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Knowledge, Attitudes and Practices of the Population of the District of Ahomadégbé (Municipality of Lalo) in Benin on Methods of Water Treatment at Home

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Abstract

Water is an indispensable resource for life. In the district of Ahomadégbé in Benin, although most of the population has access to improved water sources, in their homes, residents consume poor water quality due to microbiological contamination during transport and storage. To identify necessary actions needed to improve household drinking water quality, the present study aims to analyze the knowledge, attitudes, and practices the district of Ahomadégbé's population regarding household drinking water treatments methods. A study was conducted, where 377 residents were interviewed using an individual questionnaire and 82 participants were selected for eight focus groups to determine the population's knowledge, attitudes, and practices. More than 65% of the district's population knew some methods of water treatment at home. In practice, however, they lacked the knowledge to apply the different water treatment methods and only 6.1% of the population used at least one method of water treatment at home, even if it was not always adapted. The water treatment methods residents used were Alum ($KAl(SO_4)_2 \cdot 12\ H_2O$, chemical decantation method), filtration on tissues, and disinfection by boiling. Ineffective home water treatment methods, such as oil and cresol were also used. The population is aware of water contamination during transport and storage. Unfortunately, most residents surveyed do not treat water before consumption, and those who treat it, use inappropriate

methods. Thus, people must be made aware of the health benefits of using effective home water treatment methods and their correct use.

Keywords

KAP, Home Water Treatment Methods, Ahomadégbé, Lalo

1. Background

Water is a natural resource whose availability in sufficient quantity and acceptable quality contributes to the maintenance of health. Although 91% coverage of drinking water has been achieved globally, and 6.6 billion people have access to improved water sources [1], much of the world's population, especially those living in rural areas, continue to consume water of poor microbiological quality. In sub-Saharan Africa, 319 million people live without access to an improved water source and 102 million people still use surface water [1]. In Benin, water issues are still a major problem for the population, especially those living in rural areas where only 72% have access to drinking water [1].

In the municipality of Lalo, Benin, households' drinking water sources are boreholes, standpipes, modern wells, cisterns, and surface water [2]. Specifically, in the district of Ahomadégbé, household water sources are improved water sources (91.4%) and unimproved water sources (8.6%) [3]. Despite the district of Ahomadégbé's good coverage from improved water sources, microbiological analyses of water samples collected at the source and during transport and storage, have shown increasing microbiological contamination between source and storage [4].

More than 340,000 children under the age of 5, or almost 1000 per day, die each year from diarrheal diseases due to poor sanitation, poor hygiene, or unsafe water [1]. Diarrheal diseases are the third leading cause of death among children under 5. Despite all the progress, there is no guarantee that the population is consuming water of good microbiological quality. In rural areas, even when people have access to improved water sources, they must travel long distances before getting water. In the absence of a home piping system, access to water means water must be transported and stored at home [5] [6]. Several studies have shown that the lack of hygiene during the transport and storage of drinking water is at the root of the microbiological contamination of household water [4]-[12].

To limit water contamination, a process must be in place that includes the protection of water sources, the selection and implementation of drinking water treatment methods, and the proper management of risks in water distribution networks. Several interventions to improve the quality of drinking water are possible: source or collection point interventions, environmental interventions, and household-level interventions [13]. Household-level interventions help to

improve water during storage, as they ensure that water quality is improved at the point of consumption [14]. Moreover, household-level interventions are twice as effective in preventing diarrhea as interventions at the source [13]. These interventions require effort from heads of household to: treat water properly, always have treated water available, avoid recontamination, and refrain from drinking untreated water [13]. Several home water treatment methods have been developed over the years and are widely used around the world. The most common are chlorination and filtration. These methods can improve the quality of drinking water and prevent disease when properly applied. Although proven effective in the laboratory, the effectiveness of these methods do depend on external factors, such as the user, the ease of use of the technology, and the levels of hygiene and sanitation [15]. Unfortunately, in rural areas the population is often insufficiently informed about home water treatment methods and therefore applies them incorrectly.

To ensure that population consumes water free from microbiological contamination in the district of Ahomadégbé, it is first necessary to establish a diagnostic process that identifies the actions to be taken. This study aims to analyze the knowledge, attitudes, and practices the district of Ahomadégbé's population regarding household drinking water treatments methods.

2. Method

2.1. Study Site

This study was conducted in the district of Ahomadégbé, which is in the municipality of Lalo, Benin (**Figure 1**). The municipality of Lalo is an administrative subdivision of the Couffo department and includes eleven (11) districts. The district of Ahomadégbé is subdivided into four villages, with a total population estimated at 5403 inhabitants [16].

2.2. Description of the Study

This is a cross-sectional study that aims to analyze knowledge, attitudes, and practices (KAP) on home water treatment methods in the district of Ahomadégbé. The study ran from April 24, 2016 to May 8, 2016.

2.3. Sampling

2.3.1. Questionnaire Survey

The questionnaires were designed to take approximately 30 minutes, including open and closed questions. The questionnaire was organized into three main sections: socio-demographic and economic characteristics; knowledge, attitudes and practices on sources of drinking water contamination; and knowledge, attitudes and practices of home water treatment methods. The questionnaire was created in French, translated into the local language *Fon*, and pre-tested for all translation errors. The pre-test was done before data collection in the district of Sèdjè-Dénou, municipality of Zè.

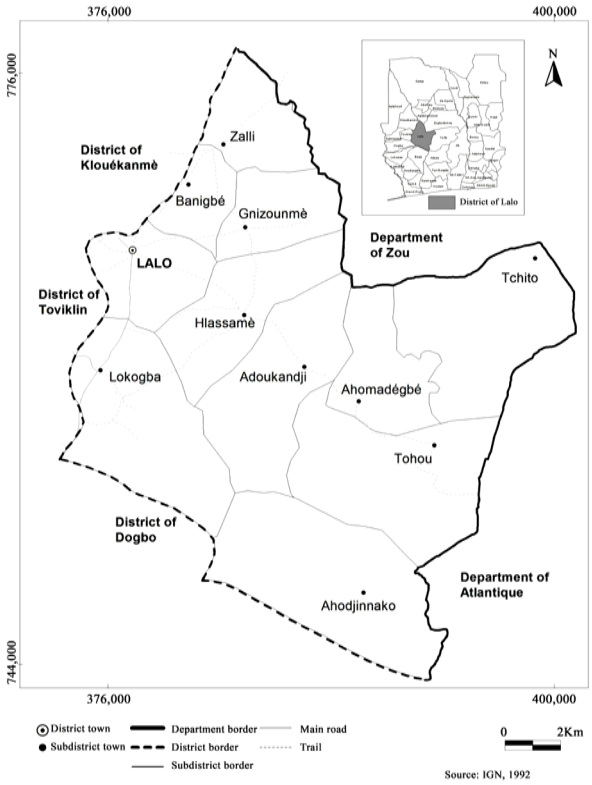

Figure 1. Location map of the municipality of Lalo, Benin.

Three hundred and seventy-seven (377) people, 342 women and 35 men residing in the villages of Ahomadégbé and Adjaïgbonou, were interviewed using an individual questionnaire.

2.3.2. Focus Group Survey

The venue was chosen to ensure accessibility for all, absolute neutrality, and a relaxed and quiet atmosphere. The date and time of the meeting considered the personal constraints of most participants. Each participant was contacted the day before the meeting date to ensure their presence and to answer any questions. Arrangements were also made to record all discussions.

An experienced sociologist moderated all focus groups. In addition to handwritten notes during the focus groups, the discussions were recorded and later transcribed and translated into French. All questions were open questions. The topics covered were: water and disease, the quality of water sources used for drinking, the sources of contamination of drinking water during transport and storage, and the measures to be taken to limit the contamination of water and home water treatment methods known and used in the district of Ahomadégbé. The privacy and confidentiality of the interviewees, and positive interactions between the individuals and the interviewer, were maintained during data collection.

Additionally, 82 participants were selected for eight (8) focus groups. Women and children were the main subjects for the following reasons:

- Women are generally responsible for household water management (watering and domestic use);
- Women were helped by children in transport, and children are in more contact with the storage container either to serve themselves or to serve adults.

However, men's opinions were also gathered on the question of drinking water hygiene.

The groups consisted of a mix of water point users and managers to confront the behaviors and practices around the water points witnessed by the two subject groups. The number of participants in each focus group ranged from eight to twelve. Four (4) focus groups were conducted with women, two (2) with men, and two (2) with children (Table 1).

3. Data Processing and Analysis

3.1. Data Processing

Data processing from the questionnaire survey included:

- manual count and coding of the questionnaires;
- development of an input mask using SPSS version 19.0;
- entry of coded data; and,
- correction of any errors after data entry.

3.2. Data Analysis

Data was analyzed with SPSS 19.0 and EpiInfo7 software.

3.2.1. Descriptive Aspect

The variables were described by their size and frequency.

3.2.2. Analytical Aspect

We performed a bivariate analysis to investigate the association between the dichotomous qualitative dependent variable and the independent variables with adequate parametric tests. The association was considered significant for independent variables with a p-value less than 0.05. The focus group data (the recorded discussions) were transcribed using Word 2007 software and triangulated with the data obtained through the questionnaire survey.

3.3. Ethical Considerations

The ethical protocol that authorized this study has been validated by the National Committee of Ethics for Health Research (No. 123/MS/DC/SGM/+DFR/

Table 1. Distribution of participants in the focus groups.

Villages	Categories			Total
	Men	Women	Children	
Adjaïgbonou	12	23	12	47
Ahomadégbé	07	19	09	35
Total	19	42	21	82

CNERS/SA). Agreement with municipality's sanitary authorities was obtained before starting data collection.

4. Results

4.1. Description of Socio-Demographic and Economic Characteristics of Populations

More than 90% of our sample is represented by women, 97.9% of which are of the Tchi ethnic group and 70% are peasants/fishermen. It should be noted that 57% of those surveyed have no education and 13.76% have a daily income of more than 500 FCFA. Socio-demographic and economic characteristics are summarized in Table 2.

4.2. Description of Behavioral Factors Influencing the Quality of Drinking Water

Approximately 86.5% of the participants surveyed consume water from an improved water source, 37.9% use improved water sources for other uses, and 78.2% use the same container for water transportation water for drinking and water for other uses (Table 3). The focus groups revealed that the repeated failures of the Adjaïgbonou water point are one of the main reasons for the use of water from unimproved water sources, especially rainwater. In the hamlet of Tozounmè, the population must cross the Couffo River before stocking up on an improved water source. This difficulty is also a reason why the population consumes the Couffo River water. "*It is difficult for us to cross the river with the basin of water in the canoe. So, we prefer to take water directly from the river.*" Among residents surveyed, 70.6% estimate that the distance between the source of water and their house is between 10 and 100 meters (Table 3). In Adjaïgbonou, this is not always the case. "*The pump regularly breaks down and we stay several days without water and we have to travel about* 3 *km to look for water in Ahomadégbé.*"

About 74.3% of the participants understand that water may be contaminated between source and storage and during storage. Most of the district Ahomadégbé's population (93.9%) cleans the transport container before taking water (Table 3). They clean the transport container of the house: "*At the pump, we have neither the time nor the space to clean the basins. When our turn comes, we must serve without waiting for others.*" About 26.3% of the population covers the container during the transport of drinking water. The population uses uncovered basins or cans with or without a lid for transporting drinking water. The reasons often mentioned are: "*The container does not have a lid*;" "*The water point is near the house or in the house itself.*"

Regarding the coverage of the drinking water storage containers, 97.9% of respondents do so (Table 3). The population knows that" *The containers* (*jar, plastic bucket and can*) *must be washed with soap before and once filled with water, they must remain closed.*" A minority (16.2%) uses the drinking-water

Table 2. Demographic and socio-economic characteristics of the respondents.

Variables	Modalities	Frequencies	Percent %	95% CI
Hamlet of residence	Yovotonou (Ahomadégbé)	60	15.9	[12.4 - 20.1]
	Tozounmè (Ahomadégbé)	60	15.9	[12.4 - 20.1]
	Towéta (Ahomadégbé)	66	17.5	[13.9 - 21.8]
	Zounkpa (Ahomadégbé)	56	14.9	[11.5 - 18.9]
	Kpanouhoué (Adjaïgbonou)	119	31.6	[27.0 - 36.6]
	Hessouhoué (Adjaïgbonou)	7	1.9	[0.8 - 4.0]
	Zounkpa (Adjaïgbonou)	9	2.4	[1.2 - 4.6]
	Total	**377**	**100.0**	
Sex	Male	35	9.3	[6.6 - 12.8]
	Female	342	90.7	[87.3 - 93.4]
	Total	**377**	**100.0**	
Age	11 - 20	78	20.7	[16.8 - 25.2]
	21 - 30	123	32.6	[28.0 - 37.6]
	31 - 40	91	24.1	[20.0 - 28.8]
	41 - 50	62	16.4	[12.9 - 20.7]
	51 - 65	23	6.1	[4.0 - 9.1]
	Total	**377**	**100.0**	
Marital status of the target	Married	275	72.9	[68.2 - 77.4]
	Single	79	21.0	[17.0 - 25.5]
	Widower	23	6.1	[4.0 - 9.1]
	Total	**377**	**100.0**	
Ethnic group	Tchi (Kotafon)	369	97.9	[95.7 - 99.0]
	Adja	8	2.1	[1.0 - 4.3]
	Total	**377**	**100.0**	
School level	Illiterate	215	57.0	[51.9 - 62.1]
	Primary	85	22.5	[18.5 - 27.2]
	Secondary	77	20.4	[16.5 - 24.9]
	Total	**377**	**100.0**	
Socio-Professional Category	Farmer/Fisherman	264	70.0	[65.1 - 74.6]
	Artisan	20	5.3	[3.4 - 8.2]
	Trader	13	3.4	[1.9 - 6.0]
	Pupil	71	18.8	[15.1 - 23.2]
	Other	9	2.4	[1.2 - 4.6]
	Total	**377**	**100.0**	
Daily income	Less than 500 F CFA	90	23.9	[19.7 - 28.6]
	500 F CFA and more	287	76.1	[71.5 - 80.3]
	Total	**377**	**100.0**	

CI: confidence interval.

Table 3. Behavioral factors influencing the quality of drinking water.

Variables	Modalities	Frequencies	Percent %	95% CI
Main sources of drinking water	Improved water sources	326	86.5	[82.6 - 89.8]
	Unimproved water sources	51	13.5	[10.3 - 17.5]
	Total	**377**	**100.0**	
Distance between water source and houses (in meters)	10 to 100	266	70.6	[65.6 - 75.1]
	101 to 500	111	29.4	[24.9 - 34.4]
	Total	**377**	**100.0**	
Water sources used for other uses	Improved water sources	143	37.9	[33.1 - 43.1]
	Unimproved water sources	234	62.1	[56.9 - 66.9]
	Total	**377**	**100.0**	
Use of the same container for the transport of drinking water and water for other uses	No	82	21.8	[17.8 - 26.3]
	Yes	295	78.2	[73.7 - 82.3]
	Total	**377**	**100.0**	
Cleaning the container for transporting drinking water	No	23	6.1	[4.0 - 9.1]
	Yes	354	93.9	[90.9 - 96.0]
	Total	**377**	**100.0**	
Transport container cover	No	278	73.7	[69.0 - 78.1]
	Yes	99	26.3	[21.9 - 31.1]
	Total	**377**	**100.0**	
Cleaning the storage container before filling	No	18	4.8	[2.9 - 7.6]
	Yes	359	95.2	[92.4 - 97.1]
	Total	**377**	**100.0**	
Cover of drinking water storage container	No	8	2.1	[1.0 - 4.3]
	Yes	369	97.9	[95.7 - 99.0]
	Total	**377**	**100.0**	
Use of the cup for other purposes	No	316	83.8	[79.7 - 87.4]
	Yes	61	16.2	[12.7 - 20.4]
	Total	**377**	**100.0**	
Shelf life of drinking water	1 to 3 days	254	67.4	[62.4 - 72.0]
	More than 3 days	123	32.6	[28.0 - 37.6]
	Total	**377**	**100.0**	
Washing hands before taking water	No	293	77.7	[73.2 - 81.8]
	Yes	84	22.3	[18.2 - 26.9]
	Total	**377**	**100.0**	
Awareness of the possibility of contamination of water between source and storage and during storage	No	97	25.7	[21.5 - 30.5]
	Yes	280	74.3	[69.5 - 78.6]
	Total	**377**	**100.0**	

CI: confidence interval.

drinking cup for other purposes and 22.3% of the population washes their hands before taking drinking water in the storage container. The observation made in the field is that the same cup is used by the whole family to collect water from the storage container and then to drink. The participants know that" *The water can be contaminated at the precise moment of its consumption if the cup is not clean or if the hands are dirty.*" More than 32.6% of the population conserves drinking water for more than 3 days. They know that:" *The duration of the storage of the water must not exceed seven* (7) *days*;" and, "*The water can be contaminated if it stays too much* (1 *week*) *in the bucket or jar. We must then replace it.*"

In conclusion, the participants surveyed are aware that the lack of hygiene can favor the contamination of water during transport and during storage. But, some behavioral factors promote microbiological contamination of water.

4.3. Description of Home Water Treatment Methods

According to Table 4, 65.3% of participants have heard about home water treatment methods at least once: approximately 24% know about disinfection by boiling, 9.3% Aquatabs tablets, 16.3% tissue filtration, 12.6% Alum ($KAl(SO_4)_2 \cdot 12 H_2O$, chemical decantation method), and 25.2% of respondents know about oil 4.1% camphor and 2% cresol. The population believes that the most effective home water treatment method is Alum. "*Alum is the most effective method*: *as soon as you put in the water*, *it becomes clear.*"

The population knows some methods, but do not know the role or at what stage of the water treatment process each method can be used.

Table 4. Knowledge of home water treatment methods.

Variables	Modalities	Frequencies	Percent %	95% CI
Knowledge of home water treatment methods	No	131	34.7	[30.0 - 39.8]
	Yes	246	65.3	[60.2 - 70.0]
	Total	**377**	**100.0**	
Known home water treatment methods	Alum	31	12.6	[8.7 - 17.4]
	Tissue filtration	40	16.3	[11.9 - 21.5]
	Disinfection by boiling	59	24.0	[18.8 - 29.8]
	Aquatabs tablets	23	9.3	[6.0 - 13.7]
	Palm branch	6	2.4	[0.9 - 5.2]
	Lemon	9	3.7	[1.7 - 6.8]
	Oil	62	25.2	[19.9 - 31.1]
	Camphor	10	4.1	[2.0 - 7.3]
	Cresol	5	2.0	[0.7 - 4.7]
	Bleach	1	0.4	[0.0 - 2.2]
	Total	**246***	**100.0**	

*Only those who claim to know the methods of water treatment at home. CI: confidence interval.

Table 5 shows that only 6.1% of participants use at least one home water treatment method. According to the focus groups, the methods often used are: cresol, Alum, or oil." *If there is cresol, we can put a little because cresol kills microbes or we can use Alum.*" "*We put some oil inside so that it does not have any larvae in the bottom of the jar.* "Other methods are sometimes used:" *We also boil water or use Aquatabs, but after the water does not have a good taste.*" And for those who do not treat water, they mentioned the following reasons:" *The water is already drinkable*;" "*We do not know how to treat water*;" "*We do not always have the treatment product available to us.*"

In practice, the participants do not know how to use these different methods of home water treatment and others use inappropriate methods.

4.4. Factors that Significantly Influence the Implementation of Home Water Treatment Methods

From the analysis in Table 6, it appears that only the association between knowledge of home water treatment methods and the practice of home water treatment methods (having used at least one method) is statistically significant.

5. Discussion

The objective of our study was to analyze the knowledge, attitudes, and practices of the population of the district of Ahomadégbé regarding methods of treating drinking water at home. Non-probability sampling was used for household selection, which allowed for a representative sample. The data was collected by a combination of techniques and tools, namely questionnaire survey and focus group. Given the language barrier, we translated the questionnaire from the French language into the local language, which could be the source of some information bias. Moreover, the inability to verify some of the participants' information could also constitute information biases.

Table 5. Attitudes and practices of home water treatment methods.

Variables	Modalities	Frequencies	Percent %	95% CI
Use of at least one method of water treatment at home	No	354	93.9	[90.9 - 96.0]
	Yes	23	6.1	[4.0 - 9.1]
	Total	**377**	**100.0**	
Methods of treatment of the water used	Alum	6	26.1	[10.2 - 48.4]
	Tissue filtration	5	21.7	[7.5 - 43.7]
	Disinfection by boiling	6	26.1	[10.2 - 48.4]
	Aquatabs tablets	1	4.3	[0.1 - 21.9]
	Oil	3	13.0	[2.8 - 33.6]
	Camphor	2	8.7	[1.1 - 28.0]
	Total	**23***	**100.0**	

*Only those who claim to use at least one method. CI: confidence interval.

Table 6. Association between the application of home water treatment methods and socio-economic, behavioral, and environmental factors.

Variables	**Modalities**	Use of at least one method of water treatment at home		P-value
		No	Yes	
Hamlet of residence	Yovotonou (Ahomadégbé)	54	6	0.083**
	Tozounmè (Ahomadégbé)	54	6	
	Towéta (Ahomadégbé)	61	5	
	Zounkpa (Ahomadégbé)	56	0	
	Kpanouhoué (Adjaïgbonou)	114	5	
	Hessouhoué (Adjaïgbonou)	6	1	
	Zounkpa (Adjaïgbonou)	9	0	
Sex	Male	34	1	0.710**
	Female	320	22	
Age	11 - 20	75	3	0.811**
	21 - 30	113	10	
	31 - 40	85	6	
	41 - 50	59	3	
	51 - 65	22	1	
Marital status of the target	Married	254	21	0.149**
	Single	77	2	
	Widower	23	0	
Ethnic group	Tchi (Kotafon)	347	22	0.399**
	Adja	7	1	
School level	Illiterate	206	9	0.053**
	Primary	75	10	
	Secondary	73	4	
Socio-Professional Category	Farmer/Fisherman	245	19	0.476**
	Artisan	19	1	
	Trader	13	0	
	Pupil	69	2	
	Other	8	1	
Daily income	Less than 500 F CFA	88	2	0.126**
	500 F CFA and more	266	21	
Main sources of drinking water	Improved water sources	303	23	0.056**
	Unimproved water sources	51	0	
Awareness of the possibility of contamination of water between source and storage and during storage	No	88	9	0.129*
	Yes	266	14	
Knowledge of home water treatment methods	No	131	0	0.0001**
	Yes	223	23	

*Chi 2 test. **Fisher test.

In the district of Ahomadégbé, only 37.9% of the participants use improved water sources for uses other than drinking mainly because of repeated failures of the only improved water source in the village of Adjaïgbonou and the necessity of villagers to cross the Couffo River in the hamlet of Tozounmè before accessing an improved water source .Distance is therefore a factor that determines the choice of water source used for drinking and for other uses in this borough. The easy access to a water source is assessed in relation to the distance between the residence and the supply point, and the time set to get water [17]. Overall, when Adjaïgbonou's supply point is operating, all participants have access to an improved source within 1000 meters. These results are similar to Kouakou *et al.*'s study of Abidjan, where they found that water sources were all located less than one kilometer from the households, guaranteeing basic access to the distance criterion for access to water [18]. In the district of Ahomadégbé, more than 62% use unimproved water sources for other uses although 70.6% obtain their water from a source located within 100 meters of their home. Howard and Bartram argued that when the distance between the water source and the house is less than 100 meters from the residence, all aspects of personal hygiene are assured [19]. Yet, when the distance between the water source and the residence is between 100 meters and 1000 meters, hand washing and basic hygiene are possible, but showering and laundry are difficult to ensure unless they are done at the source [19].

Nearly 98% of the population covers storage containers for drinking water. In Ahomadégbé, 67.4% of the population retains drinking water for one to three days. This result is different from that of Lalanne. In the province of Ganzourgou in Burkina Faso, 25% of the population gets their supplies twice a day and 75% collect water once a day [6].

In terms of knowledge of home water treatment methods, 65.3% of the population is familiar with home water treatment methods. This result is superior to that of Lalanne, who found that 48% of participants have knowledge of home water treatment methods [6]. The methods known by the district of Ahomadégbé population are among others: Alum, tissue filtration, boiling disinfection, Aquatabs tablets, palm branch, lemon, oil, camphor, and cresol. However, the population believes that the most effective home water treatment method is Alum. There is confusion between sedimentation and water disinfection because the use of Alum accelerates the sedimentation process. For effective water treatment, the following three physical and microbiological processes must be complementary: sedimentation, filtration, and disinfection [20]. Participants know good and bad methods, and do not know at what stage of the water treatment process the right methods should be used.

In practice, 93.9% of the population does not treat drinking water. In the province of Ganzourgou, 90% of the participants do not treat the water before its consumption because the boreholes are of good water quality and thus treatment is unnecessary [6]. Joshi *et al.* found that the supposed potability of water, the

high cost of the methods, and the ignorance of these methods are reasons for not treating water before its consumption [21]. In the district of Ahomadégbé, 6.1% of the population uses at least one treatment method. In the peri-urban zone in Abidjan, 3% of the population treats water [18]. Yet, Ndiaye *et al.* found that in 79% of cases studied drinking water was treated in Senegalese rural areas. [22]. In the district of Ahomadégbé, those who treat drinking water primarily use it as a method that is non-detrimental method to their health: Alum, tissue filtration, boiling disinfection, but these methods are used incorrectly. Each household uses one or the other method. A survey in Benin showed that few households treat drinking water even if the water source is not improved [23]. And, most of the time they do not use treatment methods according to the recommended procedures [23].

Methods like cresol, camphor, and oil are also used. These results corroborate those of Akowanou *et al.* who found that in the Mono and Couffo departments, people use oil and crushed palm leaves as home water treatment methods [23]. If these methods prevent the emergence and multiplication of larvae, they are dangerous to human health because they cause chemical contamination of the water.

In general, the most common home water treatment methods used in rural Benin are boiling, adding chlorine, filtration (tissue, ceramic filter or some other filter), and solar disinfection [24]. Yelognissè's work reveals that in rural Benin some women use white tissues for filtration and Alum, while other women use boiling or decantation of water as endogenous methods of drinking water treatment [25]. In the state of Katsina in Nigeria, tissue filtration is the most used method, followed by boiling and adding chlorine [11]. In India, a study has shown that people use filtration and boiling as water treatment methods [21]. Generally, in developing countries boiling, filtration, or chlorination are effective for improving the microbiological quality of drinking water [26]. But in the district of Ahomadégbé, the population prefers Alum, which represents one of the phases for the effective treatment of drinking water. The study of factors influencing the application of home water treatment methods revealed an association between knowledge of home water treatment methods and the application of those methods. For better implementation of home water treatment methods, it is necessary to bring the knowledge to the people through various awareness programs, whether in the community, schools, or health centers, or in educational or learning centers.

6. Conclusion

Our study of the knowledge, attitudes, and practices of the population in the district of Ahomadégbé regarding home water treatment methods revealed that the population is aware of water contamination during transportation and storage. Unfortunately, only 6.1% of the participants surveyed use at least one water treatment method, but use water treatment methods improperly. This study provides basic information for any intervention to improve the quality of home

water in this district.

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Conflict of Interests

The authors declare that they have no competing interests.

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