ANALYSIS OF THE CULTURAL MODEL OF NUTRITION IN CENTRAL
HONDURAS
by
Victoria Chapman

A Senior Honors Project Presented to the
Honors College
East Carolina University
In Partial Fulfillment of the
Requirements for
Graduation with Honors
by
Victoria Chapman
Greenville, NC
May 2017

Approved by
Dr. Kindal Shores
Department of Recreation and Leisure Studies
Dr. Blakely Brooks
Department of Anthropology

ABSTRACT

Currently present is a lack of cultural competency of the diet, the roles of available food, and preferred food choices of Hondurans. This creates disconnect between the people receiving dietary information and those who seek to educate Hondurans regarding nutritional lifestyle changes. A Cultural Domain Analysis (CDA), 24-hour food recall, and personal interviews were conducted of the diet in Taulabé Comayagua, Honduras. It was found that Hondurans typically group foods based on three main topics 1.) Items as standalone meals 2.) Everyday meals. 3.) Snack foods. This research provides information for the development and implementation of nutrition education material for the people of central Honduras.

BACKGROUND/ INTRODUCTION

Thousands of global health service workers and missionary teams fly into Honduras each year. Many are equipped with suitcases full of medicine, health pamphlets translated into Spanish, and with a true plan of serving the people of Honduras. Even with wonderful supplies and the goal of providing aid and making an impact, there are many ways that direct biomedical intervention and health teachings fail. Preventative medicine and healthy lifestyle adaption education is one of the most difficult tasks within public health. Even in America, these practices often do not work because more than just providing a medication or performing a physical procedure, health promotion requires a deep understanding of the culture to for implementation.

It is in this domain, there is a lack of cultural competency about the diet of Hondurans. This lack of knowledge about the roles of available food and preferred cultural food choices create disconnect between the people receiving dietary information and those who seek to educate Hondurans for lifestyle changes. The result of detachment is the presentation of non-culturally relative materials to the Hondurans, of which they man not truly comprehend or have little hope of following.

HONDURANS AND COMMUNITY OF STUDY

According to the United Nations project Millennium Development Goals Indicators; in 2011 Honduras had 16.5% of its population living in extreme poverty on less than a dollar a day. One of the main implications of this extreme poverty level is that one may consume very little nutritious foods, which in turn will make them susceptible to disease (UN 2011). According to the World Health Organization (WHO), "Malnutrition is one of the most important risk factor for disease. When poverty is added, it results in a downward spiral that may end in death. Disease decreases people's ability to cultivate or purchase nutritious foods (NLiS)." It is clear that disease preventative methods for Honduras must include nutritional education with strong focus on affordability and limited resources.

The research was conducted in a department of Honduras called Comayagua in a municipality called Taulabé. According to 2013 census from the Instituto Nacional de Estadística (INE) Taulabé has a total population of around 25,000 where around 68% live in a rural setting and 50% of the population lives in poverty. The majority of the economic activity comes from agriculture, stockbreeding, forestry, and fishing. There is a 15% illiteracy rate and the average years of formal education is 5.8 years (INE 2013).

CULTURAL DOMAIN ANALYSIS

Many traditional methods for studying a group of people or a component of their culture includes observational studies, focus groups, or case studies. All of these methods are attempting to have an emic approach to studying a culture; this emic view mainly began to gain support in the 1950's. As Dr. Lett (1990) explains, from an anthropological perspective, "Emic constructs are accounts, descriptions, and analyses expressed in terms of the conceptual schemes and categories regarded as meaningful and appropriate by the

native members of the culture whose beliefs and behaviors are being studied (pg. 130)."

It is this approach that the need for a systematic way to obtain and process the collected

data was met through the introduction of Cultural Domain Analysis. Dr. Dressler,

researcher from the University of Alabama defined CDA as "… a terrific way to organize

items of everyday into categories" The main and most often used data collection tools of

CDA include free listing and pile sorting. These are described below.

Free listing is as simple as it sounds. It is having a participant list all of the terms

that come to mind under a certain domain or topic of interest. It is generally found that

participants will mention items in terms of salience, which is familiarity. Listing more or

less typically corresponds to more or less competence about subject respectively (Medley

2008). Free listing provides valuable mass data that is analyzed and then used in pile

sorting.

From the numerous terms each participant shares within the interested domain,

the next step is to select the top choices for use in pile sorting. The common method is

simply identifying which terms appear most frequently, of which around 20 are selected

for pile sorting.

Pile sorting involves a new set of participants. Participants are asked to sort note

cards of the terms that were previously determined to be most salient. They sort these

notecards in multiple ways. One method of pile sorting is called unconstrained. In this

method, the participant is instructed to sort cards into as many piles they deem

appropriate so that "like goes with like." It is this freedom that allows participants to

stratify terms in their way, which leads to many culture specific views of the domain to

be revealed in a quantifiable way.

The second method of pile sorting is constrained sorting, which can be topic specific. Participant is asked to sort cards into a set number of pre-selected categories based on common reasoning of unconstrained sorting. Pile sorting is the most common method for proximity data, which is seeing how people group items together (Medley 2008).

After data collection using CDA, the proximity data will be converted into proximity matrices and then there are several methods of data analysis (Medley 2008). Stephen P. Borgatti, has been instrumental in the data analysis of the CDA model. Some varying types of analysis include multi-dimensional scaling, hierarchical clustering, and consensus analysis. (Medley 2008) Borgotti defines the power of the consensus analysis "… the respondent-by-respondent matrix of agreements among respondents across all questions adjusted for chance getting, can be factor-analyzed to produce a single factor (essentially an answer key) which statistically explains the patterns of agreement (1994)."

METHODS

A CDA was performed including free listing, pile sorting, 24-hour food recalls, and personal interviews. This research was approved by institutional IRB and participants were asked for their informed consented before participating. There was a small gift of cookware for participation.

FREE LISTING

Twenty-nine adult individuals were invited to participate in a free listing activity. The method of pile sorting was explained and once confident in the research approach of free listing, participants were asked to list the foods they eat most often. The translator transcribed all data.

From the free listing data, the top 20 food items were typed on index cards and a photo of the food item will be on the card for any illiterate participants and for better recognition of the item.

UNCONSTRAINED PILE SORTING

After proper comprehension, the cards made from the free listing analysis were presented in random order to 30 participants by reading the cards out loud. The participants were asked to sort these items into multiple groups by any means they see fit. Participants were then asked to describe their methods of sorting.

CONSTRAINED PILE SORTING

From field notes, it was concluded that a reoccurring theme of sorting was based on three categories: 1.) Food items as standalone meals 2.) Everyday meals. 3.) Snack foods. Thirty new individuals were prompted to sort cards into those three categories. Participants were then asked to rank in the order of the food items from most healthy to least.

24-HOUR RECALL

Thirteen participants were asked to complete a 24-hour food recall. The transcribed and translated data can be found in the APPENDIX 1-A.

INDIVIDUAL INTERVIEWS

To gain a better understanding of the culture surrounding the pile sorting five individual interviews were conducted. They were asked the below questions:

- What is one of your favorite things to eat and how is it prepared?
- What types of vegetables do you eat the most and how often?
- What types of fruits do you eat the most and how often?
- How much money per week do you typically spend on food to feed your family? What is the most expensive thing you have to buy?

- If you were to make a healthy meal, what would that look like (including amounts)?
- How do you like to receive information about health: in a pamphlet, on a poster, in person with a teacher/doctor, TV/radio ads, or others?
- What makes a person healthy?
- Why would a person want to be healthy?

The transcription and translations of interviews can be found in the APPENDIX 1-B.

DEMOGRAPHICS

Participants of this research were selected using convenience sampling. The translator assisted in finding low risk, and safe barrios. Barrios selected were Tauluabe, Carrizales, and Jardínes,

Free listing participants included a total of 25 participants, of which 11 were male and 14 where female. There was an age range of 18-61 years old. See below FIGURE-1.

Unconstrained pile sorting included 30 total participants where 12 were male and 18 were female. Their ages ranged from 18-72 years old. See below FIGURE-2.

FIGURE-1

Free Listing Demographics

FIGURE-2

Unconstrained Pile Sort Demographics
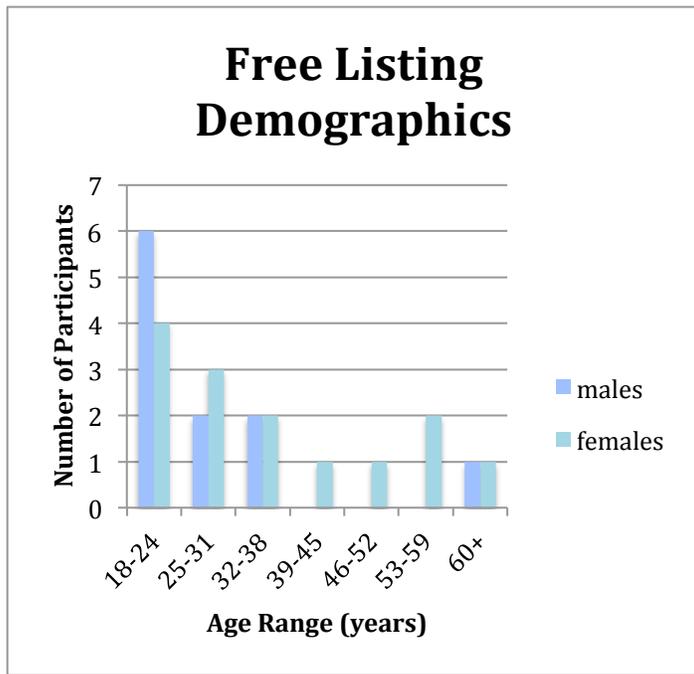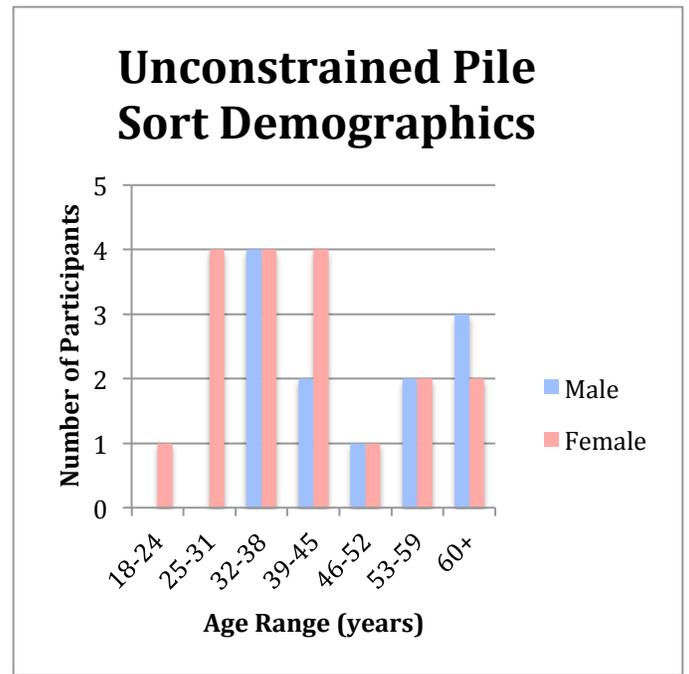
In the above figures that there are two demographic gaps for men. In the free listing phase, there is a gap of males between the ages of 39-59. Most men when the researcher requested to speak to them about food, a men in the age range of 39-59 if present I the house, would ask that the researcher ask their wife questions about food. Several stated that their wife would be better to ask because she was responsible for preparing food in their household. There is also an under represented group of males 18-31 in the unconstrained pile sort phase. This data was collected in mid May, which is the peak coffee harvest season and the women stated that the young men would be gone all day picking coffee.

RESULTS AND ANALYSIS

FREE LISTING

Participants listed over 70 individual food items. The top 20 items were selected and are below in TABLE -1. The only exception is the fruit vegetables. Each participant listed at least one type of fruit and vegetable, for further study these were grouped into the categories fruits and vegetables.

TABLE-1

Food Item (Spanish/English)	# Of Responses out of 25	Carne de Rez/ Beef	12
		Food Item (Spanish/English)	# Of Responses out of 25
Frijoles/Beans	22		
Arroz/Rice	25	Huevos/Eggs	13
Pollo/Chicken	19	Jugo de Fruta/ Fruit Juice	12

Café con Azcar/Coffee with Sugar	13		Ensaladas/ Salad	6
			Pastel/Cake	8
Baleadas	13		Pan/Bread	8
Pastas/Pasta	14		Papas Platanos Fritos/Fried Plantains and Fries	6
Sopa/Soup	12			
Carne de Cerdo/ Pork	6			
Frutas/Fruits	25		Tamales	8
Vegetales/Vegetables	25		Aqua/Water	5

As seen above, 25 out of 25 participants listed rice as a food eaten often. Other high frequency food items included fruits, vegetables, and beans.

UNCONSTRAINED PILE SORTING

Participant groupings were entered into ANTHROPACK and a multidimensional scale figure was produced as seen below FIGURE-3. Qualitative analysis is based of field notes.
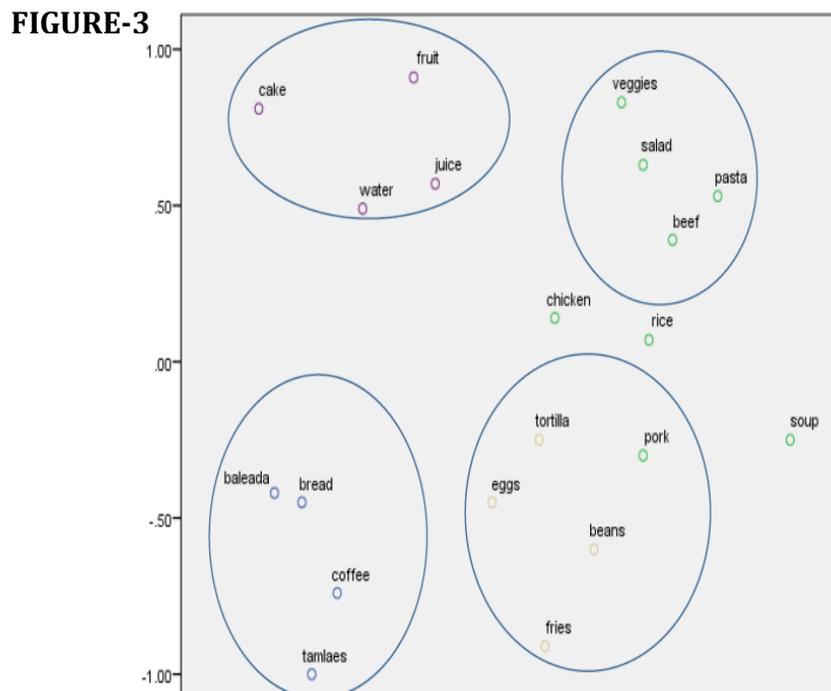
FIGURE-3

In the above figure the items closer together where more often grouped together than items further away. For instance the points for baleadas and bread in the lower left quadrant are in close proximity, which indicates that they were sorted together frequently. Tamales in the lower left and fruit in upper left are far apart and therefore were not sorted together commonly if ever. Below is a visual display of the multidimensional scale using photographs of food items in place of points (FIGURE-4).

FIGURE-4
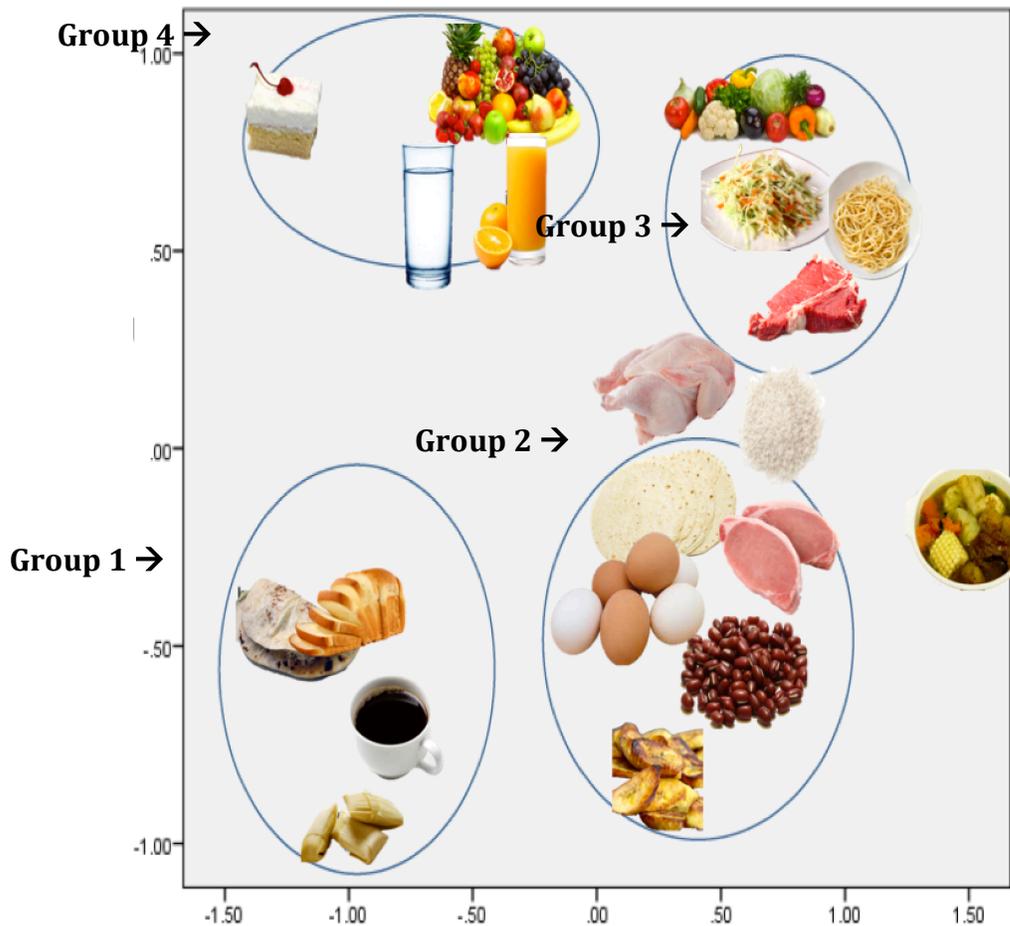
In the bottom left corner there is bread, baleadas, tamales, and coffee grouped together referred here as group 1. A baleada is traditional Honduran dish composed of a flour tortilla, often quite thick, folded in half and filled with mashed fried beans,

crumbled cheese, and crema. Coffee is a central item in this cluster because many participants indicated that coffee is typically paired with bread for an afternoon snack or breakfast. Also, tamales and baleadas were always served with a cup of coffee. Many indicated that tamales and baleadas were a food that had all the ingredients inside them and that is why they were not paired with a side, such as rice or tortillas. Some participants shared that these foods were foods you could buy on the street and where convenience items for purchase, but took a relatively long time to prepare.

The bottom right corner clusters tortillas, eggs, beans, pork, fried plantains. This is referred to as group 2. Group 2 has close proximity to rice and chicken. These foods were indicated as items used in everyday meals and often during multiple meals. Tortillas, chicken, rice, eggs, and beans were said to be staple foods of a Honduran diet.

Soup is somewhat isolated. Many responses indicated that soup was eaten alone because like the tamales and baleadas they contained all needed items for the meal inside if it. Some shared that soup was typically prepared on a Sunday afternoon as a large family meal including nuclear family and extended.

In the upper right corner as group 3 are vegetables, salad, pasta, and red meat with close proximity of rice and chicken. Many respondents were grouping these items in meal preparation. Participants would share that this group looked like a delicious lunch or dinner.

Between group 2 and group 3 an ascent of healthiness can be observed. Group 2 foods were often shared as less healthy and many said that they thought fried foods and pork were unhealthy and that vegetables were the healthiest item.

Finally, in the upper left quadrant in group 4 there is cake, fruit, water, and orange juice. Many participants grouped juice and fruit together sharing their thought process of "fruit makes juice." They also paired water and juice together because they were beverages. Cake was often unpaired or paired only with a drink or fruit because they said they only eat cake on special occasions and typically it is eaten accompanied by soda.

CONSTRAINED PILE SORT

After review of field notes and CDA groupings, it was determined that some of the most common reasoning for the pile sorting of the twenty items is based on three ideas.

1. Comida Completa (Complete Foods): Standalone meal items that have everything inside them.

2. Platos Comunes (Common Plates): Everyday meal items.

3. Apedivios (Snacks): What is eaten between meals.

These groupings lead to a final round of pile sorting and the preliminary results show strong groupings. Future analysis is needed to complete this phase and to test for salience.

24-HOUR FOOD RECALL

The 24-hour food recall allowed better comprehension of the typical diet of the region. It provided information about the types of foods that were actually on the plate of the Hondurans and in what quantities. For a full list of responses refer to APPENDIX 1-B.

PERSONAL INTERVIEWS

Some insight gained from the responses included that Hondurans desired to be healthy for their family wellness. Several indicated not eating any vegetables during a

typical week. There was a large range of how much money families spent on food weekly ranging from the equivalent of 55 cents per person per day to four dollars per day per person. Many individuals illustrated a healthy meal as one filled with vegetables and no soda or pork, but some responses displayed a lack of knowledge of what a nutritionally sound meal entailed. One woman responded that she thought coffee was healthy because it takes her headache away along with oatmeal and chocolate. It was found that meat reoccurred as the most expensive food item. For full-transcribed accounts refer to APPENDIX I-B.

APPLICATION

After review of results and reflection of the observational experience, the researcher created a nutrition educational poster and displayed poster throughout community.

SUPPORT

I would like to thank East Carolina University office of Undergraduate Research for the Undergraduate Research and Creativity Award as well as travel award. Many thanks are to given to the East Carolina University Honors College for the Scholarly Activity Awards for Students.

I would also like to thank my mentor Dr. Kindal Shores for helping me continue to see the big picture and my mentor Dr. Blakely Brooks for all the assistance with methodology and analysis.

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APPENDIX

APPENDIX 1-A
24 food recall

Participant # 1
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
2 eggs
1 chicken's hotdog
1 piece of curd (5 centimeters)
3 corn tortillas (10 centimeters and ½)
Black Coffee with sugar (1 spoonful)
Lunch:
Beef soup (the soup included: yucca, beef, carrots, tomatoes, baby corn, zucchini, and rice)
Medium bowl size
Glass of soda (banana flavor) 8 ounces
   • Had a snack between breakfast and lunch.
Dinner:
1 Pork chop (size 17 by 11 centimeters)
Some slices of Plantain
Cheese (5 centimeters)
Salad dressing
Fried Beans (7 cm)
Water ½ litters
   • Had a glass of soda after dinner (6 ounces)

Additional Comments:
The water was bought at the store
24 food recall
Participant #: 2
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Cornflakes with regular milk
Medium Bowl size

Lunch:
Fried Pork meat (8 by 3centimeters)
Beans 8 ounces
Rice (portion of 8 by 7 centimeters)
5 tortillas (13 centimeters)
Water (12 ounces)
   • Had a piece of candy between breakfast and lunch
Dinner:

2 Tamale with fried beans (13 by 1 ½ centimeters)
Butter (portion of 6 by 3 centimeters)
Cheese (7 by 6 centimeters)
1 cheese hotdog (12 ½ by 3 Centimeters)
Black Coffee with 2 spoonful of sugar
- Had a glass of soda after dinner (8 ounces) and a snack

Additional Comments:
Water bought at the store (Bottle of 5 Gallons)

24 food recall
Participant #: 3

What did the participant eat in the last 24 hours and in what quantities?

Breakfast:
Black coffee with 1 ½ spoonful of sugar
2 pieces of sweet bread (8 centimeters by ½ thick)

Lunch:
Beans (7 ounces)
Rice (9 ounces)
2 pieces of fried pork skin (7 ½ by 3 centimeters)
6 tortillas (12 ½ centimeters)
Blackberries juice (16 ounces)
Dinner:
Beans (7 ½ ounces)
Butter (portion of 3 by 3 centimeters)
4 tortillas
Water (12 ounces)

Additional Comments:
Additional question asked: What's the favorite food you like to cook and how you do it?
"Fried pork skin"
Process: boils the skin with salt until dries then pour some lard and let them cook for a while until they are ready.

24 food recall
Participant #: 4
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
1 egg
Beans (1 ounce)
1 tortilla (9 ½ centimeters)
Lunch:

Did not has lunch
Dinner:
Chicken (one piece of 7 by 3 centimeters)
Plantain
Coca cola (8 ounces)

Additional Comments:
Additional question Asked
Why didn't had lunch, and what is the favorite food for her kids?
Did not had Lunch because has upset stomach and the French fries are her kids favorite food.

24 food recall
      Participant #: 5
      What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Coffee with ½ spoon of sugar
1 piece of sweet bread
½ glass of blended aloe Vera with honey
Lunch:
Pork legs (one piece of 4 centimeters)
Rice (2 ounces)
2 tortillas (10 centimeters)
Water ½ litters
Dinner:
Plantain
Mincemeat (portion of 2 centimeters)
Coca cola (2 ounces)

- Had a coffee with blended ice after lunch

Additional Comments:

24 food recall

Participant #: 6
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Coffee with 2 spoonful of sugar

Lunch:
Beans (4 ounces)
Rice (3 ounces)
Water (16 ounces)
2 tortillas (11 centimeters)

Dinner:
Beans (2ounces)
1 egg
¼ of avocado
Water 16 ounces)
2 tortillas (11 centimeters)

Additional comments:
*At first she said she did not have lunch, but later she said she did.
Additional question asked:
What do you think people should eat to keep their good health?
She says people shouldn't drink soda because it is drug.
24 food recall
Participant #: 7
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Coffee with 1 ½ spoon of sugar

Lunch:
Stood pork (4 by 3 centimeters)
Rice (portion of 5 by 2 centimeters)
Water (16 ounces)
2 tortillas (10 centimeters)

Dinner:
Egg with tomatoes (1/2 egg and ½ tomato)
3 tortillas (10 centimeters)
Water (16 ounces)

Additional Comments:

Additional questions asked
- Where do you buy the water?

Buys the big bottle of water at the store
- What do you think should be eaten to stay healthy?

Said people must eat fish, vegetables and dairy
24 food recall
Participant #: 8

What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Beans (7 ounces)
Coffee with a spoonful of sugar
4 tortillas (11 centimeters)

Lunch:
Rice (7 ounces)
Beans (7 ounces)
Coca cola (10 ounces)
4 tortillas (11 centimeters)

Dinner:
Butter (2 ounces)
4 tortillas (11 centimeters)
Coffee with one spoonful sugar

Additional Comments:
Additional question asked:
What is your favorite food?
Answer: The chicken

24 food recall
Participant #:9
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
1 Egg with tomatoes
Rice (8 ounces)
Fried Beans (portion of 5 by 4 centimeters)
Water (12 ounces)
Lunch:
Mondongo soup (includes: Plantain, banana, potatoes and cow intestines)
2 tortillas (12 centimeters)
Medium bowl size

She had one sweetbread with water between breakfast and lunch.
Dinner:
1 egg with tomato
Rice (8 ounces)
Beans (portion of 5 by 4 centimeters)
2 tortillas (12 centimeters)
Water (12 ounces)

Additional comments:
Additional question asked:
What people shouldn't eat?
Red meat because contains too much fat.

24 food recall
Participant #: 10
What did the participant eat in the last 24 hours and in what quantities?
Breakfast:
Beans (10 ounces)
1 egg
Cheese (1/4 by 6 centimeters)
2 tortillas (10 ½ centimeters)
Coffee with 2 spoonful of sugar
Lunch:
Fried chicken breast (8 by 6 centimeters)
Rice (2 ounces)
2 tortillas (10 ½ centimeters)
Blackberries juice (12 ounces)
Dinner:
2 tamales with fried beans (Tamales 12 by 5 centimeters) (Fried beans 6 by 6 centimeters)
Butter
Water
Additional Comments:
Additional questions asked
  • How did you prepare the Tamales?
She adds blended green pepper, tomato, onion, and species to the beans.
  • When you want to have a dessert, what and a when you do it?
Jelly or "paleta" (frozen fruit juice in a cup) around two in the afternoon
  • Do you think nutrition is important for health?
Yes, because nutrition prevents people from diseases and keeps the body healthy
Participant#: 11   24 food recall

What did the participant eat in the last 24 hours and in what quantities?

Breakfast:

1 egg
Beans (3 ounces)
Butter (5 by 3 centimeters)
3 tortillas (9 centimeters)
Coca cola (12 ounces)

Lunch:

Beans (3 ounces)
Grated Cheese (1 ounce)
3 tortillas (9 centimeters)
Water (12 ounces)
Coca cola (12 ounces)

Dinner:

 Mincemeat and egg (mixed) 2 ounces
3 tortillas (9 centimeters)
Beans (3 ounces)
Water (12 ounces)

Additional Comments:

- Had a snack after dinner and coca cola (12 ounces)

Additional question asked:

What is the most expensive food item you have to buy, and how much it is?

- Said fried chicken is the most expensive she has to buy, because she makes tortillas to sell and has no time to cook. And the price is about 135 Lempiras.

Participant #: 12   24 food recall

What did the participant eat in the last 24 hours and in what quantities?

Breakfast:

Beans (12 ounces)

1 egg
3 tortillas (11 ½ centimeters)
Coffee with a teaspoon of sugar

Lunch:
Beans (1 ounce)
Grated cheese (5 ½ by ¼ centimeters)
Coffee with a teaspoon of sugar
3 tortillas

Dinner:
Flor de izote con huevo "flower with egg "(8 by 1 ½ centimeters) …this is a flower we use to boil add spices, salt and mix it with eggs.
Butter (6 by 0.8 centimeters)
Coffee a teaspoon of sugar

Additional Comments:

Had two glass of water between breakfast and dinner (12 ounces each)

Additional question asked,

How do you think food had change in Honduras through the years?

Had not change!!

She is 73 years old

Participant #: 13   24 food recall

What did the participant eat in the last 24 hours and in what quantities?

Breakfast:

Coffee with 1 sweetbread and 2 spoonful of sugar

Lunch:

Cheese (6 by 5 ½ by 2 ½ centimeters)
Beans (3 ounces)
Rice (9 ounces)
2 tortillas (9 centimeters)
Water (4 glasses of 16 ounces)
Tamarindo juice (12 ounces)
Coffee

Dinner:

Rice (7 ounces)
Beans (3 ounces)
1 egg
2 tortillas
Water (3 glasses 12 ounces each)
Tamarindo juice (8 ounces)

Additional Comments:

Questions:

- Do you think if people have a water filter, instead of buying the water at the store, will they drink more water?

She doesn't think so.

- Why do you drink so much water, because it is free now you have a water filter or you always did?

She always drinks a lot of water

She had 4 glasses of water and 4 of Tamarindo juice (16 ounces each) during the day

- Where did you get the water filter you have?
-
It was a gift by the president

APPENDIX I-B

Interviews

I Q = interviewer Question
P A = Participant Answer

Participant # 1

1. *I.Q*. **What is one of your favorite things to eat and how is it prepared?**

P.A. The normal to eat here in Honduras, it's the rice and beans, the beans can be stews, fried o whole beans; the rice with vegetables or mincemeat and you add any other seasoning you'd like.
   I.Q **But it's there any food in particular you like it?**
P.A. I am not following any diet, but what I most like are vegetables, but our daily food as most people here are the rice and beans the ones mostly people use. About diet food I can't give you so much information because I haven't health problems and like y said the vegetables are the ones good for people health.

2. *I.Q*. **What Types of vegetables do you eat most and how often?**

P.A. The most I use when it is possible to afford them are: cauliflower, cabbage, potatoes and tomatoes, those are the ones I use mostly in soups!
I.Q. **But on regular meals do you also use vegetables?**
P.A. Yes I do, adding some dressings on them.

3. *I.Q*. **What types of fruits do you eat the most often and how often?**

P.A. Here the fruits we basically ate most are Oranges!

4. **I.Q. How much money per week do you spend on food to feed your family (How many people do you feed?).**

P.A. Here is just he and me, and sometimes we spend around Lps. 300.00 ($13.00) per week buying the things we need, since now day you barely can buy a few things with Lps. 100.00 ($4.00).

5. **I.Q. What is the most expensive food item you have to buy?**

P.A. Meat is the most expensive!

6. **I.Q. If you were to prepare a healthy meal, what would it be (Include amount, drinks, and cost.)?**

P.A. Vegetables, it'll be to prepare a meal with vegetables, and less fat because fat is harmful, for the two of us the amount is low and to drink I make Tamarindo or orange juice.

   I.Q. How much you spend to prepare that healthy food with vegetables?

   P.A. Around Lps. 100.00 ($4.00)

7. **I.Q. How do you like to receive information about health: in a pamphlet, on a poster, in person, with a doctor or teacher, TV/Radio advertisement, or others?**

P.A. By Radio, because people listen most to it and it is important that people get this information because it's useful for people and many people have no information about this. And posters would be good too.

8. **I.Q. What makes a person healthy?**

P.A. Eating the "special" or very important foods, like vegetables because things like coca cola are harmful so people most to avoid them.

9. **I.Q. Why would a person want to be healthy?**

P.A. Because people want to live more, so if you take care of yourself you'll live longer.

Participant # 2

1. *I.Q.* **What is one of your favorite things to eat and how is it prepared?**
   P.A. The beans and I fry them with onions and seasonings.

   I.Q. It's that your favorite food?

   P.A. Yes, and when we get another good food would be spaghetti with some dressing; rice with chicken; when we have money to buy them.

2. *I.Q.* **What Types of vegetables do you eat most and how often?**

   P.A. Cabbage, Tomatoes, green pepper, cucumber, onion, beet.
   I.Q. And how often you eat these vegetables?
   P.A. When we have money to buy them!
   Q.I. In a week, how many days you eat them?
   P.A. Just once a week!
3. *I.Q.* **What types of fruits do you eat the most often and how often?**

   P.A. Apple, Mango, Orange, Tangerines.

4. **I.Q. How much money per week do you spend on food to feed your family (How many people do you feed)?**

   P.A. Sometimes around Lps. 1000 per week ($43)
   I.Q. Lps. 1000 per week?
   P.A. Yes.
   I.Q. And how many people do you feed?
   P.A. Eleven people!
5. **I.Q. What is the most expensive food item you have to buy?**

   P.A. The most expensive is the meat, beef or pork, but we can't afford it!

6. **I.Q. If you were to prepare a healthy meal, what would it be (Include amount, drinks, and cost.)?**

   P.A. To add the seasonings: pepper etc.

   I.Q. But to you, what would be a healthy meal?

   P.A. Bean' soup with rice, because when you are not able to buy anything else, that's what poor people food ate.

   I.Q. What could be a healthy drink?

   P.A. The coffee "Laughing" coffee takes my head ache away…The oatmeal is good though, and chocolate.

7. **I.Q. How do you like to receive information about health: in a pamphlet, on a poster, in person, with a doctor or teacher, TV/Radio advertisement, or others?**

   P.A. In person, so you'll learn how to do it!

8. **I.Q. What makes a person healthy?**

   P.A. Vitamins, and something else, I don't know.

9. **I.Q. Why would a person want to be healthy?**

   P.A. Because having health is stay well.

Participant # 3

1. *I.Q.* **What is one of your favorite things to eat and how is it prepared?**
   P.A. Vegetables

   I.Q. What vegetables in particular do you like?

   P.A. Potatoes, Beet, pataste, any kind of vegetables!

2. *I.Q.* **What Types of vegetables do you eat most and how often?**

   P.A. Beet is the one I most like

   I.Q. How often do you eat beets?

   P.A. Very often

I.Q. When you say often, do you mean every day or how many times per week?

P.A. 3 times a week

3. *I.Q.* **What types of fruits do you eat the most often and how often?**

   P.A. I like apple and pears

   I.Q. How often do you eat these fruits?

   P.A. Two times per week

4. **I.Q. How much money per week do you spend on food to feed your family (How many people**

   P.A. Lps. 1000 per week ($45) and feeds 4 people.

5. **I.Q. What is the most expensive food item you have to buy?**

   P.A. Meat is the more expensive, but we don't eat it very often.

   I.Q. But the items you buy daily, which one is the most expensive?

   P.A. Processed meat

6. **I.Q. If you were to prepare a healthy meal, what would it be (Include amount, drinks, and cost.)?**

   P.A. Vegetables, 1 kilogram, and water o soda to drink
7. **I.Q. How do you like to receive information about health: in a pamphlet, on a poster, in person, with a doctor or teacher, TV/Radio advertisement, or others?**

   P.A. For Doctor

8. **I.Q. What makes a person healthy?**

   P.A. Eat vegetables makes people healthy

9. **Why would a person want to be healthy?**

P.A. Because if someone is healthy don't have to spend money in doctors

Participant # 4

1. *I.Q.* **What is one of your favorite things to eat and how is it prepared?**

   P.A. The chicken with tomatoes sausage and white rice without any kind of seasonings and some beans, by the way it's what I am going to cook today!

2. *I.Q.* **What Types of vegetables do you eat most and how often?**
   P.A. Potatoes, cucumbers, vegetables, tomatoes those are the ones we eat most, we are very careful about our health eating certain type of items fat free; we make the meat on the grill.

3. *I.Q.* **What types of fruits do you eat the most often and how often?**

   P.A. Fruits of the season like watermelon, because is watermelon season, also the mango.

4. **I.Q. How much money per week do you spend on food to feed your family (How many people
   do you feed)?**

   P.A. Lps. 1800 ($81) 8 people

5. **I.Q. What is the most expensive food item you have to buy?**

   P.A. The meat that cost around Lps. 60 ($2.70)
6. **I.Q. If you were to prepare a healthy meal, what would it be (Include amount, drinks, and cost.)?**

   P.A. Sweaty chicken, fat free, with vegetables as many as possible, we make a kind of soup with no meat and fat free. And the cost is around Lps. 160 ($ 7.00)

7. **I.Q. How do you like to receive information about health: in a pamphlet, on a poster, in person, with a doctor or teacher, TV/Radio advertisement, or others?**

   P.A. In person by a teacher or a doctor, because you would be able to ask if you have any question and there's interaction between people the pamphlet you see it and many times you don't want to read it or you just throw it away and by TV you many times don't even care about what are they saying.

8. **I.Q. What makes a person healthy?**

   P.A. To eat healthy and do exercise.

9. **I.Q. Why would a person want to be healthy?**

   P.A. For many reasons, being healthy is good to ones own, being sick or overweigh or too thin is not good. For ourselves and family wellness!

Participant # 5

1. **_I.Q._ What is one of your favorite things to eat and how is it prepared?**

   P.A. I make to my kids beans' soup with rice
2. **_I.Q._ What Types of vegetables do you eat most and how often?**

   P.A. We are not into vegetables; we don't really like to eat them.

   I.Q. but do you eat them at least once a week?

   P.A. No

3. **_I.Q._ What types of fruits do you eat the most often and how often?**

   P.A. Cantaloupe

4. **I.Q. How much money per week do you spend on food to feed your family (How many people do you feed?**

   P.A. Lps. 600 to 900 (Around $30) per week, for four people.

5. **I.Q. What is the most expensive food item you have to buy?**

   P.A. I won't know what to say, my husband do the shopping.

6. **I.Q. If you were to prepare a healthy meal, what would it be (Include amount, drinks, and cost.)?**

   P.A. I think the healthy for kids is the beans' soup with rice and my eldest kid love it, but my younger kid like to eat everything, and to drink I make juice from this powdered drink

7. **I.Q. How do you like to receive information about health: in a pamphlet, on a poster, in person, with a doctor or teacher, TV/Radio advertisement, or others?**

   P.A. By a Doctor

8. **I.Q. What makes a person healthy?**

   P.A. Doing exercise and eating well, I don't mean eating meat because meat is not really healthy and like I say we eat beans with rice in Honduras, due most of us can't afford the meat.

9. **I.Q. Why would a person want to be healthy?**

   P.A. For ourselves wellness