

**KAMPALA INTERNATIONAL UNIVERSITY WESTERN CAMPUS, SCHOOL OF  
HEALTH SCIENCE, FACULTY OF MEDICINE AND DENTISTRY.**

**KNOWLEDGE REGARDING MALNUTRITION AMONG MOTHERS OF CHILDREN  
ADMITTED ON PEDIATRIC WARD OF KILEMBE MINES HOSPITAL, IN KASESE  
DISTRICT WESTERN UGANDA.**

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**A DESSERTATION SUBMITTED TO THE FACULTY OF CLINICAL MEDICINE AND  
DENTISTRY IN PARTIAL FULFILLMENT FOR THE AWARD OF BACHELORS' OF  
MEDICINE AND BACHELORS' OF SURGERY OF KAMPALA INTERNATIONAL  
UNIVERSITY**

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**DECLARATION**

I, KITHULA HAGGAI SUNDAY do hereby declare that this project is of my own efforts and incase of any consultation the references are appropriately cited.

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**SIGNATURE.....**

**DATES.....**

**Approval**

This research dissertation is submitted with my approval as a supervisor

**SUPERVISOR’S NAME: Dr ATWIINE BARNABAS (MMED PEDIATRICS)**

**SIGNATURE.....**

**DATES .....**

## **DEDICATION**

I dedicate this work to my beloved parents Mr. and Mrs. Mbusa William, my sisters, brothers, and my feature wife

Dr. Peter Heumer, and Dr. Gogoline Wolfgang for their continued support throughout the MBChB course.

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## **LIST OF ABBREVIATIONS**

WHO – World Health Organization

KMH- Kilembe Mines Hospital

UNICEF – United Nations Children’s Fund

UDHS - *Uganda Demographic and Health Survey*

PEM - Protein Energy Malnutrition

IAP - Indian Academy of Pediatrics

RUTF – Ready-to-use Therapeutic Foods

UBOS - Uganda Bureau Of Statistics

SPSS - Statistical Package for the Social Science

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## **ABSTRACT;**

**Introduction;** Malnutrition or nutritional deficiency according to world health organization is the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, and maintenance of specific functions. (World Health Organization 2005)

**Objective;** To establish the knowledge regarding malnutrition among mothers of children zero to five years admitted on pediatric ward of Kilembe Mines Hospital, in Kasese District.

**Methodology;** A cross-section qualitative study was carried out; where fifty participants were representative in this research; and assumption was that, additional participants will do less or no more on the end result. The participants were interviewed using a questionnaire which contained both closed and open ended questions, to collect the required data. Eight questions were asked in each part, and graded adequate knowledge if answered seven and above, moderate if answered four to six and limited if answered three and below.

**Findings;** Regarding manifestation of malnutrition, 64% had limited knowledge, 30% had moderate and 6% had adequate. About causes of malnutrition, 84% had limited knowledge; 14% moderate and 2% adequate. With knowledge level regarding prevention of malnutrition; 88% had limited knowledge, 8% moderate and 4% adequate.

**Conclusion;** This limited knowledge predisposes infants to risk of malnutrition even in the hands of their mothers and the general society.

**Recommendation;** Adequate health education to the mothers regarding malnutrition is a prerequisite to reduce malnutrition induced morbidity and mortality among infants.

# CHAPTER ONE

## 1.0 INTRODUCTION.

### 1.1 Background

Malnutrition or nutritional deficiency according to world health organization is the cellular imbalance between the supply of nutrients and energy and the body's demand for them to ensure growth, and maintenance of specific functions. (WHO, 2005)

A new classification scheme is proposed that incorporates chronicity, etiology, mechanisms of nutrient imbalance, severity of malnutrition, and its impact on outcomes.

Currently three different classification systems for distinguishing "normal" child growth

From "not normal" are being used: z-scores (SD scores), percentiles and percent-of median.

Z-score is a statistical term that quantifies the distance from the expected median value, or from what is considered to be normal. (WHO, 1995).

In 2011, an estimated 165 million children under five years of age worldwide were stunted and 101 million were underweight. High prevalence levels of stunting among children under five years of age in Africa (36% in 2011) and Asia (27% in 2011) remain a public health problem, one which often goes unrecognized, (UNICEF, 2011). Undernutrition in Uganda affects over 2 million children under 5 years. The most recent 39 percent were stunted, and 16 percent were underweight, (*Uganda Demographic and Health Survey* (UDHS) 2006). In Kasese, district 49.8% of the children below five years were stunted, 21.9% were severely stunted and 17.4% were under weight. (Tumwine et al, 2002).

A study of mothers of under five children was done to assesses their the knowledge regarding malnutrition, showed that, 37% of the mothers had average knowledge, 33% of the mothers had below average where 30% had above average knowledge on malnutrition. (Sangaraga, 2005). The study revealed that mothers had limited knowledge on malnutrition as a condition, the signs and symptoms thereof; causes; prevention and treatment of child malnutrition. This lack of knowledge made mothers to have wrong perceptions about child malnutrition. It was revealed that mothers did not perceive malnutrition as a serious problem that can result in admission for treatment in a hospital. They perceive malnutrition as a secondary diagnosis. (Ditebo, et al,

2011). Maternal education has emerged as a key element in addressing the child malnutrition. However, the studies done to discover the role of mothers in improving nutrition conditions are limited. (Semanthika et al, 2005)

Malnutrition causes many poor health outcomes, particularly as it is so common in patients with pre-existing health conditions (Hickson, 2006). The primary effects of malnutrition include weight loss and muscle wasting this impacts on respiratory and cardiac function (Marino et al, 2006). Therefore the effects of malnutrition are detrimental to health, and it is vital that causes of malnutrition be examined. It is on this basis so as to assess the mother's knowledge regarding malnutrition in children below five years.

## **1.2 Justification**

### **1.3.1 Medical practice**

The study will aid in identification of gaps and promotion of good nutrition patterns among the sick children aged 0 to 5 years admitted in Kilembe Mines Hospital, Kasese District. Health workers will have job satisfaction as they will implement their care plan as they will be dealing with people who are informed about the severity of the condition.

### **1.3.2 Health Education**

The findings of this study can be utilized by health educator to come up with strategies to improve nutritional support and monitoring in care and management of sick children.

### **1.3.3 Medical Research**

The findings will provide reference for future researchers who would like to do further studies on this topic. Gaps identified can also be a source of future researches.

### **1.3.4 Health Policy Makers.**

The study will foster administrations' good will in support public and mother education to promote patient quality care, prevent malnutrition and provide cost effective services among the study population by putting relevant strategies.

## **1.3 Broad objective/ Purpose of the study**

To establish the knowledge regarding malnutrition among mothers of children zero to five years admitted on pediatric ward of Kilembe Mines Hospital, in Kasese District.

#### **1.4.1 Specific objectives**

- (i) To establish mother's knowledge about the manifestation of malnutrition in children admitted on pediatric ward of Kilembe Mines Hospital, in Kasese District.
- (ii) To establish mother's knowledge about the causes of malnutrition in children admitted on pediatric ward of Kilembe Mines Hospital, in Kasese District.
- (iii) To establish mother's knowledge about the prevention of malnutrition in children admitted on pediatric ward of Kilembe Mines Hospital, in Kasese District.

#### **1.5 Conceptual Framework.**

Nutrition is directly related to food intake and infectious diseases such as diarrhea, acute respiratory infection, malaria, and measles. Both food intake and infectious diseases reflect underlying social and economic conditions at the household, community, and national levels that are supported by political, economic, and ideological structures within a country.

## **CHAPTER TWO**

### **2.0 Literature review**

The education of women, especially, has been found to play a central role in improving the health of children. Mother's nutrition-related knowledge, attitudes, and practices tend to be strongly associated with children's nutritional status (Bhat et al, 1992). The health-care-seeking attitudes of mothers, how they utilize available health resources in response to their children's illnesses, is another factor that can affect children's health and nutritional status but has been neglected by the past studies. Evidence suggests that active health-care-seeking attitudes of mothers play a critical role in children's wellbeing in developing countries (Scrimshaw, et al, 1987).

A study done in Serowe Botswana revealed that mothers had limited knowledge on malnutrition as a condition, the signs and symptoms thereof; causes; prevention and treatment of child malnutrition. This lack of knowledge made mothers to have wrong perceptions about child malnutrition. (Ditebo, et al,2011)

A study done in Bangalore India revealed that the knowledge scores of mothers of under five children regarding malnutrition were 37% of the mothers had average knowledge regarding malnutrition of under five children, 33% of the mothers had below average and 30.0% had above average knowledge. These scores revealed that the majority of the mothers are belonged to an average and below average. (Siddamma, 2005)

Mothers who had formal education were able to recognize correctly the nutritional values of many food types. According to this study, children whose mothers are working as daily wage laborers tend to consume less protein, energy, calcium and lysine than that of the other children whose mothers remained at home. The importance of the maternal education as an overall strategy to address child malnutrition has been well documented. Studies done in the Philippines (Alderman and Garcia, 1994), have been addressed this issue. Glewwe (1999) has identified three pathways through which schooling may influence the health of children in Morocco. Firstly, the formal education may directly transfer health knowledge to future mothers. Secondly, the literacy and numeracy skills acquired in the school may enhance people's capability to

diagnose and treat health problems of children. Thirdly, increased familiarity with modern society through schooling may make woman more receptive to modern medicine. Moreover, this study shows that mother's knowledge on health alone appears to be a crucial skill in improving nutritional status of the children.

## **CHAPTER THREE; METHODOLOGY AND MATERIALS**

### **INTRODUCTION**

This chapter covers the study area, study design, study population, sampling techniques, sample size, pre- test, research ethics, analysis and limitations of the study.

### **STUDY AREA/ SETTING**

The study area was in the pediatric ward of Kilembe mine hospital. It is a 30 bed capacity for pediatric inpatients. Kilembe Mines Hospital - A private 200-bed hospital. It's 11.7 km west of Kasese Town; in Kasese District. The hospital provides preventive, promotive, curative and rehabilitative services as inpatient, and outpatient.

Kasese District is bordered by Kabarole District to the north, Kamwenge District to the east, Rubirizi District to the south and the Democratic Republic of the Congo to the west. The district is approximately 359 km west of Kampala , Uganda 's capital city. The coordinates of the district are:00 11N, 30 05E. In 2011, Uganda Bureau Of Statistics (UBOS) estimated the population of Kasese at 74,300.

### **3.3 STUDY DESIGN**

The study design was cross- sectional, where qualitative data was collected.

### **3.4 STUDY POPULATION**

The study participants were primary caretakers of children admitted in pediatric ward of Kilembe Mines Hospital in the month of October 2013

### **3.5 SAMPLE SIZE.**

Fifty participants were representative in the research; and assumption was that additional participants will do less or no more on the end result.

### **3.6 Selection Criteria**

#### **3.6.1 Inclusion Criteria**

Participants were included in the study if;

- They were primary caretakers of the child

### **3.6.2 Exclusion Criteria**

Subjects were excluded from the study if:-

- They were not the primary caretakers of the child

### **3.7 Sampling Techniques**

Every mother admitted on the ward was interviewed until the required number was reached.

### **3.8 Procedure and Data Collection**

Data was collected in a period of one week. Participants were interviewed from the nurse's consultation room within the pediatric ward. One participant was allowed in the room at a time, so as to insure confidentiality. The participants were interviewed using a questionnaire which contained both closed and open ended questions, to collect the required data. Eight questions were asked in each part, and graded adequate knowledge if answered seven and above, moderate if answered four to six and limited if answered three and below.

#### **3.8.1 Tools**

- Questionnaire.

### **3.9 Quality control**

There will be pre-testing of the data collection tools (questionnaire) for feasibility, validity and reliability. This is aimed at ensuring that all the information is taken under the same context.

Data will be checked for completeness, in this case completely answered questionnaire will be considered.

### **3.10 Data processing and Analysis;**

Data was coded and entered in SPSS 16.0 and Microsoft excels 2007; and analysed statistically.

Data was analyzed using cross tabulation and frequency distribution.

### **3.11 Data Presentation**

Data was presented in form of tables, pie chart and bar charts.



### **3.11 Ethical considerations**

An introductory letter was obtained from the Directorate of research and post graduate studies for ethical approval and a recommendation from the area leaders was acquired before the study could be carried out. Consent form was also signed by the subject before he/she participated in the study.

### **3.12 Limitations to the study**

There was limited time allocated in the data collection exercise since the researcher did not have enough time because of the class work.

Financial problems in terms of transport, feeding and facilitation, during data collection since the researcher lacked funders for the project.

## CHAPTER FOUR: 4.0 STUDY RESULTS

### 4.1.0 SOCIAL DEMOGRAPHIC CHARACTERISTICS.

#### 4.1.1 Age distribution of the participant

The age distribution of the participations was as follows, 12(24%) were between 15-24 years, 20(40%) were between 25-34 years, 10(20%) were between 35-44, and 8(16%) were above 45 years. This is shown in table one below.

*Table1* Shows the age distribution of the participants, their frequency, percentage and their cumulative percent of the participants.

age group		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-24	12	24.0	24.0	24.0
	25-34	20	40.0	40.0	64.0
	35-44	10	20.0	20.0	84.0
	above 45	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

#### 4.1.2 Educational level of the participants

Education level of the participants was that 14(30%) had never gone to school, 28(56%) had completed primary; and 7(14%) had completed secondary. This is elaborated in table two below.

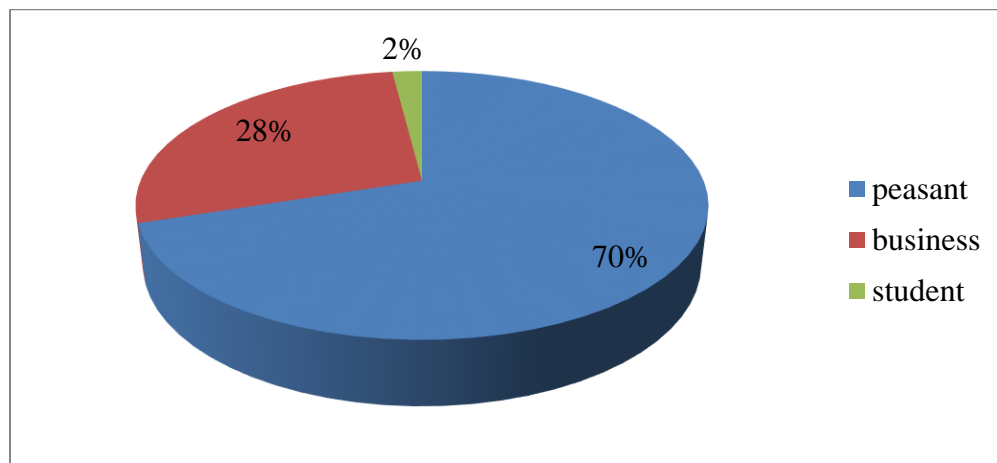
**Table2**, shows the level of education of the participants and their frequency, percentage and cumulative percent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Nil	15	30.0	30.0	30.0
Primary	28	56.0	56.0	86.0
Secondary	7	14.0	14.0	100.0
Total	50	100.0	100.0	

#### 4.1.3 OCCUPATION STATUS OF THE PARTICIPANTS

The occupation status of the participants was that 35(70%) were peasants; 14(28%) owned businesses and 1(2%) was a students. This is elaborated in figure I below.

**Figure1**, Shows pie chart with variation in occupation status of the participants in percentage; 70% being peasants, 28% own business and 2% student.



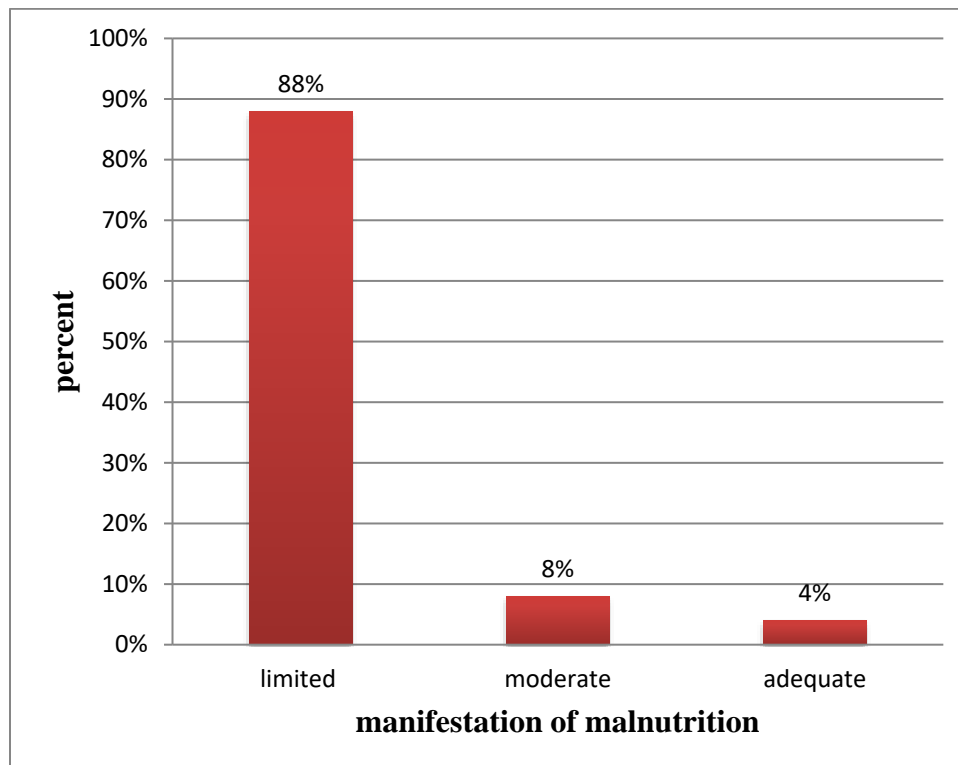
#### 4.2.0 Participants awareness regarding manifestation of malnutrition

4.2.1 All the participants (100%) are aware about malnutrition; they have ever heard about malnutrition and seen a child suffering from malnutrition.

#### 4.3.0 Participants knowledge regarding manifestation of malnutrition

Most of the participants have low levels of knowledge regarding manifestation of malnutrition. The variations are that 32(64%) had limited knowledge, 15(30%) had moderate knowledge and 3(6%) have adequate. This is as figure2 below.

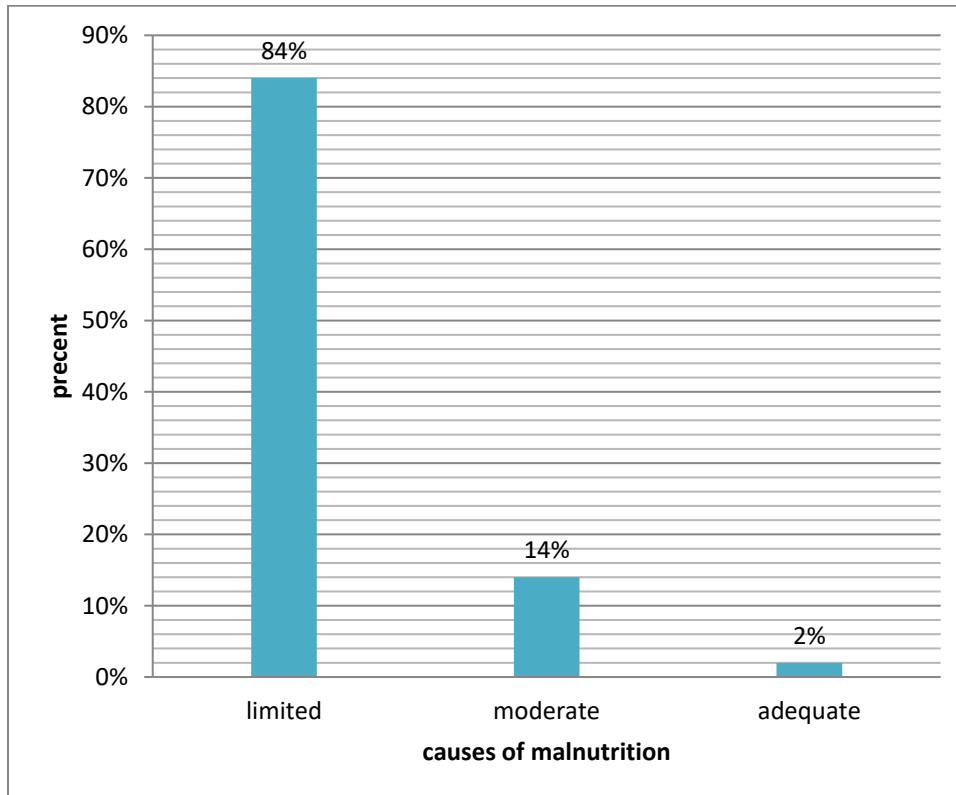
**Figure2;** Shows a bar chart with variations in the knowledge distribution of the participants regarding manifestation of malnutrition; 64% had limited knowledge, 30% moderate and 6% adequate.



#### 4.4.0 Participants knowledge regarding causes of malnutrition

Knowledge regarding causes of malnutrition among the participants was low in that 42(84%) had limited knowledge; 7(14%) moderate and 1(2%) adequate. This is shown in the figure3 below.

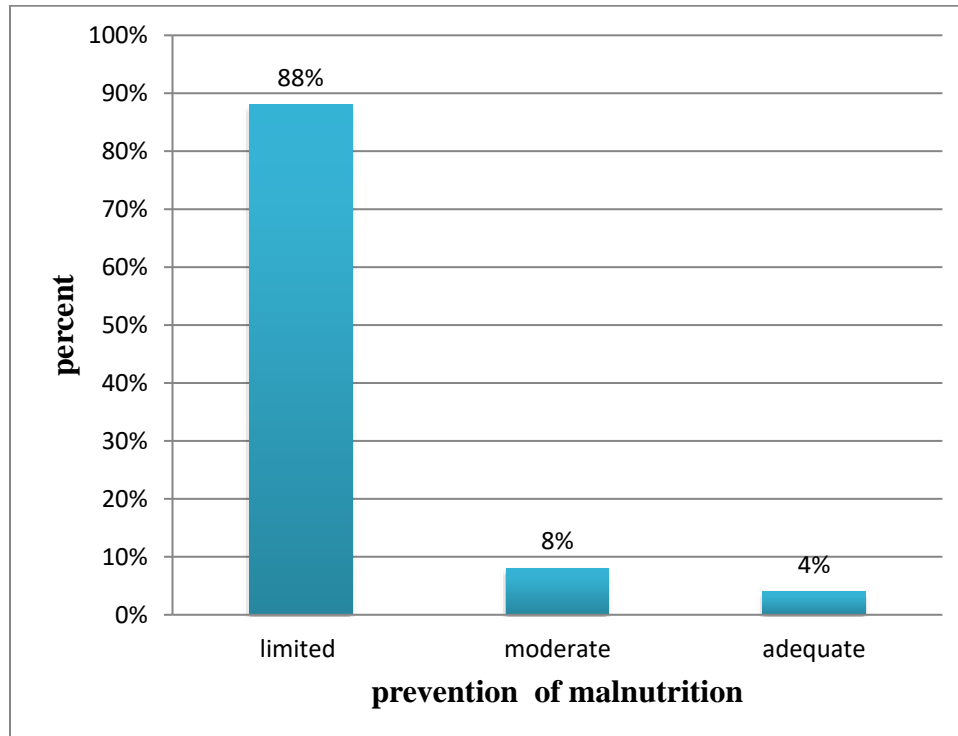
**Figure3** Shows the variation in the knowledge regarding causes of malnutrition among the participants; 84% had limited knowledge, 14% limited and 2% adequate.



#### 4.5.0 Participants knowledge regarding prevention of malnutrition

With knowledge level regarding prevention of malnutrition; 44(88%) had limited knowledge, 4(8%) had moderate and 2(4%) had adequate. This is elaborated by figure4 below.

**Figure4**, show the variation in knowledge regarding prevention of malnutrition with 88% having limited knowledge, 8% moderate and 4% adequate.



## **CHAPTER FIVE**

### **5.0 DISCUSSION OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS.**

This chapter discusses the study findings, conclusions and recommendations.

Eight questions were asked in each part, and graded adequate knowledge if participant answered seven and above, moderate if answered four to six and limited if answered three and below.

#### **5.1.0 DISCUSSION**

##### **5.1.2 Participants knowledge regarding manifestation of malnutrition**

All of the participants (100%) are fully aware about malnutrition, but still their knowledge was spatial in a way they asses a child with malnutrition. During the research interview, 64% of the participants had limited knowledge about the manifestation of malnutrition; and the symptoms they consider sometimes may be indicating a different diagnosis of the sort; 30% had moderate knowledge and while 6% had adequate knowledge partly due to their experience with children.

##### **5.1.3 Participants knowledge regarding cause of malnutrition**

Regarding causes of malnutrition the participant's knowledge was still low. Eighty four percent had limited knowledge and this is probably due to poor health education services within the district; but it can also be due to fact that the public is stereotyped with specific cases of which they attribute to cause malnutrition and therefore other cases don't apply to be the cause. Fourteen percent had moderate knowledge probably due to the level of education of the participant. Two percent had adequate knowledge, this is associated with the mothers experience not mare education of the participant. In this case, the experience of the mother depended on their age, which enables them to identify the definitive cause of the malnutrition.

##### **5.1.4 Participants knowledge regarding prevention of malnutrition**

Eighty eight percent had limited knowledge regarding prevention of malnutrition; still this is attributed to poor health education facilitation which contributed scarce knowledge regarding the prevention of malnutrition. Eight percent had moderate knowledge and this is attributed to the education level, peer education and social media. Four percent had adequate knowledge regarding malnutrition; probably due to experience with age which enables mother to acquire better methods of preventing malnutrition.

## **5.2 CONCLUSIONS**

Basing on study findings and discussion the following were found;

All mothers (100%) are aware that malnutrition is real and is affecting their children and impacting on them heavily, but the knowledge about it is low. They know that something has to be done.

Regarding manifestation of malnutrition, 64% had limited knowledge, 30% had moderate knowledge and 6% have adequate. About causes of malnutrition, 84% had limited knowledge; 14% moderate and 2% adequate. With knowledge level regarding prevention of malnutrition; 88% had limited knowledge, 8% had moderate and 4% had adequate.

This limited knowledge predisposes infants to risk of malnutrition even in the hands of their mothers and the general society. This leads to increased morbidity and mortality rates resulting from malnutrition. The cause of this limited knowledge is due the fact that the mothers have not benefited from health education regarding malnutrition.

## **5.3 RECOMMENDATIONS**

1. Adequate health education to the mothers regarding malnutrition is a prerequisite to reduce malnutrition induced morbidity and mortality among infants. Mothers should be health educated on manifestation, cause, prevention and consequences of malnutrition on a growing child.
2. Adequate staffing of health workers and health educators in the rural and district hospital. And provision of food supplements like RUTAFa and treatment of infections is a key factor to reduce the prevalence rate of malnourished infants, and improve on the health of infants.
3. The government should redirect their resources and funds toward health education of the mothers so as to meet their minimum development goal toward the eradication of malnutrition in the years to come.



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## **APPENDIX I**

### **QUESTIONNAIRE**

#### **KNOWLEDGE REGARDING MALNUTRITION AMONG MOTHERS OF CHILDREN ADMITTED ON PEDIATRIC WARD OF KILEMBE MINES HOSPITAL, IN KASESE DISTRICT WESTERN UGANDA.**

##### **Introduction**

Dear respondent, the information you are to give is for research purposes and is strictly confidential. It will help the District authorities to improve on nutritional services.

RESPONDENT NUMBER.....

##### **SOCIAL DEMOGRAPHIC CHARACTERISTICS.**

1. Age of the participant.....
2. Marital status of the participant.....
3. Educational level of the participant.....
4. Occupation of the participant.....
5. Religion of the participant.....

##### **PARTICIPANTS' AWARENESS ABOUT MALNUTRITION**

1. Have you ever heard about Malnutrition?  
a) . Yes (     )     b) no (     )  
If yes
2. Have you ever seen a child with malnutrition  
a) . yes (     )     b) no (     )

##### **MANIFESTATION OF MALNUTRITION**

1. If yes, how do children with malnutrition present?
  - I.     wasting
  - II.    oedema
  - III.   stunted

- IV. skin changes
- V. hair changes
- VI. distended abdomen
- VII. behavior changes
- VIII. Other's.....

## CAUSES OF MALNUTRITION

### 1. What causes malnutrition?

- I. Poor feeding
- II. diseases
- III. poverty
- IV. neglect
- V. family size
- VI. witch craft
- VII. lack of family planning
- VIII. Others.....

## PREVENTION OF MALNUTRITION

### 1. How is malnutrition prevented from children?

- I. Breast feeding
- II. Immunization
- III. Eating balanced diet
- IV. Regular feeding
- V. Treating infections
- VI. Monitoring child growth and development
- VII. Family planning
- VIII. Others.....

**Thank you for your co-operation.**

## MAP OF KASESE DISTRICT



## APPENDIX III

### MAP OF UGANDA



## **APPENDIX IV**

### **CONSENT FORM**

Dear participant,

This study is being done to assess “Knowledge regarding malnutrition among mothers of children admitted on pediatric ward of Kilembe Mines Hospital, in Kasese district Western Uganda”.

You are kindly requested to answer the questions verbally. The interview will take about 10 minutes. You are free to accept or refuse to take part in the study. You can also withdraw from the study at any time during the study, if you so wish. There is no any penalty or punishment if you withdraw from the study.

The information you give will be treated with the highest confidentiality and used only for the purpose of the study. Your name will not be mentioned in any part of the study findings for anonymity purposes.

If you have any questions or comments or, if there is anything which is not clear, don’t hesitate to ask the researcher.

If you agree to participate in the study, you will sign a consent form.

Thank you for your cooperation.

**Kithula Haggai Sunday**

### **PRINCIPAL INVESTIGATOR**

The principles, objectives and activities of this study have been explained to me in the language I understand. I have fully understood it and I hereby give my informed consent.

**Signature:** .....

**Date:** .....