

“Fight the fight”

A research to malnutrition in Gushegu District, Ghana



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“Never again will they hunger;
Never again will they thirst.
The sun will not beat down on them,
Nor any scorching heat.

For the Lamb at the center of the throne will be their shepherd;
‘he will lead them to springs of living water.
And God will wipe away every tear from their eyes.”

Revelation 7:16,17

Preface

In October 2010 we went to Ghana for our final internship and to conduct this research. We stayed with the Yakubu family who run a non-governmental organization, Project Share, which operates in the Gushegu district of the Northern Region. Project Share helps people to take control of their own lives through knowledge, life skills training, and stimulating them to share their knowledge with others. Their three areas of operation are health, agriculture and education. Within the health area they have set up the Neesim Nutrition Centre to fight malnutrition, as this is a significant problem in Northern Ghana. Project Share gave us the opportunity to fight this fight with them by making us part of their team and letting us work in the Nutrition Centre.

In December we started thinking about our final thesis. Soon it became clear that it should deal with malnutrition. During the following months we continued to discuss and brainstorm about what exactly we wanted to know and what could help Project Share in achieving its goal to prevent malnutrition in this area.

By the end of February 2011, the main questions and the research mythology were formulated. During the following month we finished our literature study and wrote a project plan, and March and April were dominated by the interviews we held. At the end of April we returned to Holland, where we finished our research by analysing the results and formulating conclusions.

We could not do this research by ourselves and therefore we want to thank Nelleke and Rahman Yakubu for their support and professional help. We are also grateful to Imoro Adam, Ziblim Adam, Mohammed Mochacho and Hamdia Alhassan for translating for us, Henk Chevalking for his feedback and encouragement, and Rachel Todhunter and Erica Koopman for checking our English grammar. We also want to thank our family and friends for their support.

Ede, June 2011

Nienke van der Heide & Femke Heutink

Summary

Malnutrition in children is a common problem in the Gushegu district of Ghana. Many children suffer from malnutrition and some of them die because they do not receive the right help or get this help too late. This research has been commissioned by Project Share. It investigates how carers, who live in Gushegu district, in three specific villages where no one has been to the Neesim Nutrition Centre before, regard malnutrition, and what their reasons are for seeking medical attention for their malnourished children so late.

A literature is conducted about malnutrition, the background of the people who live in the district, the Dagomba's, and about traditional medicine. The high prevalence of malnutrition in the district is due to a lack of adequate food and a low birth weight. A further underlying cause is lack of knowledge among the women. The Dagomba's have specific beliefs about sickness and the causes of sickness. They attribute spiritual causes to many illnesses. The literature also shows that traditional treatment for sicknesses is still very common.

The interviews confirmed the above results and gave additional information. The carers do not link the symptoms of malnutrition to malnutrition, but regard it as piles, polio or being cripple. These illnesses are attributed to spiritual causes, as is malnutrition, and traditional medicine is chosen as the first line of action, with modern medical help as their final option. This can often be explained by economic factors, as many people are not in possession of health insurance and traditional medicine is cheaper.

The results of this research gave recommendations that can be used by Project Share to improve the effectiveness of their education program which contributes towards achieving their main goal; reducing child mortality in the Gushegu district.

Index

PREFACE	7
SUMMARY	9
INDEX	11
ABBREVIATIONS AND TERMINOLOGY	13
INTRODUCTION	15
1. PROBLEM ANALYSIS	16
1.1 BACKGROUND	16
1.2 OBJECTIVE	16
1.3 MAIN QUESTION	16
1.4 SUB QUESTIONS	17
1.5 HYPOTHESIS	17
1.6 RELEVANCE OF THIS RESEARCH	17
2. LITERATURE STUDY	19
2.1 COUNTRY PROFILE	19
2.2 PREVALENCE OF MALNUTRITION IN GHANA	19
2.3 MALNUTRITION	21
2.3.1 CAUSES OF MALNUTRITION	21
2.3.2 CONSEQUENCES OF MALNUTRITION	22
2.3.3 HOW TO PREVENT MALNUTRITION	23
2.4 BACKGROUND INFORMATION TARGET GROUP	24
2.4.1. GENERAL	24
2.4.2 RELIGION	24
2.4.3 CONCEPTIONS ABOUT BREASTFEEDING AND WEANING	24
2.4.4 CAUSES OF SICKNESS	25
3. RESEARCH METHOD	28
3.1 TYPE OF RESEARCH	28
3.2 TARGET GROUP	28
3.3 DATA COLLECTION METHOD	29
3.3.1 TEST INTERVIEW	29
3.4 ANALYZING THE RESULTS	30
4. RESULTS AND CONCLUSIONS	31
5. RECOMMENDATIONS	38
6. DISCUSSION	41
REFERENCES	43
APPENDIXES	47

Abbreviations and terminology

GDHS – Ghana Demographic Health Survey

GHC – Ghana Cedi, monetary unit of Ghana

GHS – Ghana Health Service

HIRD – High Impact Rapid Delivery

HDR – Human Development Report

MICS – Multiple Indicator Cluster Survey

MUAC- Mid-upper arm circumference

NGO – Non-Governmental Organization

WFP – World Food Program

WHO – World Health Organization

Cock doctor

This is a person who calls himself a doctor. People consult a cock doctor when they are sick. A cock doctor did not attend a medical school and therefore he is not supposed to call himself a doctor.

Malnutrition

Malnutrition is a broad term, commonly used as an alternative to under-nutrition. Technically it also refers to over nutrition. In this report is the term malnutrition used instead of under-nutrition because most academic researchers use this term and it is well known in the academic world as referring to under–nutrition.

Piles

The medical term for piles is haemorrhoids. It was decided to use the term piles because this is generally used among the population of Gushegu district.

Introduction

This report describes a research into malnutrition in the Gushegu district of Northern Ghana. Because it is better to prevent than to cure, Project Share needed more information about how the local people view malnutrition in order to target their health education and to make it more effective. They also needed more information about why carers delay in consulting modern medical help until a very late stage which means that children unnecessarily die. With more information about this subject Project Share hopes to be able to reduce the mortality rate due to malnutrition. This research is also a small step towards meeting millennium development goal number four.

The first three chapters give information about the problem analysis, which contain the main- and sub questions. This part also includes the literature study and information about the research methodology.

Chapter four reports the results, together with the conclusions, and chapter five describes the recommendations for Project Share.

Chapter six deals with the discussion. Issues and situations which arose during the research and could have affected the results are explained. This chapter is followed by the references.

The last part of this report contains the appendixes. In the report there will be regularly referred to an appendix.

1. Problem analysis

This chapter contains the background, the objective, the main question and the sub questions. The chapter ends with the hypothesis and the relevance of this research.

1.1 Background

Records show that in 2008, 14% of all children under five in Ghana were underweight. In the Gushegu district this percentage was even higher, 33.2% to be exact. These figures and the knowledge about how simple prevention can be, compelled Project Share to set up a Nutrition Centre. This centre is located in Gushegu and opened in September 2009. Mothers can come to the centre with their malnourished child, and receive education about hygiene, health, food, malnutrition and other basic life topics. The children get the right diet and, if necessary, medicines. The mothers and children stay in general for six weeks and will be discharged when the child is healthy enough. Since the centre was set up there have been 74 boys and 71 girls admitted. A high percentage of 91% were cured. The remaining 9 percent is divided into 4.8% who left the Nutrition Centre against medical advice and the other 4.2% died (Data project share, 2011). The short-term goal of Project Share is to rehabilitate malnourished children, and the long term goal is to prevent malnutrition in this area. To achieve these goals, information is needed about how carers in this area regard the symptoms of malnutrition and also about the reasons why carers often seek medical help when the situation is already critical. The results of this research will enhance Projects Share's effort to prevent malnutrition.

1.2 Objective

The goal of this research is to get a representation of how carers, in the Gushegu District, regard malnutrition whether they recognize it and what they do in response to malnutrition. The results give Project Share input to enhance and extend their education program in Gushegu District, which aims to prevent malnutrition.

1.3 Main question

How do carers, who live in the Gushegu district, in three specific villages where no one has been to the Neesim Nutrition Centre before, regard malnutrition and what are the reasons that they seek medical attention for their malnourished children so late?

1.4 Sub questions

1. What are the causes of malnutrition in general and specifically for this area?
2. How do carers interpret the symptoms of malnutrition?
3. What kind of help do carers seek in the first place when they have a malnourished child?
4. At what point and for which reasons do carers seek medical help?

1.5 Hypothesis

The team at Project Share think that the majority of carers:

1. do not recognize a malnourished child as being malnourished.
2. think that sickness is caused by spiritual and traditional issues, so a spiritual or traditional doctor should cure a sickness.
3. that people do not go to the hospital because of financial problems or because they do not trust the care the hospital provides.

1.6 Relevance of this research

Many studies have been conducted into malnutrition. On March 11, 2011 the Academic Search Elite gave 11 full text results on “malnutrition and Ghana”. This research is different to all the other research that has been done because this was the first to focus on how carers see the signs and symptoms of malnutrition and what the barriers are for seeking help in this particular part of Ghana.

This research is relevant for several reasons. First of all it is a step towards millennium goal four set by the United Nations, to reduce the child mortality rate. In preventing malnutrition it is necessary to have information about how carers see malnutrition, both the sickness and the treatment. With this information, any education can be better targeted. If malnutrition can be prevented, less children will die and that will reduce the child mortality rate in the area. Secondly, this research is useful to Project Share because their goal is also to reduce the prevalence of malnutrition. The results will help them to target their education program and make it more effective.

In addition, this research is also of relevance to nursing. The nursing profession is divided into five roles; caregiver, director, designer, mentor and professional practitioner. There follows an explanation of why this research is relevant to some of these roles.

Caregiver

This research is relevant to the role of caregiver because in this role a nurse takes care of her patients and educates them to prevent illnesses or to learn how to cope with health situations. The results of this research give input to improve the education program and it also gives more background information about what treatment carers choose for their children. This will be helpful when planning the treatment the Nutrition Centre provides.

Designer

Within the role of designer, a nurse designs methods to improve a health situation. As previously mentioned, this research was commissioned to improve the education program of Project Share, which will in turn improve the health situation in Gushegu.

Professional practitioner

Within the role of professional practitioner, a nurse tries to improve the current health situation of a patient. The health situation of many children in this area is very critical. This research gives recommendations to improve the education program and consequently the children's health situations.

2. Literature study

2.1 Country profile

Ghana is a country in the Sub-Saharan part of Africa. The neighbouring countries are, in the west, Ivory Coast, in the North, Burkina Faso and in the east, Togo. To the south, Ghana is bordered by the Gulf of Guinea. Ghana has a total land area of 238,533 square kilometres (CIA Factbook, 2011). The capital city is Accra, which is located in the south of Ghana. Ghana is divided into ten regions and these are divided into districts. According to the Population and Housing Census of 2000, the total population of Ghana is 18,910,799 with a growth rate of 2.7%. With that in mind the population is now around the 24 million people. The Gushegu District is part of the largest region of Ghana, the Northern Region.

Ghana has a tropical climate. The rainy season in the north begins in March and lasts until September. Between December and March there is the harmattan, this is a dry desert wind that blows from the north east. The harmattan causes very warm days and cool nights in the north (CIA Factbook 2011).

There are different religions in Ghana. According to the Census 2000, 68.8% of the Ghanaian population is Christian, 15.9% Muslim, 8.5% traditional, 6.1% no religion and 0.7% follows another religion.

The major industrial activity, at national level, is agriculture including hunting, forestry and fishing (52.3%). The main activity in the Northern Region is also agriculture (70.9%) with farming as the main activity (Census 2000). The most important agricultural products, according to the CIA factbook 2011, are cocoa, rice, cassava, peanuts, corn, shea nuts, bananas and timber. The World Food Program (WFP 2011) says the main food production of Ghana is maize, tubers, plantains, meat and fish. In the Gushegu District the major cultivated crops are maize, sorghum, millet, groundnuts, cowpeas, cassava, rice and yam.

2.2 Prevalence of malnutrition in Ghana

To create a clear picture of the scale of the nutrition problem in Gushegu District there will be some statistics reviewed. First there will be some information about Ghana in general followed by information about the Northern Region before focusing on Gushegu District itself.

According to the Ghana Demographic Health survey of 2008 (GDHS 2008), the under five mortality rate in Ghana is 80 per thousand children. Two of the main causes of child mortality are diarrhoea and pneumonia (WHO 2008). Malnutrition is not named as a cause of deaths in children under five because they often do not die of this in the first place. However, malnutrition is an underlying contributing factor in one third of all child deaths in the world (WHO, 2009; UNICEF, 2009).

According to the statistics of malnutrition in Ghana, it can be said that the situation is improving. According to the results of the HDR of 2010, the prevalence of undernourishment in the total population was 8% in 2006. In 1990 this percentage was 34%. There are different reasons for the improving situation. There is a greater concern about malnutrition and there are a lot of NGO's and other organizations which are all trying to address the situation. Organizations like the WFP and UNICEF improve the situation through, for example, education and providing food supplements. The situation is also improving because of community-based programs. These programs involve the community in solving the problems. In that way the communities also become aware of the importance of tackling malnutrition.

Of all children under five in Ghana, 28% are stunted, 9% are wasted and 14% are underweight. Stunted means that the child is too small for his age, wasted means the child does not weigh enough compared to his height, and underweight means the child does not weigh enough for his age.

Northern Region

The population of the Northern Region is almost 2 million people. The under five mortality is 137 per 1000 children. Almost one third of the children is stunted, 13% is wasted, and 22% suffers from underweight.

Gushegu district

The population in Gushegu district is 125,430 people, this is 6.9 percent of the Northern Region. The prevalence of malnutrition in Gushegu is higher than the average in the country. In Gushegu 35.2% of all children under five are stunted, 10.6% are wasted, and 33.2% are underweight. (Botwe, 2008).

There is an overview of all these figures in table 1.1.

	Population	Under 5 mortality (per 1000)	Children under 5 who are underweight	Children under 5 who are stunted	Children under 5 who are wasted
Ghana	24 million	80	14%	28%	9%
Northern Region	2 million	137	22%	32%	13%
Gushegu District	125.430	Unknown	33.2%	35.2%	10.6%

Table 1.1: prevalence malnutrition

2.3 Malnutrition

Malnutrition is the result of insufficient food intake, inadequate care and infectious diseases. It can be divided into different stages, Werner (2009) documents the mild and severe stages. The mild stage is when the child does not grow or gain weight as fast as a well-nourished child does. According to Werner, severe malnutrition starts when a child has further complications like diarrhoea or infections. Malnutrition is a result of not breastfeeding for long enough or not giving enough sufficient high-energy food.

The WHO uses moderate and severe malnutrition to define the different stages. The moderate stage can be compared with Werner's mild stage. Severe malnutrition is divided worldwide into two different types, namely kwashiorkor (wet malnutrition) and marasmus (dry malnutrition). These two types will be used in this research. Kwashiorkor is a result of not eating enough proteins. Marasmus is caused by not eating enough generally (Werner, 2009). The most important sign of kwashiorkor is oedema, specifically bilateral pitting oedema. It has different stages, namely mild oedema which shows in the feet, moderate oedema which shows in the feet and hands, and severe oedema which also shows in the face (Community based management of severe acute malnutrition in Ghana)¹. The signs of marasmus are loss of fat and muscle mass and a very thin appearance (Werner, 2009).

2.3.1 Causes of malnutrition

A report by UNICEF reports that in general maternal malnutrition and non-optimal infant and child feeding are the main causes of faltering growth and malnutrition in

¹ This information is from a handout received from the public health nurse and the nutritionist. Therefore this information is used.

children under two years (UNICEF 2009). A child's birth weight or size is an important indicator of the child's vulnerability to the risk of childhood illnesses and chances of survival. Children whose birth weight is less than 2.5 kilograms are considered to have a higher than average risk of early childhood death (GDHS 2008).

A lack of education is an underlying cause of malnutrition. A survey done in Ghana, shows that 67.5% of women in the Northern Region of Ghana have no education compared to 15.7 percent in Greater Accra (GDHS 2008). Other causes of malnutrition are not taking enough food which contains proteins, fats, vitamins and minerals, or inadequate hygiene (UNICEF 2009).

Project Share believe there are three main causes of malnutrition in the Gushegu district. Not enough knowledge about breastfeeding in general, not starting supplementary feeding at six months, and the lack of knowledge about the main food groups: carbohydrates, vitamins and minerals (Project Share 2011).

2.3.2 Consequences of malnutrition

Malnutrition in children has many consequences which are divided into physical consequences and consequences through the life cycle, in this report.

Physical consequences

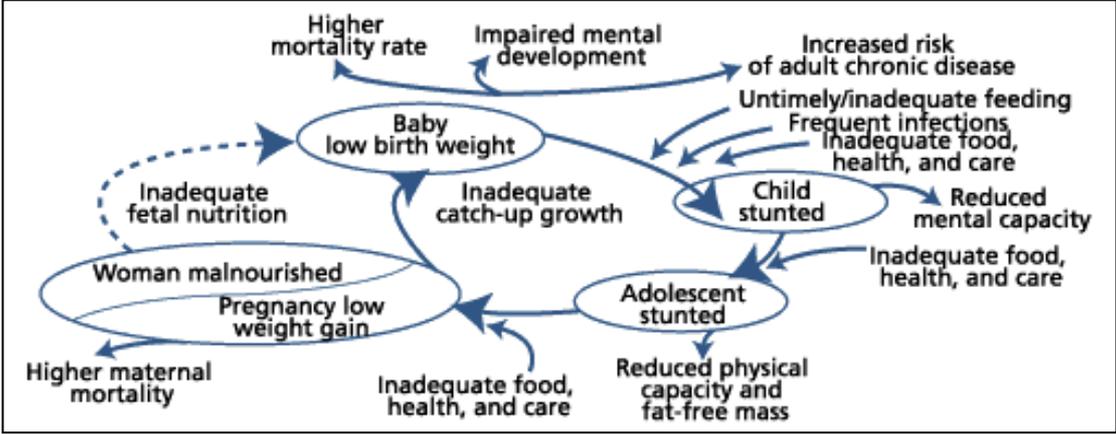
Malnourished children develop slower and are more vulnerable to developing diseases such as pneumonia and diarrhoea. Common illnesses like colds, flu's and infections last longer and are more severe because the body cannot fight effectively against it (Heycop ten Ham, C. van, 2006). Malnutrition can also cause problems like poor vision at night, weakness, tiredness, loss of appetite, anemia, and sores in the mouth. Because the body loses strength, there is a higher risk of getting infections, headaches, bleeding or redness in the gums, nose bleeds, and liver diseases (Werner 2009). Children with deficient growth before the age of two have a higher risk of developing chronic diseases such as high blood pressure, diabetes and cardio-vascular deficiencies as adults (UNICEF 2009).

Consequences through the life cycle

The consequences of malnutrition throughout the course of life are like a vicious circle (WHO, 2001). Malnourished mothers will almost inevitably give birth to a low-birth-weight baby, which can lead to growth retardation. Children born underweight have a higher risk of developing a low IQ and cognitive disabilities which can affect the

performance of the child in school (MICS, 2006). Malnourished children are more vulnerable to passing deficiencies on to the next generation (WHO 2001), this can lead to the same problems in the next generation. This is outlined in figure 1.1.

Figure 1.1: Poor nutrition throughout the lifecycle
(Population Reference Bureau, 2002)



2.3.3 How to prevent malnutrition

According to ‘Where there is no doctor’, it is important that malnourished children get special care and food in the mild and moderate stage before the children become seriously ill, or severely malnourished. Children in a mild and moderate stage have a lower risk of dying compared to children who are severely malnourished (UNICEF, 2009).

According to the local nutritionist there are two main programs running in the Gushegu district. The first is run by the GHS in cooperation with UNICEF, and they have two main projects. One of the projects involves outreaches in the villages. During these outreaches children will be weighed and the malnourished ones will be referred to local health facilities. The other project involves the training of volunteers to measure the MUAC of children under five and to refer malnourished children to health facilities. These volunteers are residents of a village chosen by the chief and other important people of the village.

The Ghana Health Service is also cooperating with the World Bank. They train residents of villages to recognize malnutrition and give first aid to malnourished children. These people have a first aid kit with medicines suitable to treat the complications of

malnutrition. These volunteers are also taught important information about good food and how to prepare and store it.

2.4 Background information target group

What a person believes can affect the way he thinks and acts, which in turn reinforces certain traditions. But also the continent, the country, and the tribe which a person belongs to can affect their thoughts and actions. In Ghana there are several tribes, also called people groups. One of those groups are the Dagomba's.

This section contains information about the people who live in the area where the research was undertaken, providing background information about the target group. First there will be general information about the area and their religion followed by an explanation about how the family situation is in general. This study provided input when designing the questions for the interviews and also helps in understanding the results of this research.

2.4.1. General

The Dagomba's live in Dagbon, an area of about nine thousand square miles in the Northern Region (Mahama, I., 2004). This is about one third of the Northern Region. The language they speak is Dagbani. Dagbon has several main towns including Gushegu. The population of Dagbon is about 954,664 people (Census 2000). Most people are farmers.

2.4.2 Religion

There are three main religions: Islam, Christianity and traditional believes. Apart from God they believe in many other gods or deities. A deity can get angry with a person and can cause a lot of harm. A soothsayer can tell a person which deity is angry and how he can be pleased again (Mahama, 2004). Mahama does not say how deities can affect someone's health. However, it is good to consider that their belief in deities can affect their view on sickness.

2.4.3 Conceptions about breastfeeding and weaning

Family is very important among the Dagomba's. It is good to have many children but not too close after each other. They have certain beliefs and traditions about breastfeeding and weaning children. According to Oppong (1973), a mother who delivers for the first time is not allowed to let her baby suckle her breast for the first week because that milk is poisonous and must be manually expressed. The baby should be fed by another

nursing mother. Oppong also says that right after birth the mother and baby drink certain medicines to protect and strengthen them. They also believe that the day after birth the child should not drink milk but only water. After that day the child can start to suckle the breast again. From a scientific point of view, these traditions have a negative effect on a child's health.

The Dagomba people also believe that some of their actions can cause a child's death. For example when a mother commits adultery during a certain ritual period, and in the same period has sexual intercourse with her husband.

These beliefs and traditions might contribute to the high prevalence of malnutrition. For example it is not likely that carers visit a doctor when they believe their child is suffering from a sickness caused by a certain deity or evil spirits. By not treating sicknesses at an early stage the child might develop a more dangerous sickness or malnutrition.

2.4.4 Causes of sickness

In the previous section is written about possible spiritual causes of sickness. This section explains more about how Dagomba's and Ghanaian people see sickness. The hypothesis of this research gives traditional medicine as a possible cause for the high number of severely malnourished children in the district, as many see traditional medicine as the first solution and therefore delay seeking modern medical help.

A study among Ghanaian immigrants who live in Holland states that Ghanaian people assign sickness to biomedical reasons and also to spiritual causes like witchcraft and evil spirits (Schutter, A., 2008). According to Mahama, the Dagomba's also say that a witch can make you ill and even let you die. He writes:

How and when do witches operate? They operate both by day and night. Nighttimes is said to be the time for hunting and for the display of their supernatural powers. They are said to move in different groups in their hunting expedition. They use the stock of millet as their guns. They shoot not the physical body but the spirits of human beings, which roam at night. When the target is hit and wounded, the person will become ill and eventually die unless the witch responsible for the harm administers the necessary treatment. The victim of witchcraft will not die until his or her flesh has been consumed by the witch (Mahama, 2004, pp. 187).

Both authors Mahama and Oppong describe how Dagomba's see causes of sickness and death. For example, Dagomba's believe that when you deliver a baby at eight months, the child will have a higher chance of dying than surviving (Mahama, 2004).

Among the Dagomba's the father owns his child, not the mother, and he has an important role in a child's life. According to Oppong (1973), a child may suffer illness and death as a result of a curse from the father when a child did not obey him.

A study by Schutter (2008) also gives examples. She writes that children can get sick from the shadow of a spiritual bird which passes over the child.

Mahama and Oppong do not write about what kind of treatment the people choose for sickness. But Schutter (2008) mentioned that many Ghanaian people choose traditional healing, which can be herbal treatment or a spiritual doctor who does rituals to drive out evil spirits.

2.4.5 Traditional medicine

To get a better picture of what traditional medicine is exactly, a definition will follow:

"Traditional medicine is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness" (WHO 2011).

Traditional medicine includes not only herbal remedies for specific diseases but also folk knowledge, traditions and values, health behaviour rules and patterns (Hevi, 1989 quoted by Tabi M.M., Powell M. & Hodnicki D. 2006). This shows that traditional medicine is difficult to define in one sentence. It includes many different types of healing and diagnosis.

The ratio of medical doctors to the population of Ghana is 1:20,000 and the ratio of traditional healers to the population is 1:200 (Tabi M. et al, 2006). This is a huge difference and it indicates that traditional healers have a big influence in Ghana. However, interventions to get people to go sooner to a health facility have the potential to reduce the mortality in Ghana. The large numbers of children who die in developing countries without ever reaching a health facility illustrates this. As does the number

who have reached a health facility but then die as a result of the delay in seeking care. (Zelee Hill, Carl Kendall, Paul Arthur, Betty Kirkwood and Eunice Adjei. 2003).

Another source indicates that traditional medicine is common in the whole of Africa. Approximately 80% of the population in Africa uses traditional medicine for health care (WHO 2011).

3. Research method

3.1 Type of research

The topic of this research requires a qualitative approach. A qualitative approach means that the research is conducted in the field, and aims to collect the stories of individuals, which will hopefully be representative of the general view of the population. The goal is to get a realistic representation of each person that is interviewed, instead of looking for specific statistics. A qualitative approach is needed to get a full understanding of all the factors involved.

3.2 Target group

The research field is limited to the Gushegu district. To get a representative view of how the carers in this district see malnutrition and why they seek for help so late, the people in four villages around Gushegu will be interviewed. The test interview is conducted in one of these villages. The data from the other three villages is/are the main source material for our research.

To get an objective answer as to how carers see malnutrition, the target group are people who have never been to the Nutrition Centre before. This decreases the chance that their knowledge about malnutrition is influenced by people who have been to the Nutrition Centre, and hence been educated about healthy education.

The villages that were chosen are Gbambu, Zeei, Nawuni and Kanshegu. There is a map of Gushegu district in appendix 8. Gbambu was used for the test interview.

In the table below the total population of each village is listed (District Assembly, 2009) along with the number of the compounds in each village.

Village	Total population	Total compounds
Gbambu	390	26
Zeei	162	19
Nawuni	121	6
Kanshegu	162	9

Table 3.1 Population and compounds

The interviewees are carers with children under five years because the research is limited to malnutrition in this category. As written in the literature, a father owns his child, but the mother plays an important role in the upbringing of small children. It is unknown if, and in what way, this affects the choice of a certain treatment, so both men and women will be interviewed. The landlord, who is the head of his family, and one of his wives, will be the interviewees.

In order to get a reliable representation is decided to interview 35% of the compounds in a village. The man and wife will be interviewed separately so they cannot influence each other and differences concerning the thoughts of men and women will be revealed. Because the villages are small and people really know each other, and hence probably share many views, it is decided that 35% of the compounds per village will give a representative view. Eventually there is chosen to interview less compounds in Zeei because there were more compounds than expected. In order to keep a balance between the villages there is chosen to interview just four compounds there. The compounds that are selected are not next to each other to get a more broad idea of how the carers in the village think about this subject.

3.3 Data Collection Method

3.3.1 Test interview

Before doing the interviews for the data collection is decided to do a pilot. This gave the opportunity to improve the questions. Early on in the research a very good translator was available. At that time the test interview was prepared, despite the early stage of the research, as having a good translator is very important to the design of a useful interview.

The test interview was designed to be semi-structured. The reason for this was that multiple-choice questions would give people a chance to answer sensitive questions on topics which they may not be happy to talk about openly. For example, by having as an option that a sickness can be caused by a curse or witchcraft, it may encourage people to open up about these issues. But in fact the multiple-choice questions meant that the full stories were not revealed. By probing deeper into their answers, the real stories came, which brought more useful information for the research.

The results of the test interview showed that almost everyone uses herbal treatment as first line, and only when a situation gets critical will they seek modern medical help. However, the interviewed people did not give clear answers when questioned about why they choose this as the first line treatment. Since it is necessary to know what their motivation is for their choice of treatment, we realized that the semi-structured interview was not the best tool for the research. Therefore is chosen to design an open interview using topics.

3.3.2 Final interview

With the results of the test interview a meeting was organized with Mr. and Mrs. Yakubu. Everyone agreed that the semi-structured test interview did not give the answers to the main question. The stories of the people, their experiences, and their view on malnutrition, sickness and health care is needed to answer the main question. Therefore we chose to change the method from a semi-structured interview to an open interview. By having the freedom to react to what the people say, the chance of getting socially desirable answers will be minimized.

To make sure that all the information was collected, a topic list was used (appendix 1). Appendix two explains why these topics were chosen. Questions that belong to each topic are described in appendix three. Mr. and Mrs. Yakubu checked this list to make sure the questions were asked in a way that people were comfortable with.

3.4 Analyzing the results

The recorded interviews were written down by every interviewed family in a table. The interviews were not described literally, but all the information was categorized by topic. These tables are included in appendix 8. To analyze the information the interviews were divided into five categories: food, health, Nutrition Centre, witchcraft/poisoning, and the economic situation. This gave a good overview of the collected information. For every village a separate summary has been made to describe the results (appendix 9). To write the results more specifics were needed, therefore the original interviews were used again to describe the proper results (appendix 10). Thus the research questions are entered.

4. Results and conclusions

This chapter will answer the questions stated in chapter 1 and will end with the conclusions. The results are interwoven with the conclusions, but a complete overview of the results can be found in appendix 10.

1. What are the causes of malnutrition in general and specifically for this area?

To answer this question the available literature is thoroughly reviewed. There is also spoken with the local nutritionist and interviews were done to gain the insights of Project Share, and to investigate what people think are causes of malnutrition.

The literature about the causes of malnutrition

The literature says that malnutrition in Ghana is caused by a low birth weight and by a lack of adequate food. In the Northern Region, lack of education among the mothers is an underlying cause of child malnutrition.

The local nutritionist about the causes of malnutrition in Gushegu district

In the Gushegu district there are several programs running to prevent malnutrition. Local people volunteer to be trained to weigh and measure the MUAC of all the children of their village and to refer the critical ones to the hospital. However according to the local nutritionist, many volunteers do not perform their tasks consistently. This results in children not being screened for malnutrition. The nutritionist also says that a lack of knowledge amongst the people in the Gushegu district is an underlying reason that malnutrition still exists in high numbers.

The interviewees about the causes of malnutrition

According to Project Share, a lack of knowledge about breastfeeding and supplementary feeding is one of the main causes of malnutrition. This is confirmed by the interviews, but it should not be a problem in this area. In the clinic and hospital the nurses give information about breastfeeding and supplementary feeding. All interviewed women went to the clinic for antenatal care and postnatal care, and some of them gave birth in the hospital. With this in mind, a lack of knowledge should not be a reason for malnutrition in this area. Nevertheless the results show that the education that is supposed to be given in the clinic and hospital does not meet the objective of improving

the knowledge of women about the above subjects. The reality is that there are many misconceptions about breastfeeding and supplementary feeding (Appendix 11) which can cause malnutrition in children. Because of the many misconceptions, it can be said that a lack of knowledge is one of the reasons for the high prevalence of malnutrition in the Gushegu District.

One aim of Project Share is to figure out whether a lack of food, as a result of not enough money, can be a cause of malnutrition. With the results of the interviews it can be said that in the Gushegu District, money is not the cause of the high prevalence of malnutrition. People do label themselves as poor, but at the same time they are able to provide three meals a day during the whole year. This shows that there is enough money for one of their basic needs, namely food.

Causes people suggest for the symptoms of malnutrition in children are poisoning, witchcraft, sickness in the blood and that it has something to do with food. The minority have no idea what the real cause is.

2. How do carers interpret the symptoms of malnutrition?

To get a clear answer on this question, the symptoms of the two types of malnutrition will be described and there will be explained how the people interpreted the pictures shown to them during the interviews (appendix 2).

Kwashiorkor

The literature about "kwashiorkor"

"The most important sign of kwashiorkor is oedema. This is named bilateral pitting oedema. It has different stages namely mild what shows in oedema in feet, moderate what shows it in feet and hands and severe what also shows oedema in the face (Community based management of severe acute malnutrition in Ghana)." The child in the picture shown during the interview shows signs of severe oedema.

The interviewees about kwashiorkor

Two people mentioned: “The child is healthy because he looks so big and swollen.” But in general people see that this child is sick and they all recognize the swollenness of the child as not normal. However, no one links the swollenness to malnutrition. Many people diagnose the child with piles. They say that piles in adults appear as piles, but in children it appears as a swollen body. Other diagnoses mentioned are poisoning, stomach problems and paralysis.

In conclusion it can be said that no one recognizes this child as a malnourished child and that no one suggests that it has to do with not getting enough varied nutrients.

Marasmus

The literature about “marasmus”

“The signs of marasmus are loss of fat and muscle and a very thin appearance (Werner, 2009).” The child in the picture shown to the interviewees meets this specification.

The interviewees about marasmus

All interviewees see this child is sick but the diagnoses they give vary a lot. A common diagnose is that the child is a cripple or has polio. Other interpretations are that this child suffers from AIDS, convulsions, worms, piles and two local diseases which cannot be translated into English: nassangbang and assara. Only one male diagnosed this child as being malnourished. The main causes given for this sickness are that it is a sickness located in the blood, and that it is caused by contaminated food or by an evil spirit. The results also show that seven people had no idea what the cause of the sickness in the child could be.

In conclusion it can be said that even though carers do recognize this child as being sick, they do not recognize the child as being malnourished, and they have no idea what could be the cause of the child’s condition.

3. What kind of help do carers seek in the first place when they have a malnourished child?

To get a complete picture of what kind of help people seek for a malnourished child, is asked what their first line of treatment would be when the carers are sick, when their children are sick, and what they would do with a malnourished child.

First line treatment for sickness in adults

The majority choose traditional treatment. Everybody believes that a sickness can have supernatural causes. The best way to treat such a sickness is with herbs. The most common route they follow is first of all herbal treatment. Then if that does not work or in addition they go to the drugstore, and in the end they go to the hospital. Only a minority choose to go to the hospital in the first place. These people also say they will use herbs in addition to the medical help (table 12).

First line treatment of sickness in children

The results show that a very high number will first try herbs or go to the drugstore (table 16). These people have herbs for many sicknesses including diarrhoea, fever, and stomach pain. If the herbs and medicines do not work they will go to the hospital. Seven families have to pay the hospital because they are not in possession of health insurance or the health insurance has expired. Only one family has valid health insurance, for this family the first line of treatment is the hospital.

First line treatment of malnutrition

Kwashiorkor

Looking at the results, the number of people who would send this child to the hospital is equal to the number of people who would treat this child with herbs (table 18).

Marasmus

The views about how to treat the marasmic child are different. Almost half of them would send the child to the hospital. Five would treat with herbs. One person says the child should go to a Nutrition Centre and three people say this child cannot be treated and will die (table 22).

Conclusions to this question

There is no single chosen treatment for malnutrition. Even though a huge number will use herbs as first line treatment, going to the hospital is also a popular choice. And there are also many people who would try herbs first but would go to the hospital in addition.

Note: the results show that the hospital is a popular choice. However experience suggests that these results are doubtful. This research has been done because people continually go very late to the hospital with their malnourished children. The fact that we had talked with the interviewees about the hospital before this question was asked might have influenced their answers. The interviewees did not know that we worked in the hospital, but they probably do know that white people prefer medical help. This might also affect their answers. It is important to consider that this answer might be a socially desirable answer.

4. At what point and for what reasons do carers seek medical help?

To answer this question there is looked at the different types of treatment people use. There is also looked at the experiences people have with the hospital, and whether they trust the hospital. In the end there is checked to see whether there is a link between health insurance and the time when people consult medical help.

The interviewees about their reasons

In general people try their herbs first. For generations they have been doing this and they have their own traditional doctors. If the herbs do not work most people go to the drugstore, here they explain what is wrong and buy medicines. If these medicines also do not work they will go to the hospital.

Although the hospital is in general the last option, people do trust the doctors. They say the doctors are qualified and they treat people well.

The fact that out of the eighteen interviewed people, only two people are in possession of health insurance, and only one family has health insurance for their children, might also impact the decision to seek medical help as the last option. In all other families at least some people do have health insurance, but their cards are expired. People have their own reasons for why they do not renew their card. Two of the most common reasons are not having enough money or simply not wanting to spend their money on health insurance if they do not use the card.

The literature about medical help

These results are not unexpected because the literature already showed that approximately 80% of the African population uses traditional medicine. Besides that the literature review also showed on page 18, that there are far more traditional healers in Ghana compared to medical doctors.

Conclusions for this question

In general people only seek medical help after trying all other treatments like traditional medicine and the drugstore. The reasons they seek medical help late is because they trust their own traditional treatment more and going to the hospital is quite expensive for those who do not have health insurance.

5. Main question

How do carers, who live in the Gushegu district, in three specific villages where no one has been to the Neesim Nutrition Centre before, regard malnutrition and what are the reasons that they seek medical attention for their malnourished children so late?

Carers notice that malnourished children are sick. They recognize symptoms of swollenness in the child who suffers from kwashiorkor and in the marasmic child they see the leanness of the child. The people link it to different diseases but not to malnutrition. For the kwashiorkor child many people think the child suffers from piles. A common opinion is that the marasmic child suffers from polio or is a cripple. There are also many people who think that these sicknesses are caused by supernatural powers.

The answers to the second part of the question are harder to interpret accurately. Almost everyone says they would send a malnourished child immediately to the hospital. But all other answers about treatment give different facts about their first line treatment for general illnesses. People in this district have their own traditional medicines for many diseases. They have used these medicines for generations and they believe strongly in the power of the herbs. Besides that they believe that there are illnesses which cannot be healed by a medical doctor and need to be seen and treated by traditional healers. These are two important reasons for why carers seek medical attention so late.

Another reason people bring up is the health insurance problem. The majority of the interviewed families do not have health insurance or the card has expired. They know that medical help in this case is very expensive. People say they are very poor so they will not spend their money easily on medical attention. It also seemed to be difficult for them to figure out the best way to spend and save their money. An example to illustrate this:

A certain family has several children. They are able to send their children to school. They also have health insurance for the whole family. At one point their health insurances expires. Luckily they saved some money to pay for the health insurance. Then 'suddenly' they get a note from the school that it is time to pay the yearly school fees. This family has no money for the school fees and therefore they use the saved money for the health insurance to pay the school fees.

In summary, people do not recognize malnutrition and they use their own traditional medicines more than medical help. The fact that most people do not have valid health insurance also contributes to the fact that they do not seek medical help quickly.

5. Recommendations

The results of this research allow the researchers to give recommendations to Project Share to help them to get closer to their goal of reducing the child mortality rate in Gushegu district. The recommendations are divided into three subjects.

1. Content of the education program
2. Locations
3. Other recommendations

1. Content of the education program

The small outreaches, which started in March this year, are a solid base for further education. Write an extended program with the outreaches as an example and use the following recommendations to make the program complete.

Use the misconceptions, which are listed in appendix 8, about breastfeeding and weaning children as an introduction for the education. Make clear that in every situation babies do not need any supplements to breastfeeding in the first six months, and after that solid food needs to be introduced. Explain the importance of food at that age. Also mention that some results of current actions will be revealed at a later age, therefore they really should listen to the educators.

Explain to people the concept of being and staying healthy. Mention the role of good, healthy and varied food in this and point out that a healthy lifestyle is always important, not only during sickness.

Explain the two types of malnutrition. Focus on the symptoms of the two types. Explain that piles never appears as swollenness of the whole body. And that growing unusually big or very lean always needs to be checked by a medical specialist. Emphasize the role of food in causing malnutrition.

Confirm to people that whilst sicknesses can be caused by spiritual powers, many sicknesses are caused by physical deficiencies of the body and can be treated by medical doctors. The misconceptions about sicknesses, listed in appendix 11, can be used for his.

Explain that many diseases are very complicated and need specific care. This care has been taught to the staff in the hospital. Only schooled people work in the hospital and they are very knowledgeable concerning this. Promote the hospital and tell them that examination and treatment is free as long as you have health insurance. Give examples of what the hospital can do for you and emphasize that the Gushegu District Hospital has a nutritionist who is especially dedicated to malnutrition

Educate about health insurance and explain its importance. People know the function of health insurance, but they still have misconceptions and do not renew their health insurance. A way to promote health insurance is to educate a local person and make him or her responsible for introducing health insurance to other people.

Educate about money management. The example mentioned in the conclusion on page 29 can be used in the education about spending and saving money.

2. Locations

Villages

Continue the small outreaches and add the recommendations of this research. Bring a woman from the Nutrition Centre with her child to the outreaches. Make sure the child is healthy enough to participate, it should not affect the child's health situation. Let this woman tell her experiences with malnutrition and the Nutrition Centre to the local people. To increase the awareness of the function of the Nutrition Centre, a picture can be showed of that child at admission.

School

Teach the children about sickness, health, malnutrition and the hospital, but also about money management. Make them enthusiastic to pass on the new information in their homes.

Market

Use the social environment of the market to educate people and make them aware of the existence of malnutrition. The MUAC of the small children can also be measured to find cases of malnutrition.

3. Other Recommendations

Both men and women should receive the education. Make sure husband and wife(s) are there at the same time and hear all the information. This way they can talk with each other about the information they have heard.

Strive towards a closer relationship between the clinic, hospital and Nutrition Centre. This will likely improve the cooperation between the three different organisations, which will have a positive effect on the education in this district and the fight against malnutrition.

Set up a team of local people who can teach these concepts. Include the hospital nutritionist and the manager of the Nutrition Centre in this team and also try to involve the local health volunteers. In this way Project Share does not need to be involved in every education activity.

6. Discussion

This chapter starts with general issues which need to be mentioned when evaluating the research. Specific points for each village then follow. These issues may have influenced the research and therefore they are brought up for discussion

General issues

During the analysis of the data it was found that not every topic was mentioned in all the interviews. For this reason not all of the results show the opinions of all eighteen interviewees, but considering the results there is no reason to believe that this has had a significant influence on the results. However, it does make some results less reliable.

Some of the results generated more questions than they gave answers. Due to the fact of early return to Holland, these questions could not be investigated further. For example it would have been helpful if there was specific information, confirmed by data, about how many people, of the three villages, have visited the hospital. Besides that, it would have been helpful to check doubtful answers regarding their choice of first line treatment.

Having two different translators sometimes caused confusions, especially in Nawuni. In this village the diagnoses for the child with kwashiorkor was translated as kwashiorkor. This gave the impression that the people in Nawuni really knew about this type of malnutrition. Because of this confusion listened a second person listen to the interview to verify this. This person said that the interviewees mean piles in their language. The translator did not translate this word correctly. Therefore, this second person also listened to other fragments of the interviews. She did not find other incorrect translations.

Poisoning is often mentioned as a cause for malnutrition but also for sicknesses in general. A comment that needs to be made is that there has been asked specifically about whether poisoning can be a cause of malnutrition or sickness. So poisoning was not always mentioned first by the interviewees themselves.

It would have been helpful to get a more detailed picture about the connection between health insurance and the first line treatment. It would have been helpful if there was

more explicit asked who exactly had health insurance in the family. Nevertheless the conclusion would not change if there was more information about health insurance.

Kanshegu

In the method is said that for the interviews people will only be interviewed from villages where no one has been to the Neesim Nutrition Centre. However, halfway the interviews in Kanshegu it became known that two women have been to the nutrition centre with their child some years ago. Nevertheless, there is chosen to use the collected data because there was no significant difference in knowledge between people from this village and other people who were interviewed.

In the method is also planned that a husband and one of his wives would be interviewed. Before entering a compound there is been asked if both husband and wife are present. Still after interviewing a woman she said that her husband was not around. Therefore there is been chosen to interview another man in the same compound. However, there is no significant influence found in the results.

In Kanshegu is made use of a photo of a marasmic child instead of a photo of two malnourished children, one marasmic and one kwashiorkor. At a later point the other photo was shown to four of the six people and that data was collected. Two people have not seen the picture of the kwashiorkor child and for that reason there is no data about their view on this type of malnutrition.

Nawuni

There are no issues in Nawuni for the discussion

Zeei

After interviewing a woman she made known that her husband was not around. Again there is been chosen interview a neighbour instead of her husband. Also in this situation is no influence on the results found

References

- Botwe, A.A. (2008). High impact Rapid delivery (HIRD) Supplementary Survey (District MISC), Northern Region, Preliminary Report, Unicef
- Collins, S., Dent, N., Binns, P., Bahwere, P., Sadler, K., Hallam, A. (2006). Management of severe acute malnutrition. Obtained on the 16th of March, 2011 through:
<http://chnri.com/resources/4.%20Research%20Articles/Nutrition/managemen%20of%20acute%20malnutrition.pdf>
- Heycop ten Ham, C. v., e.a., (2006). *Basisboek Pathologie*. Utrecht/Zutphen: ThiemeMeulenhoff.
- Mahama, I. (2004) History and traditions of Dagbon, Gillbt Printing Press, Tamale
- WHO, NHD, SDE 2001, Nutrition Risk Factors throughout the life course. Obtained on the 18th of March 2011 through:
<http://www.who.int/mip2001/files/2233/NHDbrochurecentrefold.pdf>
- Oppong, C. (1973) Growing up in Dagbon, Ghana Publishing Corporation, Accra – Tema
- Participants' handouts for community based management of severe acute malnutrition in Ghana, Module one: overview of community based management of severe acute malnutrition p 7 and 17
- UNICEF 2006, Multiple Indicator Cluster Survey, Monitoring the situation of children, women and men. *P13 and 29*. Obtained on the 15th of March, 2011, through http://www.childinfo.org/files/MICS3_Ghana_FinalReport_2006_Eng.pdf.
- UNICEF, WHO, WFP 2007, Community based management of severe acute malnutrition. Obtained on the 11th of March, 2011, trough www.unicef.org
- UNICEF 2009, Tracking Process on child and Maternal Nutrition, a survival anddevelopment priority. Obtained on the 9th of March, 2011 through:
http://www.unicef.org/publications/files/Tracking_Progress_on_Child_and_Maternal_Nutrition_EN_110309.pdf
- Verhoeven, N. (2008). *Wat is onderzoek*. Purmerend: Boomonderwijs.

Werner, D., Thurman, C., Maxwell, J., & Pearson, A. (2009), *Where there is no doctor: A village health care handbook for Africa*, London: Macmillian Education Ltd, p. 117, 420

Zelee Hill, Carl Kendall, Paul Arthur, Betty Kirkwood and Eunice Adjei. (2003). Recognizing childhood illnesses and their traditional explanations: exploring options for care-seeking interventions in the context of the IMCI strategy in rural Ghana. Obtained on the 9th of March 2011 through <http://web.ebscohost.com/ehost/detail?vid=6&hid=108&sid=bd09aab7a4df45fba428d51402c28fac%40sessionmgr111&bdata=JnNpdGU9ZWwhvc3QtbGl2ZQ%3d%3d>

Tabi M.M., Powel M. & Hodnicki D. (2006). Use of traditional healers and modern medicine in Ghana. Obtained on the 7th of March 2011 through <http://web.ebscohost.com/ehost/detail?vid=10&hid=106&sid=bd09aab7-a4df-45fba428d51402c28fac%40sessionmgr111&bdata=JnNpdGU9ZWwhvc3QtbGl2ZQ%3d%3d>

Schutter. A. (2008) Een antropologisch onderzoek naar de ziektebeleving van Ghanese migranten in Amsterdam Zuidoost. Obtained on the 10th of March 2011 through <http://igitur-archive.library.uu.nl>

Website's

www.countrystudies.us

www.ghanadistricts.com

www.ghanahealthservice.org

www.indexmundi.com

www.microlinks.org

www.modernghana.com

www.newsfromafrica.org

www.prb.org

www.undg.org

www.who.int

Appendixes

Appendix 1	Map of Gushegu
Appendix 2	The photo's
Appendix 3	Survey
Appendix 4	Processing of the survey's
Appendix 5	Topic list
Appendix 6	Accountability of the topics
Appendix 7	Questions going by the topics
Appendix 8	Processing of the interviews
Appendix 9	Summary of the interviews
Appendix 10	Results
Appendix 11	Misconceptions

Appendix 2 The photo's

- A. This is a Photo of a healthy child. This Photo is used during the test interview in Gbambu



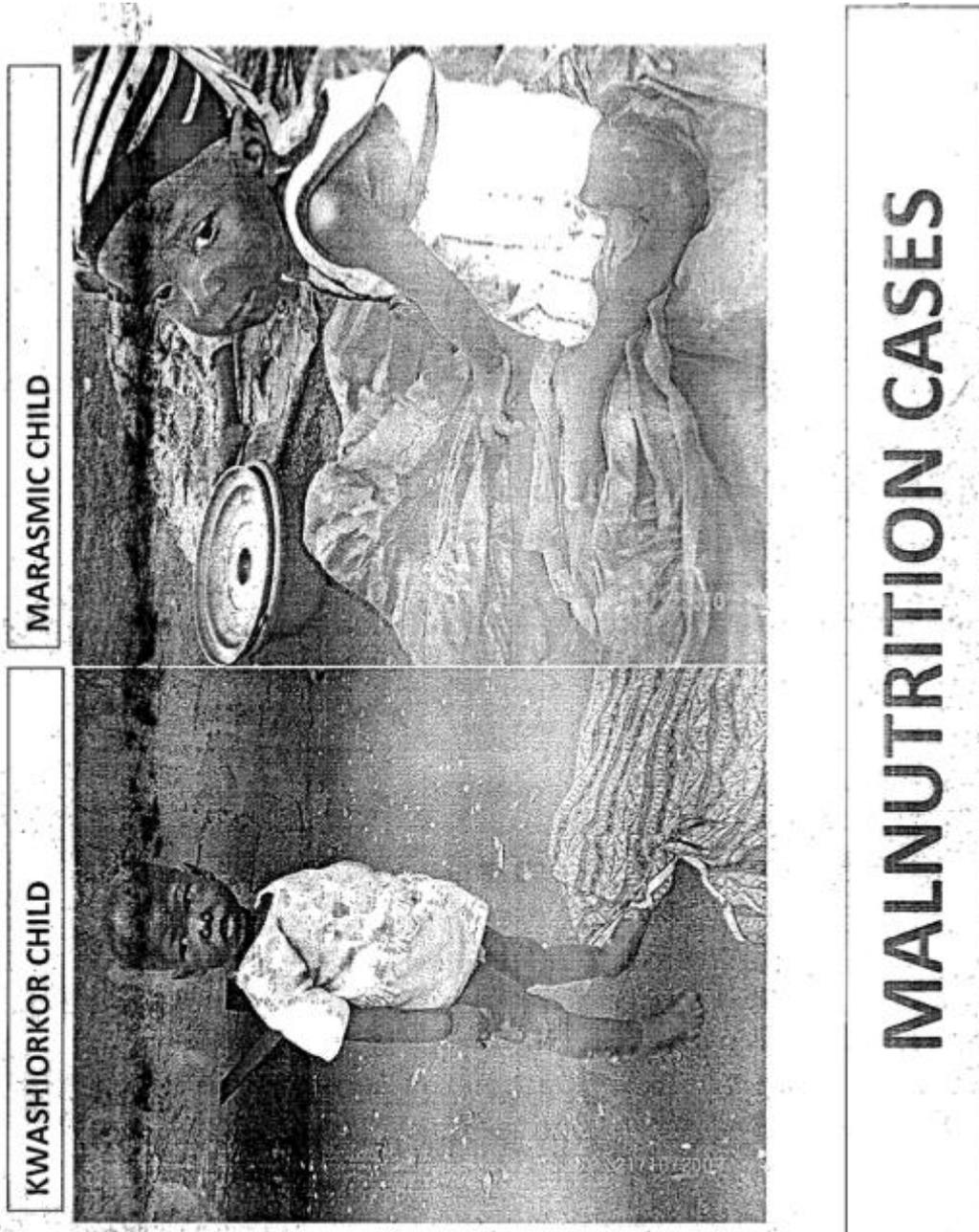
B. This is a Photo of a malnourished child. This child suffers from kwashiorkor. This Photo is used in the test interview in Gbambu.



C. This is a Photo of a malnourished child. This child suffers from marasmus. This Photo is used in Kanshegu.



D. This is a photo of two malnourished children. This Photo is used in Nawuni and Zeei. Eventually also three people from Kanshegu have seen this photo.



Appendix 3 Survey

General

1. Sex		Male	Female
2.	Age		
3.	Religion	Muslim	
		Traditional	
		Christian	
		Others namely:	
4.	What education did you have?		

Females:

5. How many children do you have?	
6.	What is the age of your youngest child?
7.	What is the age of your eldest child?
8.	What is the total number of your household?
9.	What is the total number of children in your household?

Health and sickness

10. How do you see sickness?	
11.	What do you think are causes of sickness?
	a. Physical causes
	b. Spiritual causes
	c. Witchcraft
	d. Others, namely
12.	Why do you think the answer is a, b or c?

Treatment

13. If you fall sick what kind of help do you choose in the first place	
	a. I go to the hospital
	b. I go to a local traditional medicine doctor
	c. I do not seek help
	d. Others, namely
14.	Why do you choose this option
15. a	Why do you choose this option in the first place?
15. b	Would you ever go to the hospital?
	Yes, at what point?
	No, because
15. c	At what point would you decide to go to the hospital?

Health Insurance

16. Do you have health insurance?	
a	Yes why?
b	No, why? (Go to question 18)
17. Have you ever used your health insurance?	
	No
	Yes, for what?
18. Do you have health insurance?	
a	Yes why?
b	No, why?
19. Have your children ever used the insurance?	
	No
	Yes, for what?

Malnutrition

Photo of a malnourished child

20.	Is this a healthy child?	Yes
		No (go to question 22)
21.	How do you see the child is healthy?	
22 a.	How do you see the child is sick?	
22 b.	What type of sickness do you think this is?	
22 c.	What do you think is the cause of this sickness?	
	(First three houses without the options, then with options)	
	a. Psychical	
	b. Spiritual	
	c. Witchcraft	
	d. Others	namely:
23	Would you seek help if your child looks like this?	
	No, because: (go to question 25)	
	Yes, because: (go to question 24)	
24	What kind of help would you seek?	

	a.	I go to the hospital
	b.	I go to a local traditional medicine doctor
	c.	I go to the nutrition centre (coco do)
	d.	Others, namely:
24 a	Why do you choose this option?	
24 b	Would you ever go to the hospital when your child looks like this?	
		Yes, at what point:
		No, because:
24 c	At what point would you decide to go to the hospital with your sick child?	

Photo of a healthy child

25	Is this a healthy child?	
	Yes, how do you see that?	
	No, how do you see that? (go to question 26)	
26	What kind of sickness do you think this is?	
	a.	Physical
	b.	Spiritual
	c.	Witchcraft
	d.	Other, namely:

Appendix 4 Processing of the survey's

Interview compound 1

General

1.	Sex	Male	x	Female
2.	Age	41		
3.	Religion			Muslim
				Traditional
				Christian
				Others namely:
4.	What education did you have?	NO		

Females:

5.	How many children do you have?	5
6.	What is the age of your youngest child?	7
7.	What is the age of your eldest child?	20-30
8.	What is the total number of your household?	32
9.	What is the total number of children in your household under five?	7

Health and sickness

10.	How do you see sickness?		
	-		
11.	What do you think are causes of sickness?		
	a. Physical causes		
	b. Spiritual causes	x	From God
	c. Witchcraft		
	d. Others, namely		
12.	Why do you think the answer is a, b or c?		
	(maybe the food is not good and makes you sick)		

Treatment

13.	If you fall sick what kind of help do you choose in the first place		
	a. I go to the hospital		Go to question 14 and skip 15
	b. I go to a local traditional medicine doctor	X	Go to question 15
	c. I do not seek help		Go to question 15
	d. Others, namely		Go to question 15
14.	Why do you choose this option		
15. a	Why do you choose this option in the first place?		
	The ones who do not have the health insurance go first to the traditional doctor because that is cheaper.		
15. b	Would you ever go to the hospital?		
	Yes, at what point?		
	When the herbs do not work, when we stay sick		
	No, because		
15. c	At what point would you decide to go to the hospital?		

Health insurance

16. Do you have health insurance?	
a	Yes why?
b	No, why? The landlord does not have enough money to get health insurance for everyone in his family. (Go to question 19)
17. Have you ever used your health insurance?	
	No
	Yes, for what?
18. Do your children have health insurance?	
a	Yes why?
b	No, why? Not yet.
19. Have your children ever used the insurance?	
	No
	Yes, for what?

Malnutrition

Photo of a malnourished child

20.	Is this a healthy child?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No (go to question 22)
21.	How do you see the child is healthy?		
22 a.	How do you see the child is sick?		Slim, weak, thin
22 b.	What type of sickness do you think this is?		Does not know
22 c.	What do you think is the cause of this sickness? (First three houses without the options, then with options)		
	a. Psychical	<input type="checkbox"/>	
	b. Spiritual	<input checked="" type="checkbox"/>	From God
	c. Witchcraft	<input type="checkbox"/>	
	d. Others	<input type="checkbox"/>	namely:
23	Would you seek help if your child looks like this?		
	No, because: (go to question 25)		
	<input checked="" type="checkbox"/> Yes, because: (go to question 24)		
24	What kind of help would you seek?		
	<input checked="" type="checkbox"/> e. I go to the hospital		
	<input type="checkbox"/> f. I go to a local traditional medicine doctor		

	g.	I go to the nutrition centre (coco do)
	h.	Others, namely:
24 a	Why do you choose this option? (because the herbs may not work because there is a chance that someone destroy the spiritual working of the herbs) In the hospital this would not happen	
24 b	Would you ever go to the hospital when your child looks like this?	
		Yes, at what point:
		No, because:
24 c	At what point would you decide to go to the hospital with your sick child? When the sickness stays after trying herbs they go to the hospital	

Photo of a healthy child

25 Is this a healthy child?		
		Yes, how do you see that?
	x	No, how do you see that? (go to question 26) Because it does not look happy, but it is not as sick as the first one.
26	What kind of sickness do you think this is?	
		a. Psychological
		b. Spiritual
		c. Witchcraft
		d. Others, namely:

Interview compound 2

General

1. Sex	x	Male	Female
2. Age	54		
3. Religion		Muslim	
		Traditional	
	X	Christian	
		Others namely:	
4. What education did you have?	no		

Females:

5. How many children do you have?	10
6. What is the age of your youngest child?	3
7. What is the age of your eldest child?	29
How many wives?	3
8. What is the total number of your household?	10
9. What is the total number of children in your household?	7

Health and sickness

10. How do you see sickness?	
11. What do you think are causes of sickness?	

	a. Physical causes		
	b. Spiritual causes	x	Everything is from God
	c. Witchcraft		
	d. Others, namely		
12.	Why do you think the answer is a, b or c?		

Treatment

13.	If you fall sick what kind of help do you choose in the first place		
	a. I go to the hospital	X	Go to question 14 and skip 15
	b. I go to a local traditional medicine doctor		Go to question 15
	c. I do not seek help		Go to question 15
	d. Others, namely		Go to question 15
14.	Why do you choose this option		
	They do not know the kind of sickness, so it might be shortage of blood, so first consult the doctor because then you know what the sickness is. If you are not going to the hospital immediately it might be necessary to go there later. Always using traditional herbs in addition to the hospital medicine.		
15. a	Why do you choose this option in the first place?		
15. b	Would you ever go to the hospital?		
	Yes, at what point?		
	No, because		
15. c	At what point would you decide to go to the hospital?		

Health insurance

16.	Do you have health insurance?		
a	Yes why?		
b	No, why? It has expired (Go to question 18)		
17.	Have you ever used your health insurance?		
	No		
	X Yes, for what?		
18.	Do you have health insurance?		
a	Yes why? The youngest two children. The other children do not have it because it is expired. He wants to renew it because he does not know when one of the children falls sick.		
b	No, why?		
19.	Have your children ever used the insurance?		
	No		
	Yes, for what?		

Malnutrition

Photo of a malnourished child

20. Is this a healthy child?	
	Yes
x	No (go to question 22)
21.	How do you see the child is healthy?
22 a.	How do you see the child is sick?
	The legs are huge comparing to a healthy child
22 b.	What type of sickness do you think this is?
	Piles, caused.
22 c.	What do you think is the cause of this sickness?
	(First three houses without the options, then with options)
a. Psychical	
b. Spiritual	x It's from God.
c. Witchcraft	
d. Others	namely:
23	Would you seek help if your child looks like this?
	No, because: (go to question 25)
x	Yes, because: (go to question 24)
24	What kind of help would you seek?
x	a. I go to the hospital
	b. I go to a local traditional medicine doctor
	c. I go to the nutrition centre (coco do)
	d. Others, namely:
24 a	Why do you choose this option?
	Because there is a good hospital.
24 b	Would you ever go to the hospital when your child looks like this?
	Yes, at what point:
	No, because:
24 c	At what point would you decide to go to the hospital with your sick child?

Photo of a healthy child

25 Is this a healthy child?	
	Yes, How do you see that?
x	No, How do you see that? (go to question 26) slim body
26	What kind of sickness do you think this is?
	a. Psychical
	b. Spiritual X

	c. Witchcraft
	d. Other, namely

Additional information

The man has heard of the nutrition centres in Karaga, Nalerigu and Gushegu. He would go to the doctor and he will send his child to a Nutrition Centre.

Interview compound 3

General

1. Sex	Male	<input checked="" type="checkbox"/>	Female
2. Age	50		
3. Religion	<input checked="" type="checkbox"/>	Muslim	
	<input type="checkbox"/>	Traditional	
	<input type="checkbox"/>	Christian	
	<input type="checkbox"/>	Others namely:	
4. What education did you have?	No		

Females:

5. How many children do you have?	7
6. What is the age of your youngest child?	20
7. What is the age of your eldest child?	30
8. What is the total number of your household?	12
9. What is the total number of children in your household under five?	2

Health and sickness

10. How do you see sickness?			
11. What do you think are causes of sickness?	a. Physical causes	<input type="checkbox"/>	
	b. Spiritual causes	<input checked="" type="checkbox"/>	From God
	c. Witchcraft	<input type="checkbox"/>	
	d. Others, namely		
12. Why do you think the answer is a, b or c?			

Treatment

13. If you fall sick what kind of help do you choose in the first place	a. I go to the hospital	<input checked="" type="checkbox"/>	Go to question 14 and skip 15
	b. I go to a local traditional medicine doctor	<input type="checkbox"/>	Go to question 15
	c. I do not seek help	<input type="checkbox"/>	Go to question 15
	d. Others, namely	<input type="checkbox"/>	Go to question 15
14. Why do you choose this option	After hospital sometimes herbs		
15. a	Why do you choose this option in the first place?		
15. b	Would you ever go to the hospital?		

	Yes, at what point?
	No, because
15. c	At what point would you decide to go to the hospital?

Health insurance

16.	Do you have health insurance?	
a		Yes
b	x	No, why? They are planning to get HI but they do not have money now (Go to question 18)
17.	Have you ever used your health insurance?	
		No
		Yes, for what?
18.	Do your children have health insurance?	
a		Yes why?
b	x	No, why?
19.	Have your children ever used the insurance?	
		No
		Yes, for what?

Malnutrition

Photo of a malnourished child

20.	Is this a healthy child?		Yes
			No (go to question 22)
21.	How do you see the child is healthy?		
22 a.	How do you see the child is sick?		
	Looks weak		
22 b.	What type of sickness do you think this is?		
22 c.	What do you think is the cause of this sickness?		
	(First three houses without the options, then with options)		
	a. Psychical		
	b. Spiritual	x	
	c. Witchcraft		
	d. Others		namely:
23	Would you seek help if your child looks like this?		
		No, because: (go to question 25)	

	x	Yes, because: (go to question 24)
24	What kind of help would you seek?	
	x	i. I go to the hospital
		j. I go to a local traditional medicine doctor
		k. I go to the nutrition centre (coco do)
		l. Others, namely:
24 a	Why do you choose this option? Because doctor blames them when they do not come soon enough. When sickness persist they apply herbs	
24 b	Would you ever go to the hospital when your child looks like this?	
		Yes, at what point:
		No, because:
24 c	At what point would you decide to go to the hospital with your sick child?	

Photo of a healthy child

25	Is this a healthy child?	
		Yes, how do you see that?
	x	No, how do you see that? If you are healthy you are fat. (go to question 26)
26	What kind of sickness do you think this is?	
	a. Psychological	
	b. Spiritual	
	c. Witchcraft	
	d. Others, namely:	

Additional information

They have heard of the Nutrition Centre but they did not know that Gushegu has one.

Interview compound 4

General

1. Sex	Male	x	Female
2. Age	30		
3. Religion	x	Muslim	
		Traditional	
		Christian	
		Others namely:	
4. What education did you have?	No education		

Females:

5. How many children do you have?	4
6. What is the age of your youngest child?	3 yrs
7. What is the age of your eldest child?	15 yrs
8. What is the total number of your household?	15

9.	What is the total number of children in your household under five?	2
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Health and sickness

10. How do you see sickness?		
11.	What do you think are causes of sickness?	
	a. Physical causes	
	b. Spiritual causes	x From God
	c. Witchcraft	
	d. Others, namely	
12.	Why do you think the answer is a, b or c?	

Treatment

13. If you fall sick what kind of help do you choose in the first place?		
	a. I go to the hospital	Go to question 14 and skip 15
	b. I go to a local traditional medicine doctor	x Go to question 15
	c. I do not seek help	Go to question 15
	d. Others, namely	Go to question 15
14.	Why do you choose this option	
	When the sickness is critical they are going to the hospital. First Herbs	
15. a	Why do you choose this option in the first place?	
	Financial problems	
15. b	Would you ever go to the hospital?	
	Yes, at what point?	
	When it is critical	
	No, because	
15. c	At what point would you decide to go to the hospital?	

Health Insurance

16. Do you have health insurance?		
a		Yes why?
b	x	No, why? No money (Go to question 18)
17.	Have you ever used your health insurance?	
	No	
	Yes, for what?	
18.	Do your children have health insurance?	
a		Yes why?
b	x	No, why? No money
19.	Have your children ever used the insurance?	
	No	

	Yes, for what?

Malnutrition

Photo of a malnourished child

20.	Is this a healthy child?	Yes
		<input checked="" type="checkbox"/> No (go to question 22)
21.	How do you see the child is healthy?	
22 a.	How do you see the child is sick?	
	Very weak.	
22 b.	What type of sickness do you think this is?	
	no idea, when the mother is pregnant. If the mother does not wash, does not keep the environment clean. If you do not take care of yourself you get a sick child.	
22 c.	What do you think is the cause of this sickness?	
	(First three houses without the options, then with options)	
	a. Psychical	
	b. Spiritual	<input checked="" type="checkbox"/> From God (if you do not visit a doctor you just have to seek another reason. And that reason is God. If you do something wrong with somebody, he can curse you. It depends on the relationship.
	c. Witchcraft	
	d. Others	namely:
23	Would you seek help if your child looks like this?	
	<input type="checkbox"/> No, because: (go to question 25)	
	<input type="checkbox"/> Yes, because: first traditional medicine. But when it is very critical she search for medical help. (go to question 24)	
24	What kind of help would you seek?	
	m.	I go to the hospital
	n.	I go to a local traditional medicine doctor
	o.	I go to the nutrition centre (coco do)
	p.	Others, namely:
24 a	Why do you choose this option?	
24 b	Would you ever go to the hospital when your child looks like this?	
	<input type="checkbox"/> Yes, at what point:	
	<input type="checkbox"/> No, because:	
24 c	At what point would you decide to go to the hospital with your sick child?	

Photo of a healthy child

25 Is this a healthy child?

	<input type="checkbox"/>	Yes, how do you see that?
	<input type="checkbox"/>	No, how do you see that? (go to question 26)
26	What kind of sickness do you think this is?	
	a. Psychical	
	b. Spiritual	
	c. Witchcraft	
	d. Others, namely:	

Additional information

If her child has diarrhoea she goes to the doctor for injections and other drugs. She goes there because she does not know the cause.

If her child has fever she uses the skin of a tree and makes local medicine.

If her child vomits she thinks of malaria, also in that case she uses local medicines.

If her child coughs a couple of days she thinks of asthma and TB. Normally she goes to the hospital for medical assistance. For pneumonia they use local medicines. She consults her husband; he goes into the bush to get the ingredients.

She does not know about the Nutrition Centre.

Interview compound 5

General

1. Sex	Male	x	Female
2. Age	30		
3. Religion	x	Muslim	
		Traditional	
		Christian	
		Others namely:	
4. What education did you have?	no		

Females:

5. How many children do you have?	5
6. What is the age of your youngest child?	1
7. What is the age of your eldest child?	7
8. What is the total number of your household?	15
9. What is the total number of children in your household under five?	3

Health and sickness

10. How do you see sickness?			
11.	What do you think are causes of sickness?		
	a. Physical causes		
	b. Spiritual causes	x	It is a from God because you are disobedient Can also be caused by your behaviour.
	c. Witchcraft		
	d. Others, namely		
12.	Why do you think the answer is a, b or c?		

Treatment

13. If you fall sick what kind of help do you choose in the first place			
	a. I go to the hospital		Go to question 14 and skip 15
	b. I go to a local traditional medicine doctor	x	Go to question 15
	c. I do not seek help		Go to question 15
	d. Others, namely		Go to question 15
14.	Why do you choose this option		
15. a	Why do you choose this option in the first place?		
	Because we are used to consult traditional medicine before the hospital was build.		
15. b	Would you ever go to the hospital?		
	Yes, at what point? When the sickness is critical she will go to the hospital but first herbs. On Wednesday she goes to the clinic with her children.		
	No, because		
15. c	At what point would you decide to go to the hospital?		
	When sickness is critical.		

Health Insurance

16. Do you have health insurance?			
a		Yes why?	
b	x	No, why? There is no money for health insurance. (Go to question 18)	
17.	Have you ever used your health insurance?		
		No	
		Yes, for what?	
18.	Do your children have health insurance?		
a		Yes why?	
b	x	No, why?	
19.	Have your children ever used the insurance?		
		No	
		Yes, for what?	

Malnutrition

Photo of a malnourished child

20.	Is this a healthy child?		Yes
		x	No (go to question 22)
21.	How do you see the child is healthy?		
22 a.	How do you see the child is sick?		
	Swollen cheek and legs		
22 b.	What type of sickness do you think this is?		

	Malaria
22 c.	What do you think is the cause of this sickness?
	(First three houses without the options, then with options)
	a. Psychical
	b. Spiritual
	c. Witchcraft
	d. Others x namely: not seeking early treatment and not feeding your child well.
23	Would you seek help if your child looks like this?
	No, because: (go to question 25)
	x Yes, because: (go to question 24)
24	What kind of help would you seek?
	x q. I go to the hospital
	r. I go to a local traditional medicine doctor
	s. I go to the nutrition centre (coco do)
	t. Others, namely:
24 a	Why do you choose this option? The doctor knows what wrong
24 b	Would you ever go to the hospital when your child looks like this?
	Yes, at what point:
	No, because:
24 c	At what point would you decide to go to the hospital with your sick child?

Photo of a healthy child

25	Is this a healthy child?
	Yes, how do you see that?
	No, how do you see that? (go to question 26)
26	What kind of sickness do you think this is?
	a. Psychical
	b. Spiritual
	c. Witchcraft
	d. Others, namely:

Additional information

If her child has diarrhoea she first tries traditional medicines. It is less expensive and closer to the house. Also for fever she uses traditional medicine. There are different types. In the past she has been to the hospital with her child, when he suffered from diarrhoea. She has never heard of the Nutrition Centre.

Appendix 5 Topic list

Introduction

- Who we are
- Why we are here

General information

- Age
- Religion
- Man
- Woman

Nutrition

- Food
- Knowledge
- Breastfeeding
- Supplementary food

Personal health situation

- History
- Causes

Treatment

- Types of treatment
- Who decides
- First line treatment

- Traditional medicine: Herbs
- Traditional doctor
- Cock doctor

Hospital

- Experiences
- Trusting health care (doctors, medicines)
- New hospital, differences
- Health insurance

Child health situation

- Keep healthy
- Weighing
- Vaccination
- History

Malnutrition

- Knowledge
- Signs and symptoms
- Causes
- Preventing
- Experiences

Child sicknesses

- Treatment

Nutrition Centre

- Knowledge

Economic situation

- Compound
- Carers
- Children
- Hygiene
- Clothing

Appendix 6 Accountability of the topics

Introduction

In order to introduce ourselves and to make people comfortable with the situation we chose to begin with an introduction. In this introduction we specifically chose not to mention that we work in the hospital because this can influence people's answers.

General information

We will ask for some general information for several reasons. With this information we will be able to compare answers, but it will also help to make people feel comfortable in the early stage of the interview through the non-complicated questions.

Nutrition

We chose to ask for information about food for several reasons. We want to get an idea of the interviewees' financial situations, so we will ask whether the interviewees are able to provide enough food. With this information we also want to get an idea of what people eat during a typical day, and whether there is any variation in their diet, to see if that could be a cause of malnutrition. The questions about the interviewees knowledge will be used to get an idea of how much education needs to be given about this subject. Because breastfeeding and supplementary food plays a major role in developing malnutrition we need to know what their views about these topics are.

In this section we will also ask about the Moringa tree. This information is for Project Share and is not directly useful to this research.

Personal health situation

We will ask for some information about personal health in order to get a complete picture of the health situation of the people. We will also ask what they think are the causes of sickness in general to create a picture of their thoughts about health and sickness. This information will also be used to get a complete illustration, together with the information about the first line treatment, about what kind of treatment they choose in case of sickness.

Treatment

The questions about treatment will be asked to get a clear picture about the first choice of treatment. But we also want to find out if and how often they make use of traditional doctors and cock doctors, and what their reasons are to choose a certain treatment. This information will be helpful for the education which Project Share will give.

Hospital

Because we assume that people do not visit the hospital in an early stage of a sickness, we want to collect information about their views of the hospital. We hope to find out why they do or do not choose the hospital as the first line treatment. Besides this we want to check whether having health insurance influences their choice.

Child health situation

By gaining information about what carers do to keep their children healthy, we want to understand the knowledge people have about sickness and health in children and about how to prevent children from getting sick. We want to check what carers do when faced with sickness. Within this topic we also want to ask whether the mother went to the clinic for weighing and vaccinations, and to check if they have received the information the clinic provides.

Malnutrition

The questions about malnutrition will provide the data for the main subject of this research. This information will help in answering sub questions 2 and 3 and the main question. We want get an impression of the people's knowledge about malnutrition, how they regard this sickness and what they do when children suffer from this sickness. When asking these questions we will also use a picture of malnourished children to see if they recognize this sickness.

Child sicknesses

This topic will be investigated to get an answer to the question about the first choice of treatment by the carers. We will ask about several common sicknesses like diarrhoea, vomiting and fever and how they would treat them. These sicknesses can also be signs of malnutrition, so we can also find out if they recognize the symptoms of malnutrition.

Nutrition centre

The information we gain about the nutrition centre will be used by Project Share. It will not be relevant when answering the questions of this research.

Economic situation

We will ask for information about the economic situation of the interviews in order to find out if lack of money could be a reason for the high prevalence of malnutrition. This will be checked in different ways: we will use our observations, we will ask the people if they are able to provide food, to send their children to school and if they have health insurance. At the end of the interviews we will ask them how they classify their own economic situation. With this information we want to get a clear picture about the economic situation of the interviewees.

Appendix 7 Questions going by the topic list

General information

- **Age**
- **Religion**
- **Man**
 - How many wives do you have?
 - Do you have any education?
 - What is your occupation?
 - How many children are going to school?
 - Are you planning to send your youngest children also to school?
- **Women**
 - How many children do you have?
 - What are the ages of your children?
 - How many of your children are going to school?
 - Do you have any education?
 - What is your occupation?

Nutrition

- **Food**
 - What kind of food do you eat during a day?
 - Who provides the ingredients to prepare the food?
 - What kind of food do you provide?
 - What is the reason to provide this food? (probe deeper)
 - Is there enough money to provide all the food you want to?
 - How many meals do you eat during a day?
 - Is this the same during the whole year?
 - What are the basic ingredients you use in preparing the food?
- **Knowledge**
 - Can you tell us what you think is healthy food?
 - Do you know how to use these ingredients in preparing the food?
 - Do you know how often you should eat vegetables/fruit?
 - Do you know how often you should eat meat/fish/eggs?
 - Do you know how often you should eat yam/rice/beans/corn?
 - How do you use these ingredients in a day?
 - Have you ever heard of Moringa?
 - Do you know what it is?
 - Have you ever used Moringa?
 - Do you know how to use Moringa?
- **Breastfeeding**
 - Can you tell us what you know about breastfeeding?
 - Who told you this information?
 - When did you start breastfeeding?
 - Did you start breastfeeding your first child yourself?
 - How often did you give breastfeeding during the day?
 - What else did you give in addition to the breast milk?
 - How old was you baby when you started to give other food/drinks?
 - Why?
 - Did you have any problems with giving breastfeeding?
 - What kind of problems did you have?
 - Did you try to solve these problems?

- What did you do to solve these problems?
- When did you stop giving breastfeeding?
- Why at that point?
- What did you give your child instead of breastfeeding?
- Did you have any problems with stopping the breastfeeding?
- What kind of problems?
- **Supplementary food**
 - After how many months did you give your child normal food?
 - What kind of food did you give your child first?
 - Did your child like normal food?
 - Did your child want to eat the normal food right from the beginning?
 - If no: What did you do to let him eat?
 - What kind of drinks did you give your child besides the normal food?
 - Did you give anything else besides the normal food? If yes, what and why?

Personal health situation

- **History**
 - How is your health situation at this moment?
 - Have you been sick the last few years?
 - What kind of sicknesses did you have?
 - How long did it take to recover?
 - Were you able to do your daily tasks?
 - Were you still able to take care of your children?
 - Were you still able to give breastfeeding?
 - If no: why not?
- **Causes**
 - Did something happen that made you fall sick?
 - Did you eat anything wrong?
 - Did you argue with someone else?
 - We heard about cursing and evil spirits in this area. Is it possible that cursing or evil spirits causes sicknesses?
 - Do you have experiences with those kinds of things?
 - What happened?
 - What did you do?
 - What impact did it have on the community?
 - What role does God play in sicknesses?

Treatment

- **Types of treatment**
 - What kinds of treatments are available in this village?
 - Do you know what types of treatments are available in this whole area?
- **Who decides**
 - Who decides when you start treating a sickness?
 - Is that person making the decision in every situation?
 - Who decides what kind of treatment you start?
- **First line treatment**
 - If you fall sick what is the first thing you do?
 - What kind of treatment do you choose in the first place?
 - Why do you choose for this treatment?
 - What do you do when the treatment does not work?

- Do you use other treatment in addition? What kind?
 - Is there someone you counsel when you fall sick?
 - Who is that person?
 - Why do you choose that person?
 - Where is this type of treatment available?
- **Traditional medicine**
 - Do you have experiences with traditional medicine?
 - What kind of experiences?
 - How often do you use traditional medicine?
 - In what kind of situations do you use this?
 - What types of traditional medicine are available here?
 - How do you know how to use herbs?
 - Are you also trying new types of traditional medicine? (Experimental)
 - Who's making the medicines?
 - Who's responsible for this type of treatment?
- **Traditional doctor**
 - Is there a traditional doctor in this village?
 - Are there traditional doctors in this area?
 - Have you ever counselled a traditional doctor?
 - Get the story
 - What types of treatment does he provide?
 - What are reasons to counsel a traditional doctor?
 - Is it expensive to counsel a traditional doctor?
- **Cock doctor**
 - Are there other doctors available in this area (besides medical and traditional)?
 - Have you ever heard of Kofi in Gushegu?
 - Are there more doctors like him?
 - Have you ever counselled one of those doctors?
 - Why have you counselled them?

Hospital

- **Experiences**
 - Have you ever been to the hospital?
 - For what reason did you go?
 - Can you tell us something about your health situation at that point?
 - Did you use other treatments before you went?
 - How do you feel about your stay in the hospital?
 - How did you experience your contact with the doctor and nurses?
- **Trusting health care**
 - What do you think about the hospital in general?
 - Would you visit the hospital? Why (not)?
 - Would you visit the hospital again? Why (not)?
 - Do you believe in what a doctor is saying?
 - What do you think about the medication they prescribe?
- **New Hospital**
 - Did you ever go to the old hospital/clinic?
 - Does it make a difference in your treatment choice now there is a new hospital?
- **Health insurance**

- Do you have health insurance?
- What do you know about health insurance?
- What do you think about health insurance? (Is it useful or actually not really necessary in their situation?)
- What is your reason?
 - If they say that they do not have enough money:
 - Do you know that if you ever would go to the hospital a treatment is more expensive than health insurance?
 - If children go to school. Apparently you have money so why do not you invest that in HI?
- Can you tell us how much it costs?
- Do you know where to order you health insurance card?

Child health situation

- **Keep healthy**
 - How do you try to keep your child healthy?
- **Weighing**
 - Did you go to the child weighing with your child?
 - How often did you go?
 - Why did you go?
- **Vaccination**
 - Did your child get vaccinations?
 - What vaccinations?
 - Why did you let them give your child the vaccinations? Or not give?
- **History**
 - Is your child ever been sick?
 - Do you know what type of sickness?
 - What kind of symptoms?
 - What causes the sickness?

Malnutrition

We will show both mother and father some different pictures of malnourished children.

We will use pictures of both types of malnutrition: marasmus and kwashiorkor.

- **Knowledge**
 - What do you see in these pictures?
 - We want to probe deeper on this question
 - What do you think can cause this?
- **Signs and symptoms**
 - Are there specific things you see in the pictures of the children?
 - What can it mean that the child has swollen legs?
 - What can it mean that the child is very thin?
 - What can it mean that the child has orange hair?
 - Have you seen children like this before?
 - Can it be a sickness?
 - What kind of sickness?
- **Causes**
 - Have you ever seen a child who looks likes one of these children?
 - If yes: What was the cause of that?
 - If no: What do you think might have caused this?

- Is there a chance that this type of sickness is caused by...?
- **Preventing**
 - How can we prevent children from becoming this sick?
 - How would you prevent your child to become this sick?
- **Experiences**
 - Have you ever seen a child who looks like one of these children?
 - What was the cause in that situation?
 - What did you do?
 - What did the carers of that child do?
 - Did you/they seek for help?
 - What kind of help?
 - What happened with the child?

Child sicknesses

- **Treatment**
 - What do you do when your child has diarrhoea?
 - What do you do when your child is vomiting?
 - What do you do when your child is coughing a lot?
 - What do you do when your child has a fever?
 - Who taught you this information?
 - Do the treatments help?
 - What do you do when it is not helpful?

Nutrition centre

- **Knowledge**
 - Have you ever heard of a nutrition centre?
 - What have you heard?
 - What do you know about the help they provide in the nutrition centre?
 - Would you go to a nutrition centre if it would be necessary?
 - What do you think you need to pay for admission in the nutrition centre?

(After the questions about the nutrition centre we want to give some general information about the centre, like the work we do there and the results of the treatment we provide.)

Economic situation

- How would you classify your economic situation?

Appendix 8 Processing of the interviews

Kanshegu compound 1

	Man	Woman
General information		
Age	53	30
Religion	Muslim	Muslim
Occupation	Farmer	-
Education	No	No
Children	20 children	2 children, the youngest is 2 months, and the eldest is 5 years.
How many children in school	Six children are in school. Some are still too young and there is not enough money. He is planning to send the other children to school.	Her children are not going to school
Wives	5	-
Nutrition		
Food	<p>He eats TZ and porridge. In the morning: porridge For lunch: TZ For supper: TZ Normally TZ but if it is available they have yam to prepare Fufu</p> <p>Soups: Different types of soups. Ingredients for the soups are okro, baobab leafes, aleefu and onions and pepper.</p> <p>In the farm the produce mais and yam, in the dry season he buys food from the market and in the rainy season they eat from the farm.</p> <p>The man/landlord provides the food for the compound. When there is not enough they buy in the market.</p> <p>There is enough money to buy in the market if necessary.</p>	
Knowledge	He does not know what healthy food is. If people would explain about healthy food he would listen.	<p>Small children (between 2 and 3 years) eat porridge and drink breast milk</p> <p>Healthy food: vegetables egg</p>

	He has heard about Moringa. He uses the leafes of the tree to prepare tea.	groundnut paste
Breastfeeding	You should breastfeed your child for at least two years, before you wean the child.	You can give breast milk for years. She started giving breast milk in the hospital when she was back in her room. She gives breast milk when the child is awake. She does not give water or tea, that is what she got told in the hospital. There are no problems with breastfeeding.
Supplementary feeding	Sometimes they add porridge within the two years. Sometimes when a child is 1,5 they add other food. This information was told by the nurses of the hospital. He is also the health volunteeer of the village.	Start after six months. She gives for example oranges in the orange season. Besides that she gives porridge and TZ

Personal health

History	In the past he suffered from dysentery	She felt sick in the past. It was not severe. She used herbs, this did not help so she went to the hospital where they gave medicines.
Causes	The will of God because there were also sick people in other villages. He does not know why God gives sickness. There are no evil spirits in the villages. He does not really know the cause of sickness because he is always healthy. He has never experienced witchcraft or evil spirits. But he heard they are there.	She believes that a sickness can be caused by evil spirits. Evil spirits can attack you. Some sicknesses attack you through you enemies. In that case it is not from God. Those sicknesses cannot always be healed by going to hospital. Sometimes the hospital people sent you back home for traditional medicine. Or they send you to a big hospital. Sometimes sicknesses are from God. She got told by a soothsayer. Sicknesses from God are better to heal compared to evil spirits

Treatment		
Types	Herbs	Different types are herbs, hospital and soothsayer
Who decides	He, the landlord, makes the decision for treatment in important cases. He involves the ladies.	-
First line	<p>1. Herbs. 2. Medicine from drugstore.</p> <p>The citizens of the village advised him what medicines to use, when he was sick.</p> <p>When the sickness is really severe he goes to hospital.</p> <p>First all the other treatments because he does not expect it will be serious.</p>	<p>Headache → buy Paracetamol For stomach ache she goes to her husband to complain and then she uses traditional herbs. When it does not help she goes to the hospital</p>
Traditional medicine	Stomach ache → traditional drugs. If it does not help then go to hospital.	-
Traditional doctor	<p>There is a traditional doctor in the village. He consult this doctor for:</p> <ul style="list-style-type: none"> - all sicknesses <p>The Traditional Doctor send him to the bush for herbs.</p> <p>Reasons to go first to TD:</p> <ul style="list-style-type: none"> - Old man; - lots of experience; - TD is old and wise. - For free <p>Traditional doctor is for free, but when treatment helps you will show your appreciation.</p>	-
Cock doctor	Went to the cock doctor in the night. At that time there was no hospital.	-
Hospital		
Experiences	He sends his children to hospital when they have headache. He also sends women there for deliveries.	-
Trust in HC	Care in hospital is good because they will examine	-

	you and will prescribe drugs. If it does not work you can go back to them.	
New hospital/differences	With the new hospital he will never go to a cock doctor anymore.	-
Health Insurance	Yes he has. Some cards are expired, but he will extend them. That is not done yet because of the money. HI is very important. After treatment in hospital you do not have to pay. Without HI you spend a lot of money.	-
Child health situation		
Keep healthy	To keep children healthy he sends them to the hospital when a child is sick. Newly born babies go to the hospital immediately because he do not try herbs. When children can talk they can say where the pain is and then they can try herbs first. He tells the mothers children should bath before they eat.	-
Weighing	-	Yes
Vaccination	-	Yes
History	Children have been sick. Headache and stomach ache. Causes are eating wrong food.	
Malnutrition		
Knowledge	-	-
Signs and symptoms	-	-
Causes	Shortage of blood Wrong food Not enough food. He would send a child to the hospital.	-
Preventing	-	You can prevent a child from getting this sickness by going to hospital or nutrition centre there is one in Karaga

Experiences	-	-
Child sickness		
Treatment	-	For example diarrhoea. If you do not have HI then first go to the drugstore and complain, after that she give herbs from the bush and if that does not work you go to hospital.
Nutrition centre		
Knowledge	Has heard of the nutrition centre. They cook beans, eggs and fish. Sometimes cook vegetables. Did not know it is for free.	She has heard of it. The one in Karaga is older than the one in Gushegu. But in Gushegu you do not have to pay. In Karaga you have to.
Economic situation		
Information	In general there is enough money.	-

Kanshegu compound 2

	Man	Woman
General information		
Age	20	35
Religion	Muslim	Muslim
Occupation	Farmer	-
Education	No education	No education
Children	1 child: 1 year	2 children: the eldest is 5 years, the youngest is 2,5 years.
How many children in school	To young	One child.
Wives	1	
Nutrition		
Food	In the morning: For lunch: TZ For supper: TZ Get food from the farm and sometimes they buy some food. He is the one who provides. If the harvest is not good then the food production will not reach to next harvest. In all the soups they put magi, fish, salt, pepper, union	Husband is the one who provides the maize to make TZ. Sometimes they eat yam. She buys the ingredients for the soup. She tries to make the Nutrition Centre porridge but they do not have the ingredients most of the time.
Knowledge	Maize and yam are healthy.	She does not really know what healthy food is. She

		thinks that tomatoes, eggs and fish are healthy.
Breastfeeding	He does not know anything. They sometimes give babies tea and some type of porridge when the mother is away for a while. Breast milk can cause the sickness in the picture of the malnourished child.	When a child is crying you can give your child breast milk. She started giving milk after giving birth. She does not give anything apart from breast milk, even not water. That is what they advise in the hospital.
Supplementary feeding	He does not know what age this should start	She started normal food when her child was 1.5 because her child did not like normal food. She did not really do anything to let her child eat but she tried to force. She gave only water and tea in addition. 1,5 year or two years is good to start with normal food.
Personal health		
History	He is healthy, no abnormal things	-
Causes	-	-
Treatment		
Types	-	-
Who decides	-	The husband is the one who decides.
First line	When the sickness is not that bad he goes to the traditional doctor. If that does not help he goes to hospital. Sometimes to drugstore.	Traditional medicine
Traditional medicine	This is the first option because you need to consult someone. The elder man will give you the herbs. He, himself, believes in herbs. Sometimes you will not get better by going to hospital then you try herbs	-
Traditional doctor	He goes there	She never went there
Cock doctor	Only the drugstore.	She sometimes consults Kofi, the cock doctor.
Hospital		
Experiences	The hospital tells him to go back and treat it traditional. He, himself, never went to hospital.	The last option in treatment in the hospital.
Trust in HC	It depends of the fact if they	There are diseases what

	can heal him or not.	cannot be cured in the hospital. That sickness is poisoning. When they poison you it can only be healed the traditional way.
New hospital/differences	-	-
Health Insurance	He does not have HI but his wife and child have. It is his wish to have health insurance. He believes it is necessary to have HI because it will be very expensive if he falls sick at this moment.	Her children just have health insurance since. She does not have. The hospital is expensive without health insurance.
Child health situation		
Keep healthy	-	The youngest child has convulsions.
Weighing	-	-
Vaccination	-	-
History	-	-
Malnutrition		
Knowledge	This sickness is AIDS.	The child is sick. Maybe it is not well fed.
Signs and symptoms	-	-
Causes	Breast milk can be a cause. Evil spirits can also cause this, which needs to be cured by a traditional healer.	-
Preventing	-	Only God can prevent this she does not have the knowledge.
Experiences	-	-
	He would use herbs for first aid then go to hospital.	She would consult her husband and if there is money she would go to the hospital.
Child sickness		
Treatment	-	If child has diarrhoea you have to use spices. Use pepper and make a mix and then put it in the anus of the child that will stop the diarrhoea. If it does not stop she goes to the drugstore to get drugs. If that also does not stop the diarrhoea she goes to the hospital.
Nutrition centre		
Knowledge	He has heard of the Nutrition Centre. If a child is sick and thin people go there and after	She has heard of Nutrition Centre. She knows that someone went to the centre.

	a month of more the child get better.	That child was very sick. But she does not know why to go to the Nutrition Centre instead of going to the hospital. In the NC they make special porridge. She thinks you need to pay some money.
Economic situation		
Information	They do not always have money to buy food. He does not have money to get Health Insurance.	She cannot always buy healthy food. Her children have Health Insurance. First child goes to school She says she is struggling a lot.
Additional information		
<p>The man:</p> <ul style="list-style-type: none"> - A snakebite should be treated traditional first. That is also what the hospital says. Poisoning cannot be cured in the hospital. <p>The woman:</p> <ul style="list-style-type: none"> - Her youngest child had convulsions. They used herbs to bath the child and it helped. She does not go to a traditional doctor, her husband just goes into the bush himself. A man from the village told about the treatment for the convulsions. . - Sometimes her husband does not give money for the hospital. Then she tries to borrow money for treatment. - The hospital cannot cure poisoning. Sometimes they can do a surgery to remove the sick body parts. 		

Kanshegu compound 3

	Man	Woman
General Information		
Age	45	She says 25 years old. We think she is older.
Religion	Muslim	Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	10 children	6 children. The youngest child is 1,5 year. The eldest one is three years.
How many children in school	2, planning for more but not enough money.	-
Wives	2, one wife died.	-
Nutrition		
Food	They eat TZ, fufu and porridge and they eat three meals a day.	

	<p>The wife will plant some stuff in the farm or she goes to market.</p> <p>They use vegetables like aleefu, ayoyo and peppers and tomatoes</p>	
Knowledge	<p>Healthy food: beans, millet and vegetables are healthy. They eat fish and eggs once a week</p> <p>He knows about Moringa. They have it outside the compound. He uses it for tea also for his children. When a child has fever he gives Moringa tea. Moringa can be used for stomach ache, the seeds give diarrhoea.</p>	<p>Healthy food: tomatoes, fish, groundnut paste and vegetables are very healthy. She also prepares it. She knows it is good to give your children this food.</p> <p>In the rainy season is not everything available.</p>
Breastfeeding	<p>If his wife delivers and there is not enough milk, he gives his wife something that helps the woman to produce more milk. He gives a mix of herbs (traditional medicine).</p> <p>A woman gives breastfeeding for three years</p>	<p>Started giving breast milk after delivery. They were used to give the child to someone else, for breast milk, but now she knows that that is not good. The child should only have the mothers breast.</p> <p>You give exclusively breast milk for three years because the child does not like normal food. Her child of 1,5 years old had only breast milk. (but he looks healthy) he drinks water since he was a few months. She got this information from the clinic.</p>
Supplementary feeding	<p>You have to let your child slowly getting used to normal food.</p> <p>It depends on the wife when she gives normal food, maybe when the mother is pregnant again because the milk is warm.</p>	<p>When a child can walk you can start giving normal food. When a child starts eating too early (when a child is 1 year) it will develop problems with walking. She has observed that in her children.</p> <p>The type of supplementary food depends on the interest of the child.</p>
Personal health		
History	<p>He is currently healthy. Once he suffered from dysentery. He started to treat with Traditional Medicines but after that he went to hospital.</p>	-

	Sometimes you need drips and that is only available in hospital	
Causes	The rainy season brings more sickness and mosquitoes also bring sickness. He believes in witchcraft and evil spirits. You can get poisoned by someone. You can get sick through the toilet but if you keep it clean you won't fall sick. A child should not eat in different compounds because that can make the child sick.	She believes in witchcraft but she has never experienced it.
Treatment		
Types	-	-
Who decides	He, because he is in charge of the house, also for payments	She will not always consult her husband. She goes to the drugstore by herself.
First line	He does not depend on medical treatment. Only traditional medicine	-
Traditional medicine	He uses this a lot. His grandfather was a traditional doctor so he knows a lot. That is what he is grow up to. But if traditional medicine does not work you can send your child to hospital.	-
Traditional doctor	-	-
Cock doctor	He does not go to cock doctor. He only uses traditional medicine or he goes to the hospital.	Only to the drugstore. They never consult the cock doctor.
Hospital		
Experiences	The experiences in the hospital were ok.	-
Trust in HC	They give good information. If it is necessary he will go back to hospital.	-
New hospital/differences	-	-
Health Insurance	Three of his children have Health Insurance but he does not have it for everyone. He is planning to do. He renewed his card a few times but he never used it.	-
Child health situation		

Keep healthy	-	She baths them to keep them healthy. She prepares breakfast, porridge, and lunch and supper. When a child is sick she gives herbs.
Weighing	-	yes
Vaccination	-	yes
History	-	
Malnutrition		
Knowledge	-	This child is paralysed. The child is too small
Signs and symptoms	-	-
Causes	Because they did not prevent it early enough. It can be poisoning.	Not being hygienic
Preventing	When you know your child, you know when the child is getting sick. In that case you look for help soon enough.	-
Experiences	You first try some herbs, you try different ones if necessary. You can use herbs to bath the child. If it does not help you go to the hospital.	She has never seen a child like this.
Child sickness		
Treatment	The treatment for poisoning is: a medicine to eat then you start running diarrhoea and the poison will go out of the body. He does not need to go to hospital because he inherits this from his grandfather, who was a traditional doctor. Children can die of poisoning.	She first consults her husband and he will collect herbs. If that does not work she would go to the hospital. When a child suffers from diarrhoea: she first goes to the drugstore. Then to hospital. Diarrhoea is caused by bad food. For coughing her husband has herbs. When her child has a fever she would go to the hospital.
Nutrition centre		
Knowledge	He heard of the nutrition centre but does not know anything about it.	She has heard about it but she does not know where it is. Children from the village have been to the nutrition centre. They were very small but now they are healthy again. She does not know what work is done in the NC

Economic situation		
information	It is not very good because not all his children are in school.	She cannot prepare healthy food every day.
Additional information		
<p>The man:</p> <ul style="list-style-type: none"> - Poisoning has different types. The spiritual one, this one can affect the whole body and even the hospital cannot cure it, and the poisoning in food, then it is located somewhere in the body. The hospital can remove this. - With the information of malnutrition in mind the man told us that sickness can be caused by uncovered food. - He knows a child who went to the hospital first (diarrhoea and coughing) and now he treats the child traditional. Now the child is fine. <p>The woman:</p> <ul style="list-style-type: none"> - She thinks that when a child drinks from another breast it will get the habits from the other women. - At the clinic she got taught children should start eating normal food at the sitting stage. But she does what she believes is right. - They have traditional medicine for boils, coughing and when you body is swollen. 		

Nawuni compound 1

	Man	Woman
General information		
Age	37	35
Religion	Muslim	Traditional and Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	6 children	6 children, the youngest is 1,5 years and the eldest 20 years.
How many children in school	3 children are in school, the other children are too young.	3 children are in school, the other children are too young.
Wives	1	-
Nutrition		
Food	<p>He is the one who provides the food and when food in the house is finished he goes to the market. The women go to market to buy ingredients for soup (okro, tomatoes, and green leafes).</p>	<p>Food they normally eat is Porridge and TZ. Sometimes they eat other food.</p> <p>In the soups she puts groundnut paste, pepper, salt, fish, dawa dawa (herbs). Sometimes tomatoes and onions from market. The husband is the one who provides the food. He is responsible for the corn to prepare the TZ. She is responsible for the soups.</p> <p>The buy fruits like orange and pawpaw, sometimes, in the market.</p> <p>In general they eat three meals a day. In some seasons there is not enough food.</p>
Knowledge	<p>Healthy food is corn, guinea corn, beans and fufu.</p> <p>Rice is not healthy, he runs diarrhoea after eating rice balls.</p>	<p>She thinks healthy food is tomatoes, fruit, and some kind of big fish. She knows how to use these ingredients.</p> <p>She has heard of Moringa. She uses it in soups.</p>
Breastfeeding	<p>He does not know anything about breastfeeding. The mothers get information in the hospitals.</p> <p>He does not tell the mother she should give certain things.</p>	<p>When you have been working in the farm your breast milk is too hot, you first have to cool the breast down.</p> <p>When you gave birth you have to bath yourself and the child. After that you have to start giving breast milk.</p> <p>After giving milk she puts the</p>

		<p>child down to rest. Within some minutes she does this again. In three days the milk will come plenty. The first milk is the best so she has to give it herself. This is told in the hospital.</p> <p>When there is not enough milk you can give tea in addition. There is also a medicine what can be added to the food of the child. They buy the medicine from the drugstore.</p>
Supplementary feeding	<p>His youngest child just started eating TZ. The first started with tea.</p> <p>When you start with supplementary food too young, the stomach of the child will grow bigger than the child himself. They do not want that to happen so they wait long with giving other food.</p>	<p>She starts giving supplementary food when a child is about 3 or 4 months. She gives porridge but only if you are sure the child can eat it. They also give water and tea when the child is up to 6 months.</p> <p>Problems: When you force your child to eat normal food the child starts to run diarrhoea. This also happened to her children.</p>
Personal health		
History	-	-
Causes	<p>Food can make you sick if it is not prepared well. You can also fall sick if the water is not clean.</p> <p>You can fall sick in the rainy season because the body gets hot and cold because of the cold of the rain.</p> <p>He does not believe in witchcraft and evil spirits because he has no experience with it. He has heard of it.</p>	<p>Sicknesses are from God. You can also get sick if you do not filter the water or if you do not prepare your food well.</p> <p>Poisoning can make you fall sick. It did not happen to her but she has seen it in other people. Their stomach became thick and they could not tell what kind of sickness they were suffering from. They went to traditional healer for help. It did not help because when you are poisoned you will die. She does not know the reason for poisoning. It is done by someone, not by spirits. She also believes in the existence of evil spirits.</p>

		<p>Sometimes you see someone walking in the heat of the day, then a spirit is troubling that person. They will catch and tie the person and will put medicine/herbs, give some fire to smoke and then the spirit will leave. In hospital they do something small and they will refer back to traditional healers.</p> <p>Both poisoning and evil spirits can happen in adults and children.</p> <p>When children are poisoned their stomach will get big.</p>
Treatment		
Types	-	<p>Drugstore, hospital, herbs.</p> <p><i>She gave different kind of stories about the treatment. Sometimes first traditional other times hospital. There was not one answer.</i></p>
Who decides	<p>He is the one who decides. In the morning he greets everyone and then he can hear the conditions of the children. If it is necessary he can give money to go to the hospital.</p>	-
First line	<p>If the Health Insurance is good he first goes to the hospital. When the card is expired you fear to go to hospital because then you will spend a lot of money. In that case he first goes to the drugstore.</p> <p>Hospital medicine work faster than traditional. He will add traditional medicine to the other medicine.</p> <p>(Grandparents taught them how to use).</p>	<p>When traditional medicines do not work she goes to the drugstore and explains the conditions so they will give drug. If it does not work she goes to the hospital.</p> <p>They do it this way because the health condition in the hospital is not healing fast enough. Then they add traditional medicine.</p> <p>She does not go to the hospital first because they do not have insurance. So they first go to a place where they spend less money. Maybe Traditional Medicines will help and the sickness will not go further. In hospital you need a health insurance card. She goes to the hospital when</p>

		other treatments do not work.
Traditional medicine	-	-
Traditional doctor	-	There is a traditional doctor in the village. She consults him for convulsions and stomach ache. He advices what herbs to use and he tells how to use them. You do not need to pay but you show your appreciation.
Cock doctor	Before hospital they went to cock doctor. Now there is Health insurance and a good doctor. Cock doctors were just selling for the money.	-
Hospital		
Experiences	-	She has been to the hospital for stomach ache. They gave injections and medicine. She knows children who died in the hospital because of convulsion.
Trust in HC	-	The hospital is a safe place because they do their work very well.
New hospital/differences	-	-
Health Insurance	He has health insurance but it is expired. Everybody has HI but some are expired.	She does not have health insurance because of poverty. She thinks it cost 11 GHC. For a child you pay less. She knows this information because people told her. She realizes that medical help is more expensive without health insurance. She also does not have it because she has too many children.
Child health situation		
Keep healthy	-	She keeps her children healthy by covering the food so no flies will come into it and by preparing clean food. She also baths the children.
Weighing	-	Yes
Vaccination	-	Yes
History	His children get sick in the rainy season because of the cold. When a child is sick it is because of God, not by witchcraft or evil spirits.	Children have been suffering from sicknesses convulsions and stomach ache. When child is sick she goes to the hospital after using herbs and

		medicine from drugstore.
Malnutrition		
Knowledge	<p>Marasmus: Thin legs Kwashiorkor: swollen stomach, face and legs.</p> <p>Both children are sick. One is kwashiorkor the other one is polio. They send children like this to the hospital. After that they use the traditional medicine.</p>	<p>Marasmus: cripple child. Thin legs. Kwashiorkor: Child is somehow fat → swollen.</p> <p>The swollen child is suffering from kwashiorkor. She knows because the hospital and clinic show pictures like this when she goes for weighing.</p>
Signs and symptoms	The thin child: sickness is in the blood. The sickness is from God.	-
Causes	Kwashiorkor is when you do not eat good food, dirty food and when the house is dirty. But it can also be in the blood. When parents know they did not give bad food it is in the blood. When it is in the blood a child will die. Sometimes in the hospital. Local treatment cannot cure this.	Kwashiorkor: do not know the cause. It can be caused by eating when a child is too small.
Preventing	-	The kwashiorkor can be prevented by preparing clean food. If her child was like this she would send it to the hospital immediately then bring it back and show it to the traditional healer.
Experiences		
Child sickness		
Treatment	He first goes to the clinic get medicine. Sometimes they go to the hospital and use their drugs that will knock down the symptoms. Sometimes in the night they use traditional medicine to add to the hospital medicine.	<p>When a child is running diarrhoea she goes to the drugstore to get medicine. She explains what is happening and they will give medicine. If it does not work she goes to the hospital.</p> <p>They use herbs to bath a child when he or she has convulsions and sometimes it works. When it does not work they go to hospital. For stomach problems they give herbs to eat.</p>

Nutrition centre		
Knowledge	He has heard of the nutrition centre. There is one in Nalerigu. He does not know what work is done there.	She has heard of the nutrition centre. When a child is in the condition like the picture, the hospital will refer the child to the NC. She does not know what they do and how much it costs. She knows people who have been there.
Economic situation		
Information	Poor	Poor person because she has nothing. (She can send children to school and has a bed and can eat every day.)

Nawuni compound 2

	Man	Woman
General Information		
Age	45	35
Religion	Muslim	Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	5 children	5 children. The youngest is 4 years and the eldest is 15 years.
How many children in school	-	5
Wives	1	-
Nutrition		
Food	Every season they eat three meals a day. They eat porridge in the morning and for lunch and supper TZ. He is the one who provides the food for his wife and children. There is enough money. They eat fruit when it is there. The types of fruit they eat are dawadawa and red berries, and vegetables like leaves, bra, and slimy leaves.	They eat porridge in the morning and TZ for supper and lunch. In the soups they use fish, magi, tomatoes and unions. The husband is the one who provides the food.
Knowledge	Healthy food is TZ, fish in soups and green leaves. Corn and beans are very nutritious. Vegetables are also healthy.	Healthy foods are beans, lettuce and fruit. She uses Moringa for tea and soups. She knows it from her brother in the south. He told her it is a medicinal plant.
Breastfeeding	The mother knows about breastfeeding. You give it	The first milk is the healthiest! For six months you

	when the child is crying. You can give breast milk when the child is sick if the child wants to eat. If mother is sick she can also give the breast milk when she feels good enough.	give only breast milk. Not even water. She never had any problems with breastfeeding. If there are problems some women make tea for their child. It is not common that women do not have enough breast milk when the children are below six months.
Supplementary feeding	He would grind corn and pound it. Add beans and make a porridge of it. They start when child is up to six months. He knows this through observation. When a child starts crying after giving breast milk you know that only breast milk is not enough anymore.	After six months she starts to give porridge. If child do not want to eat, she boils beans, add salt and the child would eat that.
Personal health		
History	He has headache a lot.	-
Causes	When he is in the sun too long. Causes of sickness in general: Sanitation, if you do not clean the environment you can fall sick. This is also the mayor cause of sickness. When you are working too hard without rest, you can also fall sick. Also when you argue with someone. This is very common. People do their magic stuff. You cannot do that much to treat it but he would try to treat.	-
Treatment		
Types	Some sicknesses can be cured in the hospital (blood, stomach) other sicknesses need to be cured traditional (cursing). You know you are cursed when your stomach is swollen. This cannot be treated.	-
Who decides	He is the one who decides the treatment. He is responsible	The husband decides. First he will use his own knowledge

	and what he says is final.	and after that he will go to his friends or the traditional doctor.
First line	First local herbs. If it changes the health situation he will continue his daily work. If it does not help he goes to the hospital. When he does not know the right herbs he goes to friends because in a village everyone is a traditional doctor.	First herbs. Followed by the drugstore and in the end the hospital.
Traditional medicine	-	She uses this for stomach-, waist-, chest- and headache
Traditional doctor	-	Sometimes she goes there.
Cock doctor	Apart from hospital they do not use other treatments to get injections. The cock doctor did not learn the job. It is just for the money. He does not go there.	When it is not very serious they go to them.
Hospital		
Experiences	He went to the hospital for guinea worm and headache.	They go to the hospital many times.
Trust in HC	They did their work very well. He does trust the doctors and the medicines the doctor prescribes.	She trusts the doctors
New hospital/differences	-	-
Health Insurance	He does not have because of the money. He does like it because it is important because you get treatment for free.	She does not have health insurance.
Child health situation		
Keep healthy	Clean the children before eating and never let the child eat when he or she is dirty.	They do not really get sick. Only headache or something. Then she goes to the drugstore.
Weighing	-	Yes
Vaccination	-	Yes
History	-	Nothing really bad
Malnutrition		
Knowledge	Marasmus: child is sick. Kwashiorkor: child is healthy.	Marasmus: Nassangbang. Kwashiorkor: kwashiorkor.
Signs and symptoms	He can only tell the child is not well. When a child is like this he would bring the child to the hospital but there are	Children are not well. One is very thin. Other one is swollen. It can also be piles when child is swollen. Piles is

	also local herbs you can use to bath the child.	in adults, in children they are all swollen
Causes	Thin: he is sitting in a dirty place for that reason he is sick.	Sick because of the food, but she does not know what food. Worms can also be the cause.
Preventing	You should clean environment. Some sicknesses are just from God, then you cannot do anything. God can bring sicknesses any time. It is his will.	She does not know. She gives would give an anema (Traditional treatment)
Experiences	There are cripple children like the thin child in the picture. They can use local herbs to bath the child. But it needs to be done in a certain time when a child has a certain age. Sometimes things are natural, then you cannot do a thing.	She has never experienced it in her family
Child sickness		
Treatment	He will first examine the sickness and if he cannot treat it himself he will send the child to the hospital, if he can treat himself then he first tries that. He uses local herbs for convulsions and stomach ache. Sometimes some parts of the inside will come out when a child is in toilet. He can treat it traditional.	Diarrhoea: if it is not serious she goes to the drugstore. If it is serious she goes to hospital. She uses herbs for stomach ache.
Nutrition centre		
Knowledge	He has heard of it. Women go there with sick children.	She has heard of the Nutrition Centre. They make porridge for the children.
Economic situation		
Information	poor	She is very poor. Because she cannot get health insurance

Zeei compound 1

	Man	Woman
General information		
Age	48	35
Religion	Christian	Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	6 children	6 children
How many children in school	3 children	3 children
Wives	1	-
Nutrition		
Food	Porridge, TZ. He eats fruit and vegetables in the seasons when they grow. He is the one who provides the food. The wife buys the ingredients for the soup.	They buy fruit when they go to the Gushegu market. She prepares the soups with the ingredients named below.
Knowledge	He thinks that maize, millet and zogu are healthy. He did hear about Moringa but he does not know what to do with it.	Healthy food is soya beans, groundnuts, zogu, maize, dawa dawa, pepper, fish, tomatoes and unions. She sometimes eats fruit but it is expensive. She has heard of Moringa and it can be used in tea and soups.
Breastfeeding	He says that he does not know anything about breastfeeding. His wife knows because she goes for weighing to the clinic.	The child should only drink from the mother. When the mother is sick you can give tea or bottle milk otherwise the child will fall sick.
Supplementary feeding	When a child is one year you should start give supplementary feeding.	You can start with four or six months.
Personal health		
History	In general he is healthy but sometimes he has headache or stomach pain.	-
Causes	He does not know the causes of sickness. Bad hygiene can be a cause. He does not believe in evil spirits and witchcraft.	Sickness comes from God. Can be caused by witchcraft. She believes there is a poisoning sickness what cannot be cured by doctors.
Treatment		
Types	-	-
Who decides	He is the one who decides.	-
First line	Hospital.	Hospital
Traditional medicine	In some cases first herbs but he does not know much about	She does not know much about herbs.

	that. Sometimes he asks his friends what herbs he should use in certain situations.	
Traditional doctor	In this village there is no traditional doctor. He has never consulted one.	-
Cock doctor	He has never been to any cock doctor	She goes to the drugstore but she does not consult him.
Hospital		
Experiences	The experiences he has are good. In the hospital they examine him and then give medication. He has been there twice.	The experiences are good . They prescribes medicines what cures her children
Trust in HC	He trusts the doctors. They have studied and have the knowledge.	yes
New hospital/differences	No he also went to the clinic.	-
Health Insurance	He, his wife and his children all have health insurance.	-
Child health situation		
Keep healthy	You have to keep the compound clean. People came to educate about hygiene.	You have to bath the children in the morning and prepare food for the children.
Weighing	-	Yes
Vaccination	-	Yes
History	-	Sometimes the children have fever then she sends them to the hospital. She does not use herbs for that.
Malnutrition		
Knowledge	Kwashiorkor: Child is sick. He is paralysed. He recognises the swollen body. It can also be piles. Marasmus: Child is cripple and very thin.	She mentioned kwashiorkor but some people name it piles. She does not know how to treat it Marasmus: the child is cripple.
Signs and symptoms	K = swollen M = very thin	K = one leg is bigger, cheeks and feet are bigger. M = the legs. And she sees the child is very thin. The stomach looks big
Causes	He does not know the causes.	She does not know the causes. It cannot be poisoning or witchcraft.
Preventing	You should take care of your children very well.	-
Experiences	He has seen it but not in this	She has seen who suffered

	village. He does not know what happened he only saw a swollen child. He would send his child to hospital if the child would suffer from this.	from kwashiorkor. She would send her child to hospital.
Child sickness		
Treatment	Diarrhoea: Hospital	Fever: hospital Diarrhoea: hospital
Nutrition centre		
Knowledge	He has heard of the Nutrition Centre. They do something with food.	She has heard of the Nutrition Centre but she does not know what they do there.
Economic situation		
Information	He is capable to feed his family.	She does not have money.

Zeei compound 2

	Man	Woman
General information		
Age	55	35
Religion	Muslim	Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	7 children. Youngest is 3	6 children
How many children in school	All in school	-
Wives	2 wives	-
Nutrition		
Food	He is able to eat three meals a day. The main dish is porridge in the morning and teezet in the afternoon and evening. They sometimes eat rice with beans or fufu. He is the one who provides the food but his wife provides the soup which goes along with the teezet and fufu. Sometimes he needs to go to buy food. Most of the time farming. Depends on season.	-
Knowledge	Beans, rice, yam, teezet, vegetables are healthy to eat. They eat vegetables every day. How often they eat fruit depends on the season, the fruits they eat are mango's,	Teezet, beans and rice are healthy to eat, even as vegetables. She eats local fruit like sjenat and sabbah. She has never heard of Moringa.

	oranges and local fruits. He knows about Moringa but does not know how to use it.	
Breastfeeding	A child should only drink milk of the mother, drinking from another's ones breast can affect the child, when the other mother has a sickness. When there is not enough milk they add lactogen.	You need to start breastfeeding right after giving birth. When there is not enough milk you can give tea in addition. When a child is three months old you can give biscuits mixed with water.
Supplementary feeding	Cooked beans and oranges. He gives supplementary food when a child is 1,5 years old.	They give supplementary food, porridge, when a child is four months old.
Personal health		
History	Malaria and headache.	-
Causes	In general causes are uncovered food and dirty waters, also poisoning can be a cause, then you will get a big stomach.	Dirty environment can cause sickness. No experience with poisoning and cursing. Does not know if it can cause sickness.
Treatment		
Types	-	-
Who decides	Elderly people decide. His father was traditional doctor, he could always tell you what kind of treatment was good. His father died but he inherited his knowledge about herbs.	The landlord or husband decides.
First line	When a sickness is not severe you can go to the bush for herbs, otherwise go to hospital first. In this village they can treat broken bones traditionally. Sicknesses are more sever in the rainy season.	There is a volunteer in the village with a first aid box, she consult him.
Traditional medicine	-	She uses herbs for stomach ache.
Traditional doctor	-	
Cock doctor	He sometimes goes to the drugstore with headache, but not to consult the cock doctor.	She buys drugs in drugstore but does not consult cock doctor.
Hospital		
Experiences	-	-
Trust in HC	-	Yes

New hospital/differences	-	-
Health Insurance	They all have health insurance, but some are expired. You spend a lot of money in the hospital without health insurance. Without health insurance you have to sell stuff to pay the bill.	-
Child health situation		
Keep healthy	Good sanitation and not drinking from the rivers.	When child starts to grow teeth they can get fever, she buys drugs for her child.
Weighing	-	Yes
Vaccination	-	Yes
History	-	-
Malnutrition		
Knowledge	K: big stomach and cheek. M: legs and waist not normal.	K: child is sick. Legs and stomach are swollen M: child is sick
Signs and symptoms	M: can be convulsions. It makes a child weak. Tummy will be somehow big. Can also give a fever, he would send the child to hospital.	K: stomach problem. She goes to hospital. M: child is cripple. Legs are small.
Causes/sickness	K: does not know the cause. It's not poisoning but it can be piles.	K: do not know the cause. M: caused by not giving the drips.
Preventing	K: can be treated with herbs, But can also send to hospital. If they cannot cure, you try traditional. We can keep children healthy by eating the right food and having good sanitation.	K: only God can prevent. M: give the drips. With a child like this she cannot do anything unless early treatment. A doctor cannot heal this in a late stage; therefore she would send the child to the hospital.
Experiences	-	She has never seen children like this.
Child sickness		
Treatment	-	Diarrhoea: go to volunteer Vomiting:
Nutrition centre		
Knowledge	He has heard of it and knows you can send children like the photo showed. His nephew ones went to a Nutrition Centre.	She has heard but never been there. When a child is sick the doctor in the hospital will sometimes refer a child to the nutrition centre.

Economic situation		
Information	He is not content with what he has; he wants to have more to give better care to his children. But he can survive.	She does not have much.
Additional information		
He has heard of poisoning, a patient was brought to his father and he gave him some traditional medication. The stomach of the patient became normal again, this can also happen in children.		

Zeei compound 3

	Man	Woman
General information		
Age	40	35
Religion	Christian	Muslim
Occupation	Farmer, trader	Farmer
Education	No	No
Children	6	4
How many children in school	6	-
Wives	2	-
Nutrition		
Food	He is able to eat three meals a day. The main dish is porridge in the morning and teezet in the afternoon and evening. They sometimes eat rice and maize. They can almost eat every day three meals, but sometimes it is a difficult season. If they have enough money they buy fruit.	For the soups she uses vegetables, pepper, fish, magi tomatoes and unions. In the right season they also eat fruits like mango and shenat.
Knowledge	Beans, eggs, rice and teezet are healthy.	Teezet and beans are healthy.
Breastfeeding	Baby should only drink from the mother's breast.	Need to start right after giving birth. Only the mother should give breast feeding and after six months you can give porridge and water.
Supplementary feeding	Tea when child is four or five months. And real food when child is getting teeth.	After six months.
Personal health		
History	When he is sick he goes to the hospital	-
Causes	Poisoning can make you sick and cannot be cured. Sickness comes from wrong food or	She does not know, God can make you sick but He can also heal you. If you do not clean

	from God.	yourself and your surroundings well you can also get sick. She does not believe in witchcraft but there is poisoning
Treatment		
Types	They have someone in this village with a first aid kit. He goes there for stomach pain.	-
Who decides	He decides	-
First line	Hospital	-
Traditional medicine	Does not use this	-
Traditional doctor	-	-
Cock doctor	He does not go to cock doctors because there you only spend a lot of money	Yes, she consults him. There are people in this village who she also consults. They are trained by the hospital.
Hospital		
Experiences	He has been there a few times. His experiences were fine.	-
Trust in HC	Yes, the people who work there are the professionals	Yes, they treat you well and they always tell you the truth
New hospital/differences	-	-
Health Insurance	No, because he has no money	She wants to have health insurance.
Child health situation		
Keep healthy	-	Bathing
Weighing	-	Yes
Vaccination	-	Yes
History	-	-
Malnutrition		
Knowledge	K= piles, child is sick. It can be healed in the hospital and by God.	Assara: a child eats plenty but will grow thinner. This can be healed in the hospital.
Signs and symptoms	K = legs and arms are swollen. M= legs are deformed. The child is sick. The blood is not good, shortage of blood	K = swollen legs. Piles. M = very thin. Assara.
Causes	K= cold uncovered food. Piles bring a lot of sicknesses in your body; malaria, headache, cata. M = shortage of blood because of wrong food.	K = poisoning. Need to go to traditional healer.
Preventing	Hygienic food, God and clean water	God can only protect you from getting sick.
Experiences	He knows that you can go to the Nutrition Centre when	Her nephew was like this. In the hospital they detected

	you do not get the right food or with children shown in the photo.	worms. Treatment: you can use herbs first but you also need to go to hospital.
Child sickness		
Treatment	-	Diarrhoea: first amoxicillin, then you go to the hospital. Sometimes you give herbs first but if it is not working you go to hospital. You have also herbs for convulsions.
Nutrition centre		
Knowledge	Heard of They mix the right food	Heard of it in the hospital It is for children shown in the photo. In the Nutrition Centre, there are doctors who can treat these children.
Economic situation		
Information	He has enough to feed his family.	She is poor.

Zeei compound 4

	Man	Woman
General information		
Age	40	40
Religion	Muslim	Muslim
Occupation	Farmer	Farmer
Education	No education	No education
Children	5 children youngest is 2 months	6 children. The youngest died
How many children in school	-	3
Wives	2 wives	-
Nutrition		
Food	He is able to eat three meals a day. The main dish is porridge in the morning and teezet in the afternoon and evening. He provides all the food.	She uses dawadawa, pepper, salt, fish and tomatoes to prepare the soup. Her husband provides food.
Knowledge	He does not know what kind of food is healthy. He eats fruit and vegetables. He buys the fruit in the market and can afford to buy it ones a week. He has never heard of Moringa	Fufu, teezet, rice and beans are healthy. Fruit: sjenat, banana, papaya, mango. In the right season she eats fruit every day.
Breastfeeding	He does not know anything about breastfeeding.	The first three months a child should not drink water. When the mother is sick she cannot

		give milk because it can affect the baby. Then she gives tea and warm water instead. Because you also do not allow another mother to give milk.
Supplementary feeding	When a child is up to two or three years old you add other food. You can give water and tea when a child is six months old.	When child is six months she will add porridge, this is told by volunteers.
Personal health		
History	He is healthy.	Vomiting this morning, treated with paracetamol.
Causes	Mosquito's, flies, poisoning and witchcraft can cause sickness. The last two needs to be treated by a traditional doctor.	In general, dirtiness and, contaminated food can cause sickness. Poisoning and witchcraft can also cause a sickness but you cannot cure this. This can also happen in children.
Treatment		
Types	-	Everything is given through God. Especially poisoning because there is no cure for that.
Who decides	-	-
First line	He goes to hospital first. He sometimes uses herbs. Herbs can treat malaria but a medical doctor should cure a fever.	When child is sick you go to the hospital. When child has fever you use herbs. Also for malaria. A child with diarrhoea or vomiting should be send to the hospital.
Traditional medicine	For stomach ache.	There are traditional herbs for diarrhoea and vomiting but she prefers the hospital. When you break your leg they can heal it traditional.
Traditional doctor	-	-
Cock doctor	Went there in the weekends because there are no doctors in the hospital at those times. He prefers hospital, because they are professionals.	Does not go to a cock doctor.
Hospital		
Experiences	His children went there.	-
Trust in HC	Yes, they treat a patient well and children always get better.	Yes, the care is good, the people are trained and the doctors know what is good to

		do.
New hospital/differences	-	-
Health Insurance	His children have.	She has health insurance but it is recently expired.
Child health situation		
Keep healthy	-	Right food and a clean environment will keep a child healthy.
Weighing	-	Yes
Vaccination	-	Yes
History	-	Her children are not often sick, but when her child is sick she goes to hospital.
Malnutrition		
Knowledge	K: child is sick M: child is sick	K: sick person. Poisoning. M: cripple child.
Signs and symptoms	K: swollen body. It is piles. He has seen children like this, and this can be treated traditional. It can also be poisoning but in this case it is piles. M: also piles but in this case the child grows lean.	K: poisoning because the stomach is big. You cannot cure this sickness so you have to give it to God. She would not go to the hospital. M: The body of the child is weak.
Causes	K: The sickness comes in the rainy season because then the body gets hot and cool. M: the same as the other child.	M: it might be from the mother, but it can also be spiritual. You can't cure the spiritual one, she would eliminate the child if possible. She would first try the hospital, after that some herbs and in the end she would eliminate this child. Sometimes it is hard to eliminate a child because he can come back.
Preventing	When his children are like this he would treat them with herbs. If it does not help he goes to hospital.	M: pray that God shall always protect you from all of this. You cannot do anything to prevent yourself from getting this.
Experiences	K: has seen children like this, but not his own children.	She has seen children like this. There is one at the Fulani's, but she would not go to the hospital because the child might not even be a human being.
Child sickness		

Treatment	If his child suffers from diarrhoea he will buy drugs in Gushegu.	-
Nutrition centre		
Knowledge	He has heard of the Nutrition Centre because he sends his own child ones to a Nutrition Centre. His child was very lean and in the Nutrition Centre they taught him what kind of food to give a child. They also give tablets and teach the mothers about a special porridge. He also heard about the Nutrition Centre in Gushegu. He does not give the special porridge to his other children because they are not sick.	She has heard of the Nutrition Centre. You can send swollen and lean children there and they will treat the children with drugs and food. A child of her sister has been there. Children like shown in the photo can also be sent to the Nutrition Centre. She would not send her child there because there is no cure for these sicknesses.
Economic situation		
Information	He is a poor man. But is able to eat three meals a day, his children are in school and he has money for health insurance.	She is poor and she does not have money to renew her health insurance.

Appendix 9 Summary of the procession per village

Kanshegu

Notion	Conclusion
Food	
Three meals per day	All six people are able to eat three meals a day the whole year. If the farm does not provide enough food they will buy it in the market. So there is enough food and money to buy food.
Variation of the food	The basic food is maize, they prepare porridge and teezet with maize. They vary through the soups, they use different ingredients like leaves, unions, peppers, tomatoes, fish, salt and magi. They get the different types of vitamins and minerals, but the people almost eat every day the same thing.
Providing food	The man provides the main food. The women often buy the ingredients to prepare the soup. It is important to educate the man because he is the head of the family and he plays an important role in providing food.
Knowledge of healthy food	Initially they all did not know what healthy food is. But when we asked more questions they carefully said a few things like; vegetables, eggs, groundnut paste, maize, yam, tomatoes, fish, beans, millet. And if we asked what they think fruit is, they say it is healthy or they do not know. But fruit is quite expensive for them to buy, they say. We have the impression that they do not really know what healthy food is but mention the food they have and use.
Moringa	Two out of the three men know Moringa, they both use it for tea and one of them also use it for stomach pain because the seeds cause diarrhoea and this will heal the stomach pain, this men is a traditionally doctor. They have no idea how healthy Moringa is and they do not know how to implement Moringa in their cooking.
Knowledge of breastfeeding	The men do not know much about breastfeeding, they only see what their wife's are doing. One man knows herbs that a woman can use when you do not have enough breast milk. The women know they can give breastfeeding for years, and they all start immediately after birth. They know you should not give your baby water and tea in the first six months. One woman says she knows that you should only give the mothers breast to a child and for three years. Misconception <ul style="list-style-type: none"> - At least two years breastfeeding before a child can be weaned. - Breast milk can cause aids in children. - If your child sucks another ones breast it will get the habits of that woman.
Supplementary feeding	The men do not really know when and what kind of food you should give. One man says the child should be 1,5 years, one man has no idea, and one man says it is the women's decision. The first woman says you start after six months with supplementary food. The second woman gives supplementary feeding at 1,5 years, and the third woman says that a child should walk before you start.

	<p>Misconceptions</p> <ul style="list-style-type: none"> - A woman might stop giving breast milk when she is pregnant again (the milk also to warm when she is pregnant). - When a child starts eating in early stage, the child will develop problems in walking. - One mother told that in the clinic they teach the people to start giving normal food at a sitting stage.
The supplementary food	Five people will give porridge, four people start with teezet and one person will start with oranges. Three people mention that it depends of the interest of the child.
Conclusion breastfeeding	They say they get their information from the hospital and clinic. But if we believe the woman the hospital gives wrong information. They have their own ideas and conceptions about breastfeeding, of course very logical because in every culture it goes from mother to mother.
Health	
General causes of sickness	<ul style="list-style-type: none"> - Will of God - Evil spirits - In the rainy season there is more sickness because of the mosquitoes.
Deciding treatment	In all cases the landlord decides what type of treatment they choose and in what stage it will start. One man says he does involve his wife's in the decision. One woman sometimes goes to the drugstore without involving her husband in that decision.
First line treatment	<p>The first line treatment of all the people in the village are herbs. One person first consults a traditional doctor and one woman sometimes visits the drugstore.</p> <p>When the herbs do not work they go to the hospital. A man says that the hospital cannot always cure, in that case he goes home and treats the sickness traditional.</p>
Cock Doctor	Two of the six people have consulted a cock doctor before. All the people have visit the drugstore before. Often people first try the herbs and after the herbs they try the drugstore. They also combine the herbs with the medicines from the drugstore. In the end they visit the hospital.
Hospital	If nothing works they go to the hospital. One man has never been to the hospital before. In general people do trust the hospital. It depends whether the doctors can heal the person. The care the hospital provides is good, they examine people and prescribe drugs. If the medicines not work you can go back to the hospital.
Health Insurance	They majority have no health insurance. Two people have health insurance and some of the children.
Reasons for not having health insurance	Money is the main reason to not renew the health insurance. Some people have health insurance but because they never have to use it, they pay for it but do not get anything in exchange for the money. We also think people don't know how to manage their money they just spent it.
Ideas about health insurance	<ul style="list-style-type: none"> - It is very important to have health insurance. - Without health insurance you spent a lot of money in the hospital.

	<ul style="list-style-type: none"> - What is the advantage of having health insurance if you never use it.
Child health situation	In general the child health situation is good. One child had convulsions in the past. In this case the parents used herbs first and after that they went to the hospital.
Keep children healthy	<ul style="list-style-type: none"> - You have to bath your children in the morning and before eating. - When a child is sick one woman give herbs. - Two women have been to the clinic for the antenatal care and child vaccination and weighing.
Treatment children	The first line treatment is most of the time herbs. When herbs and medicine don't work people decide to go to the hospital.
Malnutrition	
Observation	<p>Kwashiorkor Everyone sees this child is swollen. Except for two persons everyone thinks this child is sick. One woman says the child is healthy because he is big and the other one has no idea whether this child is sick or healthy.</p> <p>Marasmus Some of them see a thin child, with a leg that is not good. Everyone sees that this child is sick</p>
Diagnose	<p>Kwashiorkor Almost everyone says this is Piles.</p> <p>Marasmus Most of them have no idea what this can be, two people say it looks like polio. One woman says the child has worms.</p>
Treatment	<p>Kwashiorkor Herbs can treat Piles but if this does not work you can go to the hospital.</p> <p>Marasmus Almost everyone says this should be treated in the hospital; they have no medicine for this illness</p>
Cause	<p>Kwashiorkor Piles can be in your blood; you will be born with it.</p> <p>Marasmus No one knows what can be the cause of this.</p>
Preventing	For both illnesses, the people say you should take good care of your child; be hygienic, bath the children every day and make sure you prepare the food also in a hygienic way.
Nutrition Centre	
Knowledge	<p>All people have heard of the nutrition centre. But do not know what we do there.</p> <p>During the interviews we found out that two children of this village have been to the Nutrition Centre before. Despite that, the people of the village do not know what work is done in the Nutrition Centre. This can mean that the women who have been there, did not tell anything about the Nutrition Centre.</p>
Witchcraft	
Knowledge	People believe in witchcraft and evil spirits. Most of the people have not experienced these things themselves but they have heard of it.
Economic situation	
Information	<p>Compound 1</p> <p>The people say there is in general enough money.</p> <p>Our observation</p> <ul style="list-style-type: none"> - Thinned roofs. - Children are well dressed.

	<ul style="list-style-type: none">- A clean compound.- There is enough money to buy food in the market.- All people have health insurance.- Six of the 20 children are in school, others are too young, married or there is not enough money. <p>Compound 2</p> <p>The people say they are struggling a lot to buy everything they need.</p> <p>Our observation:</p> <ul style="list-style-type: none">- They live in the chiefs compound.- It is a big compound and a bit messy. <p>Compound 3</p> <p>This family say they have not enough money.</p> <p>Our observation</p> <ul style="list-style-type: none">- The Landlord smokes.- He is a traditional doctor and people consult him.- They were building new rooms in their compound.- Not all the children are in school.
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Nawuni

Notion	Conclusion
Food	
Three meals per day	Most of the people are able to eat three meals a day during the whole year. Even though some people say its difficult some years during the rainy season.
Variation of the food	The people vary with the ingredients of the soup but they do not vary with the main dishes.
Providing food	The man is providing the main food in this village. The woman is responsible for the ingredients in the soups.
Knowledge of healthy food	People mention the ingredients they have but cannot specific say what kind of food is healthy. One man is saying he will run diarrhoea after eating rice balls. It can be a misunderstanding but it's also possible that he just can't eat it.
Moringa	In both compounds the women have heard of Moringa. They use it in soups and tea and one of the women's brothers told her it is a medical plant. The men never heard of it.
Knowledge of breastfeeding	People know different things about breastfeeding. Some things are good but there are also misconceptions. People get taught in the hospital and clinic what to give their child and when to start breastfeeding. In general only the women know this information. They give breast milk almost immediately after giving birth. One mother is saying you should only give breast milk for the first six months.
Supplementary feeding	Misconceptions <ul style="list-style-type: none"> - When you start weaning your child to early, the stomach will be too big, therefore they wait giving normal food. - When you force your child to eat normal food, the child will start running diarrhoea. - You should start giving food when your child starts crying after drinking breast milk, this means the milk only is not enough anymore.
The supplementary food	The people start with teezet and porridge when a child is up to 3 or 4 months. When a child is up to six months they also add water and tea. They know this trough their observation.
Health	
General causes of sickness	<ul style="list-style-type: none"> - Food, if it is not prepared well. - You can fall sick when the water is not clean. - The rainy season; the body gets hot and cold because of the rain. - Gods' will. - When you are in the sun too long. - If you do not clean the environment. - When you work too hard without resting. - Poisoning and witchcraft.
Deciding treatment	In all cases the husband will decide the type of treatment.
First line treatment	People in the first compound want to go to the hospital first but because there is no health insurance they try herbs first. If that does not work they go to the hospital. The second compound also tries the traditional medicines first. In almost every situation they will use traditional medicine, even in addition to the hospital medicine.

Cock Doctor	Everyone went to the hospital before.
Hospital	Everybody trusts the hospital, they provide good work.
Health Insurance	No one has health insurance. One man says their health insurance is expired.
Reasons for not having HI	The people do not have health insurance because of being poor.
Ideas about HI	They know medical help is for free with health insurance and expensive without health insurance.
Child health situation	In general the children's health is good. They sometimes have headache. It is in the rainy season when children get sick.
Keep children healthy	<ul style="list-style-type: none"> - Cover food. - Bath the children. - Wash the hands and face of the child before eating.
Treatment children	Herbs, drugstore and after that the hospital.
Causes	Sickness is from God.
Malnutrition	
Observation	<p>Kwashiorkor Three say that this child is sick. They all see they are swollen. One man thinks this child is healthy.</p> <p>Marasmus They all see this child is sick because it looks ill and because of the thin legs.</p>
Diagnose	<p>Kwashiorkor Three people know these children are suffering from piles. It can also be a sickness in the blood.</p> <p>Marasmus Polio, sickness in the blood, cripple, nassangbang and one person says it can be anything.</p>
Treatment	They say you can use herbs but most of them will send the child to hospital.
Cause	<p>Kwashiorkor When you eat dirty food, and when the compound is dirty. Can be caused by giving the child normal food when it is too young/small.</p> <p>Marasmus It is from God</p>
Preventing	<ul style="list-style-type: none"> - Preparing clean food. - Keep the environment clean. - If it is from God, therefore you cannot prevent it. - Anema (this is a herbal suppository).
Nutrition centre	
Knowledge	All the people have heard of the nutrition centre. Most of them do not know why the Nutrition Centre is there, what they do, and that it is for free.
Witchcraft	
Knowledge	Except for one man everyone believes in witchcraft and poisoning.
Economic situation	
Information	<p>All people say they are poor.</p> <p>Our observation</p> <ul style="list-style-type: none"> - Most of them have bikes. - The people have real beds. - They can send children to school. - They can eat every day. - They say they are very poor because they cannot afford health insurance.

Zeei

Notion	
Food	
Three meals per day	Most of them are able to eat three meals a day the whole year, but the hardest season is the rainy season.
Variation of the food	In this village they all eat porridge in the morning and teezet in the afternoon and evening, they vary with the soups.
Providing food	The men provide the main ingredients and the women provide the ingredients for the soup.
Knowledge of healthy food	According to the information, everything they use is healthy. Some try to eat fruit every week. In the end they do not know what food is healthy but they just eat what they have.
Moringa	One person has heard of Moringa, and use is for tea, all other people have no idea.
Knowledge of breastfeeding	<p>Two men say they do not know anything, their women get the information from the clinic. Both other men say the children should only drink the mother's milk and one of them says you can add lactogen when the mother does not have enough milk. Three women say the child should only drink from the mothers breast. One mother says when you are sick you cannot give milk, but you can give tea in addition.</p> <p>Misconceptions</p> <ul style="list-style-type: none"> - If you do not have enough you add tea - If you drink from another mother you can get their sickness. <p>If you are sick you can't give breast milk.</p> <p>The man have no idea, the woman knows when to start because they have been taught in the clinic. But they do not exclusively say they that the first six months a mother should only give breastfeeding.</p>
Supplementary feeding	<p>Man</p> <ul style="list-style-type: none"> - The child should be 1,5 years, he gives cooked beans and oranges - You give tea when a child is 5 months old. You start with supplementary food when child is getting teeth. - When a child is up to 2 or 3 years you start with supplementary feeding. Water and tea can be given after six months. - The child need to be 1 year before starting supplementary food. <p>Woman</p> <ul style="list-style-type: none"> - You can start when the child is 4 or 6 six months. - When a child is 4 months you start with porridge. - You can start when the child is six months old.
The supplementary food	Porridge, cooked beans, and oranges.
Health	
General causes of sickness	<ul style="list-style-type: none"> - Does not know - Bad hygiene - From God - Uncovered food - Dirty water

	<ul style="list-style-type: none"> - Dirty environment - Mosquitoes - Witchcraft - Poisoning
Deciding treatment	In most cases the landlord decides when and what treatment should be started.
First line treatment	<ul style="list-style-type: none"> - Hospital (in some cases first herbs) - Hospital (does not know much about herbs) - Herbs, hospital (sickness is more severe in farming season) - Volunteer in village - Hospital (do not uses traditional medicines) - Hospital (sometimes herbs. Malaria treated by herbs) - Hospital (but broken bones, malaria and stomach ache can be cured by herbs)
Traditional doctor	In this village is no traditional doctor.
Cock Doctor	One woman consults the cock doctor, three women just buy medicines there, and one man goes in the weekend. The other men do not go at all.
Hospital	They have good experiences with the hospital. The staff gives good care and they trust the doctors.
Health insurance	<ul style="list-style-type: none"> - Compound 1: He, his wife and all his children have health insurance - Compound 2: They all have health insurance. Some expired - Compound 3: No health insurance - Compound 4: She wants to have health Insurance, her children do have.
Reasons for not having health insurance	People do not have enough money
Ideas about health insurance	Without health insurance you have to spend a lot more money
Child health situation	Normal
Keep children healthy	<ul style="list-style-type: none"> - Keep the compound clean. - Bath the children every day. - Prepare the food in a hygienic way. - Good sanitation. - Let them not drink from the river.
Treatment children	Most of them send children to hospital or the volunteer. Two people say they use herbs first but always go to the hospital.
Malnutrition	
Observation	<p>Kwashiorkor They all see this child is sick and they recognize the swollen body</p> <p>Marasmus The child is very thin, the legs are not good, the stomach is big, the waist not normal, and the child has a weak body</p>
Diagnose	<p>Kwashiorkor Piles, paralyzes, convulsions, and poisoning because the stomach is big.</p> <p>Marasmus Cripple, convulsions, it is in the blood, assara, piles (in this case the child will grow lean).</p>
Treatment	<p>Kwashiorkor</p> <ul style="list-style-type: none"> - Hospital ** - Traditional **

	<ul style="list-style-type: none"> - Cannot be cured * <p>Marasmus</p> <ul style="list-style-type: none"> - Hospital - Some use herbs but they will also go to the hospital. <p>You can also go to NC with children like this.</p>
Cause	<p>Five people say they do not know what can be the cause of malnutrition. Other people give the following options.</p> <ul style="list-style-type: none"> - Uncovered and cold food. - Shortage of food because of wrong food. - Rainy season. - Spiritual (you cannot cure this, you have eliminate the child because it might not even be a human being. - Witchcraft/poisoning.
Preventing	<ul style="list-style-type: none"> - Take care of your children very well. - Good sanitation. - Only God can prevent. - Early treatment. - Hygienic prepared food. - Using clean water.
Experiences	<p>Some people have seen children like the picture, but not in this village. One woman said there is a child like the marasmus child just outside this village, she does not believe that the marasmic child is a human being.</p>
Nutrition centre	
Knowledge	<p>Some people heard and have experiences with a Nutrition Centre but most do not know what kind of help a Nutrition Centre provides.</p>
Witchcraft	
Knowledge	<p>Conceptions about witchcraft and poisoning</p> <ul style="list-style-type: none"> - Believe in evil spirits. - There is poisoning that cannot be cured by doctors. - Poisoning is a cause of sickness and will give a big stomach. - Someone does not believe in witchcraft but does believe in poisoning. - If you are poisoned you need to go to traditional healer - Kwashiorkor is poisoning - You need to eliminate a poisoned child
Economic situation	
Information	<p>People classify themselves as being poor but our observations show that in general there is enough money. The people were building a lot, many children are going to school and they are all capable to eat enough every day.</p>

Appendix 10 Results

This appendix describes the results of the interviews. The interviews were done in three different villages: Kanshegu, Nawuni and Zeei. 35 percent of the compounds in each village were interviewed. The results are described using following categories: food, health, malnutrition, witchcraft and economic situation. These themes contain different subjects within them.

Food

Providing food

Not all families are able to eat three meals per day throughout the whole year. For some of them the rainy season makes it difficult to provide three meals a day, but if they have enough money they will buy food in the market (Table 1). For all people the main dish in the morning is porridge, and in the afternoon and evening they eat teezet, both dishes are local ones. For both dishes the main ingredient is maize. They combine the teezet with a soup. In this soup they use different ingredients such as leaves, onions, tomatoes, groundnut paste, peppers, fish and maggi. In all the compounds the men provide the ingredients for the main dishes and the women provide the ingredients for the soups in general.

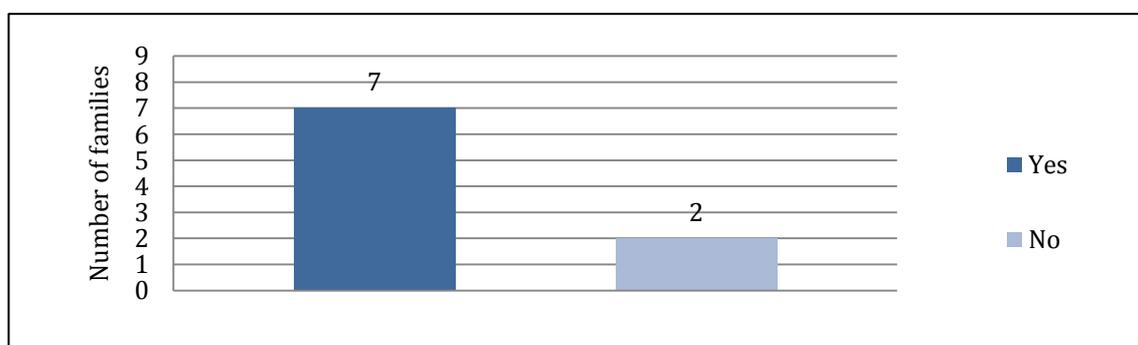


Table 1: Provide three meals a day per compound

Healthy food

Most people could initially not answer the question what they think are healthy foods. After giving some examples some people could mention some foodstuffs, though some people still had no idea what healthy foods are (table 2). The results show that there is no significant difference in knowledge between men and women. The interviewees try to eat fruit but it depends on the season and whether it is available, and on the money.

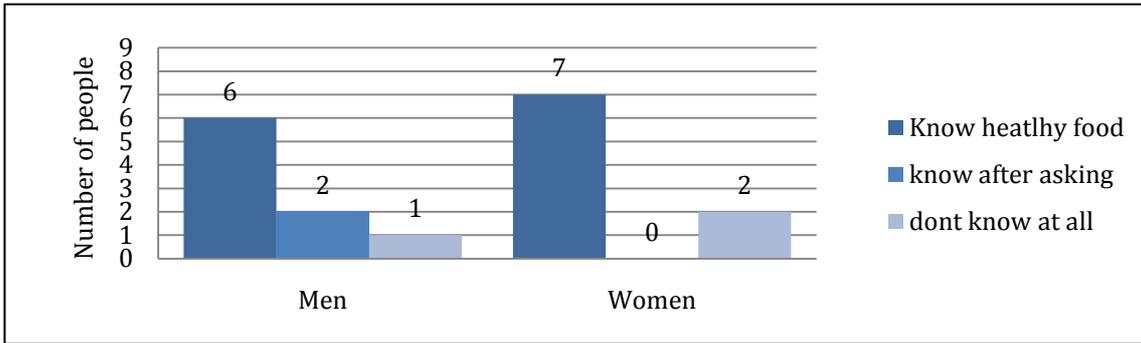


Table 2: knowledge of healthy food

Knowledge of breastfeeding

Men

At first all the men said they do not know anything about breastfeeding. According to them only women get information about this in the clinic and the hospital. After some more questioning four men could tell some things which they knew about breastfeeding (table 3). They mentioned different things:

- One man knew about certain herbs which can be used when women do not produce enough breast milk.
- One man said that you should give breast milk when the child is crying and mothers can continue giving breast milk when they are sick.
- Two men said that children should only drink their own mother's milk. If a child drinks milk from another woman the child can get the habits of that woman. One of the men said that you can add lactogen if there is not enough milk.

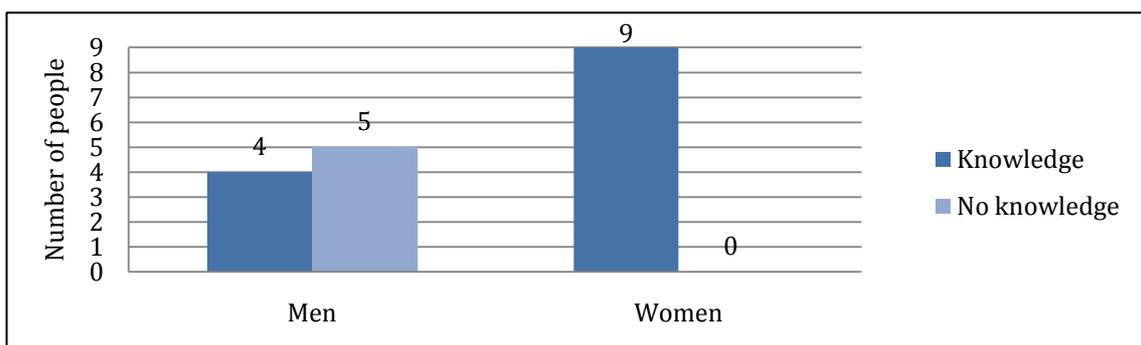


Table 3: knowledge of breastfeeding

Women

Most of the women said you have to start giving breast milk immediately after giving birth. One woman said that the first milk is the healthiest. She did not mention when she started to breastfeed (table 4).

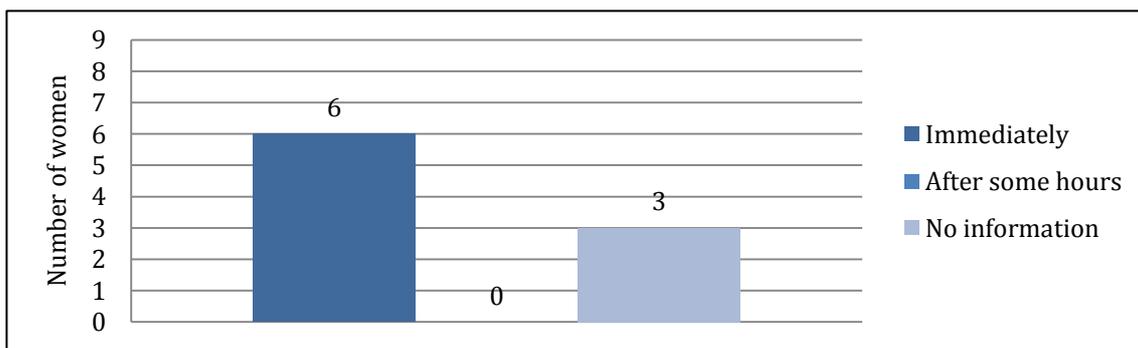


Table 4: Start breastfeeding

The women have different views on exclusive breastfeeding for the first few months (table 5). Five women say water and tea should not be given during the first months. Four women say water and tea can be given, especially when a mother does not produce enough milk or when a mother is sick.

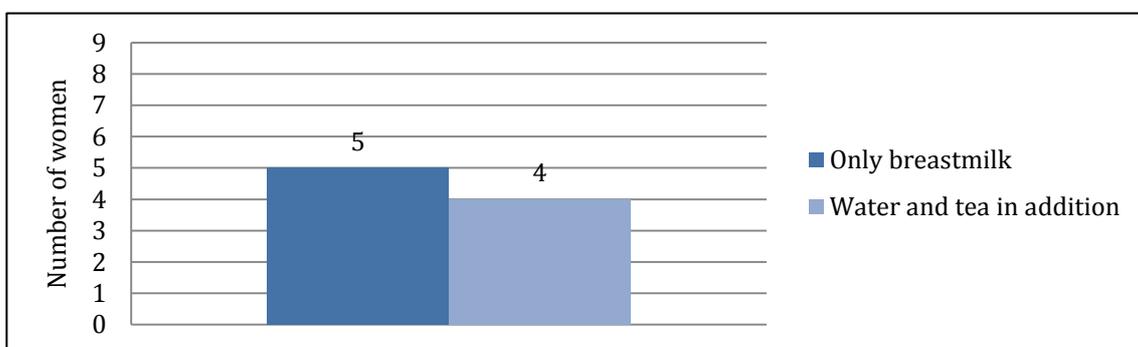


Table 5: Exclusively breastfeeding for the first few months

Source of information about breastfeeding

The women get their information from different sources. The different sources are the hospital or clinic and a health volunteer. Table 6 shows how many women get their information from the different sources.

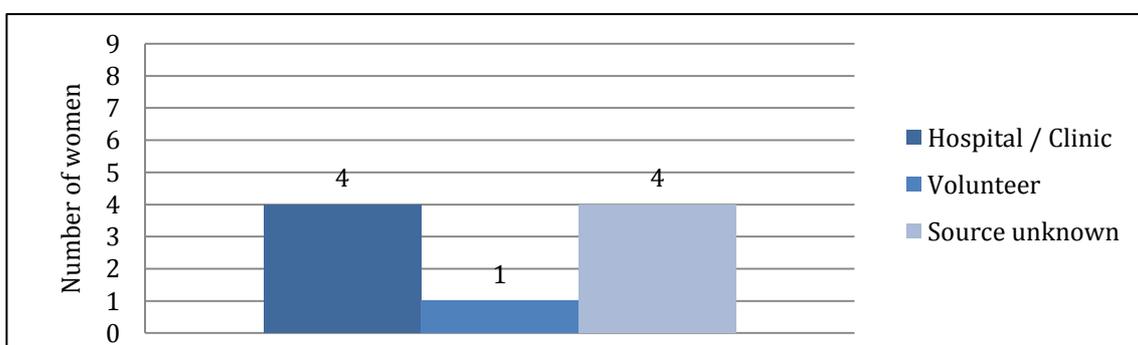


Table 6: Source Education

Problems with breastfeeding

Three women mentioned they do not have problems with breastfeeding (table 7), but if someone has problems with breastfeeding you can give tea, water or bottled milk instead of breast milk.

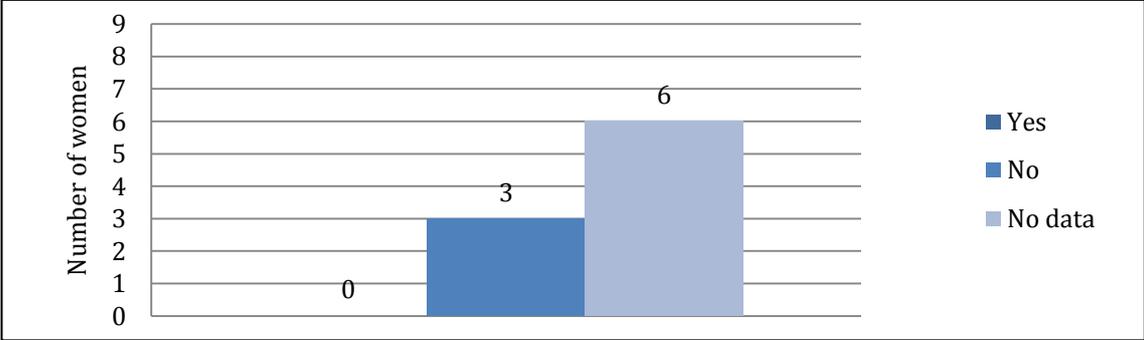


Table 7: Problems with breastfeeding

Misconceptions about breastfeeding

Among the women there are a lot of misconceptions about breastfeeding (table 8). These women have been to the hospital and clinic where they are supposed to get information about breastfeeding.

Misconceptions
1.5 or 2 years old is a good age to start giving your child normal food. When a child starts exclusively eating solids at an early age it will develop problems with walking.
Breast milk is too hot after a day of working on the farm. You have to cool your breast before you give your child breast milk.
When a mother is sick she cannot give breast milk. Instead of breast milk you give tea or bottled milk.
When there is not enough milk you can give tea.

Table 8: misconceptions of women about breastfeeding

Supplementary feeding

Men

The men had different views on supplementary feeding and what to give. Some had no idea and the others gave information about the age when you should start

supplementary feeding (table 9). In table 10 is listed what sort of food the men think a child should eat.

Some of the men’s misconceptions about supplementary feeding were:

- Supplementary feeding should be started when a mother is pregnant again because the breast milk might be too warm for the child.
- The stomach of a child will grow big if supplementary feeding is started too early.

Women

The women also had different views on when to start supplementary feeding (table 10). All the women give porridge and teezet as supplementary food (table 11). One woman mentioned that she only gives what the child likes.

Among the women there were also misconceptions such as:

- 1.5 or 2 years is a good age to start with normal food.
- When a child starts eating at an early age the child will develop problems with walking.
- When you force your child to eat normal food too early the child will run diarrhoea

	Men	Women
3 - 4 months	0	2
4 - 6 months	0	1
6 months	2	4
1 year	1	0
1,5 yrs - 3 yrs	4	2
No idea	2	0

Table 9: Age to start supplementary food

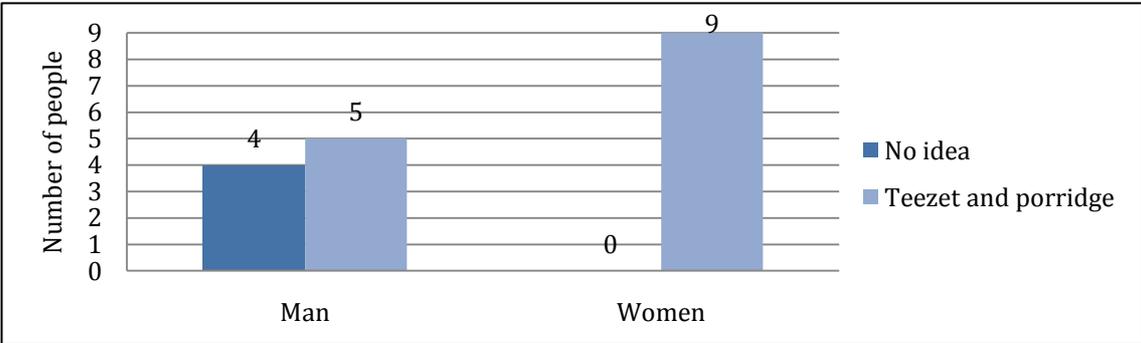


Table 10: Types of supplementary food

Health

Causes of sickness

The interviewees gave different causes for sickness in general.² The most commonly mentioned cause was poisoning. Nine out of the eighteen people mentioned this.³ Bad hygiene and uncovered, dirty food can also make you sick according to seven people. In the table below (table 11) all the mentioned causes are listed.

Mentioned causes	Kanshegu	Nawuni	Zeei	Total
1. Poisoning	1	1	7	9
2. Hygiene	1	2	4	7
3. Contaminated food	1	2	4	7
4. God	2	1	3	6
5. Witchcraft	1	1	3	5
6. Evil spirits	3	2	-	5
7. Water	-	2	1	3
8. Enemies	1	1	-	2
9. Mosquitoes	1	-	1	2
10. Rainy season	1	1	-	2
11. Work	-	1	-	1
12. No answer	2	-	-	2

Table 11: Mentioned causes of sickness

Deciding treatment

When somebody is sick the man will decide the type of treatment. Some women will go to the drugstore by themselves but most of the time she will also consult her husband about this.

First line treatment

Out of the eighteen people interviewed, only two people have health insurance. For them, the first line treatment is to visit the hospital. The other sixteen people do not have health insurance or their insurance is expired. Most of them choose to treat sicknesses in the traditional way first. Two of the sixteen choose to go to the hospital

² Everybody believes in the existence of witchcraft, poisoning and getting attacked by your enemy.

³ We asked everybody about this specifically.

first, six choose to go to the hospital last. Other options are the drugstore, the cock doctor and health volunteers. Table 12 shows the first line treatments the people choose. The interviewees gave different reasons for using traditional treatment:

- Traditional treatment is free.
- They choose this type of treatment when a sickness is not serious;
- The traditional doctor has a lot of experience;
- They have no health insurance;
- In the hospital you won't heal fast enough.

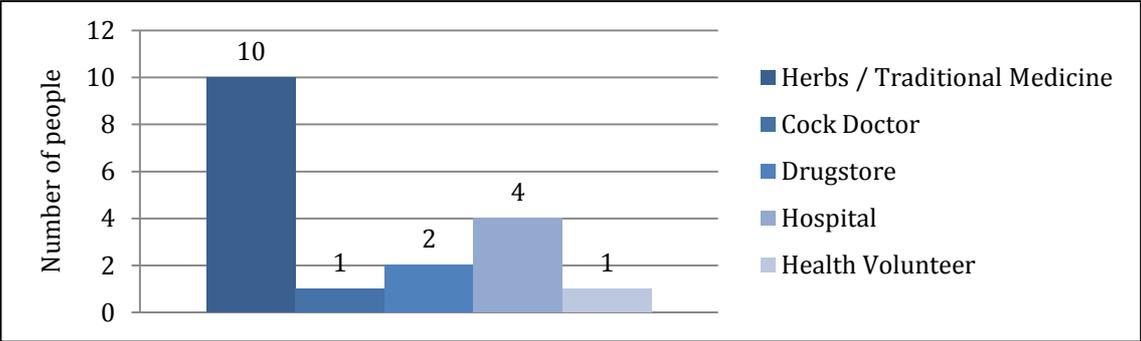


Table 12: First line treatment

Cock doctor

Some people have consulted the ‘cock doctor’ in the past. The main reason for this is that the hospital had no doctor at that time. One woman still consults the cock doctor but in general the interviewed people do not go there anymore. They say that the cock doctor only works for the money and is not a professional.

Drugstore

Most of the people, especially the women, go to the drugstore to buy medicines.

Hospital

People trust the hospital in general, but their opinion is influenced by past experiences of whether people were cured or not. According to the interviewees, the care that the hospital provides is good. The doctors can examine you and they will prescribe medication. If the treatment does not work you can go back to the hospital. One man said he does not rely on medical help but he would go to the hospital when his own treatment does not help or in case of an emergency.

Health Insurance

Of the people who were interviewed, only two have health insurance, ten people do not have it and six people did have it but their card has expired (table 13). We asked the interviewees themselves but we also asked whether or not their families have health insurance. The families are divided into three groups; namely the families where all members are in possession of insurance, families where no one has it, and the families where some do have, some do not have and where some are expired. This group is called the mixture group. In table 14 the results are outlined.

One man mentioned that he is not sure why he should renew his health insurance card. He never made use of the expired one and it did cost him a lot of money. Others see the need of health insurance as it is very expensive to receive treatment in the hospital without it. Overall the main reason for not having health insurance is the costs and the people do not have enough money.

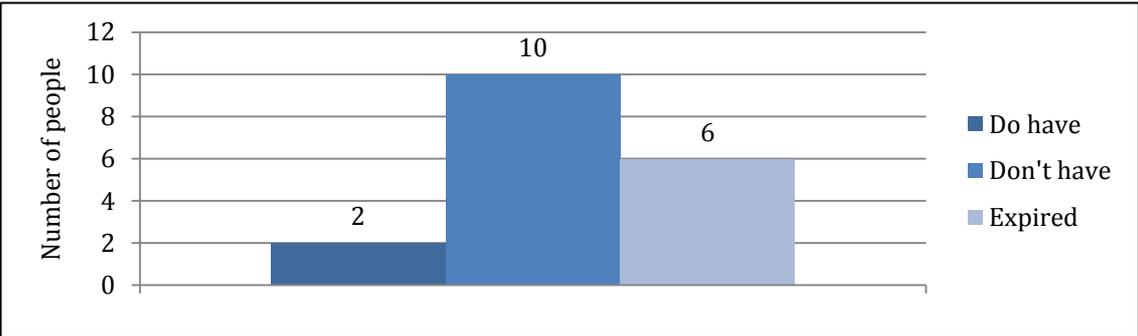


Table 13: In possession of health insurance

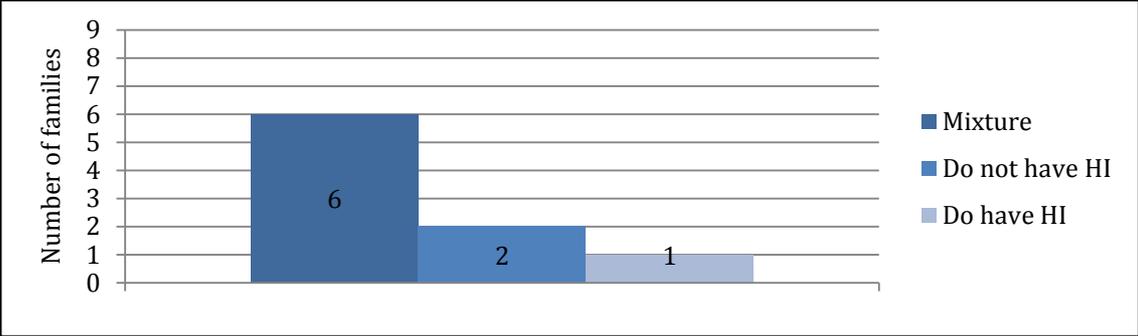


Table 14: families and health insurance

Child health situation

The health situation of the children is, in general, normal. Some children do occasionally have stomach aches or headaches. One parent mentioned that children get sick in the rainy season.

Clinic

All the women we asked are going to the clinic with their children for weighing and for the vaccinations (table 15).

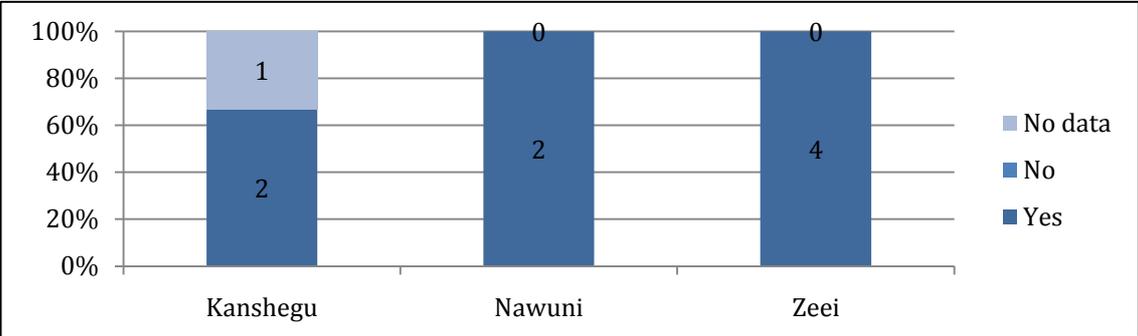


Table 15: Go to clinic for weighing and vaccinations

Keeping children healthy

All the parents say they bathe their children in the morning and they keep the compound clean to keep their children healthy. They wash the hands and the face of their children before eating. In addition, it is important to cover food and ingredients very well. One woman mentioned by herself that she goes to the clinic for vaccinations for her children to keep them healthy. Other women are also going but they did not mention that themselves. One person said that children should not drink from the river.

Treatment for children

The interviewees choose different types of treatment when a child is sick (table 16).

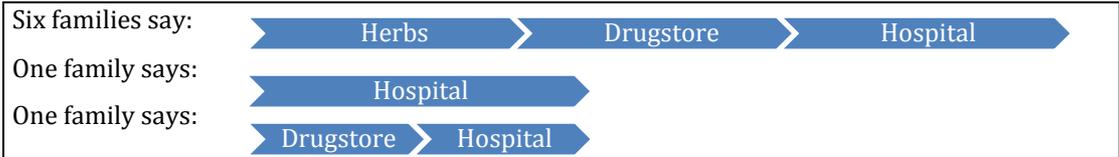


Table 16: Chosen types of treatment when child is sick.

Malnutrition

The results will be described using the two types of malnutrition, kwashiorkor and marasmus.

Kwashiorkor

The interviewees gave different answers to the question of whether this child was healthy or sick. Most of them said the child is sick but there were also some who thought the child is healthy (table 17).⁴

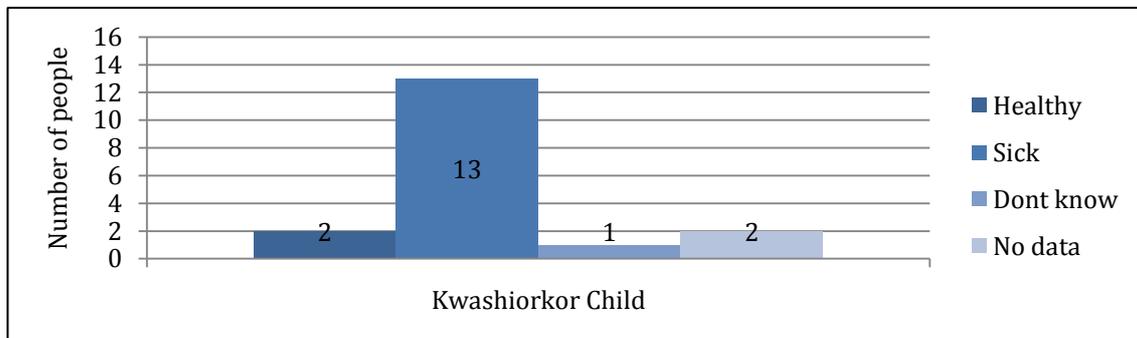


Table 17: Child sick or healthy

The child is seen as healthy because of the swollenness and the size. Eleven of the thirteen people, who said the child is sick, diagnose the sickness as piles. Other mentioned diagnoses for this type of malnutrition are poisoning, stomach problems and paralysis. Except for one person everyone views the child in the picture as swollen.

The people chose different types of treatment for a child suffering from kwashiorkor (table 18).

6 people	Herbs → Hospital
5 people	Hospital → Herbs
1 man	No treatment
1 man	God

Table 18: Chosen type of treatment for a child suffering from kwashiorkor

The person who chose no treatment believes the child was poisoned which cannot be healed. The man who said that God has to heal the sickness would also send his child to the hospital or to a Nutrition Centre.

Of the fourteen people who said this child is sick, five people had no idea what the causes of this sickness could be (table 19). The other nine gave different causes (table

⁴ For two interviewees there is no data about this type of malnutrition.

20). The three main mentioned causes were poisoning or witchcraft, food, and sickness in the blood.

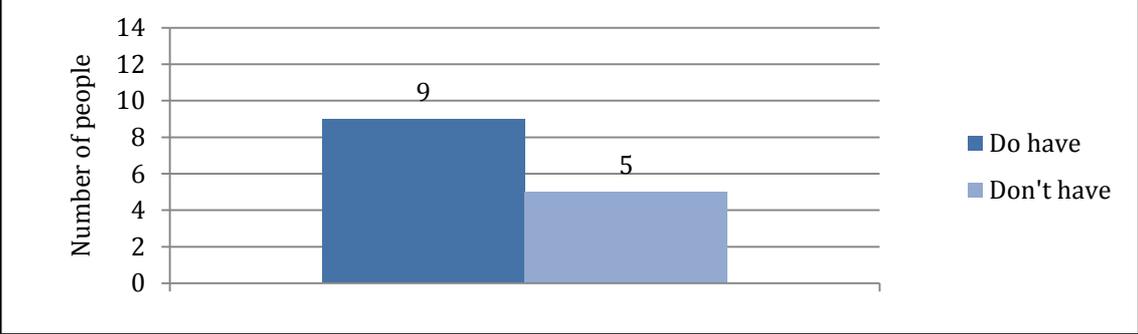


Table 19: Ideas about the causes of kwashiorkor

Mentioned causes	Number of times mentioned
1. Poisoning / witchcraft	3
2. Food	3
3. Sickness in the blood	2
4. Child is born with it	1
5. Oily food	1
6. Bad hygiene	1
7. Worms	1
8. Rainy season	1

Table 20: Mentioned causes of kwashiorkor

To prevent children from getting this sickness people say you should trust God, ensure good hygiene when preparing and keeping food and also in the surroundings, use clean water, use not too much oil in preparing food, and take care good care of your children.

Marasmus.

All eighteen interviewed people said this child is sick. They diagnosed this child with different types of sicknesses. Six people said this child is crippled and three people diagnosed the child with polio. Other mentioned diagnoses are AIDS, worms, convulsions, piles, nassangbang and assara.⁵ One man said the child is malnourished

⁵ People have local names for certain diseases. These cannot be translated into English. Assara is a sickness what will make you grow lean even though you eat normally.

(table 21). Like with kwashiorkor, people chose different types of treatment for a child such as this (table 22).

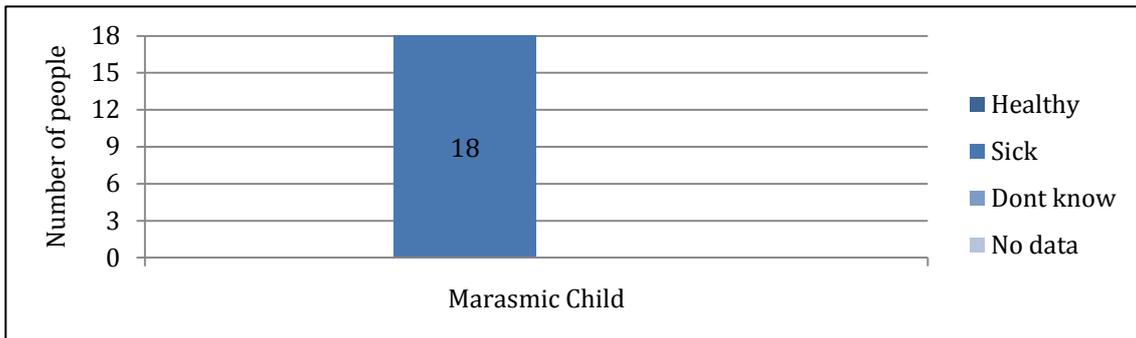


Table 21: Child sick or healthy

Five people	Hospital
Three people	Herbs
Two people	Hospital & Herbs
Two people	Herbs & Hospital
Two people	No treatment
One person	God
One person	Nutrition Centre

Table 22: Chosen types of treatment when child suffers from marasmus

The people who chose not to treat the sickness believe it is untreatable.

Seven people had no idea what could cause this sickness (table 23). The other eleven people gave different causes (table 24). The three most mentioned causes were that it is a sickness in the blood, that the sickness is caused by not eating enough or eating the wrong food, or that it is caused by evil spirits.

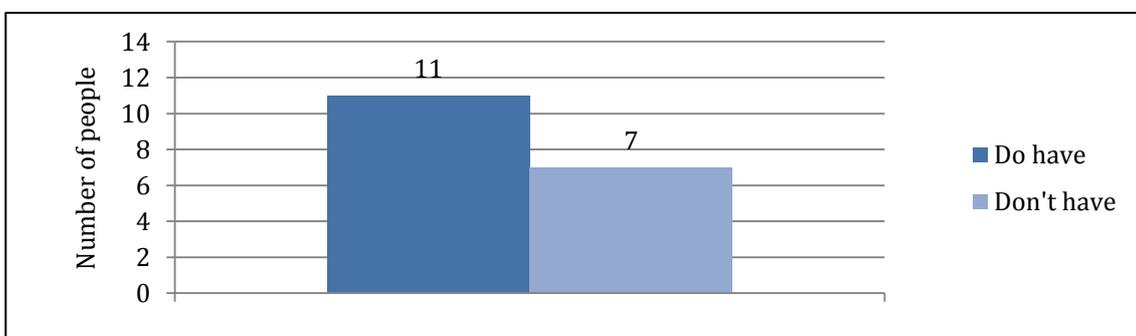


Table 23: Ideas about the causes of marasmus

Mentioned causes	Mentioned times
1. Sickness in the blood	3
2. Wrong/not enough food	2
3. Evil spirits	2
4. Breast milk	1
5. Poisoning/witchcraft	1
6. Rainy season	1
7. From mother	1
8. No drips against polio	1
9. Not taking good care of child	1
10. Dirty environment	1

Table 24: Mentioned causes of marasmus

To prevent children from this sickness people say you should trust God, take care of good hygiene for yourself and the surroundings, and take the drips against polio.

Witchcraft

Witchcraft refers in this report to witchcraft, evil spirits and/or poisoning. Sixteen of the eighteen people said they believe in some form of it. They have different conceptions about it:

- Evil spirits are mentioned by many people. Most of them do not have experience with it. They say it is very difficult to heal a sickness from an evil spirit.
- People have different thoughts about poisoning. Some say poisoning cannot be cured at all, others say you can go to a traditional healer for treatment. People believe that poisoning will cause a swollen stomach. People believe that there are two different types of poisoning; spiritual poisoning and poisoning by enemies.
- People say kwashiorkor children may have been poisoned.
- One person said a marasmic child might not even be a human being but they do not give a clear explanation about the causes.

Economic situation

The economic situation is hard to describe. Almost everyone says that they are very poor. But many of them have, for example, a tin roof which is more expensive than a thatch, or they can send their children to school. They are also able to provide three

meals a day the whole year. The people have trouble with saving and spending money: one family tries to save money for health insurance but then they realize they have to pay the school fees. In that case they use the money for the school and do not have money for the health insurance anymore.

Appendix 11 Misconceptions

Misconceptions of women about breastfeeding

Misconception

1,5 or 2 years old is a good age to start giving you child normal food;

When a child is start exclusively eating in an early age it will develop problems with walking;

Breast milk is too hot after a day of working on the farm. You have to cool your breast before you give your child breast milk;

When a mother is sick she cannot give breast milk. Instead of breast milk you give tea or bottled milk;

When there is not enough milk you can give tea;

Misconceptions about supplementary feeding

Misconceptions among the men

Misconception

Supplementary feeding should be started when a mother is pregnant again because the breast milk might be too warm for the child.

The stomach of a child will grow big if supplementary feeding is started too early.

Misconceptions among the women

Misconception

1,5 or 2 years is a good age to start with normal food.

When a child start eating in an early age the child will develop problems with walking.

When you force your child to eat normal food the child will run diarrhoea

Appendix 12 Specific results for Project Share

This appendix describes the specific results for Project Share. The information was asked in the interviews but not relevant for the research.

Moringa

As shown in table 1, four men and three women have heard of Moringa. One man and one woman have never heard of it. There is no significant difference between men and women in knowledge about this tree. One man and one woman knew that the leaves can be used as medicine. This man's grandfather was a traditional healer and the woman got her information from her brother. The leaves are used to make tea or to prepare soups. The interviewees could not tell how nutritious Moringa is and how you can vary its use.

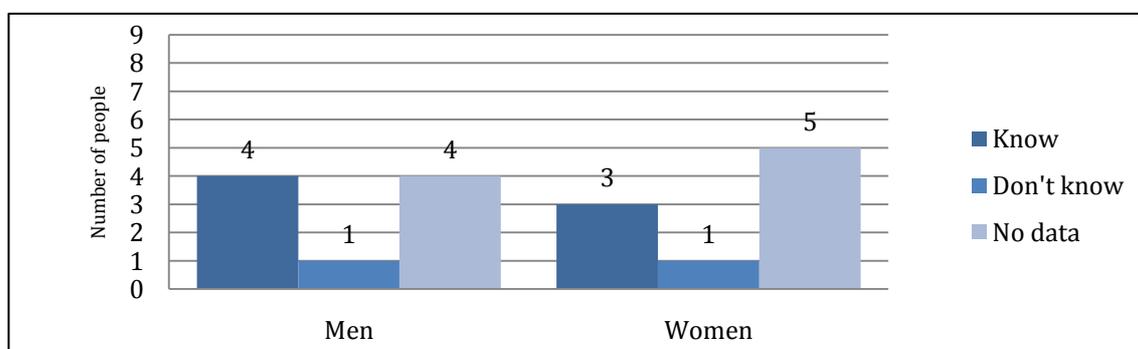


Table 1: knowledge of Moringa

Nutrition Centre

All the interviewees have heard of a Nutrition Centre. They mentioned the centre's in Nalerigu, Karaga and Gushegu.

Two children from Kanshegu have been in the Nutrition Centre in Gushegu⁶. Nevertheless, nobody in this village knew exactly what work is done in the centre. Some people do know that it is about food and for sick children. They also know that the Nutrition Centre in Gushegu is for free.

In Nawuni the people do know that the Nutrition Centre's are for sick children but they do not know what work is done there.

One child from Zeei has also been to a Nutrition Centre, the one in Nalerigu. The education that is given there is about what a child should and should not eat. Back in the

⁶ The Nutrition Centre records did not contain the information about these people.

village they do not use the information they learned in the centre anymore because the children are healthy now. One woman's sister has sent her children to a Nutrition Centre. The woman knows that the Nutrition Centre provides food and drugs. Two people said you can send children like the one in the photo picture to the centre (appendix 2). Two people said that the centre is about food and two have no idea.