

Comparative analysis of the main demographic characteristics of the child population surveyed in the community health needs assessment of the community of Batey 2, Esperanza, Valverde, Mao RD 2017, 2020 y 2023



DEMOGRAPHIC, SOCIAL AND ECONOMIC STUDY OF THE BATEY 2 COMMUNITY

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Introduction

Community Health Needs Assessments (CHNA's) have multiple purposes in order to inform decisions based on the analysis of the sociodemographic data of a population relating to living conditions, access to basic services, food security, as well as educational, technological and development levels.

Bateys are rural communities which have grown around the sugar industry in the Dominican Republic. These towns began to be established in the interior of the Dominican Republic at the beginning of the 19th Century, when sugarcane plantations increased the itinerant and unregulated manual labor of Haitian workers. Batey 2 represents a sample of the existing bateys throughout the territory of the Dominican Republic identified by the precarious living conditions of its inhabitants, who still do not have access to basic public services like: medical attention, education, electricity and access to potable water. Batey 2 is located geographically in the North West of the Dominican Republic, between the cities of Mao, Valverde and Navarette de Santiago, adjacent to Esperanza. The community was founded in 1952 to house workers who cut sugarcane for the sugar cane mill of Esperanza.

In general in the bateys, the degree of malnutrition in children is lamentable, with the presence of marasmus and Kwashiorkor. The reality of child malnutrition is dramatic; The majority of these children are severely malnourished according to age, weight and height. Child malnutrition has consequences at various levels which accompany a person for their entire life. During childhood, children suffering from acute childhood malnutrition may manifest the following physio-pathologies: Decreased brain tissue growth, decreased cardiac muscle mass, decreased oxygen consumption, decreased weight of renal plasma flow, and anemia.

This community health needs assessment is a process that allows knowing the living conditions in which the community finds itself in relation to the social, economic, and educational characteristics of its people and their homes.

We appreciate the great work of the team who made this important project possible, mainly 12 people—census takers, supervisors and community leaders who knocked on door after

door reaching people and places never before surveyed. Also, thanks to Thomas M. Kelly, Ph.D. for his outstanding contribution to this research work without whose important collaboration, this project would have been difficult to carry out.

General Objective, Methodology and Tabulation Plans

The activities of this CHNA were based on a descriptive and comparative study of the village. The work and tasks they comprise were planned and determined at the central level, through considering the personnel and material resources necessary for their execution. Through this work, the suitability of the processes and the sequence that was required throughout the process were guaranteed as planned. This integrated planning took into consideration the experiences and advice of experts in the field of community growth and development to achieve the general objective of this research work, which consists of carrying out a **comparative analysis of the main demographic characteristics of the child population surveyed in the household survey of the community of Batey 2, Esperanza, Valverde, Mao RD, 2017, 2020 and 2023.**

Techniques and Execution

Two questionnaires and one interview were prepared. The first questionnaire sought information to obtain and compare the demographic, social, and economic information of the population in general, divided by family unit. Within this questionnaire are the questions about the evolution and characteristics of the dwellings people inhabit.

The second questionnaire was prepared to seek specific data on the child population, school status, age, nutritional status, and general health. This information would later reveal the general underlying structure that generates variation, invariants, causality, or evolution.

A sample of the population was also interviewed using implicit knowledge where the interviewers inquired about the main problems of the community, including its weaknesses and strengths.

We then purchased materials, copies, pens, pencils, folders, medical scales, tape measures. Logistics and incentives for volunteers were also planned, staff were retrained, and we explained and rehearsed all questions in the questionnaires.

With these strategies, the CHNA was carried with conceptual uniformity and consistent universality in its execution. Leaders, churches and local groups were motivated to cooperate and support functions in the execution of the investigation of the Batey 2 community. Roughly 12 volunteers traveled from Santiago, RD to the community where they interviewed house by house through direct contact.

Tabulation Plans

The training of volunteers to complete the work for this assessment was accomplished in two groups, taking into account their functions and responsibilities.

In the first stage, they trained those responsible for organizing, conducting, supervising, and controlling assessment activities in the community in general. In this, the group was subdivided into 2. One group was trained to assess the general population, the other was trained to assess the child population.

In the second stage, the collection of information was processed and data was transferred to tables and graphs. The data collected used coded forms and was recorded in the computerized software database.

The information collected through the forms was registered and codified in a sophisticated computer and programming database. This information was input to the database prepared for the purpose of analysis of demographic and community statistics.

The data obtained was collected, tabulated and graphed through the sophisticated program of the Centers for Disease Control and Prevention (CDC), called EPIINFO version 7.2.5, which is a computerized software of high quality and reliability that allows data to be transformed and many types of statistical analysis to be performed.

The work was plausible and permissible from an ethical and moral point of view because it did not affect the integrity of the physical or mental health of the participants or their environment.

We appreciate the great work of the team that made this important project possible, mainly 12 people—survey facilitators, supervisors and community leaders who knocked on doors reaching places never surveyed before. Also, thanks to Thomas M. Kelly, Ph.D. for the outstanding contribution in the census and without whose important collaboration, this project would have been difficult to carry out. We also thank those who welcomed us into their homes and delivered the information in an enthusiastic and warm manner.

Comparative analysis of the demographic characteristics of the child population surveyed in the CNHA of the community of Batey 2, Esperanza, Valverde, Mao RD, years 2017, 2020 and 2023.

**Table 1:
Total child population surveyed by sex and age group**

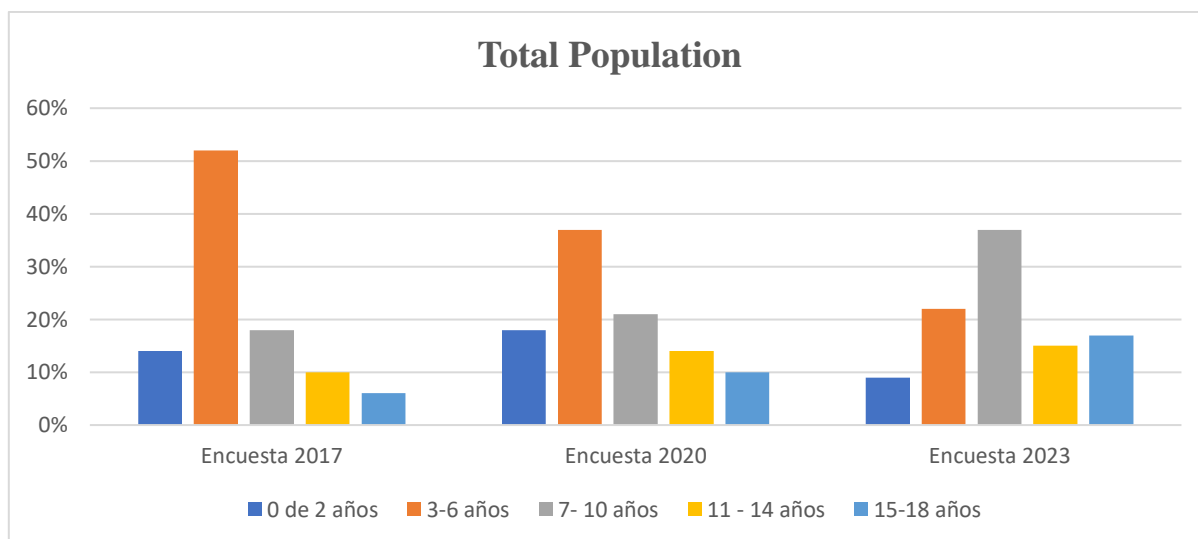
Edad	CNHA 2017			CNHA 2020			CNHA 2023		
	Fem.	Masc.	%	Fem.	Masc.	%	Fem.	Masc.	%
0 to 2 years	2	5	14%	7	2	18%	3	2	9%
3-6 years	10	15	52%	13	6	37%	3	9	22%
7- 10 years	5	4	18%	2	9	21%	14	6	37%
11 - 14 years	4	1	10%	1	6	14%	2	6	15%
15-18 years	2	1	6%	4	1	10%	7	3	17%
SUBTOTAL	24	25	100%	27	24	100%	29	26	100%
TOTAL	49		100%	51		100%	55		100%

Source: Table 1: Source: Survey demographics of the child populatoin of Batey 2. Years 2017, 2020 y 2023

According to the research study carried out in **2017**, it was observed that 14% of the population was 0 to 2 years old, 52% was 3 to 6 years old, 18% was 7 to 10 years old, 10% were between 11 to 14 years of age and 6% were in the ranges of 15 to 18 years of age.

For the research carried out in **2020**, it was observed that 18% of the population was 0 to 2 years old, 37% was 3 to 6 years old, 21% was between 7 to 10 years old, the 14% were between 11 to 14 years of age and 10% were in the ranges of 15 to 18 years of age.

In the survey carried out in **2023**, it was observed that 9% of the population was 0 to 2 years old, 22% was 3 to 6 years old, 37% was 7 to 10 years old, 15% They were between 11 and 14 years old and 17% were in the range of 15 to 18 years of age. Note that the predominant gender is **female**.



Graph no. 1 Source: Table 1

Table 2:
Predominant language of the population

Predominate languages in the population	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	Percentage	Frequency	Percentage	Freq.	%
Creole	27	55%	20	40%	15	27%
Spanish and Creole	22	45%	31	60%	40	73%
Total	49	100%	51	100%	55	100%

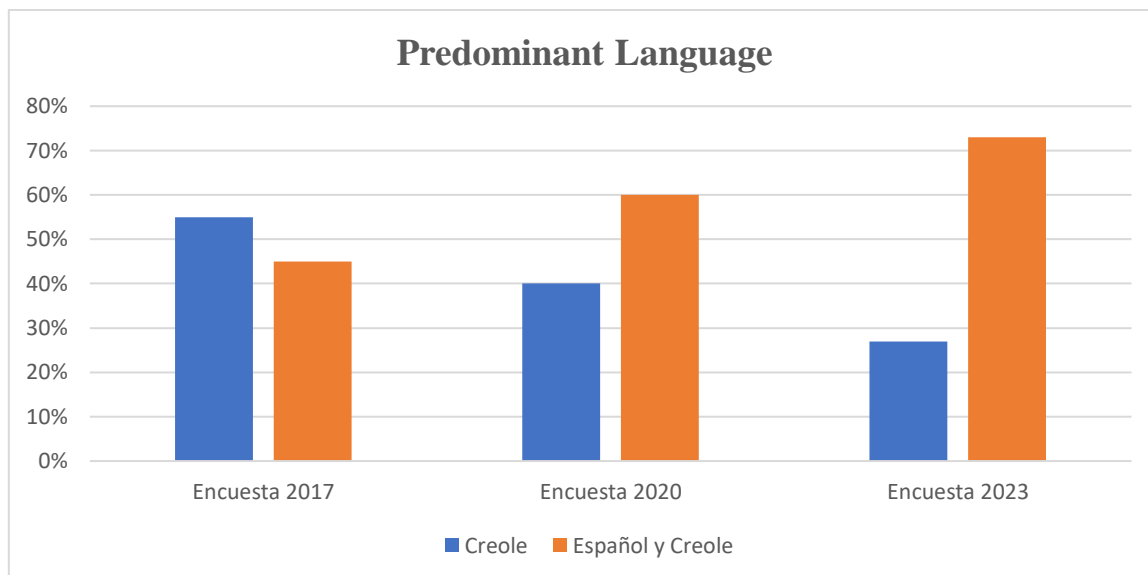
Table 2: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023

According to the scientific research study carried out in **2017**, 55% of the children of the investigated population spoke only Creole, while 45% had the ability to maintain a conversation between the two mentioned languages.

Community assessment work carried out in **2020**, it was possible to see that 40% of the children spoke Creole, while 60% mastered the two languages, Creole and Spanish.

The assessment carried out in **2023**, reveals that 27% of the population studied speaks Creole while 73% are fluent in the two languages in question, Creole and Spanish.

It should be noted that the vast majority of the children studied in 2023 are fluent in the Spanish language. In 2017 only 45% of them spoke Spanish. This is due to the fact that more children received documentation (from Haiti) and are currently studying at the local school.



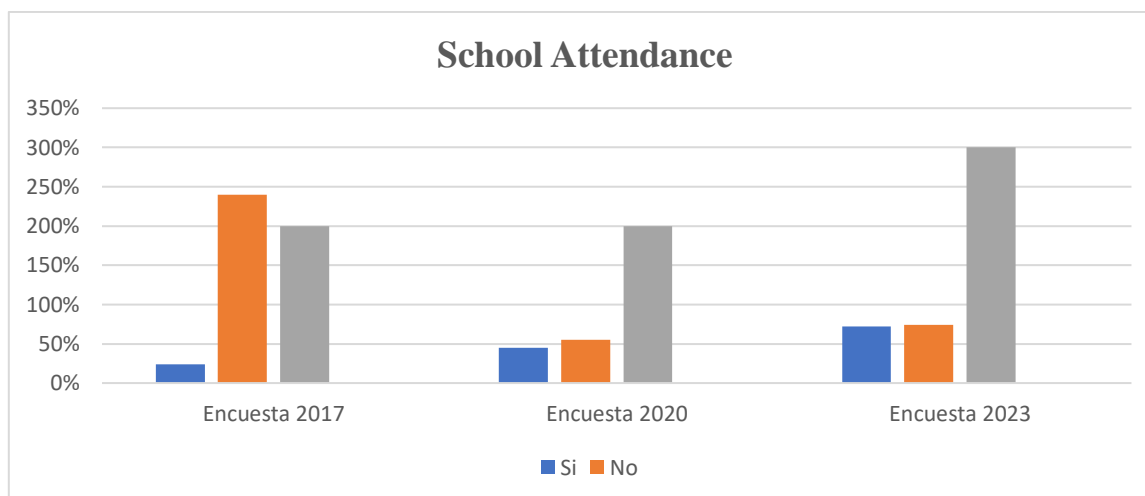
Graph 2 Source: Table 2

Table 3:
Attendance in an Education Center

Edad	CHNA 2017				CHNA 2020				CHNA 2023			
	Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
3- 6 years	4	8%	31	64%	4	9%	15	36%	6	13%	3	6%
7- 10 years	3	6%	6	12%	9	22%	2	5%	15	32%	5	11%
11 - 14 years	5	10%	0	0%	4	9%	3	7%	6	13%	2	4%
15 -18 years	0	0%	0	0%	2	5%	3	7%	7	15%	3	6%
SUBTOTAL	12	24%	37	74%	19	45%	23	55%	34	72%	13	28%
TOTAL	12 children or about 24% <u>attend</u> school.		37 children or about 76% do <u>not attend</u> school		19 children or about 45% <u>attend</u> school		23 children or about 55% do <u>not attend</u> school		34 children or about 72% <u>attend</u> school		13 children or about 28% do <u>not attend</u> school.	

Table 3: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023.

The studies carried out in 2023 showed a considerable increase in children attending school. In 2017 only 24% of the children attended school. In 2020 only 45% of the children studied attended school. In 2023, 72% of the child population of Batey 2 attend school. The predominant ages of those who attend educational centers are between 11 and 14 years. Notably, 28% do not attend any educational center. Therefore, it is necessary to give support, accompaniment and technical and comprehensive assistance to mothers so they can enroll the remaining children in schools.



Graph 3: Source: table 3.

Table 4:
Population in kilograms of weight

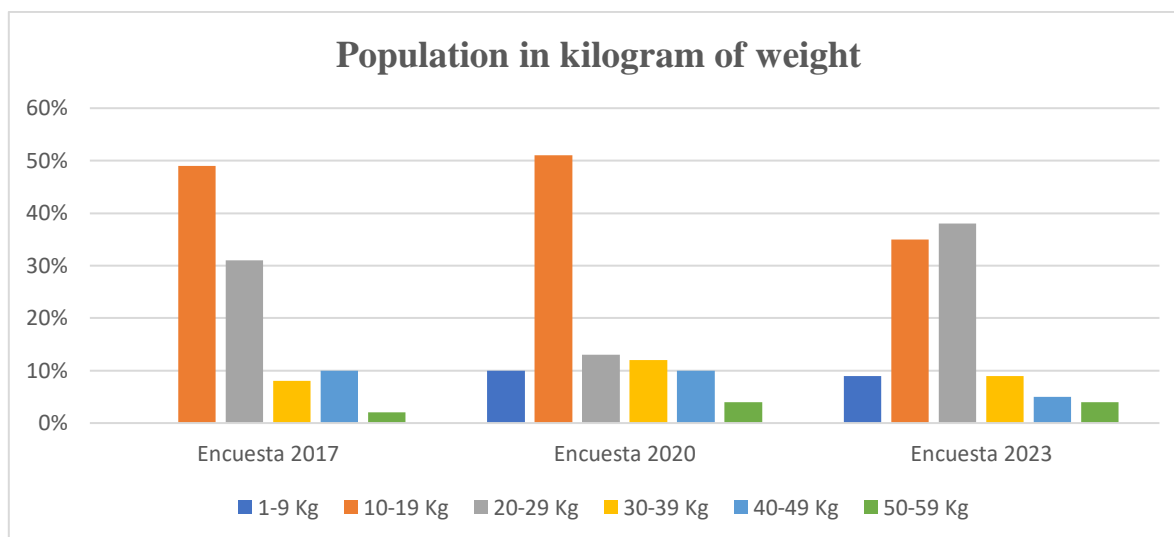
Peso en Kg	CHNA 2017		CHNA 2020			CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%	
1-9 Kg	0	0	5	10%	5	9%	
10-19 Kg	24	49%	26	51%	19	35%	
20-29 Kg	15	31%	7	13%	21	38%	
30-39 Kg	4	8%	6	12%	5	9%	
40-49 Kg	5	10%	5	10%	3	5%	
50-59 Kg	1	2%	2	4%	2	4%	
Total	49	100%	51	100%	55		

Table 4: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023.

According to the CHNA in 2017, a total of 49% of the children in Batey 2, had a body weight between 10 and 19 kilograms, 31% had a body weight between 20 and 29 kg, 8% between 30 and 39 kg, 10% were between 40 and 49 kg, and finally 4% weighed between 50 and 59 kg.

According to the CHNA in 2020, 10% of the child population investigated weighed between 1 and 9 kg, 51% of the children studied, residents of Batey 2, had a body weight of between 10 to 19 kilograms, 13% had a body weight between 20 to 29 kg, 12% between 30 to 39 kg, 10% were between 40 to 49 kg, and 4% had weights between 50 to 59 kg .

According to the CHNA in 2023, 9% of the child population weighed between 1 and 9 kg, 35% of the children studied, residents of Batey 2, presented body weight between 10 to 19 kilograms, 38% had a body weight between 20 to 29 kg, 9% between 30 to 39 kg, 5% were between the weights of 40 to 49 kg, and 4% had the weights between 50 to 59Kg.



Graph no. 4 Source: Table 4.

Table 5:
Height or Size of the Child Population Measured in m²

Size en m ²	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%
0.6-07.99 m ²	15	31%	6	12%	3	5%
0.8-0.9.99 m ²	13	27%	11	21%	9	16%
1-1.19 m ²	9	18%	13	25%	20	36%
1.2-1.39 m ²	8	16%	10	20%	12	22%
1.40-159 m ²	3	6%	6	12%	6	11%
1.6-1.79 m ²	1	2%	5	10%	5	9%
Total	49	100%	51	100%	55	100%

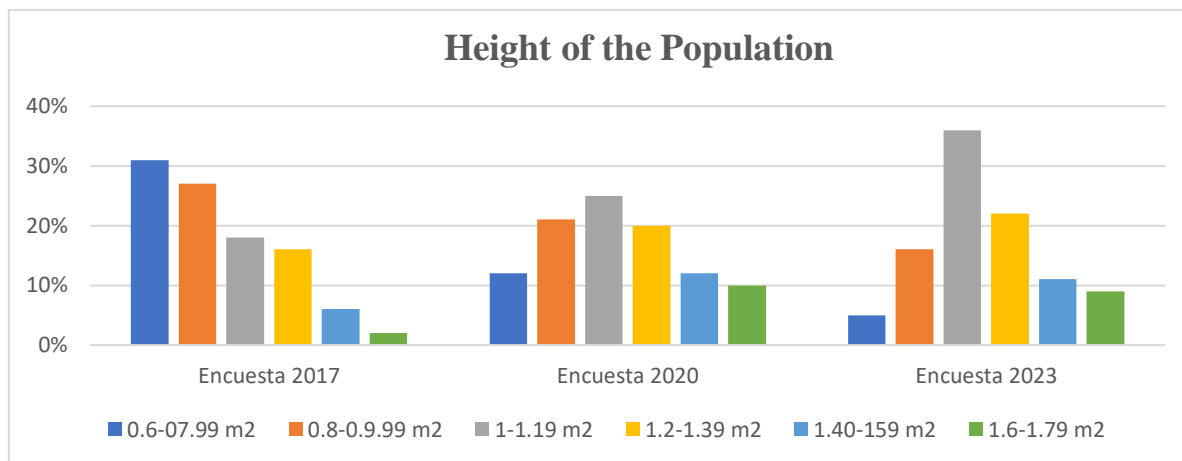
Table 5: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023

According to the CHNA from 2017, 31% of the surveyed population are between 0.6 to 07.99 m², 27% are between 0.8-0.9.99 m², 18 % are located between the size of 1.1 to 1.19 m², 16% are between 1.2-1.39 m² of sizes, 6% are between 1.40-159 m² of sizes, and 2% are between 1.6-1.79 m².

According to CHNA in 2020, 12% of the surveyed population are between 0.6 to 07.99 m², 21% are between 0.8-0.9.99 m², 25% are between 1.1 to 1.19 m², 20% are between 1.2-1.39 m², 12% are between 1.40-159 m², and 10% are between 1.6-1.79 m².

According to CHNA in 2023, 5% of the surveyed population are between 0.6 to 07.99 m², 16% are between 0.8-0.9.99 m², 36% are between 1.1 to 1.19 m², 22% are between 1.2-1.39 m², 11% are between 1.40-159 m², and 9% are between 1.6-1.79 m².

One can highlight a considerable growth of the child population in terms of height as the years go by. This is explained by the stability in the feeding program.



Graph 5: Height of the CHNA Child Population in m² Source: table 5.

Table 6:

Nutritional state of the child population based on percentiles, BMI\age and gender

Gender	CHNA 2017				CHNA 2020				CHNA 2023			
	Nutritional state based on percentiles, BMI\age and Gender				Nutritional state based on percentiles, BMI\age and Gender				Nutritional state based on percentiles, BMI\age and Gender			
	Low Wt.	%	Normal Wt.	%	Low Wt.	%	Normal Wt.	%	Low Wt.	%	Normal Wt.	%
Feminine	11	22%	6	12%	4	8%	23	45%	0	0%	29	52%
Masculine	21	44%	11	22%	5	10%	19	37%	1	2%	25	46%
SUBTOTAL	32	66%	17	34%	9	18%	42	82%	1	2%	54	98%
TOTAL	According to the 2017 data, 32 children or about 66% were malnourished with critically low body weight.		According to the 2017 data, only 17 children, or 34% , had normal body weight.		According to the 2020 data, only 8 children or 18% were malnourished with critically low body weight.		According to the 2020 data, 42 children or 82% had normal body weight.		According to the 2023 data, only 1 child, or 2% of the children were malnourished with critically low body weight.		According to the 2023 data, 54 children or 98% had normal body weight.	

Table 6: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023

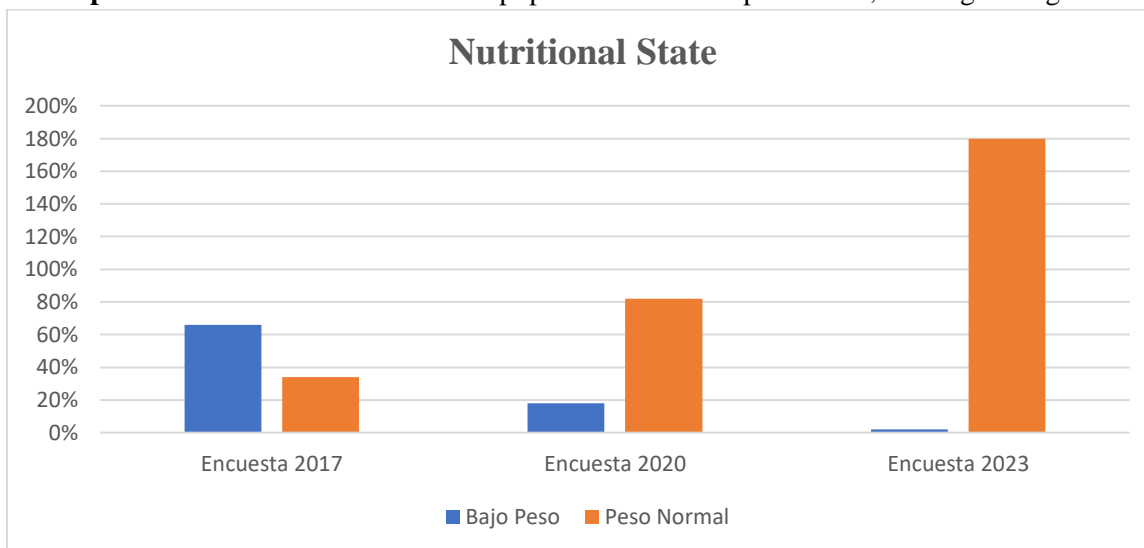
Graph 6: Nutritional state of the child population base don percentiles, BMI/age and gender**Graph 6:** Nutritional State of Children, Source: Table 6

Table 7:
Nutritional State of Children according to percentiles, BMI and affected age

Age	CHNA 2017				CHNA 2020				CHNA 2023			
	Nutritional state based on percentiles, BMI and age affected.				Nutritional state based on percentiles, BMI and age affected.				Nutritional state based on percentiles, BMI and age affected.			
	Low Wt.	%	Normal Wt.	%	Low Wt.	%	Normal Wt.	%	Low Wt.	%	Normal Wt.	%
0 – 2 years	0	0%	0	0%	0	0%	9	19%	0	0%	5	9%
3 – 6 years	18	37%	17	34%	4	8%	15	28%	1	2%	11	20%
7- 10 years	9	19%	0	0%	1	2%	10	19%	0	0%	20	36%
11–14 years	5	10%	0	0%	1	2%	6	12%	0	0%	8	15%
15–18 years	0	0%	0	0%	3	6%	2	4%	0	0%	10	18%
TOTAL	32	66%	17	34%	9	18%	42	82%	1	2%	54	98%

Table 7: Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 y 2023.

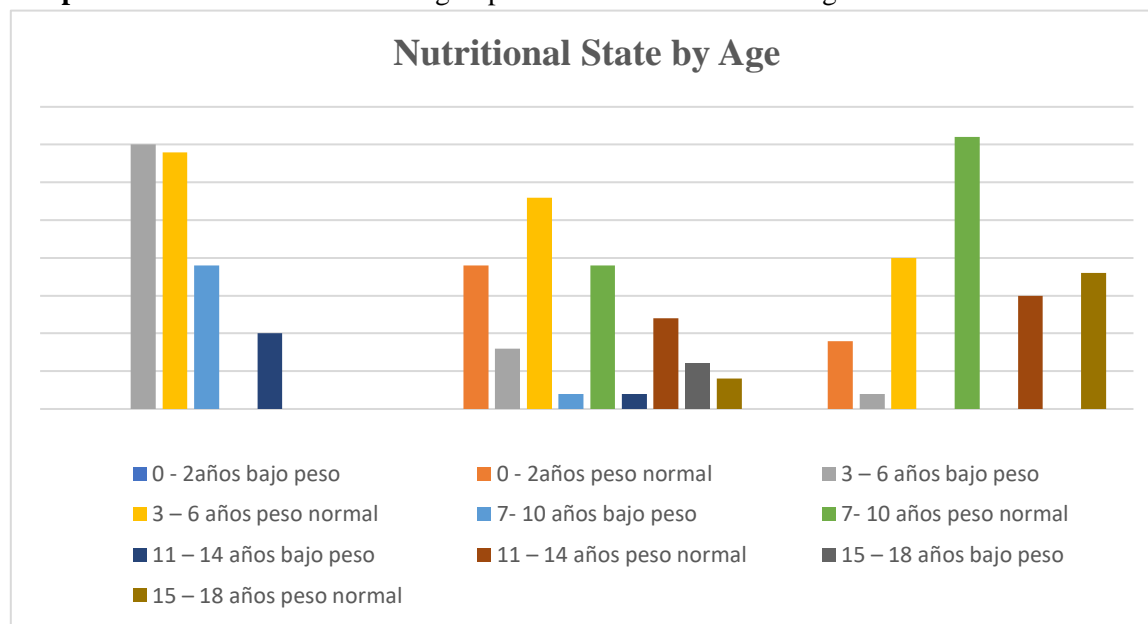
According to the CHNA from 2017, 66% of the child population had low body weight based on the parameters of percentiles related to BMI, weight, age and height. Only 34% had healthy and normal weight.

According to data from 2020, 18% of the child population had low body weight based on the parameters of percentiles related to BMI, weight, age and height. About 82% had healthy and normal body weight.

According to data from 2023, 2% of the child population had low body weight based on the parameters of percentiles related to BMI, weight, age and height. A total of 98% had healthy and normal body weight.

The highest number of cases suffering from low weight have been among the group between **2 and 6 years of age** for the 3 CHNA's (2017, 2020, 2023). In **2017**, this age group had **51%** of its participants underweight, however by **2020** only **8%** of these children were underweight. By **2023** only **2%** of this age group is underweight.

Graph 7: Nutritional State according to percentiles of BMI and the age affected.



Graph 7: On the nutritional state of children by percentile of BMI and age affected. Source: Table 7

Table 8:
Nutritional level of the child population based on gender

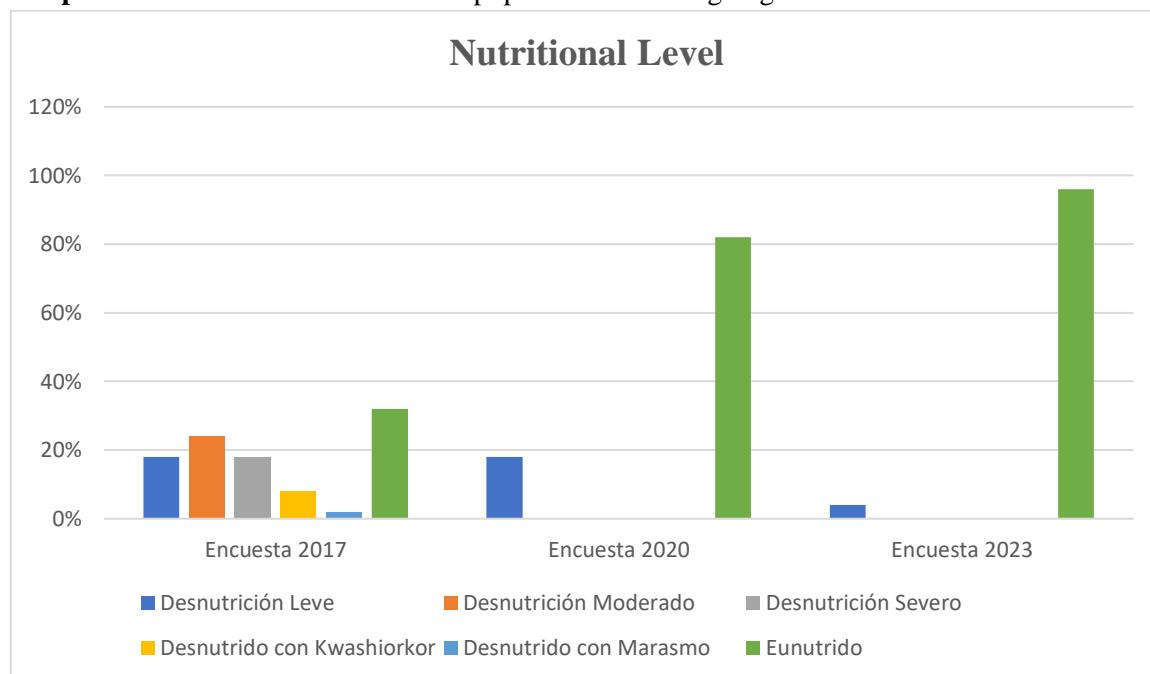
Nutritional Level	CHNA 2017				CHNA 2020				CHNA 2023			
	Gender		Gender		Gender		Gender		Gender		Gender	
	F	%	M	%	F	%	M	%	F	%	M	%
Mild Malnutrition	4	8%	4	8%	4	8%	5	10%	0	%	2	4%
Moderate Malnutrition	3	6%	8	18%	0	0%	0	0%	0	0%	0	0%
Severe Malnutrition	4	8%	5	10%	0	0%	0	0%	0	0%	0	0%
Malnutrition w/ Kwashiorkor	0	0%	4	8%	0	0%	0	0%	0	0%	0	0%
Malnutrition w/ Marasmo	0	0%	1	2%	0	0%	0	0%	0	0%	0	0%
Well nourished	6	12%	10	20%	23	45%	19	37%	29	53%	24	47%
TOTAL	17	34%	32	66%	27	53%	24	47%	29	53%	26	47%

Source: CHNA demographics of the child population of Batey 2.

According to the CHNA in 2017, there were 2% cases of marasmus, 8% cases of kwashiorkor, 18% cases of severe malnutrition and 24% moderate nutrition and 16% mild nutrition. Only 32 of the children were well nourished.

According to the CHNA in 2023, a demonstrated and comprehensive positive change to the nutritional status of the children has occurred. No cases of marasmus, kwashiorkor, or severe or moderate malnutrition were recorded. It should be noted that 96% of the investigated child population is well nourished.

Graph 7: Nutritional level of the child population according to gender.



Graph 8: on the nutritional state of children according to gender. Source: Table 8.

Table 9:
Nutritional level of children according to age

Nutritional Level	CHNA 2017					CHNA 2020					CHNA 2023				
	Age					Age					Age				
	0-2	3-6	7-10	11-14	15-18	0-2	3-6	7-10	11-14	15-18	0-2	3-6	7-10	11-14	15-18
Mild Mal.	0	7	0	1	0	0	4	1	1	3	0	2	0	0	0
Mod. Mal.	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0
Sever Mal.	0	4	2	3	0	0	0	0	0	0	0	0	0	0	0
Kwashiorkor	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Marasmo	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Well-nourished	0	14	1	1	0	0	15	10	6	2	5	9	20	8	10

Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020, 2023.

According to the CHNA in 2017, children between the age of 3 and 6 years presented some degree of malnutrition, with mild malnutrition being the most prominent; however, of the children between the ages of 7 and 10, 7 presented malnutrition to different degrees, observing 5 cases with moderate malnutrition and between the ages of 11 and 14, 3 of the 4 cases experienced severe malnutrition.

According to the CHNA in 2020, children between the ages of 3 and 6 years had 9 cases of mild malnutrition, 3 cases of this same pathology was experienced in children from 15 to 18 years, 1 case from 7 to 10 years , and 1 case from 11 to 14 years old.

According to the CHNA in 2023, a total and positive improvement can be observed. An integral change in the nutritional status of the children has occurred. No cases of marasmus, kwashiorkor, or severe or moderate malnutrition were recorded. It should be noted that 96% of the investigated child population is well nourished.

**Table 10:
Attitudes of Parents to Illness of Children**

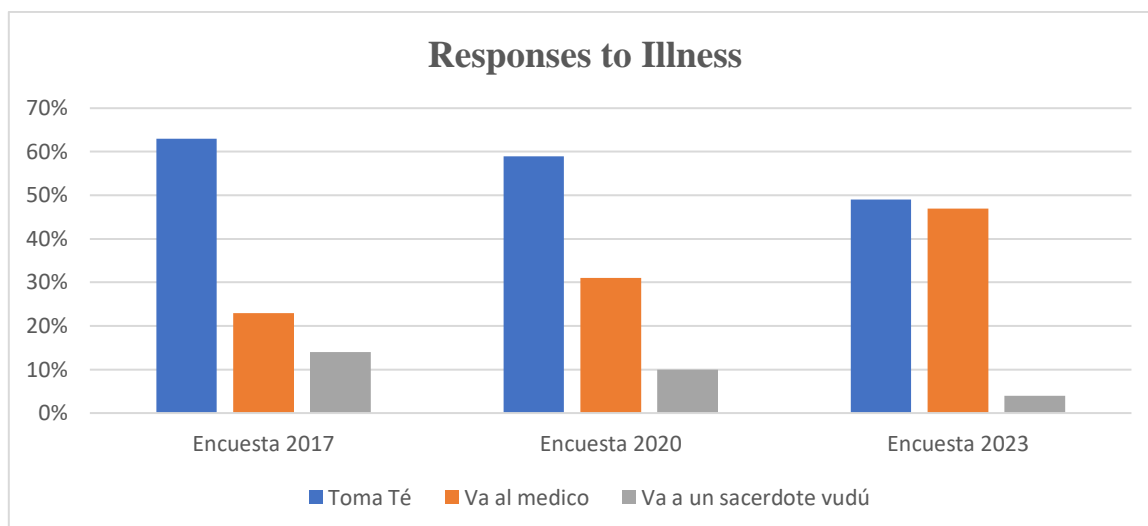
What do you do when you are sick?	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%
Drink tea	31	63%	30	59%	27	49%
Go to a doctor	11	23%	16	31%	26	47%
Good to a priest or voodoo leader	7	14%	5	10%	2	4%
Total	49	100%	51	100%	55	100%

Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020, 2023.

According to the CHNA in 2017, 63% of the child population only drank tea in case of being sick. 23% went to a medical doctor and 14% chose to find a solution with voodoo faith healers.

According to the CHNA in 2020, 59% of the children reported drinking tea when they felt sick, while 31% indicated that they go to the doctor in the event of illness. Only 10% went to a voodoo faith healer to be cared for when they were sick. There is a very notable difference in terms of the family that visits the medical center in 2020, which is 31% compared to 23% in 2017.

According to the CHNA in 2023, 49% of the interviewees drank tea when they felt sick, while 47% went to a medical doctor. There is another notable difference in terms of visits to medical doctors which increased from 31% in 2020 to 47% in 2023.



Graph 10: Responses to illness. Source: Table 10.

Table 11:
Most Frequent Illnesses

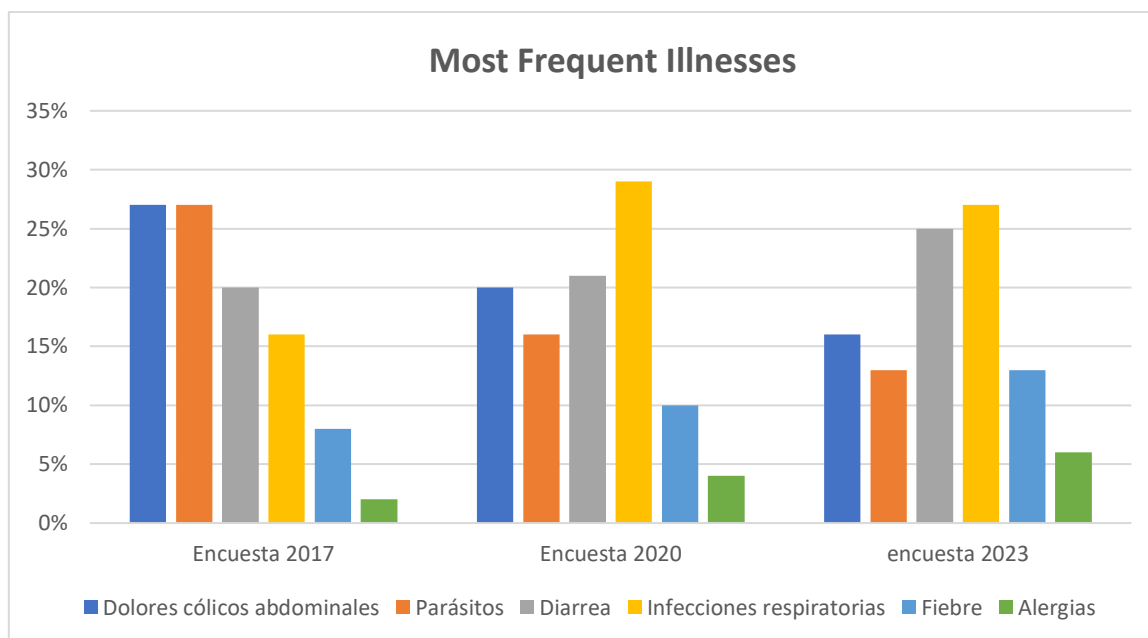
Frequent Illnesses	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%
Colicky abdominal pain	13	27%	10	20%	9	16%
Parasites	13	27%	8	16%	7	13%
Diarrhea	10	20%	11	21%	14	25%
Respiratory infections	8	16%	15	29%	15	27%
Fever	4	8%	5	10%	7	13%
Allergies	1	2%	2	4%	4	6%
Total	49	100%	51	100%	55	100%

Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020, 2023.

According to the CHNA in 2017, 27% of the children suffered from abdominal cramps and parasites represented the most frequent diseases identified among the child population. In addition, 20% of the children suffered from diarrhea and 16% suffered from respiratory infections.

According to the CHNA in 2020, 29% of children suffered from respiratory infections, followed by 21% suffered from diarrhea, 16% suffered from parasites, 20% suffered from abdominal pain.

According to the CHNA in 2023, 16% of children suffered from frequent abdominal cramps, 13% of the children suffered from parasites, 25% of the children suffered from diarrhea, 27% of the children suffered from respiratory infections, and 13% of the children suffered from frequent fevers.



Graph 11: On the Most frequent diseases among children in Batey 2. Source: table 11.

Table 12:
Source of Water consumed by Children

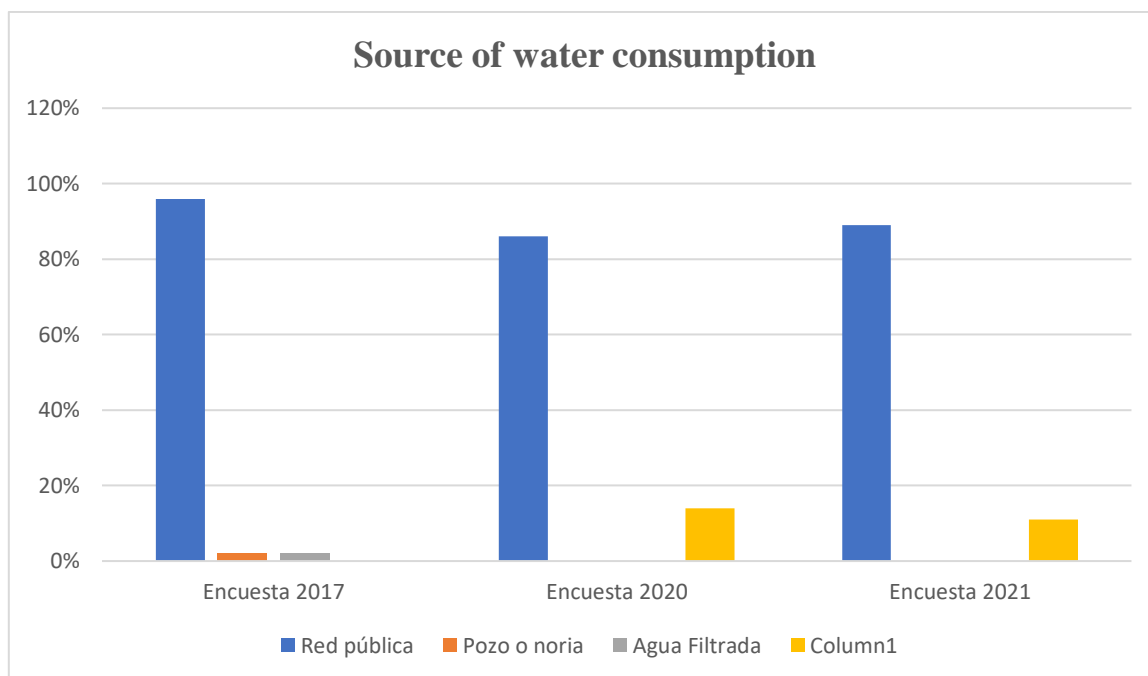
Source of water consumed	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%
Public network	47	96%	44	86%	49	89%
Well	1	2%	0	0%	0	0%
River	1	2%	0	0%	0	0%
Filtered Water	0	0%	7	14%	6	11%
Total	49	100%	51	100%	55	100%

Source: CNHA demographics of the child population of Batey 2. Years 2017, 2020, 2023

According to the CHNA in 2017, 63% of the children drank water from the public pipe network, 2% from wells, and 1% from rivers.

According to the CHNA in 2020, 86% of the children drank water from the public pipe network and 14% from a bottle of filtered water.

According to the CHNA in 2023, 89% of the children drank water from the public pipe network and 11% from filtered water.



Graph 12: Source of drinking water for children in Batey 2. Years 2017, 2020, 2023. Source: Table 12

Table 13:
Frequency of Eating

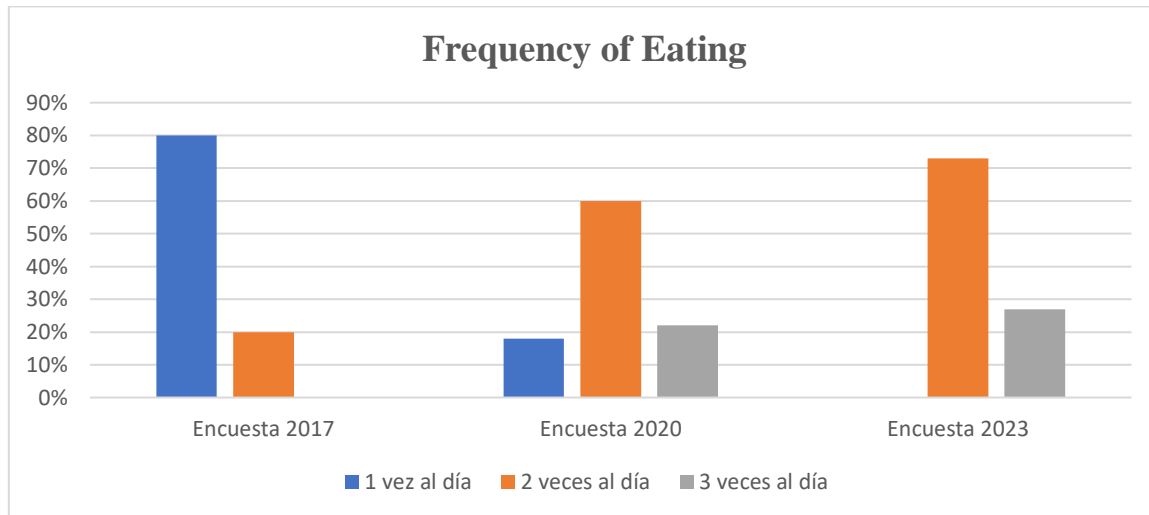
Items	CHNA 2017		CHNA 2020		CHNA 2023	
	Frequency	%	Frequency	%	Frequency	%
How many times a day a child eats?						
1 time a day	39	80 %	9	18%	0	0%
2 times a day	10	20%	31	60%	40	73%
3 times a day	0	0%	11	22%	15	27%
Total	49	100%	51	100%	55	100%

Source: CHNA demographics of the child population of Batey 2. Years 2017, 2020 2023.

According to the CHNA in 2017, 80% of the children ate food only once a day, while 20% reported that they ate 2 times a day.

According to the CHNA in 2020, 60% of the children ate 2 times a day, 22% ate food 3 times a day and only 18% continued to eat once a day due to the extreme poverty of the family.

According to the CHNA in 2023, 73% of the children eat twice a day and 27% eat 3 times a day. **The difference was felt immediately after the implementation of the Batey 2 feeding program by Pascal's Pantry. A considerable increase is noted of the eating frequency of the children.**

Graph 12: Frequency of Meals of the Children**Graph 13:** Frequency of eating of the children of Batey 2. Source: Table 1

Interpretation of the Data and Conclusions

About the homes where children live

The hygienic situation of the homes of the child population of Batey 2 is unfortunate. Limited access to water creates an environment favorable to infectious diseases. Within the houses where the children live, there is no furniture of much importance that facilitates the lives of these people. The children sleep on makeshift beds in poor condition or on foam bedspreads.

According to the CHNA in 2017, 37% of those interviewed did not have any important objects or household appliances and furniture, 3% had a radio, 56% had a cell phone while 4% owned a motorcycle.

According to the CHNA in 2020, 33% of those interviewed did not have any object and important household appliances and furniture, 4% had a radio, 57% had a cell phone while 6% owned a motorcycle.

According to the CHNA in 2023, 31% of those interviewed did not have any important objects and household appliances and furniture, 5% had a radio, 56% had a cell phone and 8% had a motorcycle. The radio is the appliance they have the most. The use of the internet is practically non-existent.

About Hygienic Conditions

Most of the population interviewed affirmed that they urinate and defecate in the countryside and in latrines and in some unusual places, such as rivers, and in ravines . . . Data also indicates concerns regarding the conditions of hygiene and humanity within which the children of Batey 2 are growing.

Basic services in the homes of the population studied are very precarious. The sanitary facilities are latrines shared with other families. Some of these latrines are built of old wood, with sack-cloth doors, and a tin roof, or unroofed with a wooden floor, and are generally in poor condition.

According to the CHNA in 2017, 84% of the houses lack a bathroom or latrines, therefore they must exercise their physiological needs elsewhere. It would be important to carry out a construction project for common bathrooms. Only 16% of the houses have latrines.

According to the CHNA in 2020, 80% of the houses lack a bathroom or latrines, only 20% of the houses have latrines.

According to CHNA in 2023, 77% of the houses lack a bathroom or latrines, only 23% of the houses have latrines.

The most common fuel for cooking is coal, which is used in homes, followed by the use of firewood and propane gas.

About Basic Services

The population of this community live in conditions of extreme poverty. The lack of basic services, the inadequate disposal of garbage, the deficient sanitary services determine hygiene conditions that facilitate a high occurrence of respiratory and gastrointestinal diseases.

In the DR, there is no regional census that allows for reliable statistics on the total Haitian immigrant population in the northern region of the country. As a result, little is known about their living and working conditions which limits the development of planned or effective actions that could transform the life these people.

The population of Batey 2 lives between the uncertainty of repatriation and the certainty of labor overexploitation. The condition of illegality is inherited by children of Haitian descent born on Dominican soil.

The level of integration of these communities into wider Dominican society and the dynamics of relationships within these communities is low. This population relates very little to the Dominican people, since they prefer to interact with their compatriots. This demonstrates significant difficulties for the interaction between both population groups, a situation that is linked to cultural aspects, language and socioeconomic conditions and migratory status.

About groups based on age and gender

According to the CHNA in 2017, 14% of the population was 0 to 2 years old, 52% was 3 to 6 years old, 18% was 7 to 10 years old, 10% were between 11 to 14 years of age and 6% were in the ranges of 15 to 18 years of age. The predominant gender was masculine.

According to the CHNA in 2020, 18% of the population was 0 to 2 years old, 37% was 3 to 6 years old, 21% was between 7 to 10 years old, 14% were between 11 to 14 years of age and 10% were in the ranges of 15 to 18 years of age. The predominant gender was female.

According to the CHNA in 2023, 9% of the population was 0 to 2 years old, 22% was 3 to 6 years old, 37% was 7 to 10 years old, 15% was between 11 and 14 years of age and 17% were in the range of 15 to 18 years of age. The predominant gender is female.

The Bateys are traditionally places built around the economic activity of the sugar mill. For this reason its initial inhabitants were a great majority male. The studies carried out by Silie et al (2002) on Bateys in general, reveal a relationship of 5 men for each woman. A recent study points out the *difference* that exists in the gender relationship between the population of Bateys and the population of Haitian immigrants as a whole. According to FLACSO / OIM (2014), the male-female ratio in the total immigrant population is 77 men for every 23 women.

In a study carried out in the DR titled: “Sociodemographic analysis of the Batey population base.” Dr. Leonardo Martínez (2016) observed that the distribution by age was: Children and adolescents (52.9%) and people in ages of greater social and productive activity (45.3%).

About the Source of Water Consumed

According to the CHNA in 2017, 63% of the child population drank water from the public pipe network, 2% from wells, and 1% from rivers.

According to the CHNA in 2020, 86% of the children drank water from the public pipe network, 2% and 14% from a bottle of filtered water.

According to the CHNA in 2023, 89% of the children drink water from the public pipe network and 11% from filtered water.

Research data from the Latin American Faculty of Social Sciences (FLACSO), Bona, Pedro J. (2018) indicate that the population of the Bateys is placed under the critical poverty index. They have severe unsanitary conditions, lack of basic services, overcrowding and no fringe benefits.

About Education

According to the CHNA in 2017, only 24% of children attended schools. The ages of predominance of those who attend educational centers are between 11 and 14 years. It stands out that 28% do not attend any educational center. Therefore, it is necessary to give support, accompaniment and technical and comprehensive assistance to mothers so that they can enroll the remaining children in schools.

According to the CHNA in 2020, 45% of the children of Batey 2 attended school.

According to the CHNA in 2023, Batey 2 showed a considerable increase in children attending school. During 2023, 72% of children in the Batey attended school.

According to the CHNA in 2017, 55% of the children of the children of Batey 2 spoke only Creole. About 45% had the ability to maintain a conversation between the two languages of Creole and Spanish.

According to the CHNA in 2020, 40% of the children spoke Creole, while 60% mastered the two languages of that context, that is, Creole and Spanish.

According to the CHNA in 2023, 27% of the studied population speaks only Creole while 73% are fluent in the two languages of Creole and Spanish.

The vast majority of the children of the population studied in 2023 speak the Spanish language fluently, while in 2017 only 45 of them spoke Spanish, this is due to the fact that more children are studying at school at the present time. **This was a result of the intervention of *Pascal's Pantry* in facilitating the documentation for children from Haiti through the Haitian consulate.**

An analysis of data published by Tejeda Yangüela (2019), demonstrates that 71.4% of the women who live in Dominican Haitian Bateys in general did not attend more than the 4th year of basic education, against 64.1% of the men. Of that percentage of women, 26.1% are not in any school grade. Con Mudha affirms that only 38% of the residents in bateys know how to read and write.

The report by the Convention on the Rights of the Child (2001-2005), affirmed that the lack of documents influences the fact that the population of the Bateys has a high percentage of illiteracy and school dropout; it noted that 28.5% of women of childbearing age do not have any level of education and 66.5% have less than five years of approved schooling. One of the causes of this situation is attributed to the fact that most of the communities do not have a school campus. They often use small houses in poor condition to teach in without benches or desks to accommodate students.

The social exclusion experienced by Haitian migrants and their descendants in the DR violates their fundamental rights, affects their lives and the social balance of where they settle. This situation generates consequent complaints and protests by immigrants and social, national and international organizations.

In a dialogue carried out with Martínez Bretón, Regino (2016) affirmed that within the Bateys there are three groups differentiated by their cultural and social behavior. These groups have been identified by other investigations carried out by the International Organization for Migration (OIM) and Latin American Faculty of Social Sciences (FLACSO) (2014), on Haitian immigrants in the Dominican Republic.

- 1) **Born in Haiti:** Migrant workers searching for work
- 2) **Children of Haitians born in the Dominican Republic:** Haitian descendants born in the Dominican Republic but whose Dominican nationality is not recognized.
- 3) **Dominicans born in the Dominican Republic:** Group that for various reasons, economic or social, have joined Haitians and live in the Batey.

About Health

According to the CHNA in 2017, abdominal cramps and parasites were the most frequent diseases identified among the child population Batey 2 representing 27% respectively. In addition, diarrhea and respiratory infections ranked second and third, with 20% and 16% each.

According to the CHNA in 2020, respiratory infections were the most prominent with 29% of the child population suffering from these, followed by diarrhea (21%), parasites (16%) and abdominal pain (20%).

According to the CHNA in 2023, the children in Batey 2 had frequent abdominal cramps (16%), parasites (13%), diarrhea (25%), respiratory infections (27%), and from frequent fevers (13%).

Research carried out by Alexandre Guy (2013) concluded the following: among immigrants who go to hospitals, there are high percentages of asthma, cerebrovascular accidents, heart disease and diabetes. Nearly 60% were “at high risk of high cholesterol, high blood pressure, and many had acute anemia. Approximately 70% had never seen a doctor, more than half had never seen a dentist, 99% had no health insurance, and none benefited from government-funded insurance programs for people with low incomes.” Furthermore, while 80% had suffered work accidents for which they should have received compensation, only 4% of all migrants even knew of the existence of such programs.

According to the CHNA in 2017, 63% of the child population of Batey 2 only drank tea in case of being sick. About 23% went to a medical doctor and 14% chose to find a solution in faith healers.

According to the CHNA in 2020, 59% of the child population of Batey 2 reported drinking tea when they felt sick, while 31% indicated that they go to a medical doctor in the event of illness. Only 10% go to a voodoo priest to be treated when they are sick. There is a notable difference in terms of families who visit the medical center in 2020 (31%) compared to 2017 (23%).

According to the CHNA in 2023, 49% of the child population in Batey 2 drank tea when ill and 47% went to a medical doctor.

Coupled with the ongoing cost of medical visits, Haitian workers are often discouraged from seeking medical treatment due to the costs involved. These include: the inability to miss work, the inability to find or afford childcare, the lack of transportation and military checkpoints that threaten the possibility of immediate deportation. Additionally, migrating Haitians tend to be unfamiliar with healthcare systems and fear communication problems that arise from language barriers and/or cultural differences. Because *Pascal's Pantry* sends a medical doctor and nurse to the community twice a month, this has ensured an access to healthcare that would otherwise be unavailable.

On the Nutritional State of Children

Chronic malnutrition and poor diet are consequences of extreme poverty. This type of malnutrition can bring with it serious infectious diseases derived from the intake of spoiled food and contaminated water, among others. This degrades the correct mental and cognitive development of children, a consequence that is reinforced by the inaccessibility of education in conditions that are suffered. Child malnutrition can have consequences at various levels that accompany the affected person throughout their lives. During childhood, children suffering from acute childhood malnutrition may manifest the following physio pathologies: decreased brain tissue growth,

decreased cardiac muscle mass, decreased oxygen consumption, decreased weight, renal plasma flow and anemia.

On the Weight of the Child Population of Batey 2

According to the CHNA in 2017, 49% of the child population of Batey 2 had a body weight between 10 and 19kg, 31% had a body weight between 20 and 29kg, 8% between 30 and 39kg, 10% weighed between 40 and 49 kg, and 4% weighed between 50 and 59kg. A total of 32 children, or 66%, were found malnourished in 2017 with critical figures of low body weight, only 17 children, or **34%, were found to have normal body weight.**

According to the CHNA in 2020, 10% of the child population of Batey 2 weighed between 1 and 9kg, 51% weighed between 10 to 19kg, 13% had a body weight between 20 to 29kg, 12% between 30 to 39 kg, 10% weighed between 40 to 49 kg, and 4% weighed between 50 to 59Kg. According to the CHNA in 2020, only 9 children or 18% of the children are found to be in low body weight states, while a total of 42 children or **82% of the children surveyed in 2020 had a normal body weight.**

According to the CHNA in 2023, 9% of the child population of Batey 2 weighed between 1 and 9kg, 35% of the children weighed between 10 and 19kg, 38% weighed between 20 and 29 kg, 9% weighed between 30 and 39kg, 5% weighed between 40 and 49 kg, and 4% weighed between 50 to 59Kg. According to the CHNA in 2023, only 2% of the children were found to be in states of low body weight. While a total of **98% of the children were found with normal weight.**

On the height or size of the Children in Batey 2

According to the CHNA in 2017, 31% of the child population of Batey 2 measured between 0.6 to 0.7.99m², 27% measured between 0.8-0.9.99m², 18% measured between 1.1 to 1.19m², 16% measured between 1.2-1.39m², 6% measured between 1.40-1.59m², and 2% between 1.6-1.79 m² of sizes.

According to the CHNA in 2020, 12% of the child population of Batey 2 measured between 0.6 to 0.7.99m², 21% measured between 0.8 to 0.9.99m², 25% measured between 1.1 to 1.19m², 20% measured between 1.2 to 1.39 m², 12% measured between 1.40 to 1.59m², and 10% measured between 1.6-1.79 m².

According to the CHNA in 2023, 5% of the child population of batey 2 measured between 0.6 to 0.7.99m², 16% measured between 0.8 to 0.9.99m², 36% measured between 1.1 to 1.19m², 22% measured between 1.2 to 1.39m², 11% measured between 1.40 to 1.59m², and 9% measured between 1.6-1.79m².

One can highlight a considerable growth of the child population in terms of height over the past six years. This is explained by the stability in the child feeding program initiated by *Pascal's Pantry*.

On the Nutritional State of the Child Population

According to the CHNA in 2017, 66% of the child population of Batey 2 experienced low body weight based on the parameters of percentiles, BMI, weight, age and height. **Only 34% had a healthy and normal weight.**

According to the CHNA in 2020, 18% of the child population Batey 2 experienced low body weight based on the parameters of percentiles, BMI, weight, age and height. **However 82% had a healthy and normal body weight.**

According to the CHNA in 2023, 2% of the child population in Batey 2 experienced low body weight based on the parameters of percentiles, BMI, weight, age and height. **This year a total of 98% of the children in Batey 2 had a healthy and normal weight.**

The highest number of cases of low weight occurred in the group between 2 and 6 years of age for the 3 surveys. **By 2017, this age group was affected by 51%. However by 2020 only 8% of those affected were registered as underweight. By 2023 only 2% were underweight.**

On the Nutritional Level of the Child Population of Batey 2

According to the CHNA in 2017, there were 2% cases of marasmus related malnutrition, 8% cases of kwashiorkor related malnutrition, 18% suffered from severe malnutrition and 24% suffered from moderate nutrition, 16% experienced mild nutrition, and only **32% of the children were found to be well nourished.**

According to the CHNA in 2020, a notable and positive change of the nutritional level of the children of Batey 2 became evident. In 2020, there were no cases of marasmus, kwashiorkor, moderate or severe malnutrition. Only 18% experience mild malnutrition. **Notably 42 children, or 82% were well nourished.**

According to the CHNA in 2023, a comprehensive and positive change in the nutritional status of the children of Batey 2 was discovered. There were no cases of marasmus, kwashiorkor, severe or moderate malnutrition. **One child experienced mild malnutrition while 96% of the child population is well nourished.**

According to the CHNA in 2017, the child population of Batey 2 between 3 and 6 years of age presented some degree of malnutrition, with mild malnutrition being the most prominent; however, of the children between 7 and 10 years of age, 7 presented malnutrition to different degrees, observing 5 cases with moderate malnutrition and between the ages of 11 and 14, 3 of the 4 cases presented as severe malnutrition.

According to the CHNA in 2020, the child population of Batey 2 demonstrated 9 cases of mild malnutrition between the ages of 3 to 6 years, 1 case from 7 to 10 years, 1 case from 11 to 14 years old, and 3 cases of this same pathology children from 15 to 18 years.

According to the CHNA in 2023, a total and positive improvement in the child population of Batey 2 has been observed, an integral change in reference to the nutritional status of the children. This year there are no cases of marasmus, kwashiorkor, severe or moderate malnutrition recorded. It should be noted that 96% of the investigated child population is well nourished.

On the Frequency of Eating

According to the CHNA in 2017, 80% of the child population of Batey 2 indicated they ate food only once a day, while the remaining 20% reported they ate 2 times a day.

According to the CHNA in 2020, a difference in this indicator was felt immediately after the implementation of the feeding program by *Pascal's Pantry*. In 2020, 60% of the child population in Batey 2 eat twice a day, 22% eat 3 times a day and only 18% continue to eat once a day due to extreme poverty of the family.

According to the CHNA in 2023, considerable increase is highlighted in relation to the eating frequency of the child population of Batey 2. In 2023 the improvement in the frequency of daily feeding is more noticeable. 73% of the child population ate twice a day and 27% ate 3 times a day.

Recommendations

These recommendations are aimed at improving the living conditions of migrant children in the Bateys by increasing access to education, preventive and curative health, and expanding food safety program.

Implement joint programs between NGOs, national and international cooperation agencies, and government institutions to improve the living conditions of this population, in terms of housing, services, and education infrastructures. Increase access to Health and nutritional stability for children.

- Develop permanent orientation and protection campaigns for children.
- Promote actions to reduce the vulnerability of women and children, both in terms of access to education, as well as disease prevention and hygiene improvement, both personal and environmental.
- Promote education programs and nutritional programs for children.

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Entrevistador _____ Fecha _____

1 COMUNIDAD/ BATEY	1.1. Nombre del niño/a _____	1.2. Fecha de nacimiento _____ 1.3. Edad _____ 1.4. Sexo: _____
	1.5. ¿Asiste a la escuela? <input type="checkbox"/> Si <input type="checkbox"/> No <input type="checkbox"/> <i>La escuela más cercana está a _____ KM</i>	1.6. Peso: _____ 1.7. Talla / altura: _____ 1.8. IMC: _____
	1.9. ¿Qué hace cuando está enfermo? <input type="checkbox"/> Va al médico <input type="checkbox"/> Toma medicamentos naturales <input type="checkbox"/> Va a donde un sacerdote de vudú <input type="checkbox"/> Otros _____	1.10. Enfermedades frecuentes en los niños: <input type="checkbox"/> Diarrea <input type="checkbox"/> Fiebre <input type="checkbox"/> Infecciones respiratorias <input type="checkbox"/> Dolores cólicos abdominal <input type="checkbox"/> Alergias <input type="checkbox"/> Parásitos <input type="checkbox"/> Traumas o caídas <input type="checkbox"/> Otros _____
1.11. Idioma que habla <input type="checkbox"/> Creol <input type="checkbox"/> Español <input type="checkbox"/> Creol y español <input type="checkbox"/> Otro _____	1.12. ¿Qué tipo de agua consume? <input type="checkbox"/> Botellón <input type="checkbox"/> Red pública <input type="checkbox"/> Pozo o noria <input type="checkbox"/> Camión aljibe <input type="checkbox"/> Río, vertiente, estero, canal, lago, etc.	
1.13. ¿grado de Alimentación? <input type="checkbox"/> Desnutrición leve, moderada, severa <input type="checkbox"/> 2 marasmo, kwashiorkor <input type="checkbox"/> 3 eunutruido	1.14. Aspecto general del niño basado en la edad altura y sexo. _____	
1.15. Exploración física <input type="checkbox"/> Cabeza normal o anormal <input type="checkbox"/> Ojos normal o anormal <input type="checkbox"/> Boca normal o anormal <input type="checkbox"/> Cuello normal o anormal <input type="checkbox"/> Tórax normal o anormal <input type="checkbox"/> Abdomen normal o anormal <input type="checkbox"/> Corazón normal o anormal <input type="checkbox"/> Pulmones normal o anormal <input type="checkbox"/> Sistema esquelético normal o anormal	1.6 Estado Nutricional basando Percentiles, IMC\Edad género <input type="checkbox"/> Bajo peso <input type="checkbox"/> Peso normal <input type="checkbox"/> Obeso	
1.16. ¿fuente de agua que consume? <input type="checkbox"/> Si <input type="checkbox"/> No	1.18. ¿frecuencia de alimentación de los niños <input type="checkbox"/> 1 vez <input type="checkbox"/> 2 veces <input type="checkbox"/> 3 veces	