

A Field Study of Malnutrition among Children in Uganda

AUTHORS

**Kristin Lundgren
Emmy Uhrenfeldt**

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SUPERVISOR

Kerstin Segesten

EXAMINER

Helene Berglund

Institute of Health and Care Sciences

The Sahlgrenska Academy



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ABSTRACT

Background: Malnutrition is a major, global health problem. Children are particularly vulnerable since adequate nutrition is essential to ensure healthy growth and development. Africa is severely affected and in Uganda are 2.3 million children under the age of five chronically malnourished. The shortage of health care professionals and lack of access to health care services makes the situation even worse.

Aim: To illuminate the health care of malnourished children in Uganda.

Method: Qualitative method with an ethnographical design. Data has been collected through unstructured observations, conversations with health care professionals and parents, as well as guidelines and documents used at the MNU, Mulago Hospital.

Results: The WHO Child Growth Standards, MUAC tape and clinical examination of bilateral edema, were used to determine the nature and severity of malnutrition. The treatment given at the MNU consisted of therapeutic milk and RUTF. The parents had an important role and were responsible for the care of their child. The health care professionals worked preventively by strengthening parents' knowledge of malnutrition. Parents were given advice and instructions regarding nutrition, the importance of basic hygiene and how to avoid transmission of infectious diseases. Preventive actions were also conducted as community outreach, which aimed to improve the health of the population in rural areas.

Conclusion: There are several causes of malnutrition and it is a complex phenomenon with different affecting factors. The study reveals the importance of parents as caretakers. Lack of financial resources and education were major risk factors and affected children's health. Many parents could not afford to buy medications to their children and sought medical care too late. The importance of information and its contribution to improved living conditions was obvious. By reaching out to people with poor access to health care facilities, important actions were performed in the struggle of preventing malnutrition.

Keywords: Malnutrition, Children, Uganda

SAMMANFATTNING

Bakgrund: Undernäring är ett stort globalt hälsoproblem. Barn är särskilt utsatta eftersom adekvat näringstillförsel är viktigt för en hälsosam tillväxt och utveckling. Afrika är svårt drabbat av undernäring och i Uganda beräknas 2,3 miljoner barn under fem år lida av kronisk undernäring. Bristen på sjukvårdspersonal och den begränsade tillgången till sjukvård gör den svåra situationen ännu värre.

Syfte: Att belysa hur vården av undernärda barn bedrivs i Uganda.

Metod: Kvalitativ metod med en etnografisk design. Datasamlingen har utgjorts av ostrukturerade observationer, samtal med sjukvårdspersonal och föräldrar samt riktlinjer och dokument från MNU, Mulago sjukhus.

Resultat: För att bedöma svårighetsgraden av undernäring användes instrument som Världshälsoorganisationens tillväxtkurvor, MUAC-måttband samt klinisk bedömning av bilaterala ödem. Behandlingen som erbjöds på MNU bestod av terapeutisk mjölk och terapeutisk mat. Föräldrarna spelade en viktig roll då de var ansvariga för omvårdnaden av sitt barn. Sjukvårdspersonalen arbetade preventivt genom att stärka föräldrarnas kunskap om undernäring. Föräldrarna fick råd och instruktioner om nutrition, om vikten av basala hygienrutiner och hur de kunde undvika smittspridning av infektionssjukdomar. Förebyggande åtgärder genomfördes också i form av samhällsstöd, vilket syftade till att förbättra hälsan hos invånarna på landsbygden.

Slutsats: Undernäring är ett komplext fenomen och har många underliggande orsaker och påverkansfaktorer. I studien framkommer föräldrarnas betydelse som omvårdnadsgivare. Brist på ekonomiska resurser och utbildning var stora riskfaktorer som påverkade barnens hälsa. Många föräldrar saknade ekonomiska medel för att köpa mediciner till sina barn och uppsökte sjukvård för sent. Betydelsen av information och dess bidragande till förbättrade levnadsvillkor var uppenbar. Genom att nå ut till människor med bristande tillgång till hälso- och sjukvårdskliniker kunde viktiga förebyggande åtgärder utföras i kampen mot undernäring.

Nyckelord: Undernäring, Barn, Uganda

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ABBREVIATIONS

HIV	Human Immunodeficiency Virus
ICN	International Council of Nurses
ITC	Inpatient Therapeutic Care
IMAM	Integrated Management of Acute Malnutrition
LRA	Lord's Resistance Army
MDG	Millennium Development Goals
MNU	Mwanamugimu Nutrition Unit
MUAC	Mid-Upper Arm Circumference
OTC	Outpatient Therapeutic Care
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SD	Standard Deviations
SDTM	Specially Diluted Therapeutic Milk
SIDA	Swedish International Development Cooperation Agency
TB	Tuberculosis
UI	The Swedish Institute of International Affairs
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
VHT	Village Health Team
WB	World Bank
WFH	Weight-for-Height
WFP	World Food Programme
WHO	World Health Organization

1. INTRODUCTION

Malnutrition is a major, global health problem. Children are particularly vulnerable since adequate nutrition is essential to ensure healthy growth and development. Globally are 101 million (16 %) children under five years of age estimated being underweight (UNICEF, WHO & WB, 2012). Africa is severely affected and approximately 48 million children under five years are malnourished in Sub-Saharan Africa (UNICEF, 2013b). The majority of the countries in Africa are still struggling with the heavy burden of infectious diseases and poor maternal and child health. These countries need nutrition solutions that are adapted to their circumstances, in order to achieve improved public health (Atinmo et. al, 2009). Since The Sahlgrenska Academy at Gothenburg University has collaboration with the Makerere University, an opportunity to study the problem of malnutrition in Uganda appeared. Only in the country, 2.3 million children under the age of five are chronically malnourished (Government of Uganda, 2011).

2. BACKGROUND

2.1 Uganda

Uganda is located on the equator in East Africa (see Appendix 1) and has borders to Kenya, Tanzania, Rwanda, Congo-Kinshasa and South Sudan (see Appendix 2). The country has a population of approximately 33 million inhabitants (UN Association of Sweden, 2013).

2.1.1 History

Uganda was, after independence from the colonial power Great Britain in 1962, one of the richest countries in Africa. But in less than a decade, prosperity vanished because of misrule and dictatorship. During the bloody regime of dictator Idi Amin in 1971-1979, several hundred thousands of people were killed and many were expelled from the country. The standard of living has increased progressively and everyday life has become more secure after the current president Yoweri Museveni came to power in 1986. But for many years lasted almost uninterrupted conflicts between Museveni's government forces and various guerrilla movements. The guerrilla group, which caused the most suffering to the civilian population, was the Lord's Resistance Army (LRA), which from 1987 to 2006 fought a guerrilla war from bases in northern Uganda and southern Sudan. Today, the rebel movement has been chased out of the country and the majority of the internal refugees have returned to their villages (SIDA, 2013). Uganda is nowadays a post-conflict country and economic reforms have yielded results. The regime has however become increasingly authoritarian and prevents the opposition from gaining influence (UI, 2012a).

2.1.2 Poverty and Development

Despite the democratic deficit, the country has developed strongly since the 1970- and 1980's bloody dictatorship. The economic growth has for many years been one of the highest in the continent. The country has a favourable climate, fertile soils and abundant natural resources. Oil discovery in the west part of the country expects to accelerate

economic growth. The majority of the population is still living of small-scale agriculture (SIDA, 2013).

The poverty has almost halved since 1992, but the social and economic development has been geographically uneven and the country is still characterized by large regional differences and inequalities. If economic growth is to benefit the poorest and most vulnerable people, a strong political will is needed to create a fair and equitable distribution of resources. Corruption and poor infrastructure also inhibits further development (SIDA, 2013).

A quarter of the population in Uganda lives in extreme poverty (WFP, 2013). The international definition of extreme poverty is set to the possession of less than 1\$ a day. Today it is obvious that one cannot consider only the economic part of poverty. Poverty is also social, political and cultural (UNESCO, 2013). Over the last two decades, the country has started on a development agenda, with generally positive impact on welfare and hunger. The poverty rate has declined from 38,8 per cent in 2002/03 to 24,5 per cent in 2009/2010 (WFP, 2013).

2.1.3 Health and Social Welfare

The life expectancy at birth is 54 years (UN Association of Sweden, 2013). The probability of dying before five years is 69 per 1000 live births. Comparatively, this figure is 3 per 1000 live births in Sweden (WHO, 2013d). Access to health care is poor in rural areas and most healthcare facilities are located in larger cities. The shortage of doctors and nurses is extensive. Voluntary organizations account for a large part of the public health system. The social safety net is poor and, as in many other developing countries, the family and relatives take care of the sick or elderly people (UI, 2012b).

2.2 The Importance of Nutrition

Humans can only survive a few days without water, while it may take weeks, months or even years, before deficiency symptoms of other nutrients are visible. The World Health Organization (WHO) has defined nutritional recommendations, which in principle could be applied in all parts of the world. The nutritional recommendations aim to meet the physiological needs for growth, function and to provide conditions for good health and reduce the risk of diet-related diseases (Skolin, 2010).

At no other time in the lifecycle is nutrition more important for health, growth and development than during infancy (Akers & Groh-Wargo, 2012). Children need adequate nutrition in early childhood to ensure healthy growth, proper organ formation and function, a strong immune system, and neurological and cognitive development (UNICEF, WHO & WB, 2012).

2.3 Malnutrition

Malnutrition, the state of being poorly nourished, is not merely a result of too little food, but a combination of factors: insufficient protein, energy and micronutrients, frequent infections or diseases, poor care and feeding practices, inadequate health services, unsafe water and sanitation (UNICEF, 2003). Severe Acute Malnutrition (SAM) is a life threatening condition requiring urgent treatment. SAM is defined by a very low weight

for height, by visible severe wasting, or by the presence of nutritional edema (WHO, 2013b).

Malnutrition causes degraded immune response and weak musculature. The degraded immune response makes the body more susceptible to infections. The energy- and nutrient resources of the body are being consumed and the body tissue breaks down. The body protein has many vital functions and cannot be dispensed without causing damage to vital functions. Heart muscle weakens leads to decreased blood pressure and slower pulse, which in turn leads to impaired circulation. Weakened respiratory musculature leads to shallow breathing and less energy to cough up phlegm. The synthesis of enzymes and proteins, that occur in each cell during normal conditions deteriorate and leads, for example, to poorer wound healing. It is the amount of body fat in a person, which determines the survival time. Permanent damages will occur if more than 30 per cent of the body's protein is consumed (Skolin, 2010).

2.3.1 Classification of Malnutrition

There are various conditions of malnutrition, which are classified based on energy- and protein intake. Marasmus and kwashiorkor are two examples of these conditions (Skolin, 2010).

Marasmus

Marasmus is energy shortage caused by prolonged starvation. The patients suffer from low body weight in relation to the length. Because of the absence of subcutaneous fat and atrophied muscle, skeleton, pelvis and ribs emerge. Upper arms, thighs and buttocks are very thin. Peripheral edema in lower legs and feet can occur (Skolin, 2010).

Kwashiorkor

The condition of kwashiorkor affects mostly children. The cause is a diet that is low in protein. The protein deficiency gives rise to hypoalbuminemia, which comprises a very low level of albumin in the blood. Due to osmotic action, hypoalbuminemia causes peripheral edema and ascites (accumulation of fluid in the peritoneal cavity). Adipose tissue (body fat) and muscle tissue are relatively well preserved; therefore the patient does not look emaciated (Skolin, 2010).

2.3.2 Malnutrition and Children

Globally are 165 million stunted (i.e. low height-for-age) due to chronic illness and poor diet and 52 million children are wasted (i.e. low weight-for-height). These children have an increased risk of SAM and death. Although the prevalence of underweight, stunting and wasting among children under-five years of age worldwide has decreased since 1990, overall progress is insufficient and millions of children remain at risk (UNICEF, WHO & WB, 2012). In developing countries, the proportion of underweight children declined from 28 per cent to 17 per cent between 1990 and 2011. One of the Millennium Development Goals (MDG's) is to eradicate extreme poverty and hunger. The goal is to halve the proportion of people (between 1990-2015) who suffer from hunger (UN, 2013). Even if the reduction is close to meet the MDG target, significant differences remains within regions (WHO, 2013c).

Child growth is the most widely used measure of children's nutritional status. Stunting reflects the effects of malnutrition and infections since birth, and even before birth. Evidence of this condition indicates chronic malnutrition, which is likely to have serious and long lasting impacts on health. Being underweight may reflect wasting, which indicates acute weight loss and/or stunting (WHO, 2013c). Decreasing child mortality and improving maternal health depend heavily on reducing malnutrition. Malnutrition is responsible for 35 per cent of deaths among children under five years (WHO, 2013b). Despite this, malnutrition is rarely listed as the direct cause of child death (WHO, 2013a).

Lack of access to nutritious food, especially nowadays with rising food prices, is a common cause of the problem. Infections, especially diarrhea, pneumonia, measles and malaria, also undermine the nutritional status of a child (WHO, 2013a). Malnourished children have lowered resistance to infections; they are more likely to die from diarrheal diseases and respiratory infections (UNICEF, 2013c).

Malnutrition is the biggest threat to a child's survival and development. Unlike starvation, malnutrition is almost invisible. Three quarters of the children who are at risk of dying from malnutrition, suffer from milder forms of malnutrition and therefore show no outward signs of starvation. The fatal injuries affect the inside of the body, especially the brain (UNICEF, 2013a).

2.3.3 Malnutrition in Uganda

Malnutrition is a major public health concern in Uganda and affects both children and adults (Ministry of Health Uganda, 2010). In the country, 34.6 per cent of the population suffers from malnutrition. Of all children up to five years, 13.8 per cent are malnourished (UN Association of Sweden, 2013). The Human Immunodeficiency Virus (HIV) pandemic has exacerbated the situation and many of the acutely malnourished children who receive care are HIV-positive. According to the Ministry of Health in Uganda (2010) severe wasting in children less than five years is associated with a 9-fold increased risk of mortality compared to a healthy child.

2.4 The Role of the Nurse

According to the International Council of Nurses (ICN), a nurse has four primary responsibilities; to promote health, to prevent illness, to restore health and to relieve suffering. Nurses provide care to individuals, families and the public (ICN, 2012). The definition of the nursing profession, level of education and responsibilities varies around the world. In many low-income countries, attempts have been made to resolve the severe shortage of nurses by providing short courses for health care workers. Health care workers are not registered as nurses, but sometimes have a considerable clinical responsibility (Eriksson, 2009).

Health care professionals must have knowledge of how to assess, treat and evaluate malnutrition. In the nurse's role it is central to assess nutritional status, plan, propose and implement measures, initiate consultations with other experts and to evaluate the actions taken (Westergren, 2009).

The shortage of health care professionals and lack of access to health care is a global problem, which leads to serious public health problem in many areas. Nurses are probably the most important profession in this context (Eriksson, 2009). At present, Africa holds 3 per cent of global health workers but bears 24 per cent of the global burden of disease (VSO, 2014). According to WHO, the sub-Saharan area needs at least another 600 000 nurses, in order to achieve the health related MDG's. There are six nurses per 100 000 inhabitant in the country (Eriksson, 2009). There were comparatively, 1 100 nurses per 100 000 inhabitant in Sweden 2009 (The National Board of Health and Welfare, 2012). According to Kinfu, Dal Poz, Mercer & Evans (2009) Uganda has a higher outflow than inflow of nurses. This means that the country trains an insufficient number of nurses to replace those leaving the workforce.

2.5 Theoretical Framework - Transcultural Nursing

Dr. Madeleine Leininger is considered as the founder of the theory *Transcultural Nursing* (Sagar, 2012). Transcultural nursing is focused on caring differences and similarities of beliefs, values and life ways of cultures to provide culturally congruent, meaningful and beneficial health care to people. For the care to be meaningful and therapeutic, professional knowledge needs to fit with the cultural values, beliefs and expectations of patients. If professional knowledge and skills fail to fit the patient's values and life ways, one can expect that the patient will be uncooperative, noncompliant and dissatisfied with nursing efforts. Patients from different cultures are generally quick to show signs of conflict, discontent, distrust and general dissatisfaction with nurses who do not know how to provide culturally based care. By knowingly responding to cultural differences or variations, the nurse can provide sensitive, compassionate, and competent care that promotes healing and well-being and fits cultural needs and expectations (Leininger, 2002).

Verbal and nonverbal communication is essential in studying the cultural beliefs and life ways of different people. Every culture generally has different values and patterns of expression that need to be identified and understood in order to provide transcultural-nursing care (Leininger, 2002). Since cultural knowledge often is embedded within individual and family values, the nurse has to enter the patient's world to be able to do a cultural assessment. The planning and implementation of nursing interventions should be adapted as much as possible to the patient's cultural background (Sagar, 2012).

Leininger's theory is described as the sunrise model (See Figure 1, p. 7). The model consists of different factors that together form a sunray. The factors are (1) technological, (2) religious and philosophical, (3) kinship and social, (4) cultural values and life ways, (5) political and legal, (6) economic, and (7) educational. The factors influences individuals, families and groups in health and illness. The model can be applied in assessing and caring for individuals, families, groups, communities and institutions in various health systems (Sagar, 2012).

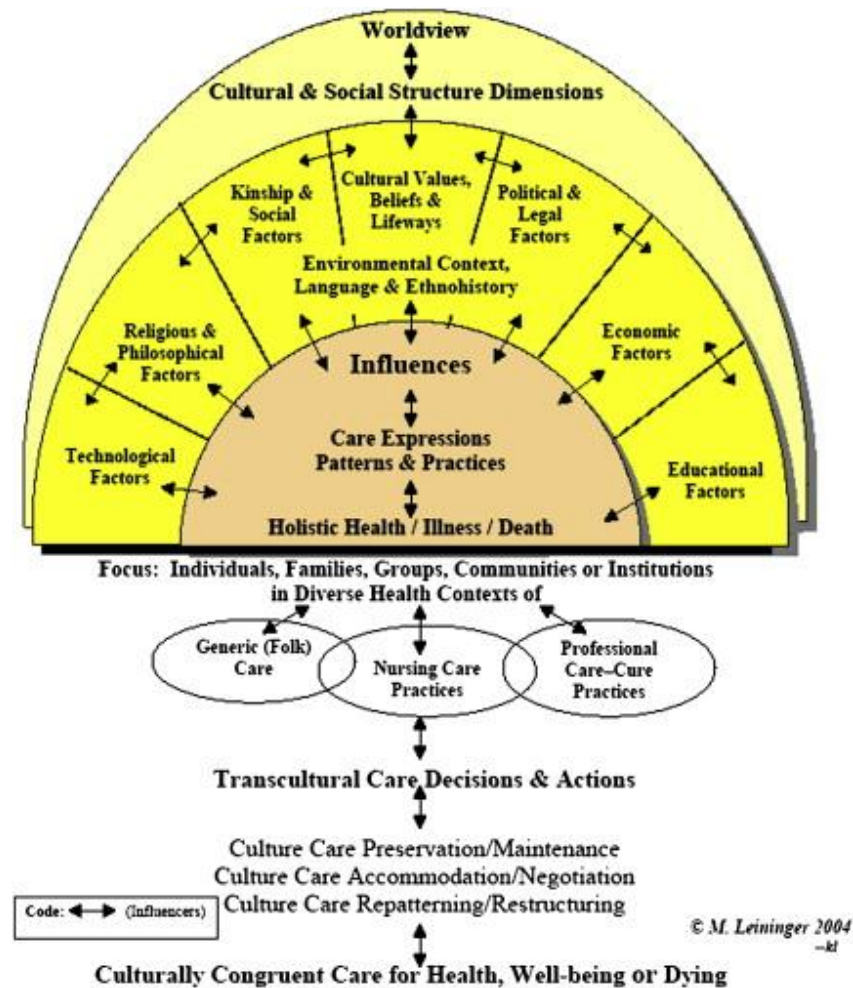


Figure 1. Sunrise Enabler to discover Culture Care Sunrise Model (Sagar, 2012, p. 2)

Transcultural nursing is challenging but complex. According to Leininger (2002) it is important for nurses to be attentive to and respond appropriately to the patient's cultural needs. Without cultural knowledge, nurses can be ineffective and even dangerous. Learning about cultures in the past and today is important, and it takes time to gain understanding of patients. Such knowledge is considered to be equally as important as nurses studying about how the heart or how the muscles function in the body. Culture and care greatly influence how human beings are living and functioning in their daily life (Leininger, 2002).

Cultures and caring are complex phenomena with diverse meanings and comparative expressions that must be studied and fully understood. According to Leininger (2002) it is a moral and ethical responsibility for nurses to learn about different cultures, if nurses are going to work effectively in a world of cultural diversity. Discovering how and why cultures are alike or different with respect to care, health, illness and death provides new insights to improve nursing. Providing culturally competent, safe and congruent care to people of diverse or similar cultures is the central goal of transcultural nursing. This should be an integrated part of the health care worldwide (Leininger, 2002).

3. AIM

Adequate nutrition is essential throughout life, but especially during infancy. Malnutrition causes severe damages to both brain and body, which strongly effects a child's physical and psychological development. The nurse has an important responsibility when it comes to discover and prevent malnutrition among the population. Few studies seem to focus on health care professionals' work with malnourished children in Africa. Therefore the authors seek to increase awareness and knowledge of this global health issue.

3.1 Purpose

The purpose of the thesis is to illuminate the health care of malnourished children in Uganda.

3.2 Questions

- How do the health care professionals determine the nature and severity of malnutrition?
- How is the care of malnourished children performed?
- How do the health care professionals work to prevent malnutrition?

3.3 Limitations

In the initial phase of the study some limitations were made. The first limitation conducted was to focus on malnutrition. The topic was chosen because malnutrition is a widely spread health problem in developing countries. Since the Makerere University is a partner university to The Sahlgrenska Academy, the location of the study became Uganda and Kampala. The thesis was thus limited and conducted in a metropolitan. Another limitation was malnutrition among children, as children are especially vulnerable to nutritional deficiencies. The authors decided to focus on children between 0-5 years, since it is a particularly vulnerable age group. Due to the time-limited extent of the study, the authors spent two weeks in the observational environment. This is a relatively short time for an ethnographic study.

4. METHOD

This chapter will describe the method and also the ethical considerations, which were made while planning and conducting the thesis.

4.1 Study Design and Settings

A qualitative method with an ethnographical design was chosen. The setting for the observations was the Mwanamugimu Nutrition Unit (MNU) at Mulago Hospital, one of the main hospitals in the capital Kampala. The MNU opened on June 1st, 2011 and was a 72-bed capacity unit specialized in managing children with SAM with an average monthly admission of 50-70 patients. The unit consisted of three wards, the Giraffe ward, the Zebra ward and the Elephant ward. The Giraffe ward consisted of 30 beds and was the first phase where the children were being placed until they had begun to stabilize their nutritional intake. The Zebra ward consisted of 34 beds and was considered as the second phase where the children's recovery further was being

observed. When the child reached its goal weight, they moved on to the third phase, the Elephant ward. At this ward the children were being observed for approximately three days, before being discharged. The amount of patients varied significantly, from 50 to over 100. The number of patients increased when food prices rose and when the dry season hit hard. During the observation period, the ages of the children varied from a few months up to seven years.

4.2 Research Method

Considering the aim as well as the questions for the study, ethnography was chosen as research method.

4.2.1 Ethnography

Unlike many other research methods, the ethnographic design is very flexible, from the beginning and even during the writing. Before and during the study, a number of choices had to be made. Mulago Hospital was for example chosen as study setting. The malnourished children, their parents and health care professionals were chosen as informants. According to Pilhammar Andersson (2011) these choices are made in a conscious and deliberate manner in which the election of individuals, events, situations etc. are chosen after what the researcher is interested of to find out.

Pilhammar Andersson (2011) states that the ethnographic study can be divided into four phases; *the preparation phase, the field study phase, the analysis-and interpretation phase and the writing phase*. The preparation phase consisted of preparations made before entering the field. This included applying for the scholarship Minor Field Study, sponsored by the Swedish International Development Cooperation Agency (SIDA), which encourage students to write their thesis in a developing country. SIDA gave a preparation course of lessons on aid, development, health, safety, culture and communication. The preparation phase also consisted of e-mail correspondence with the host university, vaccinations and applying for visa. The field study phase included field data collection in the field. During this period, a great deal of analytical work was undertaken. The analysis- and interpretation phase occurred when all data was collected and included final analysis and interpretation of the collected material. During this phase the authors analysed field notes and discussed the observations in order to interpret the data. The last phase, the writing phase, included formulation of text and was performed during several weeks.

4.2.2 The Field

The first task for the observational research is to choose and gain access to the field (Patel & Davidson, 2011). For this study access to the field were given by the international coordinator at the Makerere University and also by the head nurse at the MNU. Access to a setting or a group is often negotiated via a “gatekeeper”, someone in a position to allow and to facilitate the research. In health care settings, this may involve negotiating with different staff, including doctors, nurses and managers (Pope & Mays, 2008).

The choice of location for data collection is primarily determined by the degree to which the phenomenon is represented on the site and the opportunities for access to the field (Pilhammar Andersson, 2011). MNU was the only unit treating children with SAM

at Mulago Hospital. Therefore, the choice of location for data collection was obvious. A request for permission to perform the study at MNU was sent and approval was given. It requires more or less lengthy introductory periods to undertake field studies and to be accepted in the field. During the first day the authors got familiar with the health care professionals and became acquainted with the premises at the MNU. The authors also noticed the ward's different procedures and tried to be accepted by the children's parents by interacting with them.

The ethnographic study took place within a context, among the people who had a natural residence there and the interaction occurred naturally between people. Data was collected from observations made at the MNU among health care professionals, the malnourished children and their parents. Each individual was a potential informant and each situation was loaded with information. Through the informants the authors got an inside perspective and interpretation of the context.

4.2.3 Observations

Data has been collected through unstructured observations, documents and guidelines, as well as conversations with health care professionals and parents, during two weeks at the MNU at Mulago Hospital. These different methods of observations were part of an overall research strategy (Pilhammar Andersson, 2011). According to Pope & Mays (2008) observational methods have been used to look at the everyday work of health care professionals. Patel & Davidson (2011) states that observations may be conducted in a variety of ways and are divided into two main categories, structured and unstructured observations. Unstructured observations were conducted to collect as much data as possible within the selected problem area. Patel & Davidson (2011) points out that unstructured observations often is used when a researcher wants to get an overall picture, rather than observing any specific within a particular problem area.

Field notes and keywords were written during the observations or immediately afterwards. Patel & Davidson (2011) states the importance to register observations, such as key words, in close connection to the observations. Otherwise there is a risk that things are forgotten or misinterpreted. Through a long observation time there are opportunities to observe cyclical activities. For example, the authors had the possibility to observe weighing and measuring of the children, distribution of therapeutic milk, the doctors' rounds etc. There is no possibility to attend all hours, all days or all contexts (Pilhammar Andersson, 2011). Observations were made during daytime and the authors therefore became familiar with the daily activities. After the authors became acquainted with the surroundings and had performed the data collection, six weeks more were spent in the country. In this way, the authors had the opportunity to further observe children's terms and conditions in the society.

4.2.4 The approach of the observer

A participant and unknown approach was chosen. According to Patel & Davidson (2011) an observer can adopt different approaches during the observation, a participant or non-participant or a known or unknown observer. A participant observer actively participates in the observed situation and becomes a member of the current group. A disadvantage is however that the observer's participation can disrupt the natural behaviour of the group. The unknown approach was chosen to avoid affecting the everyday work of the health care professionals. Patel & Davidson (2011) states that an

unknown participant observer will not affect the group in the same way, as when the observer is known. When the group is unaware of the researcher's observer role they will behave as usual. Being an unknown participant observer can imply some practical problems. There might, for example, be problems for the unknown participant observer to register observations according to Patel & Davidson (2011).

4.2.5 Ethical Considerations

In this study, ethical issues have been taken into consideration. Being a participating unknown observer involves ethical problems, since no consent from the observed individuals are given (Patel & Davidson, 2011). However has approval from the parents been asked for in some situations, for example, before discussing the child's health and looking in their medical record. It has been considered whether the observed individuals might have experienced some discomfort during the observations and the authors have been aware of that their presence could have been a disturbing factor. Considering health care secrecy, all the informants' identity data has been anonymized. According to Patel & Davidson (2011) the researcher must be careful when reporting results. It is important that individuals not are identifiable or hurt when the information is presented.

5. RESULTS

In the results chapter the questions of the thesis are being answered and explanations are given to medical and nursing interventions related to the care of children with SAM. Since the environment plays an essential role in the ethnographic method, an introduction of the care environment is given in the beginning of this chapter.

The MNU was situated on a top of a hill and belonged to the old part of the Mulago Hospital. It consisted of several buildings painted in white and blue. The Zebra and the Giraffe ward were located in the main building and the Elephant ward in a nearby building. The buildings were detached single storey and there was a playground and a lawn outside the main building. There were benches around the buildings, which made it possible for the parents to sit outside under a roof. The triage was located at the entrance of the main building. Beside the triage, a small room was situated for weights and measures. The walls were painted with various animals and figures in bright and cheerful colours. Inside the entrance, there was a room on each side, The Critical Care Unit and The Resuscitation Unit. The most severely affected children were placed in these rooms. Both of the rooms had four cots and equipment for oxygen therapy. The Giraffe ward was situated on the left side of the main entrance and was a large bright room with several windows along both sides. The room was filled with cots. The Zebra ward was situated on the right of the main entrance. The room was also large and bright, but the beds were suitable for adults. The Elephant ward consisted of two rooms with beds. There was a TV in one of the rooms, which the children gathered around. There was a large room at the Elephant ward, where the nurses held meetings with the parents. Each bed on the MNU had bed linen, blankets and a mosquito net. There seemed to be a lack of space at the ward and it was normally crowded. For example the parents had difficulties to find an area on the floor to sleep on, next to their child's bed.

The nurse handling and preparation area consisted of benches and cabinets, where medical equipment and medications were stored. This was situated in an open area, in a passageway, for both health care professionals and parents. The medical equipment

available on the ward seemed to be adequate. There was also a medical expedition with a bunk and a desk. The kitchen was small and had a gas stove and a sink. The therapeutic milk was prepared in the kitchen and there were cabinets where the milk was stored. The ward had no water, except from in the kitchen, and the parents had to go outside if they wanted to wash themselves and the children. The toilets were outdoors, two for the parents and one for the staff, and consisted of a hole in the ground. There were hand sanitizer holders on the walls, but the hand sanitizer was usually out.

5.1 How do the health care professionals determine the nature and severity of malnutrition?

When a child arrived to the MNU the health care professionals controlled the child's health status at the triage. All children were weighed and measured upon arrival. The WHO Child Growth Standards, the Mid-Upper Arm Circumference (MUAC) tape and the clinical examination were used in order to determine the nature and severity of malnutrition.

The weight of the children was checked every day at 8 am. The children were weighed naked. Usually one of the mothers weighed all children by standing on the weighing scale, holding the baby in her arms. The woman's weight was then subtracted from the total weight. One of the nurses registered the weight of the child in a medical record. Children who could stand on their own were weighed separately. The children's nutritional intake was adjusted daily, based on whether the child had decreased, increased or maintained the weight from the previous day.

5.1.1 WHO Child Growth Standards

The health care professionals used the WHO Child Growth Standards to assess the well-being of infants and young children. According to the health care professionals, the growth charts were an essential component when working with children. The growth standards represented the best description of physiological growth for children less than five years of age. According to guidelines in practice, the standards described normal early childhood growth under optimal environmental conditions and could be used to assess children everywhere, regardless of ethnicity, socioeconomic status and type of feeding. The Z-score was obtained from the weight-for-height (WFH) curve and determined how severe the malnutrition was. The Z-scores were between -3 Standard Deviations (SD) to 3 SD. In the WFH index table a child's weight could be compared to the weight of a child of the same height and sex in the WHO standards.

WHO and United Nations Children's Fund (UNICEF) recommend the use of WFH of below -3 SD to identify infants and children with SAM. The reason for the recommendation is; children below this dividing line have a highly elevated risk of death compared to those who are above. Guidelines in practice stated that children with WFH above -2 and below -1 SD have a lower mortality risk than those below -3 SD. Those with a WFH above -1 SD have an even lower risk of death. For simplicity, it was possible to use 15 per cent weight gain as discharge criteria for all infants and children admitted to therapeutic feeding programmes. For children with edema, the same discharge criteria could be applied using the weight, after edema had disappeared, as the baseline.

5.1.2 The MUAC tape

The MUAC tape was a measurement instrument to assess wasting and used for children older than six months. By measuring the circumference of the child's left mid-upper arm, an assessment of the child's current nutritional status could be made. According to guidelines in practice, the MUAC tape is a better indicator of mortality risk associated with acute malnutrition than WFH Z-score. Children with a MUAC less than 115 mm have a highly elevated risk of death compared to those who are above. The prevalence of SAM, i.e. numbers of children with SAM, based on WFH below -3 SD of the WHO standards and those based on a MUAC less than 115 mm, are very similar. The WHO Child Growth Standards and the MUAC tape were used in the identification of 6-60 month old infants and children for the management of SAM.

5.1.3 Bilateral edema

The health care professionals explained that a clinical manifestation of acute malnutrition is bilateral pitting edema. The edema (also called kwashiorkor) is verified by a gently pressure of a thumb for at least three seconds on the top of both feet. The child has an edema if the pressure leaves a pit for some time after lifting the thumb. Chart 1 below shows how the severity and mode of care can be determined by classifying nutritional edema, according to guidelines in practice.

Chart 1. Classification of edema

Observation	Classification
No edema	(0)
Bilateral edema in both feet (below the ankles)	+/(Grade 1)
Bilateral edema in both feet and legs (below the knees)	++/ (Grade 2)
Bilateral edema in both feet, legs, arms, face	+++/ (Grade 3)

The diagnostic criteria for SAM are compiled in Chart 2 below:

Chart 2. Diagnostic criteria for SAM in children aged 6-60 months

Indicator	Measure	Cut-off
Severe wasting	WFH	< -3 SD
Severe wasting	MUAC	< 115 mm
Bilateral edema	Clinical sign	

According to guidelines in practice, the elevated risk of death below these cut-offs requires intensive nutritional and medical support.

5.2 How is the care of malnourished children performed?

A father was at the MNU with his nine-month-old baby. He explained that the child had lost his mother at the age of two months. The child's nutritional intake was then changed from breast milk to cow milk. According to one of the doctors, the cow milk is high in lactose, which an infant cannot assimilate. This was a major contributing factor to the child's suffering from SAM. Baby formulas had been able to replace the breast milk, but it was too expensive to buy according to the father.

5.2.1 The children's diseases, symptoms and signs

Most of the children were emaciated and had a critical and life-threatening health condition. Almost all patient cases were acute and many children could barely move or had difficulty breathing. Many of the children were edematous and had skin lesions. Due to nutrients deficiency the skin got dry and flaky and the skin colour could be both dark and white on the same child, because of pigment loss and pealed skin. Many of the children had cough, diarrhea and fever and were generally weak. Some of the older children could not walk due to weak musculature and some children had difficulty breastfeeding. Because of muscle weakness and slow swallowing, the risk of aspiration pneumonia was high and the parents had to feed the children carefully. The patients were almost constantly crying and the noise level was high at the ward. Many parents reported that their child had been sick and weak for several months and it seemed that many parents sought medical care late, in some cases too late.

Many of the children had sepsis and received intravenous antibiotics during seven days, according to treatment guidelines. It was common that the children had pneumonia, malaria, tuberculosis (TB) and HIV. According to a doctor, five out of ten children suffered from TB because of immunosuppression. All children presenting with cough were tested for TB. During the period of observations, six children were treated for TB. Anaemia was also a common condition among the children and blood transfusion was given. Hypothermia and hypoglycaemia, as well as septic and hypovolemic shock, were common causes of death. When children had a septic shock, blood transfusion and antibiotics were prescribed. For children with hypovolemic shock fluid therapy (Ringer Acetate) was given. The treatment was repeated if the extremities still were cold. Vitamin A deficiency among the children was common and the children therefore received 3 doses of Vitamin A, day 1, 2 and 14.

5.2.2 Medical examinations and Nursing interventions

Rounds were carried out daily by different doctors. During the medical examination the doctor listened to the child's lungs by using a stethoscope. The doctors examined whether the child had edema by pressing the child's feet, lower legs, thighs, abdomen, arms and face. The medical examination also included observing the child's faeces and checking the child's temperature. The authors did not observe the health care professionals checking any vital signs as pulse, blood pressure, oxygen saturation and respiratory rate except the temperature. The doctors talked to the parent to find out how their child was doing and asked especially if the child had been vomiting, had diarrhea or cough. The parents were asked if they experienced their child to be unhappy and if the child cried a lot.

The nurses were responsible for medication, sampling, weighing of children, food distribution and medical technical procedures as inserting peripheral venous catheters

and nasogastric tubes. Almost every child had a peripheral venous catheter. The nurses seemed to generally have as their primary role to enforce prescriptions from doctors. The authors perceived that the nurses had an authorial behaviour and a tough attitude towards the parents. The parents were considered to have the care responsibility. It was perceived as an expressed requirement that an adult family member should be with the child during the hospital stay, since the children who were left alone at the ward received lower quality of care. According to the nurses there was a shortage of nurses at the unit. During the day shifts a nurse was responsible for 20 patients. In the night shift, the number of patients increased to 50.

5.2.3 The importance of the parents

The children were mainly aged 0-2 years. One day the authors observed a boy sitting alone in a bed. He looked slightly older than the other children and his file stated that he was seven years old and abandoned. According to the nurses, a volunteer found the boy and brought him to the hospital. The health care professionals had been trying to contact his parents, but without any result. The boy's body was extremely emaciated and he had very weakened musculature. His current weight was 8,3 kg (a normal developed seven year old child weights about 25 kg). He spoke only a few words of the local language Luganda and he was unable to walk by himself without support. A week later, the boy's grandmother appeared on the ward and took care of him.

The children arrived at the unit with a parent, usually the mother. The parents stayed during the entire treatment of their child. The beds at the Giraffe ward were small and the parents had to sleep on a carpet on the floor. The Zebra and Elephant wards consisted of large beds, which allowed the parent to sleep next to their child. The parent was responsible for the care of their child, such as washing, feeding and diapering. A few children lied in their beds on plastic sheeting, since the parents could not afford to buy diapers. Some children had no clothes on to avoid dirtying from urine and diarrhea. It was difficult for the parents to leave the ward to wash clothes. The authors observed that the parents, who had a child with nasogastric tube, had to learn how to feed through the tube with a syringe filled with therapeutic milk.

The parents did not get any food at the hospital and had to buy it themselves. Sometimes, the parents took turns to take care of each other's child, while the other went off to buy food. Some of the parents left the ward in the morning to go to work. The child was then left alone in its bed until evening when the parent was back again. Sometimes one of the other parents became responsible for the child's care and feeding during these hours. Some parents abandoned their child at the ward and other parents had to take care of the child. The circumstances at the unit caused a social expectation among parents to help each other.

5.2.4 Nutritional interventions and food distributions

A nutritionist made daily rounds and asked the parents how their child managed to drink the therapeutic milk. The nutritionist closely monitored the child's weight curve to adjust the child's nutritional intake. The nutritional prescriptions were issued daily by the nutritionist and were based on the child's age, weight and length. When it was time for food distribution one of the nurses rang a bell. As the parents heard the ringing they brought a plastic cup, which they had been assigned, and lined up in a long row next to a table where a nurse served the therapeutic milk. Parents were asked to bring the

child's nutrition card, which stated how often, how much and which type of therapeutic milk their child should drink. The children received therapeutic milk every two or three hours.

The authors observed how health care professionals used lists of fluids to register children's nutritional intake. Sometimes the child's nutritional intake could be a problem. For example, a six-month-old boy diagnosed with SAM was born with cleft lip and palate. Due to these circumstances the boy was unable to breastfeed. According to the mother, her son had undergone cleft lip surgery and was now waiting for palate surgery. The mother had been feeding the boy soya porridge since his birth. The boy got SDTM therapeutic milk at the MNU and the mother was encouraged to breastfeed him as much as possible. Unfortunately some milk ran out of the boy's nose during feeding. According to the boy's medical record his weight was 3,3 kg when he arrived to the hospital the 31st of December 2013. He gained weight during treatment and the 21st of January 2014, his weight was 3,9 kg.

5.2.5 Therapeutic milk

At several occasions the authors had the opportunity to participate during the nutritional distribution. During one of these moments the health care professionals explained the different types of therapeutic milk. The therapeutic milk given at the MNU consisted of three types; SDTM, F-75 and F-100 and was provided by UNICEF and World Food Programme (WFP). Breastfeeding was although still recommended for at least 24 months and exclusive for the first six months.

SDTM Therapeutic milk

According to the health care professionals, SDTM was the only therapeutic milk suitable for infants (0-6 month) with SAM. The aim was to stimulate maternal breast milk production and to supplement the infant with therapeutic milk, until breast milk production was sufficient to allow the infant to grow properly. Putting the infant to the breast as often as possible stimulated breast milk production. SDTM was a F-100 ready-mixed powder that was diluted with a greater volume of water than usual and therefore, had a lower osmolality than full-strength F-100. SDTM contained of all nutrients necessary for the treatment of SAM.

F-75 Therapeutic milk

F-75 therapeutic milk was given to children older than six month. This type of therapeutic milk was designed for the initial phase of treatment of SAM and was strictly recommended by the WHO. It was used for children diagnosed with SAM and edema, diarrhea and vomiting. F-75 was also used for children without the above mentioned symptoms during the first days. It was not intended for weight gain and its use was restricted to phase 1 of treatment of SAM. The therapeutic milk was not adapted for well-nourished children. F-75 consisted of lots of energy, but was low in fat. It was packed into sachets and to prepare the therapeutic milk one sachet was mixed with 500 ml of boiled/portable water. One sachet provided 600 ml of milk and 100 ml contained of 75 kcal.

F-100 Therapeutic milk

At the sachets of F-100, it was stated that it was a phase two therapeutic milk and designed for therapeutic feeding programmes. F-100 was given when treatment with F-75 was completed and was only used under the supervision of doctors and nutritionists.

This therapeutic milk was given to children older than six month and was designed for weight gain. F-100 was more solid and viscous than F-75. It was packed into sachets and the preparation was the same as for the F-75. F-100 contained of vitamins A, D, E, C, B1, B2, B6, B12, K, calcium, magnesium, iron, zinc and folic acid. 100 g powder of F-100 contained of 530 kcal.

5.2.6 Plumpy’Nut®

During the observation period the authors noticed another important nutritional support for the treatment of SAM. Plumpy’Nut was mainly used during the third phase, at the Elephant ward. Plumpy’Nut was a Ready-to-Use Therapeutic Food (RUTF) and was given to children older than six months who had been treated with therapeutic milk and reached their goal weight. According to observed guidelines, all patients did an appetite test on RUTF when being transitioned from the second phase to the third phase of the treatment. Those who passed the test were dosed with Plumpy’Nut. All patients who failed the test continued with therapeutic milk until passing the RUTF-test. Plumpy’Nut was used under medical supervision and ensured rapid weight gain in severely malnourished children.

An advantage was that Plumpy’Nut did not need to be mixed with water. Thereby the risk of bacteria in case of accidental contamination could be avoided and Plumpy’Nut was therefore safe to use at home. The product, which was based on peanut butter, mixed with dried skimmed milk, vitamins and minerals, was consumed directly by the child and provided sufficient nutrient intake for complete recovery. It could be stored for three to four months without refrigeration, even at tropical temperatures. There were several boxes of Plumpy’Nut in the kitchen and each portion was packed into a sachet, which contained of 500 kcal. According to the nutritionist the treatment included 200 kcal per kg bodyweight per day. The treatment normally lasted 6-8 weeks on average. Plumpy’Nut provided the same nutritional value as the F-100 therapeutic milk and was high in vitamins and minerals.

The invention of Plumpy’Nut had made Outpatient Therapeutic Care (OTC) possible for severely malnourished children and was used for children with an appetite and without any medical complications. After completing medical treatment and passing the appetite test, all children were discharged after approximately three days. The children continued with RUTF in OTC as long as necessary. Children who suffered from SAM needed to receive an adapted diet to be able to regain a normal nutritional status. According to guidelines, the introduction of Community-based Management of Acute Malnutrition and the use of Plumpy’Nut had increased the number of malnourished children treated. Plumpy’Nut was although not a substitute for a varied and nutritious diet. Therefore the health care professionals urged the parents to also give the child regular food, Plumpy’Nut was only to be seen as a nutritional supplement.

5.2.7 The 24-hour report

A 24-hour report was conducted in a logbook, where statistics on the number of patients were registered every day. The statistics were divided into different categories as; Admissions, Discharges, Transfers in, Transfers out, Run-aways, Deaths and Total number of patients. The statistics were gender specific and was divided into males and females. Four children died during the observation period. Despite this, the authors were not present when the deaths occurred.

A six-month-old boy diagnosed with SAM had fever, diarrhea, cough and difficulties to breastfeed. When he arrived to the unit the 16th of January, he weighed 5,7 kg and his length was 65,6 cm. Four days later, the boy was dead. The cause of death was sepsis caused by malaria. According to the health care professionals, many children arrived to the hospital when a fatal outcome was inevitable.

5.2.8 Discharge from MNU

The children were transferred from the Zebra ward to the Elephant ward, when they had reached their goal weight. The authors noticed a completely different atmosphere at this ward. Children's scream had turned into play and the health care professionals seemed to interact more with the parents. The Elephant ward was considered as the third phase in the treatment and the children normally spent three days there. The health care professionals ensured that the children continued to gain weight following the WHO Child Growth Standards and that they accepted to eat Plumpy'Nut, before they were discharged.

The health care professionals held daily group meetings with the parents and gave instructions and advices of what kind of food the children needed. They emphasized the importance of basic hygiene in order to avoid transmission of infectious diseases. The nurse in charge of the meeting asked control question in order to verify that the parents had understood the given information. In this way, the parents got to repeat what they had learned, while they were given an opportunity to ask different questions. The nurse asked the parents about their profession and what their everyday life looked like. Specific advice according to the families' circumstances was given. A doctor also joined the meeting and lectured on various aspects of malnutrition.

5.3 How do the health care professionals work to prevent malnutrition among children?

A man brought his brother's daughter for the check-up. He explained to the authors that his brother lived in the rural areas. During a visit at his brother's house, he discovered how severely malnourished the girl was. When he pointed this out to his brother, he answered, "This is life in Africa". The man was an educated teacher who worked in Kampala. He realized that the girl needed health care and brought her to the MNU, which probably saved the girl's life.

5.3.1 Causes of Malnutrition

In order to understand the importance of the preventive work performed, causes of malnutrition need to be clarified. According to the health care professionals, there are several interconnected causes of child malnutrition. The causes of the problem are multi-dimensional, in which many different factors affect each other. There are two immediate causes of children being malnourished in the country. One of them is inadequate dietary intake with poor feeding frequency and practices. There are also insufficiently diverse diets. The underlying causes are household food insecurity, with poor access to diversified foods and low nutrient content of foods. Seasonal fluctuation in food supply and diet quality and low agricultural productivity are also contributing factors. The other immediate cause is frequent illness with malaria, diarrhea and infections. Late seeking of health care is also a problem. The underlying cause of this is poor access to health care and healthy environment with improper sanitation, hygiene

and unsafe water sources. Poor food safety and poor access to nutrition support services is also common. Another underlying cause, pointed out by the health care professionals, is inadequate maternal and childcare. High daily workload for women, teenage pregnancy, frequent births and lack of knowledge of good caring practices are some examples.

According to the staff descriptions, unemployment, infections and lack of food are some of the causes to why many Ugandans have moved from the rural areas in to the cities after the war. Later, when the families move back to the rural areas, they have difficulties in managing their daily life. Many of the children's parents were unemployed and poverty strongly influenced their lives. According to a parent, it could be difficult to get access to food if you are poor and live in Kampala. There are almost no possibilities to grow crops in the capital compared to the life in rural areas. The authors noticed that many children came from families with low level of education and a poor social network. This implied that children developed SAM before anyone recognized the warning signs. Another contributing factor, according to a doctor, was that many children were left alone at home during the day, while the parents worked. In some cases, a sibling was responsible for the child during that time. Children were left alone even at one year of age, sometimes with a sibling who was only a few years older. This led to a restricted and irregular nutritional intake and in some cases a complete absence of nutritional intake.

A nurse explained that young mothers generally have less experience and less knowledge about how to care for their child and themselves during pregnancy. Being young and having multiple children can therefore easily lead to malnutrition. Lack of knowledge is a major problem in the country. Some of the HIV-positive mothers stop breastfeeding too early, since they are afraid of passing HIV to their child. This expresses the lack of knowledge, since exclusively breastfeeding decreases the risk of passing HIV further. The nurses explained that mixed feeding (breastfeeding combined with other types of milk and food) doubled the risk of passing HIV to the child and encouraged them to exclusively breastfeed. According to guidelines used in practice, if no action is taken to prevent the spread of HIV from mother to the child, 40 per cent of the children will be infected. If the mother exclusively breastfed, the risk of passing HIV decreases and only 15 per cent of the children will be infected. 10 per cent of these children will become infected during pregnancy, labour and delivery and 5 per cent will still be infected though breastfeeding.

According to a father, another cause of the problem is if the child's mother dies and the child cannot breastfeed for the first six months. If the family cannot afford to buy milk replacer, this may cause malnutrition. Some mothers abandon their child and husband, which could lead to malnutrition due to lack of breast milk and constant care. The nutritionist explained that some children were given animal milk instead of breast milk. The animal milk was lacking in many important nutrients needed for a baby less than six months of age. A nurse explained that some parents could not afford to buy medications for their sick malnourished children and this caused death or severe medical complications. Many parents were aware that the lack of money affected their child's health and this was difficult to accept.

5.3.2 Community outreach

A health care professional explained about Uganda's Community outreach project. Community outreach was a part of MNU and the Integrated Management of Acute Malnutrition (IMAM). According to guidelines used in practice, a comprehensive Village Health Team (VHT) strategy has been implemented, which the IMAM approach builds upon. The VHT strategy requires every village to have village team members who work to improve the health in the village. Community outreach had several aims; to empower the community by increasing knowledge of SAM and IMAM, increasing access and service uptake of IMAM services, strengthening early case finding, referral of SAM-cases and follow-up of problem cases. Another important aim was to provide nutrition education and counselling.

The guidelines in practice further stated that by using active case finding, it was possible to identify children with SAM before they developed severe medical complications. MUAC and assessing pitting edema were tools used for identifying acute malnutrition in the villages. Identified children were referred to either OTC or to the Inpatient Therapeutic Care (ITC) facility. It was important that the children were referred to the appropriate level of care. The guidelines further stated that children with acute malnutrition in treatment required follow-ups and needed to be monitored to ensure sustained improvement in their condition. The follow-ups included home visits of the malnourished children, following up on absent or defaulting children, given feedback to health providers and connecting children to livelihood/safety net programmes in the community.

5.3.3 Mildmay

The doctors talked about Mildmay as an important organization in the community. The organization was active in 16 districts of central Uganda and identified children who were malnourished and brought them to the MNU. The organization's goal was to transform the lives of those living with HIV. In Africa, Mildmay worked with the most vulnerable and hard to reach people living with and affected by HIV and other related health issues. Mildmay trained many ordinary people to provide basic health care and social support for people living with HIV in their communities. This enabled those in the remotest regions to receive the care they needed. Mildmay has grown to the biggest HIV care and treatment provider in central Uganda.

5.3.4 Outpatients

Every Wednesday outpatients (children who have been discharged) gathered with their parents outside one of the buildings at MNU. Parents were asked to bring their child for a check-up every second week for three times. During the check-up the children were weighed and measured by health care professionals and a nurse registered their values in a medical record. This was done to ensure that the child did not lose weight and kept growing according to the WHO Child Growth Standards. When all the children had been weighed and measured, one of the nurses held a meeting about nutrition and hygiene. The following information was written on a wall chart behind the nurse:

Aspects of good hygiene:

1. Wash hands with soap
2. Cut finger and toe nails short
3. Boil and decant drinking water

4. Clean child at all times
5. Clean its feeding equipment and sterilise
6. Wash all its belongings
7. Don't give child left over milk in bottle/cup
8. Warm child's food always
9. Wash food before preparation and storage
10. Wash child's hands and body before feeding
11. Cover food and store it well
12. Make juice hygienically
13. Always clear trenches
14. Always dispose wastes appropriately
15. Animals shouldn't share house with humans
16. Always clean house and maintain it dry
17. A home should have hand and kitchen towels

Outcomes of poor hygiene:

1. Child develops diarrhea and related diseases
2. Child gets worm infections
3. Child becomes uncomfortable often
4. Child's appetite is maybe affected
5. Child cries a lot
6. Prone to accidents

After the meeting, the child's amount of Plumpy'Nut for the next two weeks was distributed. If the child had not gained weight, the amount of Plumpy'Nut was increased. The health care professionals explained that the nutritionist carried out home visits to those children who suffered from acute malnutrition and had a poor social status. The nutritionist also controlled the families' living conditions and how they fed the child with Plumpy'Nut. One of the nurses explained that some parents sold the Plumpy'Nut, instead of giving it to their child. This was due to the family's poor financial situation. The children who did not gain weight, without a reasonable cause, were referred to other paediatric clinics. This was performed since they might have other differential diagnoses, which could affect their nutritional status.

6. DISCUSSION

The discussion is divided into two parts, method and results discussion.

6.1 Method Discussion

In qualitative studies the aim is to discover phenomena, to interpret and understand the meaning of life values, or to describe perceptions or a culture (Patel & Davidson, 2011). The observations conducted show how a specialized unit provides a description of why the children concerned and their parents end up in a specific situation. In a qualitative study, the term validity aims to the entire research process, rather than a specific phenomenon. Since qualitative studies are characterized by a great variety, it is difficult to find unambiguous rules, procedures or criteria to achieve good quality (Patel & Davidson, 2011). The evidence used in qualitative studies may however provide guidance for the practical nursing work (Friberg, 2012).

The observations have been interpreted on the basis of the authors' preunderstanding. Preunderstanding is unavoidable and cannot be ignored. However, it is important to consider while interpreting the data. The authors have sought to understand the data unconditionally, by trying to understand the problem in the context it occurs. Leiningers' theory was not used systematically during the period of data collection. Although it indirectly contributed to the authors' responsiveness of being acquainted with her theory.

The qualitative method, with an ethnographical design, enabled the aim of the study to be explored according to the authors. The ethnographic method was chosen in order to study the children who suffer from malnutrition and their surrounding environment. Ethnography is useful when describing cultural and community settings through field studies and can therefore be considered as suitable for the aim of the study. Ethnography is based on the perception that different aspects of a phenomenon cannot be understood and analysed independently, which the authors believe applies to the context of the problem. Since the MNU is a national referral unit for treatment of SAM, the unit offered a specific and advanced treatment. Furthermore, the MNU was the only unit at Mulago Hospital treating children with SAM. The choice of study setting for data collection was therefore natural.

The authors were active in the care through feeding of the children and conversations with the parents. As mentioned before, there is a risk that researchers affect their surroundings when being a participant observer (Patel & Davidson, 2011). In this case, the authors became a part of the health care professionals and were treated as group members. Since the authors chose an unknown approach, they seemed to have minor effect on the health care professionals' work and the authors conclude that they behaved as usual. However, the authors believe that their presence had a greater impact on the parents as the authors talked with them and asked them questions. The attention and time given by the authors seemed to be appreciated among the parents and they also seemed pleased to talk about their child's condition. The authors' presence had probably little impact on the malnourished children, due to their severe medical condition.

As Patel & Davidson (2011) states, field notes should be registered in close connection to the observations. Field notes were written during the observations and conversations, but in some situations the authors felt uncomfortable taking notes, for example during conversations with the parents. Some field notes were therefore written a moment later. The authors do not consider this to have affected the field notes negatively, since two observers could recall the observed situation. Documents and guidelines, available at the unit, were also included in the data collection and represented an important part of the results. The choice of unstructured observations as data collection instrument can be considered as relevant, due to the complexity of the aim and of the questions. The intention of using observations was to get an overall view of the care of the malnourished children. A wide range of data was able to be collected through chosen data collecting instruments. A strength of the method was that the observations included health care professionals, the malnourished children and their parents. In this way, the problem could be seen from different points of view.

A limitation of the results is that only the English-speaking parents' voices were heard, as none of the authors mastered the local language, Luganda. Since the authors chose the approach as unknown observers, it was not appropriate to use an interpreter. The

risk to affect the normal interaction at the ward had also increased by using an interpreter. As mentioned before, the observations were conducted during two weeks. A longer data-collecting period would have been preferable, but was not possible due to the limited extent of the study. The fact that the authors were two was however an advantage, and enabled more observations to be conducted. Since the authors spent six additional weeks in Kampala writing the thesis, a deeper knowledge and understanding about children's living conditions in general was achieved.

Being unknown observers included some ethical issues. The authors have considered these ethical issues during the writing of the thesis. The choice not to mention the informants' identity was done considering respect and health care secrecy. Although were the patient cases and the parents' stories so appealing for the problem that the authors did not want to leave them out. The authors chose, for example, to include the observation of the seven-year-old boy. Even though he was older than the intended age group of the study, his condition was distinguishing at the unit.

6.2 Results Discussion

The main features and the most relevant results will be discussed in the results discussion.

The physical environment at the ward made it difficult to maintain a high standard of hygiene for both health care professionals and parents. This increased the risk for spreading infections. The fact that there was no running water, except from in the kitchen, made it difficult for parents to maintain children's and their own hygiene. For example this was problematic when a child had diarrhea and the parent needed to wash both child and clothes, several times a day. The nurses tried to educate the parents about hygiene aspects, but it was a struggle for the parents to meet the expectations due to the prevailing circumstances.

6.2.1 How the health care professionals determine the nature and severity of malnutrition

The health care professionals follows the international guidelines recommended by WHO and UNICEF by making use of the WHO Child Growth Standards, the MUAC tape and the clinical examination of bilateral edema. The health care professionals were careful to weigh the children without clothes in order to compare the weight correctly from the previous day. The authors believe that the measuring instruments, for example the MUAC tape, were adapted to the context the care was provided in.

Leininger (2002) points out the importance of learning about cultures in the past and today, in order to gain better understanding of patients. The situation in the country is therefore described in the background of the study to understand the context within the malnourished children live. During the observations, the authors became aware of the cultural differences within the health care services between Sweden and Uganda. It was complex and difficult to form an opinion about how culture affected the care being performed. However, it seemed important to consider cultural differences to conduct effective care. According to Leininger (2002) every culture has different values and patterns of expression that needs to be identified and understood to provide transcultural-nursing care. By discovering how similarities and differences between

various cultures influences care, health, sickness and death, new insights can improve nursing (Leininger, 2002).

The elevated risk of death below the cut-offs, determined by WHO and UNICEF, required intense nutritional and medical support. Due to lack of time and shortage of health care professionals, the patients did not get sufficient attention, according to the authors. The nurses were aware that they were understaffed, although the work was performed in a non-stressful way. However, it is important to take into account the staffs working conditions for conducting a good health care. Too many patients, shortage of health care professionals and lack of access to medical equipment contributes to the delay of health care. According to Leininger (2002), cultures and caring are complex phenomena with diverse meanings and comparative expressions that must be studied and fully understood. Therefore it is important to consider the health care provided from a cultural perspective.

6.2.2 How the care of malnourished children is performed

Leininger (2002) points out that verbal and nonverbal communication is essential in studying the cultural beliefs and life ways of different people. By conducting observations and conversations, the authors were able to understand cultural beliefs and life ways. According to Sagar (2012) a nurse has to enter a patient's world in order to provide a cultural assessment.

It was positive that the doctors interacted with the children's parents during the rounds. In this way, valuable information emerged, which was helpful in achieving a successful treatment. The authors were impressed by the nutritionist's work. She was entirely responsible for the essential task to adjust the children's nutritional intake, by closely monitoring their weight curves. Due to heavy workload, it seemed that the health care professionals did not have enough control of the patients. Many children with critical medical conditions were treated at the same ward, and some of them had respiratory problems. The lack of material resources and health care professionals was a struggle, and sometimes it cost a life of a child.

The children in Uganda are at a particular risk of malnutrition because of the environment and the climate they live in. The high prevalence of several infectious diseases also poses a threat. It is positive that tests for TB are carried out for those children presenting with cough at the unit. There are several reasons for the delay of seeking medical care too late. Some of the families lived far away from Kampala and the journey to the hospital could be costly and difficult to undertake. Since the parents needed to take care of their child at the ward, other family members or neighbours had to look after their family and household while they were away. It is unfortunate that the lack of access to health care leads to such dire consequences. According to Sagar (2012), Leininger emphasizes how different factors influence individuals, families and groups in health and illness. Economic and educational factors impact children's health and many families had insufficient financial resources and no education. Some parents could not afford to buy medications and some had no knowledge of when to seek care. These two factors are closely linked to the problems that many developing countries are struggling with.

The importance of the parents was obvious, for example during distribution of therapeutic milk. Given the shortage of nurses at the unit, it was a very good solution to

let the parents feed the children. The fact that the child needed to ingest nutrients at regular intervals during the day created an awareness and routine for the parents. The children seemed to like the three types of therapeutic milk and most of them gained weight. In that way the therapeutic milk seemed to fulfil its purpose. There was a lack of knowledge among parents concerning what children could eat and assimilate at a few months of age. It was obvious that more information was needed within this area. Plumpy'Nut seemed to be appreciated by the children and their parents. The eliminated risk of accidental contamination of bacteria was a major advantage. The fact that Plumpy'Nut was portioned meant that the child could ingest the same amount of nutrition every time. It also facilitated for the parents to create an overview of how much the child should ingest per day. The authors perceived Plumpy'Nut to be a smart nutritional solution adapted to the living conditions and environmental factors in the country.

The parents were given little attention from the health care professionals, but still carried the main responsibility for the care of their child. The fact that the parents had to sleep on the floor for weeks was an example of lack of resources and affected the caring environment negatively. The authors perceived that the health care professionals had insufficient time to care for the family members in a desirable way. To stay at the hospital with a child, who is in a life threatening health condition, must have a major impact on the mental health. When a parent needed to leave the ward to buy food, wash clothes or work, circumstances forced another parent to care for the child. It felt unacceptable that a parent should have the responsibility for two seriously ill children during the same time. It is also important to consider the psychological effect of leaving a child with a stranger. Some assistance from the staff was unfortunately not offered, due to shortage of health care professionals. Leininger (2002) points out the importance for nurses to be attentive and respond appropriately to the patient's cultural care and other needs.

The fact that some of the children were abandoned at the hospital surprised the authors. It was difficult to understand the action, but a number of economical and social causes are probably the underlying reason. The authors perceived the attitude of the nurses as tough, but maybe that is not the way the parents experienced it. The tough attitude could be an effect of a society with an authoritarian rule and therefore the parents might expect to be treated in a tough manner. However, the authors have not had enough time to deepen their understanding in this issue

There were several positive aspects with the third phase unit. The fact that the health care professional ensured that the children accepted Plumpy'Nut was necessary. It was pleasing to see that so much emphasis was placed on information to parents. The information given to the parents was relevant, since it concerned both diet and hygiene aspects. Some of the information was directly adapted to the daily lives of families and was thus of great benefit for the parents. The fact that nurses asked control questions to ensure that parents had understood the information, was positive and necessary. This enabled the nurses to find out if the parents were lacking in knowledge in some areas. According to the authors, the Elephant ward represented an important transition from hospital care to OTC.

6.2.3 How the health care professionals work to prevent malnutrition among children

There is no simple explanation for the causes of malnutrition. As shown in the results, malnutrition depends on several different factors affecting each other. The widespread poverty makes it difficult for a large part of the population to intake a sufficient nutritious and varied diet. Other underlying major causes are infectious diseases and the limited access to health care.

The patient case regarding a man, who brought his brother's daughter to MNU, is interesting in several aspects. It shows the importance of education and how it can contribute to improved living conditions for the local population. It also shows how culture and beliefs affect people's way of thinking. Some people think that malnutrition is something you have to expect when living in Africa. This patient case shows the opposite, the problem is something that is preventable and treatable. According to Leininger (2002), the care needs to fit cultural values, beliefs and expectations of patients, in order to be meaningful and therapeutic. Because of the high HIV prevalence in the country it is important that mothers have knowledge of how HIV is transmitted, in order to minimize the risk of passing HIV to their infant. According to Ministry of Health, Uganda (2009) mothers should breastfeed exclusively for the first six months to decrease the risk of passing HIV. Many women were unaware of this and believed the opposite. Therefore they stopped breastfeeding. More information needs to be spread within this area.

The VHT is an important factor, when it comes to prevention of malnutrition. The work of the VHT, as case-finding, referral, follow-ups, counselling and education, are important actions in the struggle of preventing the problem. International organizations, such as Mildmay, play a very important role in detecting children with SAM in rural and slum areas. Thereby Mildmay work preventively to refer children to MNU before it is too late.

As mentioned earlier in the results, the discharged children were requested to return to the hospital for check-ups every second week for three times. The revisits made it possible for the health care professionals to monitor the condition of the children and the parents got the opportunity to raise questions. By adding an information session before the distribution of Plumpy'Nut, all parents had to attend the meeting, which was a smart approach. The nursing actions conducted during the return visit seemed to strengthen parents' knowledge of the problem, which can be considered as an important preventive action in relation to malnutrition. Leininger (2002) states that transcultural nursing is challenging but complex. Cultural differences do not only exist between countries but also within countries. The culture can for example vary between different villages and towns and also between generations. The health care professionals were thus acting correctly when asking the parents about their specific living conditions. All of the information given was not suitable for all Ugandan families and needed to be adapted according to their life situation. In transcultural-nursing, the planning and implementation of nursing interventions should be adapted as much as possible to the patient's cultural background (Sagar 2012).

One of the reasons of the continuing high levels of young child malnutrition is the generally low awareness of how malnutrition hampers the country's economic development. Too little effort is made to reduce child and maternal mortality. The

problem contributes to poverty in the country and a loss of about 4,1 per cent of the gross domestic product per year. Malnutrition is also expensive to treat. According to the Government of Uganda (2011), treating SAM costs more than US\$ 120 per child. Once policymakers realize the burden child malnutrition places on development, adequate nutrition for all will become a leading priority (Gardner & Halwell, 2000).

7. CONCLUSION

This study shows that there are several causes of malnutrition and that it is a complex phenomenon with different affecting factors. The main causes of the problem in the country are the widespread poverty, various infectious diseases and limited access to health care. The assessment of malnutrition and the care at MNU is provided by prevailing conditions and according to international guidelines. The lack of material resources and health care professionals is a struggle, and sometimes it costs a life of a child.

The study reveals the importance of parents as caretakers of their child at the unit. This may however, affect the care of the abandoned children in a negative way. Lack of financial resources and education are major factors that affect access to medications and knowledge of when to seek health care. The importance of education is obvious since knowledge contributes to improved living conditions for the local population.

VHT and International organizations play an important role in detecting children with SAM in rural and slum areas. By reaching out to people far away from health care facilities, important actions are performed in the struggle of preventing malnutrition. The check-ups of discharged children seemed to work successfully and also contributed to strengthen the parents' knowledge of the problem, which can be considered as an important preventive action. Malnutrition contributes to poverty, although little effort is emphasized to reduce the continuing high levels of malnourished children in the country.

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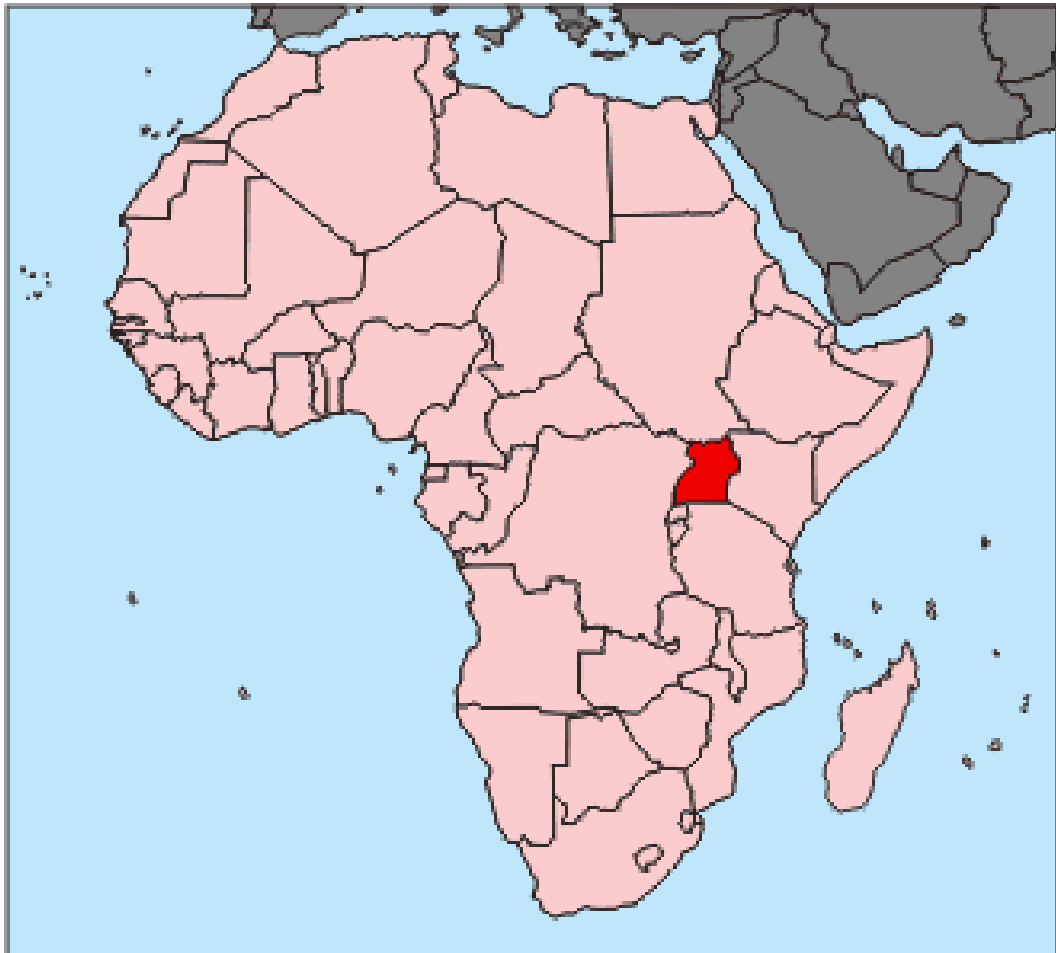
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APPENDIXES

Appendix 1: Uganda marked on a map of Africa



Source: <http://www.o-zander.se/afrika/uganda/>

Appendix 2: Uganda and neighbouring countries



Source: http://www.mapnall.com/sv/map/Karta-Uganda_52593.html