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VOLUME 4
HEALTH-HYGIENE-NUTRITION
ATACORA

**SOCIO-ECONOMIC PROJECT FOR THE
DEVELOPMENT
OF
ONCHO-FREE AREAS**

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VOLUME 4: HEALTH - HYGIENE - NUTRITION

ATACORA

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VOLUME 4

ATACORA

DATA ON HEALTH - HYGIENE - NUTRITION

I. HEALTH

A. Infrastructure

Health organization is centered around the medical districts set up in each District capital. These districts are generally directed by a doctor, assisted by one or more nurses, according to the importance of the medical post. Some medical districts are, however, without a doctor. This is the case in particular of KEROU, OUAKE, COBLY, MATERI and TOUCOUNTOUNA, where the dispensary is headed by a male nurse. At the commune level, there is a medical post and a maternity ward, or a Center for Mother and Child Protection (Centre de Protection Maternelle et Infantile (P.M.I) and some communes are without them. These units are usually managed by a male nurse or a midwife. Finally, there are the village health units (Unités Villageoises de Santé - U.V.S.), with a first-aid worker or a midwife. Few villages have these facilities. In addition to the medical districts, (with dispensaries), the medical posts, the P.M.I.'s (Centers for Mother and Child Protection) and the U.V.S. (Village Health Units), there are three hospitals in ATACORA. Two of these are private (one in TANGUIETA headed by the Frères St. Jean de Dieu religious order and the other in KOUANDE headed by the German Volunteer Service). The health infrastructure is completed by numerous sales outlets of the Office National de Pharmacie (O.N.P. or National Pharmaceutical Office), but they are inadequately supplied. Thus, in KOUANDE,

the doctor in charge of the medical district writes the following: "the sales outlet of the O.N.P. practically never has the essential prescriptions (World Health Organization classification) on sale". In the case of KEROU: "there is a complete shortage of urgent prescriptions and first-aid medications".

The good geographical distribution of the various health centers means that the distances to reach them in the event of need are not excessive. Table 25 reveals that 23.1% of the population has to travel less than one kilometer to reach them and that 50% of the population has to go less than 5 kilometers to get to them. Table 26 reveals, that 50% of the population needs up to one hour to reach them and that three-fourths of the population (77.2%) can arrive in less than two hours. In contrast, the sales outlets for pharmaceuticals are definitely less numerous and only 8.4% of the people are located less than one kilometer from them; 50% of the population has to travel more than 11 kilometers (Table 27), which is equivalent to walking more than two hours (Table 28), with no guarantee that the prescription will be available. In the District of KEROU, the head of the medical district notes that there is a "complete shortage of urgent pharmaceuticals and first-aid drugs" and that "interruptions in the supply are very frequent, even for commonly-used medicine". This situation prevails in a large number of centers. This problem therefore contributes to the use of traditional remedies, which very often are the only ones available.

B. The Sick

Of 782 households surveyed in ATACORA, 376 had one or more members of the household who were sick during the course of the year preceding the survey (Table 1), which means that there were sick persons in 48% of the households surveyed. The total number of sick can therefore be estimated at 10.3% of the population.

Comparison of Table 2 and Table 16 of the population survey reveals that the population is equally distributed between the sick persons and the main activity of the household. This means that there are no more sick persons in one social-professional category than in another. Also, careful comparison of Table 5 and Table 1 on population shows that the proportion of sick persons is higher in the age categories of 1 to 5 years, and in the category of more than 35 years of age. For those groups, the proportion of sick people is greater than the average, even reaching 25% for the age category of from 60 to 64 years, as can be seen from the next table:

**DISTRIBUTION OF SICK PERSONS WITH REGARD TO THE
POPULATION AND BY AGE GROUP**

AGE GROUP	POPULATION	SICK PEOPLE	PERCENTAGE
less than 1 yr	187	12	6.4%
1 - 4 yrs	880	122	13.8%
5 - 9 yrs	1187	109	9.2%
10 - 14 yrs	691	48	6.9%
15 - 19 yrs	582	39	6.7%
20 - 24 yrs	535	47	8.7%
25 - 29 yrs	512	36	7.0%
30 - 34 yrs	379	37	9.7%
35 - 39 yrs	265	31	11.7%
40 - 44 yrs	227	28	12.9%
45 - 49 yrs	241	40	16.6%
50 - 54 yrs	181	22	12.1%
55 - 59 yrs	113	21	18.6%
60 - 64 yrs	145	15	10.3%
65 - 69 yrs	64	16	25.0%
70 yrs and over	157	32	20.4%
TOTAL	6,336	655	10.3%

A comparison between the distribution of the sick by age and sex and the total population (Table 6 : health and Table 3: population) shows that for children less than one year old

there are more sick among girls than boys (8.9% for girls as against 6.6% for boys). This trend is the opposite for age category 5 to 9. In the age group 20 to 30 the proportion of women sick is clearly greater than that of the men. However, starting at age 30 more men are sick than women. From the age of 70 on, once again we note a larger proportion of sick women, as shown in the following table:

AGE GROUP	MALE			FEMALE		
	POPULATION	SICK	%	POPULATION	SICK	%
less than 1 yr	75	5	6.6	78	7	8.9
1 - 4 yrs	437	59	13.5	443	60	13.5
5 - 9 yrs	623	63	10.1	563	44	7.8
10 - 14 yrs	394	22	5.6	297	25	8.4
15 - 19 yrs	285	21	7.3	297	18	6.1
20 - 24 yrs	213	14	6.5	322	33	10.2
25 - 29 yrs	223	14	6.3	288	22	7.6
30 - 34 yrs	157	18	11.4	222	19	8.5
35 - 39 yrs	113	12	10.6	151	18	11.9
40 - 44 yrs	108	18	16.6	109	10	9.2
45 - 49 yrs	119	22	18.5	122	18	14.7
50 - 54 yrs	90	13	14.4	91	9	9.8
55 - 59 yrs	60	10	16.6	53	11	20.7
60 - 64 yrs	73	8	10.9	72	5	6.9
65 - 69 yrs	38	11	28.9	26	5	19.2
70 yrs and over	93	16	17.2	63	15	23.8
TOTAL	3,101	326	10.5	3,197	319	9.9

Table 9 shows that there is a relationship between the age of the sick persons and their kinship ($r = .46$). The largest percentage of sick persons is found in the infant group. The most common sicknesses or symptoms are: stomach aches (23.4%), headaches (23%), flu (11.2%) and fevers (10.5%) (Table 49). The most common illnesses treated by the doctors or nurses of the medical districts are malaria, measles, gastroenteritis and dysentery, broncopathies and pneumo - pathies. It should be

noted that onchocerciasis is not mentioned among the sicknesses treated at the medical districts level. Indeed, the population is only vaguely familiar with onchocerciasis (Table 50), since only 8% know of this disease and 81.8% state that they do not know anyone with the disease (Table 54). Does this mean that onchocerciasis is not serious in the region? No, because the most numerous cases are found in the districts of COBLY and MATERI and we do not have any data for those districts. It is a certainty, however, that at the province level onchocerciasis is not the top priority health problem. Diseases such as malaria, pulmonary disease, gastroenteritis and infectious diseases like measles are the most significant threats. The young (Table 51), people who have had the most schooling (Table 52) and civil servants (Table 53) have heard about onchocerciasis. This is probably the result of awareness campaigns.

C. Attitude towards Medicine

Despite the fact that modern medicine arrived several decades ago, the people as a whole remain very much attached to traditional medicine. Doctors are aware that "generally the people resort to native cures before consulting with a doctor" (KOUANDE Medical District). Although Table 10 shows that 41.3% of the sick go to a doctor for treatment and 14% are treated by a male nurse, it can be conceived that the vast majority of these persons pay a visit beforehand or simultaneously to the witch doctor. Although, according to Table 34, 82.5% of the persons interviewed claim that they have greater confidence in modern medicine than in traditional medicine, the latter remains nevertheless very popular. Indeed, according to Table 10, 29% admit to having been treated by a faith-healer. Doctors are consulted by priority for the following:

- eye diseases 80%
- unknown diseases 77.8%
- cough 50%
- infectious diseases 48%
- stomach aches 44%

Among the ethnic groups who have the most confidence in modern medicine are the DENDI (96.6%), followed by the YORUBA (89.1%). Those groups with the greatest confidence in traditional medicine are the BARIBA (37.7%) and the PEULH (34.1%), as shown by the following table:

NATIONALITY	CONFIDENCE IN MODERN MEDICINE
DENDI	96.6%
YORUBA	89.1%
FON	88.9%
OTAMMARI	85.2%
DJOUYOU	83.2%
PEULH	65.9%
BARIBA	62.3%

Table 35 reveals that among the heads of household the women have more confidence in modern medicine than the men. The next table shows that there is a relationship ($r = .09$) between that confidence and the age of the head of household. The older the head of household is the more confidence he has in traditional medicine. This shows the older people's belief in ancestors traditions. There is also a relationship ($r = .07$) between this confidence and the main activity of the head of the household. Civil servants and housewives have more confidence in modern medicine than farmers or stock breeders (Table 38). In contrast, there is no relationship between confidence in modern medicine and the schooling of the heads of household (Table 37).

The faith healer, or witch doctor, is consulted first of all for paleness (75%), icterus (63.6%) and body pains. The witch doctors treat the symptoms rather than the diseases and this is why the health problems mentioned represent symptoms. It is interesting to note in Table 13 that when the sickness lasts more than 3 months the percentage of sick people who resort to faith healers for treatment is equal to those who have been attended to by doctors. Also, if one type of medicine does not yield the desired results the combination can be more efficient. According to Table 14, it appears that the percentage of sick people who have been cured is the same for those who were treated by a doctor and those who were treated by a faith healer and that the percentage who died appears to be greater in the latter group. Concerning the treatment given and the fate of the sick people, Table 15 reveals that regardless of the treatment applied the largest percentage of cure is in the category of those who receive both pharmaceutical and traditional treatment (81.8%). The next largest percentage of cure is in those persons who receive pharmaceutical treatment (67.3%) and then the traditional treatment (66.2%). It should be noted, lastly, that the percentage of deaths (14.4%) is highest in the category of traditional treatment. Table 44 provides a list of the major remedies used in native medicine. Tree bark, plants and roots are primary components.

Sicknesses are rarely attributed to a natural phenomenon, but are generally looked upon as being the result of supernatural forces surrounding man, or ancestors to whom respect has not been given. Thus, 25% of the persons interviewed believed sicknesses are caused by the intervention of supernatural forces, only 8% consider the cause to be the absence of hygiene, 5.5% malnutrition, and 5.4% non-potable water for preparing meals and drinking (Table 39). It is therefore not surprising that the vaccination campaigns undertaken to prevent certain diseases, or to bring them under control,

have not had the desired result. Thus, Table 56 reveals that only 982 men and 783 women have been vaccinated in their lifetime, which is equivalent to 31.6% of the men and 24.4% of the women. Of that group, those under the age of 15 are 52.5% women and 52.4% men. Half of the persons vaccinated are school-age children (Table 56). The vaccines received are Calmette-Guerin Bacillus (25.2%), smallpox (24.3%), measles (20.5%), tetanus (7.8%), tetracoccus (4.8%) and yellow fever (2%); 15.2% being indeterminate (Table 57).

RELATIVE IMPORTANCE OF THE VARIOUS VACCINES RECEIVED

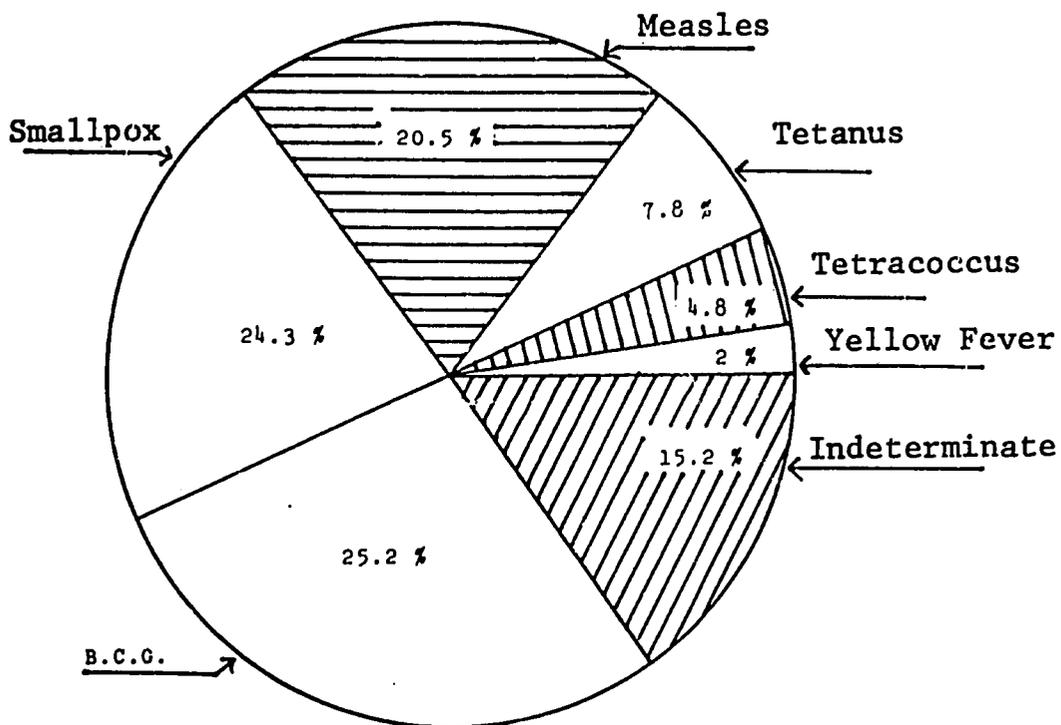


Table 58 shows that the children are the ones vaccinated the most. Among the persons vaccinated, only 15.2% of the heads of household and 13% of the wives are vaccinated. With respect to the total population, this represents 34% of the heads of household and 21.6% of the wives. Table 59 confirms that regardless of the type of vaccine, the children are the ones most vaccinated, followed by the heads of household and then the wives.

II. HYGIENE

Hygiene, one of the essential elements of disease prevention, is practiced at various levels. We may distinguish environmental hygiene, body hygiene and nutritional hygiene. Concerning nutritional hygiene, this study will only deal with water.

A. Environmental Hygiene

Table 1 reveals that for 93.2% of the population the customary place for relieving oneself is outdoors, while 6.3% of the population have septic tanks for that purpose. Examination of the tables by ethnic group reveals that the FON (44.4%) and the DENDI (35%) have septic tanks. These are two groups that live primarily in the urban centers. The districts with the most septic tanks are DJOUGOU URBAIN (51.2%) and TOUCOUNTOUNA (11.0%). Table 2 shows that there is a relationship ($r = .18$) between the customary place for relieving oneself and the main activity of the head of household. Civil servants have the highest percentage of septic tanks, followed by merchants. Another important aspect of environmental hygiene is waste disposal. The best way to dispose of waste is to burn it or to bury it in the ground. However, 89.7% of the population claims to throw the waste outdoors (Table 3), which is a significant source of contamination, in particular when animals, such as

boys, roam freely. In terms of the ethnic groups, the OTAMMARI (17.2%) and the FON (16.7%) burn their waste the most. In contrast, with the DENDI, the PEULH or the YORUBA, the waste is always discarded outdoors. The practice of burying the waste is not very widespread. This practice is followed only by some FON (5.6%) and DJOUGOU (3.1%). The districts of BOUKOUMBE, TOUCOUNTOUNA and MATERI have the highest percentage in the categories of burning or burying waste, but this percentage remains low, since 75% of the population of TOUCOUNTOUNA and 85.5% of the population of MATERI disposes of waste outdoors. Table 4 shows that there is no relationship between how waste is disposed of and the main activity of the head of household. It is the custom to leave waste outside.

B. Body Hygiene

Body cleanliness of children is important to prevent infection. Table 5 shows that in the Province as a whole 82.8% of the children are washed daily and most of the children are washed at least every other day (97.8%). This is truly remarkable considering how difficult it is to obtain water. During the dry season, of course, one could be led to believe that the frequency of washing drops because water becomes a scarce commodity. If we classify the ethnic groups in descending order, we see that the DJOUGOU wash their children most often (94.8%) and the OTAMMARI the least often (71.5%).

NATIONALITY	CHILDREN WASHED DAILY
DJOUGOU	94.8%
FON	93.3%
DENDI	93.1%
YORUBA	90.2%
PEULH	86.0%
BARIBA	83.1%
OTAMMARI	71.5%

It is not surprising to note, that the Districts of NATITINGOU (53.4%) and BOUKOUMBE (56.7%) have the lowest percentages in terms of bathing children daily, since these districts are inhabited largely by OTAMMARI. The Districts where the children are washed most frequently are OUAKE (98%) and TANGUIETA (96.2%), as can be seen from the next table:

DISTRICTS	CHILDREN WASHED DAILY
OUAKE	98.0%
TANGUIETA	96.2%
DJOUYOU RURAL	95.6%
PEHUNCO	94.5%
TOUCOUNTOUNA	91.9%
BASSILA	91.7%
MATERI	89.0%
COPARGO	88.7%
KOUANDE	86.0%
COBLY	83.8%
DJOUYOU URBAIN	81.6%
KEROU	75.0%
BOUKOUMBE	56.7%
NATITINGOU	53.4%

It should be noted that 44.2% of the population has access to a well (Table 7). The others obtain their water from the streams (41.0%) or rivers (10.7%). Some (4.1%) have access to a tank or to a faucet in their home. The PEULH (23.3%) are the ones with the least wells and who have to resort to the natural water sources (74.4%). The OTAMMARI (28.7%) have slightly more access to the wells. The DENDI are the group with the most access to a well (93.5%).

NATIONALITY	ACCESS TO A WELL
DENDI	93.5%
FON	72.2%
DJOUYOU	57.5%
BARIBA	55.6%
YORUBA	45.5%
OTAMMARI	28.7%
PEULH	23.3%

OUAKE and DJOUYOU URBAIN are the districts where the population has the greatest access to wells, whereas in TANGUIETA none of the households interviewed had any access to a well: 81.5% of the people get water from open streams.

DISTRICTS	ACCESS TO A WELL
OUAKE	87.5%
DJOUYOU URBAIN	72.9%
DJOUYOU RURAL	72.0%
KEROU	68.6%
TOUCOUNTOUNA	60.5%
KOUANDE	58.8%
PEHUNCO	42.9%
COBLY	39.5%
BASSILA	35.8%
NATITINGOU	31.3%
MATERI	21.3%
BOUKOUMBE	20.0%
COPARGO	11.3%

The distances to get water are not great except during the dry season. Table 8 reveals that 71.8% of the people have to travel less than one kilometer to reach a supply of water and 81.1% need less than one hour to get there (Table 9).

C. Nutritional Hygiene

In the field of health there are numerous cases of gastro-enteritis and dysentery. This is not surprising considering that 12.7% of the population claims to have no access to drinking water (Tables 10 and 11). What is even more interesting is that a large number of the 70.5% who claim to have access to drinking water think that if the water is clear it is potable and can be drunk. The groups with the greatest access to potable water are the DENDI (96.6%) and the YORUBA (95.5%), whereas those with the highest percentage usage of non-potable water are the PEULH.

NATIONALITY	ACCESS TO POTABLE WATER	
	DRINKING	COOKING
DENDI	96.6%	96.8%
YORUBA	95.5%	93.5%
DJOUGOU	80.8%	81.3%
BARIBA	68.1%	71.2%
FON	61.1%	61.1%
OTAMMARI	60.4%	53.0%
PEULH	58.1%	50.0%

The Districts best supplied with potable water for drinking or cooking are PEHUNCO and OUAKE, whereas those least supplied are BOUKOUMBE, TANGUIETA and KOUANDE.

DISTRICTS	POTABLE WATER	
	DRINKING	COOKING
PEHUNCO	97.1%	97.3%
OUAKE	94.0%	92.0%
BASSILA	86.8%	87.0%
COPARGO	83.0%	83.0%
KEROU	77.8%	83.3%
DJOUGOU RURAL	77.4%	79.6%
DJOUGOU URBAIN	76.4%	77.5%
TOUCOUNTOUNA	73.8%	74.4%
MATERI	68.4%	39.5%
NATITINGOU	60.9%	55.4%
COBLY	59.0%	59.0%
BOUKOUMBE	52.5%	50.5%
TANGUIETA	51.9%	51.9%
KOUANDE	42.0%	41.2%

At MATERI, a great difference is noted between those who have potable water for cooking and for drinking: 47.4% are not sure that the water they use for cooking is drinkable. In effect, 11.8% know that the water is not safe for drinking and 13.2% know that it is not safe for cooking. It is interesting to note that while 251 households out of 767 replied to the question that they do not have potable water or that they do not know whether it is potable, 470 households, (61%) treat the water, either by boiling it (42.6%) letting it set (9.1%) or filtering it (45.3%). This reveals that even those who believe that their water is safe take precautions. The population is consequently aware of the dangers of direct consumption of the water from the streams or rivers. The process of filtering the water consists in decanting the water to which an alum white stone has been added. The FON and the DJOUGOU are the ones who "filter" water, whereas the BARIBA, DENDI and OTAMMARI boil it. In the case of the PEULH there are just as many who boil

water as those who filter it. In terms of districts, in COBLY, COPARGO and KEROU water is boiled, whereas in DJOUGOU URBAIN, BASSILA and TOUCOUNTOUNA water is filtered. These practices are not a function of the age of the head of household (Table 14), the schooling of the head of household (Table 15) or even the main activity of the head of household (Table 16). These are, therefore, very widespread practices which maintain the health of the population.

III. NUTRITION

Among all of the ethnic groups of ATACORA it is customary for mothers to breast-feed their babies. Almost all of the babies are breast-fed (Table 1). The exceptions are to be found in the OTAMMARI, where 1.6% of the babies are not. In the districts of BOUKOUMBE, COBLY, MATERI, TANGUIETA, TOUCOUNTOUNA and NATITINGOU there are some cases in which the babies are fed milk or porridge from the youngest age (Table 2). Among those babies who are not breast-fed, therefore, 44.9% are fed porridge and 39.7% milk. Some are given light foods (1.3%) or even heavy foods (2.6%), but this is an exception.

NATIONALITY	MILK	PORRIDGE
PEULH	54.5%	45.5%
DJOUYOU	52.2%	39.1%
YOURUBA	50.0%	50.0%
DENDI	37.5%	62.5%
OTAMMARI	14.3%	47.6%

The table shows that the PEULH are the ones who feed their babies milk the most. This is understandable because they are herdsmen. The OTAMMARI give the least milk, giving porridge instead or other foods. The DENDI are the group giving the most porridge, which is generally composed of corn, sorghum

or millet. In terms of the districts, the most milk is given in BASSILA and OUAKE, whereas practically nothing other than porridge is given in BOUKOUMBE, COBLY and TOUCOUNTOUNA.

The age for weaning babies is generally quite high, the average age being 24 months (Table 3). Some babies are not weaned until the age of 30 months, which is the upper limit. Thus, in the District of KEROU all of the babies are weaned between the age of 21 and 30 months, whereas in PEHUNCO 60% of the babies are weaned between the age of 16 and 20 months.

DISTRICTS	PERCENTAGE OF BABIES WEANED BETWEEN AGE OF 21 AND 30 MONTHS
KEROU	100.0%
DJOUYOU RURAL	92.3%
NATITINGOU	85.2%
BOUKOUMBE	85.2%
KOUANDE	83.3%
COBLY	82.9%
COPARGO	80.6%
BASSILA	78.1%
DJOUYOU URBAIN	73.2%
TOUCOUNTOUNA	63.6%
MATERI	59.2%
TANGUIETA	56.5%
OUAKE	40.0%
PEHUNCO	34.8%

Relatively few children have health problems (Table 4) at the time they are weaned (30.4%) and this is understandable considering their advanced age. Those with the most health problems are the DENDI and those with the least health problems are the FON.

NATIONALITY**HEALTH PROBLEM
AT TIME OF WEANING**

FON	22.1%
OTAMMARI	24.9%
BARIBA	27.4%
YORUBA	30.6%
PEULH	37.8%
DJOUGOU	38.7%
DENDI	40.7%

In KOUANDE (70.5%) and OUAKE (65.8%) the babies have the greatest problems at the time of being weaned. The Districts that are inhabited by OTAMMARI have a much lower rate, with MATERI having the least problems with only 11.4% of the cases. The major health problems encountered at the time of weaning are diarrhea (44.6%), some cases of fever (13.2%) resulting in a certain loss of weight in the baby (12.7%) (Table 5). The BARIBA seem to be the group most affected by this problem, whereas in the case of the YORUBA the number one problem is fever (25%) and in the case of the DENDI stomach aches (50%).

NATIONALITY**MAJOR PROBLEM
AT TIME OF WEANING****%**

FON	FEVER	33.0
BARIBA	DIARRHEA	60.0
DENDI	STOMACH ACHES	50.0
PEULH	LOSING WEIGHT	37.5
OTAMMARI	DIARRHEA	50.7
YORUBA	FEVER	25.0

At the District level, there is the following distribution:

DISTRICTS	MAJOR PROBLEM AT TIME OF WEANING	%
BASSILA	UNDETERMINED	66.7
BOUKOUMBE	DIARRHEA	51.9
COPARGO	DIARRHEA	50.0
COBLY	LOSING WEIGHT	41.7
DJOUYOU URBAIN	FEVER	43.8
DJOUYOU RURAL	DIARRHEA	77.8
KEROU	"	51.6
KOUANDE	"	81.8
MATERI	"	55.6
NATITINGOU	"	37.5
OUAKE	"	53.8
PEHUNCO	"	53.8
TANGUIETA	LOSING WEIGHT	50.0
TOUCOUNTOUNA	DIARRHEA	50.0

When health problems occur at the time of weaning, the households resort mostly to native remedies (49%), then to pharmaceutical remedies (40.3%). Table 3 shows that close to 10% do nothing at all, and 1% perform ceremonies. The FON resort the most to pharmaceutical remedies and the BARIBA to native remedies.

NATIONALITY	PHARMACEUTICAL REMEDIES	NATIVE REMEDIES
FON	100.0%	-
DENDI	58.3%	41.7%
PEULH	57.1%	14.3%
DJOUYOU	39.1%	58.9%
OTAMMARI	38.2%	54.4%
BARIBA	30.0%	65.0%
YORUBA	18.8%	12.5%

In the case of the YORUBA, 65% of the households do nothing and simply let the health problem solve itself. At the District level, pharmaceutical remedies are resorted to the most in OUAKE, whereas native remedies are used the most in COBLY.

For the family in general, Table 7 shows that all complain of the lack of food (99.3%). No nationality, no district escapes from this. This is not a problem that occurs throughout the year, but rather characterizes in particular the period between the planting and the harvesting (see the commentary on the districts). Many who have depleted their supplies suffer from famine. This is a problem that recurs each year. Table 8 shows that eating to one's fill is not pertinent to the number of persons in the household or the main activity of the head of household (Table 9). Civil servants, merchants and farmers complain of not always being able to eat to their heart's content. During the year, the people take at least two meals per day (47%) and 51.9% take 3 meals per day (Table 10). Discrepancies occur among the ethnic groups, as shown in the next table:

NATIONALITY	THREE MEALS	TWO MEALS
DJOUYOU	77.2%	21.7%
BARIBA	75.0%	25.0%
FON	70.6%	17.6%
YORUBA	64.7%	26.5%
DENDI	54.8%	45.2%
PEULH	53.7%	34.1%
OTAMMARI	29.3%	48.6%

The DJOUYOU and BARIBA have the highest percentage of households eating 3 meals a day, whereas OTAMMARI 48.6% eat only two meals a day and 21.1% only eat one meal. It is

therefore not surprising to note that 50% of the population in the Districts of BOUKOUMBE, COBLY and NATITINGOU only eat 1 or 2 meals per day, whereas in all of the other districts 50% of the population eat between 2 and 3 meals a day. Table 11 reveals that there is a slight relationship ($r = .12$) between the number of meals per day and the size of the households: the larger the size of the household, the greater the number of meals. This indicates that the large households have more food available than the small ones. Also, there is a slight relationship ($r = .10$) between the number of meals and the main activity of the head of household: a larger percentage of civil servants than farmers eat 3 meals per day (Table 12).

Table 13 shows that in general there is no regular time for the meals: only 30.3% of the households of ATACORA eat their meals at a regular time. The FON are the ones with the highest percentage for regular time for meals and the OTAMMARI have the lowest percentage:

NATIONALITY	REGULAR TIME
FON	52.9%
DJOUYOU	47.8%
DENDI	46.7%
BARIBA	25.0%
YORUBA	25.0%
PEULH	21.9%
OTAMMARI	19.3%

Although there is no relationship between the fact that meals are eaten at a regular time and the size of the household (Table 14), there is a relationship ($r = .11$) with the main activity of the head of household. Merchants and civil

servants have the highest percentage of a regular time for their meals. This can be understood in the case of the civil servants, since the working hours determine the meal times.

Tables 15 to 19 show that there is no difference between the composition of the meals of children and that of adults. Table 15 shows that at breakfast one eats either porridge, "pâte" or "pâte acide". Table 17 shows that for lunch people eat mostly "pâte", porridge or yams, and for supper more than 90% eat "pâte". The meals are not very elaborate and are composed essentially of cereals and tubers. Table 20 shows that the composition of the meals is the same regardless of the activity of the heads of household.