably contract the disease, because it is forbidden in our culture." A wet nurse is expected to know all these prohibitions, as she risks exposing her child to certain danger, for ignorance of the law is no excuse.



Source : Survey data, october 2020

Fig 1 : Chicken eggshells

3. Diarrhea related to a health object



Source : Survey data, october 2020

Fig 2 : Chicken eggshells

Women use special loincloths called *kôkôgou* or *sesêfanou* fieldwork. After several uses, they lose their luster and become torn. Once collected, they are used to make health items called *saffohou* to treat internal wounds, known as "nommigui". This helps prevent diarrhea. Once such health item is a safety belt that the child wears around their hip for protection. However, this item is not without its dangers. Once the mother has given it to the child, she must ensure that the loincloth is not left on the door of the house. She must also avoid sitting on a mortar with the child on her back. If she forgets this, the child will develop diarrhea.

4. Mothers' practices in the face of infantile diarrhea

This section analyzes mothers' treatment approaches to infant diarrhea. To do this, we asked mothers the following questions : How do you treat children's diarrhea ? Here are some of their answers : "When the child is writhing in pain, I use leaves and plants to treat them. That's what my grandmother taught my mother, and she passed it on to me. That's how it's done. In any case, it works". (G.J. 51 years old, saleswoman) ; "When the child isn't well and refuses to eat, I ask the neighbors who have already treated the illness for help, so they can show me the remedies. It's my first time" (T.M. 29 years old, Market gardener) ; " When the illness persists after herbal treatments, I take the child to the hospital" (P.L. 50 years old, shopkeeper). Several therapeutic approaches or methods stem from these remarks

5. Modern treatments

These treatments concern modern Africa and its republican institutions. This is the Africa of the man who, briefcare in hand, looks towards Europe. Thus, to solve his problems, he reaches out to the West. This justifies resorting to hospitals in the search for solutions to health problems. Here, tablets, syrups, and ampoules are used in treatment. Biomedical science defines diarrhea as the passage of three loose stools per day. The causes are linked to genes. They are viral and paraitic infections. According to the doctors at the CSU (University Health Center), mothers are quick to seek treatment because they know that the illness leads to dehydration. This mother confirms the doctor's statement : "When my child has diarrhea, I make a mixture of water, sugar, and salt to give them, because children lose a lot of water when they have diarrhea. They become dehydrated" (G.C. 38 years old, shopkeeper). For her, modern medicine is effective because it remains the last resort among all therapeutic practices. This assertion is shared by this interviewee : "If I can't treat the child with traditional medicines and those from the pharmacy I know, I go to the hospital, I go to the healthcare professionals" (E.N. 38 years old, Market gardener). They also value their children's lives. This is why many of them resort directly to modern medicine : "Diarrhea is so dangerous that when it starts, I send them straight to the hospital. I don't want to take any risks" (T.S. 40 years, Soleswoman).

6. Management of infant diarrhea

According to physicians, a child can grow and develop if they live in a healthy environment with good food hygiene. The management of diarrhea has two components : prevention and treatment. The first concerns maternal hygiene, the child's living environment, and the rotavirus vaccine, Rotapen, which has been introduced into the Expanded Program on Immunization (EPI). It should be noted that this vaccine is not effective in treating all forms of diarrhea. Furthermore, it is free and administered orally. Regarding treatment, rehydration with oral rehydration solution (ORS) and zinc is administered to strengthen the immune system before investigating and treating the underlying causes. The causes and their associated treatments are : (i) bacterial infection = antibiotic treatment ; (ii) parasitic infection=antiparasitic treatment ; (iii) fungal infection=antifungal treatment ; (iv) viral infection=rotavirus treatment.

The new WHO and UNICEF action plan for the treatment of diarrheal diseases and pneumonia includes several interventions. This include improving community-based sanitation and handwashing with soap, as well as rotavirus and measles vaccination, encouraging breastfeeding and providing vitamin A supplementation, The main therapeutic interventions for children with diarrhea include continued feeding, zinc tablets, and fluid replacement with reduced-osmolarity oral rehydration salts (ORS). Some mothers are also familiar with dehydration techniques and consider modern medicine as one option among many. Breastfeeding is the preferred method for mothers in the studied community. They believe that diarrheal illnesses can occur at any time, regardless of the individual, which justifies their practices.

7. Self-medication in relation to modern medicine

According to D'Almeida (2003)^[4], self-medication is when an individual uses medication, either on their own initiative or at the request of a relative, to treat an illness or symptom they have identified themselves, without consulting a healthcare professional. Considered a phenomenon that increasingly threatens public health, it has attracted the attention of several authors. These studies have emphasized the potential negative consequences (Gensel, 2012 ; Chen, 2008), highlighting the main risks, both plausible and proven, including acquired microbial resistance to medications, adverse drug events, unfavorable drug interactions, and drug dependence and addiction (Monstrastruc, 1997 ; Jonville, 1995 ; Guigemde, 1991). In Africa, several studies have presented the prevalence (Akangan, 1986 ; Donkor, 2012), as well as the characteristics of self-medication, consisting essentially of its motivations (high cost of treatment patients in training, low purchasing power, insufficient infrastructure and health personnel, trivialization of certain diseases, complicity of some pharmacy sellers not respecting the rules for dispensing medicines due to a lack of information and awareness about the risks associated with the misuse of medicines (Sanfo, 1999 ; Konate, 2005 ; Ndiaye, 2006)^[13] and its harmful effects (lack of control over indications, contraindications, dosages, administration schedules and duration of treatment). In the Democratic Republic of Congo, the prevalence of self-medication was estimated at 49% in 2001 for the entire population (Eva, 2005) and at 57 % in Goma (Namegabe, 2013)^[8]. In Lubumbashi, data on the prevalence and characteristics of self-medication among students are unavailable. According to the author, a study conducted from February to April 2014 among students aged 18 to 35 residing on the Kassapa campus of the University of Lubumbashi, in the DRC aimed to determine the prevalence and characteristics of self-medication in this environment. Clearly, self-medication is linked to a lack of information about this practice. Women are unaware that by engaging in this practice, they are essentially buying illness. They implicitly contribute to the recurrence of diseases. This means that awareness campaigns against this practice have not been successful, as the behaviors needed for change are not being adopted. Awareness campaigns are conducted through the media (television, radio, print). But, how many women or mothers actually have access to these means of communication ?

Surveys show that most of them are illiterate and poor. They live in precarious conditions. They are therefore "economic

cancers" to borrow Moustapha's expression (1999). These women, who save a pittance and have a low level of education, do not truly understand the danger to which they are exposed. The last practice concerns traditional medicine.

8. Traditional medicine

Among the methods used by women to treat diarrhea are traditional remedies. Indeed, when faced with discomfort, mothers turn to local medicine. Tjus, leaves, plants, bark and fruits are gathered or purchased for treatment. The use of traditional treatments is justified by the socio-cultural environment. Mothers have inherited social values that influence their actions, their feelings and their ways of thinking. Faced with problems, they first consult nature to find solutions. This is the magical-religious Africa. It is the Africa of the man, sitting on a stool, scanning the horizon and asking nature for the elements essential to his survival. To achieve this, plant species are gathered and transformed into remedies by women to treat ailments (traditional medicine). While plants are used in treatments, traditional healers also play a role in the search for solutions to illnesses. If plants are used in treatments, traditional healers also play a role in finding solutions to illnesses. Thus, traditional specialists employ magical and religious practices (incantations, libations, divination, etc.) in their search for solutions. If mothers use both plants and pills, then collaboration between the two medical practices is essential.

9. Factors determining recurrent infantile diarrhea

This section aims to explain the causes of recurrent infant diarrhea. To do so, we interviewed mothers : "Why does diarrhea persist in children?". The responses obtained identified several causes :

10. Low level of education

Regarding our topic, the survey showed that the majority of women are either illiterate or have only a primary school education. One interviewee confirmed this : "I didn't go to school for very long, so I don't know much about diarrhea diseases. That's why when my child is sick, I give them whatever medicine is within reach" (S.L., 39 years old, Market gardener). V.K (50 years old, Market gardener) also stated : "Our parents didn't understand the importance of school. They refused to send us to school so we would have the knowledge of white people".

Today, literacy rates are so low that even television messages are not well understood. In short, the level of education among mothers is low. This situation is not unique to Côte d'Ivoire, as it significantly affects mothers across Africa, with particularly high rates in rural areas and significant disparities between countries. It is therefore a cross-border issue. The level of education has negative consequences for children's education and health. In 1998, according to the ongoing household survey, 68% of employed individuals had no formal education, and 70% were estimated to have a level of literacy ranging from illiteracy to primary school education. The low level of education among women smoked fish producers is documented by various authors. The average percentage of women with no formal education is 89%. The literacy rate for women is 11%, lower than the UNICEF literacy rate (2013)^[15], which is 31% (Djessouho, 2015)^[5]. This figure corroborates the work of Chabi (2014). In his study on the

performance of an improved smoking device (chorkor oven) on the quality of smoked fish in southeastern Benin, the author states that 95% of the women processors are illiterate, and none of them have received any training. The sector is characterized by illiterate women, as highlighted by Kouakou (2013) in his work on adjuevan production in Côte d'Ivoire. Degnon (2013) focused on the microscopic quality of horse mackerel during the smoking process in Benin. He shows that a high level of education is observed in Mono region. According to him, there is only one woman, a village chief, with a secondary education (upper secondary level). Regarding his reflections on health standards and international trade, Bigot (2004) confirms that female traders in West African countries have not received as much schooling as their male counterparts. Faced with this disadvantage (low level of education), they do not always understand the rationale behind awareness campaigns, policies to combat diarrhea, hygiene Practices..., aimed at protecting children's health. This exposes children under 5 years old to illness.

Poverty

The recurrence of childhood diarrhea is also linked to poverty. The women interviewed live in precarious conditions, as most of them are wives of unemployed men. These women confirmed: "My husband is no longer working. He was laid off. I manage to support him so that the children are not left to fend for themselves" (T.K 50 years old, Market gardener). "With the high cost of living, how can we afford to go to the hospital for tests, pay for medication, and properly follow the prescriptions?" (T.H. 38 years old, Saleswoman; P.F. 47 years old, Market gardener).

The analysis reveals the precarious situation of mothers, as they are barely scraping by. In short, they live in poverty, which affects the quality of childcare. They live in poverty. They are "economic cancers", to borrow Moustapha's expression (1999). From the early 1960s to 1977-1978, Côte d'Ivoire experienced growth primarily linked to the boom in coffee, cocoa, and timber exports. GDP then increased by more than 7% per year on average. Thanks to a policy of intensive deforestation, supported by the government, the cultivated areas for export crops increased dramatically. Extensive coffee and cocoa farming is taking hold, with nearly one in two working Ivorians becoming a farmer, increasingly supported by cheap immigrant labor (from Burkina Faso or Mali). The price stabilization fund, the sole public authority for the coffee and cocoa sector, is filling the state coffers with revenue, thanks to the difference it collects between producer prices and farm prices for coffee and cocoa. The boom turned euphoria in the years 1975-1977, when world cocoa prices tripled and coffee prices quadrupled. The Ivorian state in the 1970s erred on the side of optimism. It viewed the rise in commodity prices as a long-term phenomenon and lived beyond its means. Côte d'Ivoire's dependence on world cocoa prices plunged the country into a deep crisis that lasted approximately 13 years (1980-1993). Between 1978 and 1986, cocoa prices plummeted by 40%. While imports continued their upward trajectory, the decline in the value of exports reversed the trade balance, which had been largely in surplus, characteristic of the Ivorian growth model. The structural adjustment programs demanded by the Bretton Woods institutions as a remedy have, to this day, failed to pull the

country out of its economic stagnation. On the contrary, they caused layoffs and their corollaries of unemployment and poverty (Sawadogo, 1972). This is also Kramo's position (2016)^[7]:

"We observe that Ivorian growth is not inclusive. Today, nearly half the population lives in poverty, almost five times more than in 1985. Since 2012, poverty has decreased by barely 0.3% for each percentage point of growth gained. This is far too little. As long as the benefits of growth are not shared, the poor will continue to become poor".

B.L. (36 years old, Saleswoman) and S.K. (44 years old, Market gardener) stated:

"We don't have money for food. We live in difficult conditions because our husbands don't have good jobs. Going to the hospital costs money. Consultations cost money, test and medication cost money. You can't treat a child in the hospital without money; it's truly a terrible situation".

The analysis shows that, faced with increasing poverty, financially destitute women cannot afford this luxury. They lack the means for consultations, hospitalizations, and medications, which are exorbitantly, and expensive. Being poor, they are forced to self-medicate or rely on traditional treatments. Thus, leaves, plants, bark, steam baths, cold baths, and decoctions remain their primary recourse. "I always look for plants when my child is sick. At least the price is affordable. When you go to the hospital, there are too many constraints. You often have to wait for the doctor for hours. Everything is expensive, even too expensive" (T.F., 56 years old).

Conclusion

Among the diseases that affect children's health is diarrhea, which, like other illnesses, has become a public health problem. This research focused on children in Ahoungansou, aged between 0 and 5 years, who were suffering from the disease. It examined mothers' perceptions of diarrhea. The research revealed a diversity of opinions. While a segment of the surveyed population had a good understanding of the disease, this was not the case for the majority of women. This leaves children more vulnerable to diarrhea. This situation is explained by factors including the level of education. N'Goran (2023)^[9] states in this regard:

"Despite the program to combat diarrheal diseases by promoting therapy, particularly oral rehydration, initiated in 1985 in Côte d'Ivoire, the percentage of diarrheal children who received oral rehydration in 2016 was only 56.4%. The explanatory multivariate analysis shows that the contribution of the community context to explaining oral rehydration in diarrheal children under 5 years of age is estimated at over 42%. The contextual factors associated with oral rehydration therapy are: region of residence and living environment. As for the associated individual factors, they are: the child's sex and the mother's level of education".

To address the illness of children under five, mothers, influenced by their beliefs and social constructs, choose

between modern, traditional, or combined treatments. Despite various strategies (programs, advertising campaigns...), diarrhea persists among children in the Ahougnansou neighborhood. Given this distressing situation, a critical review of the local diarrhea control policy is essential.

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