

**FACTORS CONTRIBUTING TO POOR FEEDING PATTERNS  
AMONG THE CHILDREN AGED UNDER FIVE YEARS  
ADMITTED TO LIRA REGIONAL REFERRAL HOSPITAL  
LIRA DISTRICT**

**A RESEARCH DISSERTATION SUBMITTED TO THE SCHOOL  
OF HEALTH SCIENCES IN PARTIAL FULFILMENT OF THE  
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HUMAN MEDICINE AND SURGERY OF KAMPALA INTERNATIONAL  
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**DECLARATION**

I Orec Isaac, declare that this dissertation is my original work and has never been submitted anywhere for the award of a degree or for any academic purpose. Where I have used the work for others, due acknowledgement has been given. I therefore take sole responsibility for the errors and inaccuracies that could be inherited in this research work.

Signature \_\_\_\_\_

Date: January 08 2014

Orec Isaac

**Researcher**

## **APPROVAL**

This is to certify that this research report under the title “**Factors contributing to poor feeding patterns among the children under five years admitted to Lira regional referral hospital Lira District**” has been carried out under my supervision and now ready for submission with my approval

Signed \_\_\_\_\_ Date: \_\_\_\_\_

Mr. Nuwapuhair Benard  
**Supervisor**

## **DEDICATION**

I dedicate this research dissertation to my dear wife Brenda Orec, our lovely children; Abednego, Noah and Jesse.



## **ACKNOWLEDGEMENTS**

Doing a Bachelors degree in Human Medicine and Surgery dissertation is one of the most extraordinary adventures in my life. Never have I forgotten the joyfulness and happiness of Mrs Rose Oteng and Dr. Absalom Oteng. The joy of finding people who trust me and are willing to help me is invaluable. I know that this work is a collaborative fruit rather than mine.

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Thank you all.

## **ABSTRACT**

### **Background**

The issue of healthy eating or feeding has long been an important concern to individuals and communities. Feeding is the process of taking in food by an organism to provide them with nutritional needs necessary for growth and energy

### **Objective**

To assess the factors contributing to poor feeding pattern among children under five years admitted in pediatric ward Lira Regional Referral Hospital

### **Methods**

The study was a descriptive cross-sectional study in which both quantitative and qualitative approaches were used.

### **Results**

Among all the respondents that were interviewed, it was found that the greatest number of children who were hospitalized was of the age group 2-5 years and this accounted for 40% of the total respondents. This was attributed to the weaning effect as this is the age bracket where children are weaned from breast feeding and this could have affected their immune system.

The results showed that up to about 70% of mothers do not have money at any one time which influences the feeding patterns and in the long run may lead to malnutrition among children under five.

### **Conclusion**

Conclusively, the research has shown that the main factor contributing to poor feeding among children under five in Lira Regional Referral Hospital are illnesses that cause loss of appetite and vomiting. However, poverty is another major contributing factor to poor feeding among the under five children.

## **1.0 CHAPTER ONE**

### **1.1 Introduction.**

Feeding is the process of ingesting food by an organism to provide necessary nutrients that promote growth and development (Hankard et al, 2002). Poor feeding pattern is associated with either eating less or more than the body requirement. Hilton (2004) in agreement says that, the risk that an individual's intake will be inadequate increase as the average intake fall below the recommended dietary allowance (RDA).

Good dietary intake is essential to the child's health and wellbeing. During ill health there is increased need for nutrients because of the extra demands being placed on the body by illness. Poor nutritional status has been associated with delayed recovery and an increase in mortality, which also increase the cost of providing health care. In addition, adequate nutrition not only promotes growth and repair of tissues but also aids recovery from surgery, disease and trauma. Unfortunately recent reports have highlighted that many people in hospital are malnourished on admission but also that they often receive inadequate nutrition once in the care of health providers (Hilton, 2004).

Boykin (2006) commented that growing children, who are significantly at risk, may also develop their own feeding habits or preferences, besides physical, socioeconomic, environmental, cultural and spiritual factors that may contribute to poor feeding pattern. These interfere with the recommended frequency, quality and quantity of food provided leading to malnutrition.

Globally, high prevalence rate of hospital malnutrition among patients is an issue of major concern, throughout Europe where in the UK alone, it was estimated that some 40% of patients were malnourished on admission. Hendriks et al (2003) pointed out to the fact that under-nutrition among hospital patients led to extended hospital stays, prolonged rehabilitation, diminished quality of life and unnecessary costs to healthcare. similarly Rocha et al (2006) in agreement further added that these enhanced policies on nutrition assessment and formation of associations where caterers and dietitians were to work more closely with nurses and doctors, the essential priority was to get food into patients' mouths, and that if patients needed assistance with eating, they were to get it.

Assessing of feeding patterns of children is one of the components of integrated management of childhood illnesses (IMCI) as sick child visit is the best opportunity to counsel the mothers more especially in those admitted in hospitals as malnutrition is now a major concern among children admitted (WHO, 2005).

In Africa, many children have adversely been affected either following natural calamities that interfere with food production and security, cultural believes that affect the nutritional content of food taken by vulnerable groups, ill health from tropical diseases and non accessible or affordable health services, or poverty that majority of the people live on less than \$1. Efforts have been made to implement nutritional programs to foresee the feeding patterns especially among the under fives and pregnant mothers (AMREF, 2009). In most African countries, IMCI has been embraced as a strategy for early identification and prompt management to both the well and sick children who attend hospital services and occasional survey and community interventions. In some hospitals, malnourished children are given high protein diet or fortified foods (MOH, 2005). However, in some facilities nutritional assessment is not a priority. In Uganda, in as much as all acknowledge that sick children need to eat frequent nutritious meals, majority of those admitted are malnourished, accounting for 40% mortality rate (UBOS, 2007). There is also limited supervision as majority of the hospitals in Uganda do not provide food to their in-patients, but have open patient kitchen that the caretakers can cook for the patients, a few private hospitals provide food, while others have hospital cafeteria that patients have option to purchase from or both.

Lira Regional Referral Hospital is among the teaching hospitals in Uganda, located in Northern part of Uganda. Caretakers cook or provide food for their patients admitted in the wards including children in pediatric ward. Feeding time, type of food, quantity and quality depend on how much money they have.

This study is aimed at assessing the factors contributing to poor feeding pattern among children admitted in pediatric ward Lira Regional referral Hospital. It will focus on the socio-economical and environmental factors.

## **1.2 Statement of problem.**

Feeding patterns have adversely worsened the disease conditions of children admitted in hospitals due to a number of factors. Admission of children in most cases comes as an emergency and parents may not be fully prepared with the extra budget. The mothers who are often caretakers depend on their husbands as the bread winners who in most cases do not value nutrition as a priority. They will tend to be comfortable paying hospital bill than to give money to the mother for feeding the child to recommended pattern.

During illness they require increased levels of energy and therefore frequent nutritious meals needed. Children are not small adults and thus are unable to express themselves concerning what they need and special attention should be given to identify their deficit.

Hankard et al (2002) illustrates that there has been little attention in several health settings towards meeting recommended number of meals especially when children are admitted who in most cases are already undernourished but end up focusing primarily on medical problem.

Their condition is usually worsened by different factors that interfere with the children's feeding patterns to include disease condition affecting the appetite, pain that interfere with feeding pattern, need to change the normal diet that calls for the patient to adapt to the new type of diet, the ward environment that may not be child friendly, change in feeding intervals or time, lack or insufficient food due to low economic status and socio-cultural belief about particular diseases and some medical procedures needing fasting eventually leading to acute malnutrition (Wilkins', 2008).

Joosten et al (2008) reported that the prevalence rate of acute malnutrition in infants and children with mixed diagnoses admitted to hospital, ranges from 6.1 to 40.9% worldwide. Uganda is among the developing countries suffering from high levels of macro- and micronutrient deficiencies, particularly among young children, adolescents, and pregnant/lactating women. Under nutrition is endemic in many parts of the country and poses a serious threat to the well-being of many. It is responsible for about 40% of all deaths occurring in children below the age of five in Uganda. The most recent Uganda Demographic and Health Survey (UDHS), (2006),

revealed that 38% of children under five were stunted, 6% wasted, and 16% underweight (UBOS, 2007).

Sick children often receive inadequate nutrition support once in the care of medical personnel as nutritional supervision by nurses and other medics has been neglected and thus not being able to identify early, patients in need of being assisted in food intake (Hiltron, 2004). This in turn affects their management like drug adherence, disease prognosis, increased malnutrition, increased morbidity and mortality rate.

All these factors interplaying have stimulated the researcher to carry out this study.

### **1.3 Purpose of the study**

To assess the factors contributing to poor feeding pattern among children under five years admitted in pediatric ward Lira Regional Referral Hospital

### **1.4 Specific objectives**

1. To determine how socioeconomic factors contribute to poor feeding pattern among children under years admitted in Lira Regional Referral Hospital
2. To assess how environmental factor lead to poor feeding pattern among children admitted in pediatric ward Lira Regional Referral Hospital
3. To determine possible strategies towards improving the feeding pattern of children under five admitted in pediatric ward Lira Regional Referral Hospital.

### **1.5 Research questions**

1. What are some of the social economic factors that contribute to poor feeding pattern among children under five admitted in pediatric ward?
2. What are the environmental factors (physical and social) that contribute to poor feeding pattern in children aged 0-5 admitted in pediatric ward?
3. What strategies should be put in place to improve the feeding pattern among children under five years Lira Regional Referral Hospital?

## **1.6 Justification of the study.**

### **1.6.1 Nursing practice**

4. The study aided in identification of gaps and promotion of good feeding patterns among the sick children under five years Lira Regional Referral Hospital?

Nurses had job satisfaction as they implemented their nursing care plan timely for instance drug administration as well as taking care of a satisfied client who was able to listen and understand the instructions and participate in their care.

### **1.6.2 Nursing Education**

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

### **1.6.3 Nursing Research**

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

### **1.6.4 Health Policy Makers.**

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

The hospital will serve as a role model in the provision/monitoring of nutritious diet to its patients and demonstrate reduced hospital stay for patients and achieve millennium goal of reduction of underweight among the under fives.

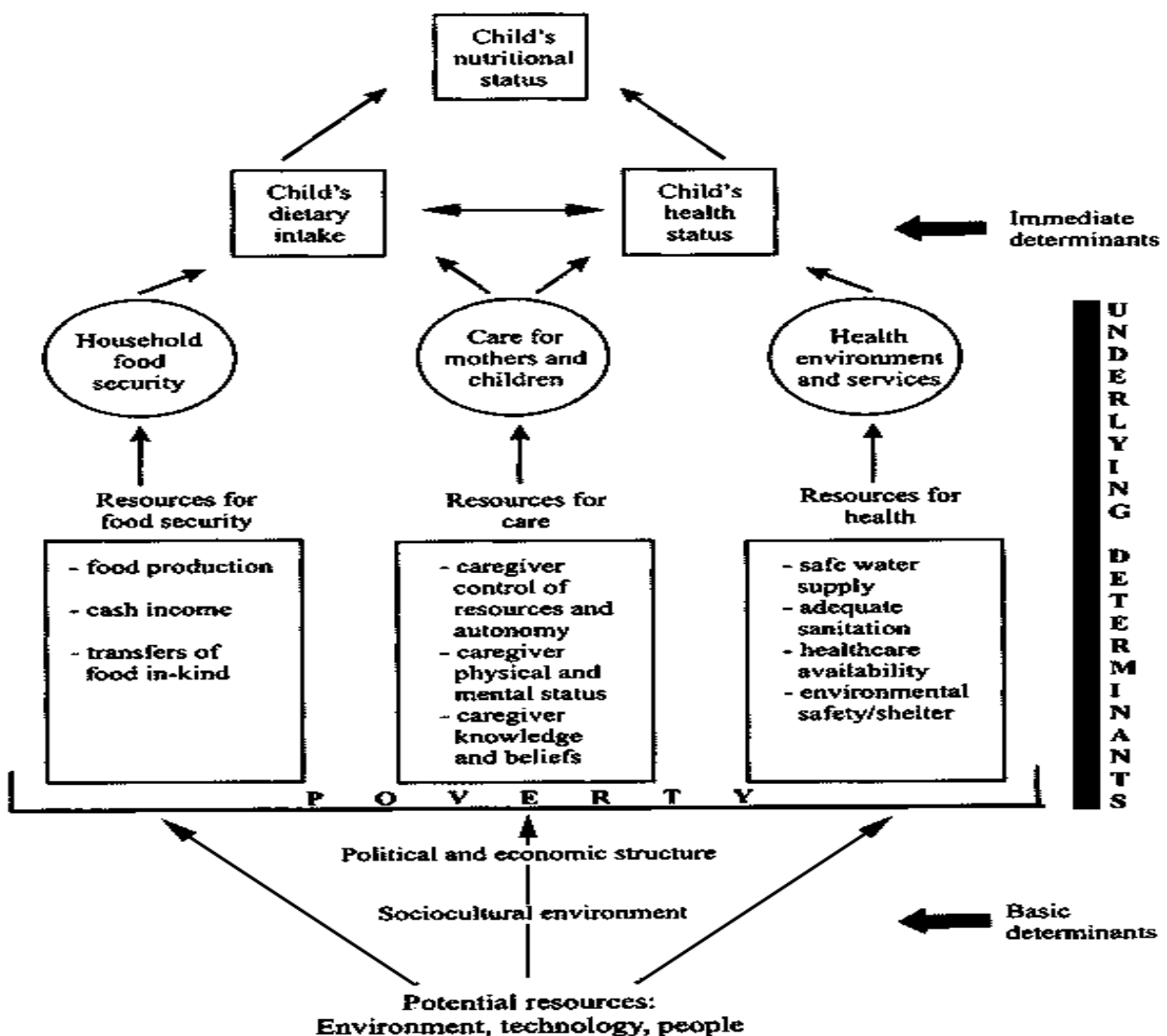
The identified strategies can be replicated by other health facilities in the country and beyond.

## **1.7 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.

The following diagram is a conceptual framework for nutrition adapted from UNICEF reflects relationships among factors and their influences on children's nutritional status. The socioeconomic, environmental, and cultural factors that affect the nutritional status of children admitted in pediatric ward will be included in the study.





## **CHAPTER TWO**

### **2.0 Literature review**

#### **2.1 Introduction**

The issue of healthy eating or feeding has long been an important concern to individuals and communities. Feeding is the process of taking in food by an organism to provide them with nutritional needs necessary for growth and energy (Boykin, 2006).

Sue et al (2002) acknowledges that Food is a basic physiological human need that must be achieved first according to Maslow hierarchy of needs from the time of birth to death. The frequency of feeding differs with different ages depending on the body's needs.

In children between 0-5 years, feeding ranges from breastfeeding on demand to frequent small nutritious well or attractively served meals to enable them get attracted and accept the newly introduced food (WHO, 2005).

Buttriss et al. (2002) recommends that children aged 1-5 years should eat three meals a day with snacks and/or drinks or breast milk/formula between meals. Foods should generally be of a normal adult texture, but will probably need to be chopped. While Hendriks (2003) adds that parents should aim at providing three to four servings of starchy foods and whole meal varieties can be included; three to four servings of fruit/vegetables; (Appendix 6) and diluted unsweetened natural orange juice may be given with meals (this helps iron absorption from non-haem sources). He adds that at least one serving of animal protein (e.g. meat, fish, egg) should be provided daily, plus two servings of vegetable protein (e.g. bread, pulses, cereals).

Finger foods remain important as recommended by Hankard et al (2002) and should be included with each meal to encourage self-feeding. Salty foods should be avoided, and biscuits, cakes and other foods with added sugar kept to a minimum. Ensuring an adequate intake of iron and zinc is particularly important. Similarly, Kyarimpa et al (2011) in addition describes feeding patterns at different age groups among children and the food types, where breast feeding takes the lead till age 2 or older. They recommend three main meals and 2 nutritious snacks for the children 2 and above years.

In as much as this is the ideal, some children are unable to get the above recommended type of meals and the required frequency ending up with poor feeding pattern that leads to malnutrition. Hilton (2004) categories the contributing factors to these as follows: **Physical factors** arising from alteration in the structure, function or processes of the gastro-intestinal tract and ill health plus its treatment that interferes with metabolic processes or appetite. **Psychological factors** such as depression, anxiety and anorexia. **Cultural factors** for example vegetarians, vegan or religious persuasion. **Environmental factors** for example unpleasant smells, unavailability and inaccessibility of shops, the community or family and the peer group. **Socio-economic factors**, for example lack of finances

## **2.2 Environmental Factors**

Pactric et al (2003) divides the environmental factors into physical and social environment.

### **2.2.1 Physical environment**

This include food availability whereby, on the ward the care taker may not get what the child likes due to financial constraint or the hospital environment do not sell such like foods. Accessibility for instance of quality services to meet what the child requires during illness, portion size where the care taker may not manage to give the expected amount as the little food available must be shared among all those care takers in hospital (Pactric et al, 2003). Ozturk (2003) in support adds that the unfriendly surrounding where there is unpleasant smell, fear of the health care personnel and interferences with the medical procedures like wound round interfere with the feeding time.

Joosten et al, (2008) also reports that the food served in the hospital may be different from that which the patient is accustomed to eating. Patients may not like the hospital food, or meals may be served at times when the patients are not accustomed, or when the patient is not hungry. Conversely Hendrikse et al (2009) adds that patients also are often put on a special diet in the hospital, to help treat their disease (for example, a hypertensive patient taking low or salt free diet) in this matter; patients may not like the change in diet.

Koen et al, (2008) focused on the alteration of the structure and body function and said that ill health affects the feeding pattern so much that the total food intake is greatly affected, for instance sore throat that affect swallowing of food, Gastro-intestinal tract problem involving nausea and vomiting and fever resulting to loss of appetite. Also patients who are in the hospital are almost always at risk of getting insufficient nutrients either because of their illness or because of the treatment for their illness (Marteletti et al, 2005).

### **2.2.2 Social Environment**

The social environment focuses on parents' behaviors, beliefs, attitudes, feeding styles, the surrounding community (health care providers in the hospital) and peers as the major extrinsic factors that interfere with feeding pattern, for instance an anxious parents will tend to follow the child's preference and not focusing on the nutritive values (Taylor et al, 2003). Research has also shown that we eat more with our friends and family than when we eat alone and the quantity of food increases as the number of fellow diners grows (De Castro JM. (2004). Thus children eat better while with the peers than when alone and worse still in a strange environment of the hospital worsened by the unfriendly procedures by health providers.

Lennard-Jones (2003) commends that nutritional care of patients in hospitals suffer from division of responsibility. Doctors regard malnutrition as nurses' problem, nurses tends to refer malnourishment to dietitians. He also reported that in hospitals there is no member of either senior medical or nursing staff with a special interest in clinical nutrition.

Nurses from historical background have been patients' advocate, case finder, care givers, educators, counselors a few to mention. This seems to be diminishing with the ever growing population of malnutrition even in the hands of medical personnel (Rocha et al, 2006). Food serving supervision is one of the nursing duties, however, Merrit and Suskind (2009) observes that, serving of meals in an appetizing manner no longer appears a priority in the wards.

Dorothea Orem in her theory of self care deficit points out that it is the responsibility of the nurse in the early identification of the deficit and helps support and protect the patient (Sue et al, 2002). With this, a few children could be malnourished in the hands of medical personnel to

minimize its effects on the young generation. Many studies have been done to prove the high prevalence of malnutrition in children admitted in the hospitals (Wilkin's et al, 2005).

### **2.3 Socio-economic factors**

The relationship between low socio-economic status and poor health is complicated and is influenced by gender, age, culture, environment, social and community networks, individual lifestyle factors and health behaviors. Population studies show there are clear differences in social classes with regard to food and nutrient intakes. Low-income groups in particular, have a greater tendency to consume unbalanced diets and have low intakes of fruit and vegetables (De Castro, 2004). This is worsened by hospital bills versus nutritional need dilemma.

Parson et al (2008) comments that education level and income determine food choices and behaviors that can ultimately lead to diet-related diseases. Low-income groups face specific challenges when attempting dietary change and solutions need to be specifically targeted.

### **2.4 Strategies to improve the feeding pattern among children aged 0-5 years admitted in hospital**

There is great diversity of nutritional support strategies in different health facilities to include: Existence of nutritional programmes to foresee close monitoring of feeding requirements, Logistics like use of nutritional assessment tools to enhance early identification and intervention of the risk children, Health education to care takers to understand what is essential in the diet of the sick child and formation of associations by the caterers and dietitians to work hand in hand with the doctors, nurses and other health professional who do close monitoring of feeding patterns for the sick children (Payne-James, 2002).

Hilton (2004) recommends nutritional supervision by nurses and other medical personnel that will enable nutrition education and early identification of at risk children to be assisted in food intake patterns.

The patients admitted in Lira Regional referral hospital (LRRH) are not exceptional as they are affected too by the above factors. What could be the contributory factors to poor feeding among the children admitted in pediatric ward in Lira Regional hospital?

With these, there is a great need for this study to enable identify the factors contributing to poor feeding pattern among this population in LRRH and possible strategies to aid improve both nursing and medical care to the children admitted in pediatric ward that may be replicated too to other wards and beyond.

## **CHAPTER THREE**

### **3.0 Research Methodology**

#### **3.1 Introduction.**

This chapter describes the methodology which will be used. It especially deals with the description of the Study design, study area, study population, sample size determinant, Sampling method/technique, Inclusion and exclusion criteria, Data collection methods, Data analysis, Data presentation method, ethical considerations, Study limitations and Data quality control.

#### **3.2 Study Design**

The study was a descriptive cross-sectional study in which both quantitative and qualitative approaches of data collection was used.

#### **3.3 Study area/ Setting**

Lira regional referral Hospital is located in the town of Lira, Lira District, Northern Uganda. It is the only biggest referral and teaching hospital in Lira district. It also serve other neighboring districts to include Apac in the North (Western part of Lango Sub region) Amolatar District, Dokolo district, Alebtong distric, Otuke distrct, Kole district, Oyam district and some part of Kaberamado district. The hospital serves a population of 241,500 people in Lira district by 2012.

The hospital provides preventive, promotive, curative and rehabilitative services as inpatient, outpatient or special clinic services. There are different wards among them is the pediatric ward which had occupancy rate of 20.4% (738) in 2012 (Hospital records office) and total annual admission of 6610 Sick children who came from different backgrounds and with different disease conditions. Nutrition monitoring is of great concern as these patient require a diverse variety of foods to suite each individual. It is the policy of the hospital that every individual provide food for her/himself.

### 3.4 Study population

All Children of age 0-5 admitted in Lira hospital pediatric ward and health care providers working in the same ward at the time of study.

#### 3.4.1 Sample size determination

Fishers et al (1990) formula was used to arrive at the sample size.

$$n = \frac{Z^2 P Q}{d^2}$$

Where:

n = Sample size of the target population.

Z = Standard normal deviation set at 1.96 when the confidence interval is 95%

P = Proportion of the targeted population estimated to have a particular problem or characteristic estimated at 50% which is 0.5

d = Accepted error rated at 0.09

$$Q = 1 - P = 1 - 0.5 = 0.5$$

$$n = \frac{(1.96)^2 * 0.5 * 0.5}{(0.09)^2} = 111.4 (110)$$

The sample size is 110. Since children cannot give the information needed, 60 caretakers were interviewed while 40 health care providers were given a questionnaire to fill giving a total of 100 participants.

### **3.4.2 Sampling Technique**

Purposive sampling technique was used where by all care takers in Pediatric ward at the time of study that would consent. The study also used interview formulated schedule. The researcher intended to apply this sampling method since the children comes from different areas and with different disease conditions. They were also different socio-economic status, this affects their feeding pattern.

Stratified sampling technique was used for the health providers whereby they were grouped into strata as doctors (3), nurses (7), nursing students (75) and Medicine students (16) total number of care providers was 101. Being that only 30 care giver were to be included, the distribution was as follows: Doctors (1), Nurses (2), Nursing students (22), Medicine students (5) and The list of all groups was to be obtained, Simple random sampling was used to choose the individuals in the groups to participate by picking Yes or No paper. This method was chosen to limit bias, enable all members to have equal chance of being selected, and the fraction will show representativeness of the population.

### **3.4.3 Inclusion Criteria**

All care takers of the sick children aged 0 to 5 years admitted in Lira pediatric ward at the time of study was included in the study.

All health providers working in pediatric ward at the time of the study had equal chance of being included in the study.

### **3.4.4 Exclusion Criteria**

Children not within the age bracket plus those not admitted on pediatric ward were included in the study sample.

All Health providers not working in pediatric ward at the time of the study participated in the study.



### **3.5 Study Variables**

The study variable was included the Environmental and socio-economic factors as the independent variables while poor feeding pattern among children aged 0-5 years admitted in Lira referral hospital as the dependent variable.

**3.6 Research instrument:** The researcher used both the interview schedule and the questionnaire to collect data.

### **3.7 Data Collection methods**

Information was collected from the study group through a combination of self administered questionnaires and interview schedules. This method is considered appropriate as it's deemed the most appropriate method of data collection as per the study design. Interview schedule was used for caretakers to foster understand and improve quality of data, while the questioner for the health providers was made easy for them to understand and be able to answer relevantly.

Research assistants were trained on the data collection tool to be able to adequately administer the interview schedule in an ethical way in the language acceptable to the respondents.

#### **3.7.1 Validity and reliability**

#### **3.7.2 Pre-Testing of the Study Instruments**

The questionnaires pretested by issuing 2 copies to care takers and 2 to health providers in Apach Hospital pediatric ward. After filling the questionnaires, adjustments were made accordingly. Pre-testing helped in verifying some Ethical consideration and correcting of any ambiguous questions.

#### **3.7.3 Data Processing and Analysis.**

The SPSS (Statistical Package for Social Scientists) software, version 16.0 for windows was used to analyze the data.

### **3.7.4 Data Presentation**

Study results were presented on pie charts, bar graphs and tables which represented the statistical data collected from the respondents. Descriptive statistics was used where percentages for each response was calculated to give the lesson learnt and conclusion from the response. This was the outline of what majority of the responded feel as compared to the minority.

### **3.8 Ethical Consideration**

The study was conducted upon ethical approval from Lira referral Hospital and ethics committee and was demonstrated by granting permission by issuing an introductory letter to the concerned people and study areas.

The purposes and objectives of the study were clearly explained as well as privacy and confidentiality during and after the study were maintained. Numbers were used instead of patient names to foster confidentiality.

Informed and written consent were sought from the study participants in the study (Appendix 1). Participation of all respondents in the study were strictly voluntary and there was no monetary or other compensation offered for participation.

Measures were taken to assure the respect, dignity, and freedom of each individual participating in the data collection.

All interviews were conducted in private and the respondent's identity was recorded.

### **3.9 Study Limitations**

**Financial constraints-** The researcher confined the study within Lira Hospital where some expenses were reduced and as well as the available resources.

**Time Frame-** The study was done in a relatively shorter period by involving more research assistant to facilitate quick data collection. Computer was used in data analysis as compared to manual which consumes a lot of time.

**Fluctuation of patient numbers in the ward** which made the researcher not meet the expected sample size. The research was vigilant in identifying all caretakers to avoid missed opportunities,

also a clear explanation on the purpose of the study was made to minimize decline of legible participants.

**Purposive sampling method** had bias in data collection. Addition of the error margin corrected any bias made.

### **3.10 Dissemination of Results**

The findings of the study were compiled into a research report. Five copies were made and distributed as follows; a copy for the researcher, a copy to the university research and ethics committee, Lira Hospital Administration where the research was carried out, a copy to my research supervisor and a copy to the head of department pediatric ward.

## CHAPTER FOUR:

### 4.0 RESEARCH FINDINGS

#### 4.1 Introduction

In this chapter the researcher wishes to describe and analyze all his research finding in both tabular, pie chart and graph representation of the all finding as he observe from his data collection tools.

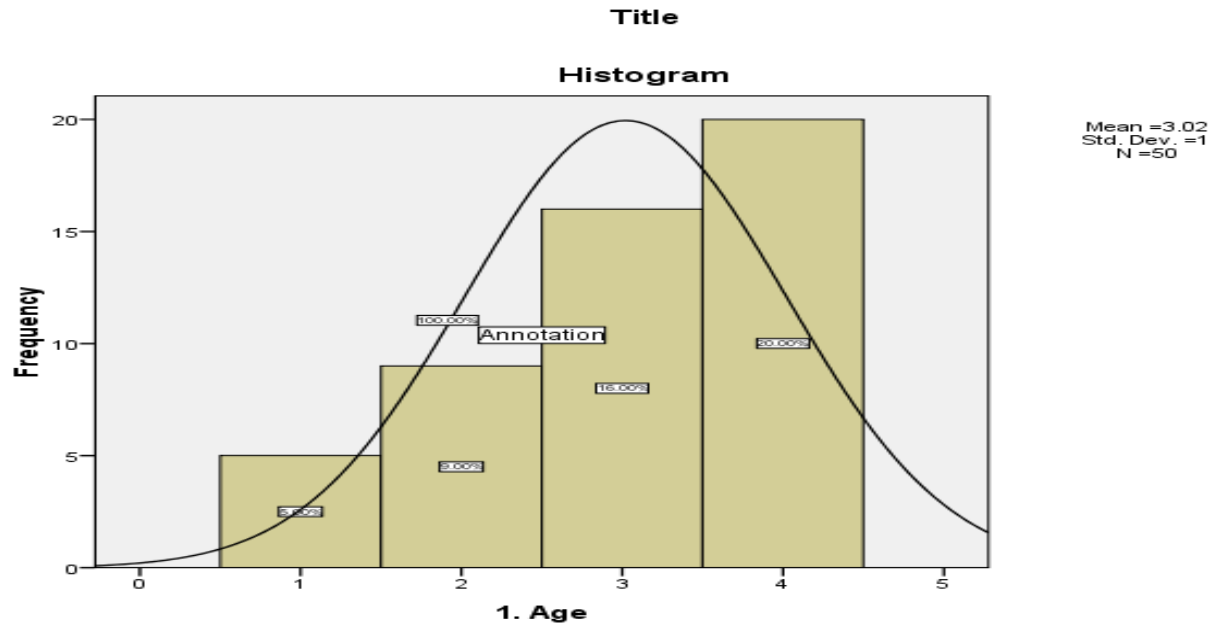
#### DEMOGRAPHIC DATA

**Table 1:** Showing age distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-4 MONTHS	5	10.0	10.0	10.0
	4 MONTHS- 1YR	9	18.0	18.0	28.0
	1-2 YRS	16	32.0	32.0	60.0
	2-5 YRS	20	40.0	40.0	100.0
	Total	50	100.0	100.0	

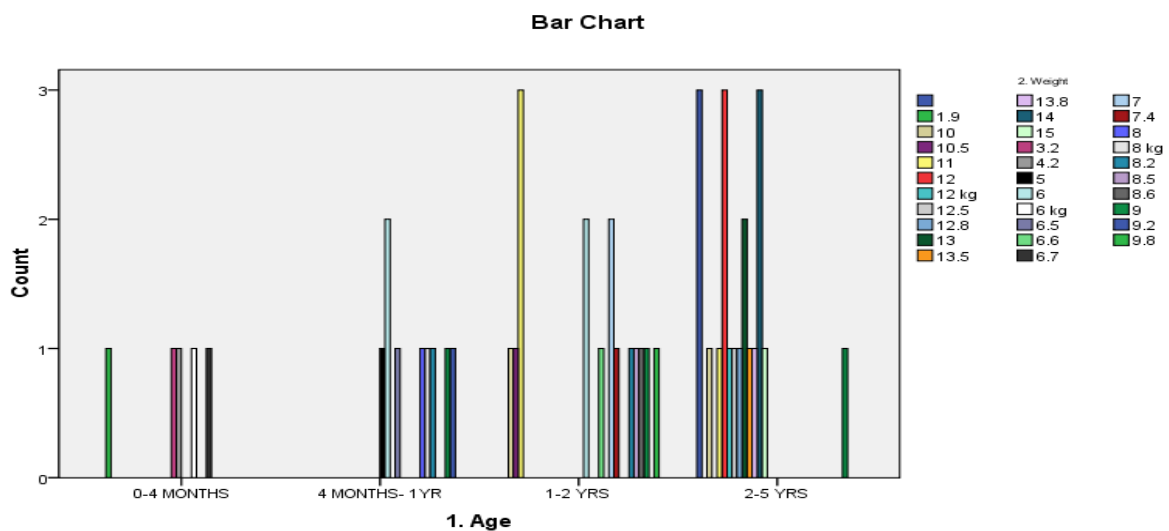
The number of respondents seen are within the age bracket of 2-5 years and the constituted to 40% Of all the respondents this was followed by those with in the age bracket of 1-2 years who accounted for 32% while the least were those with age group of 0-4 month who also accounted for 10% of the respondents and this probably could be because reduced body immune system following weaning

**Figure 1:** Age distribution of the respondents



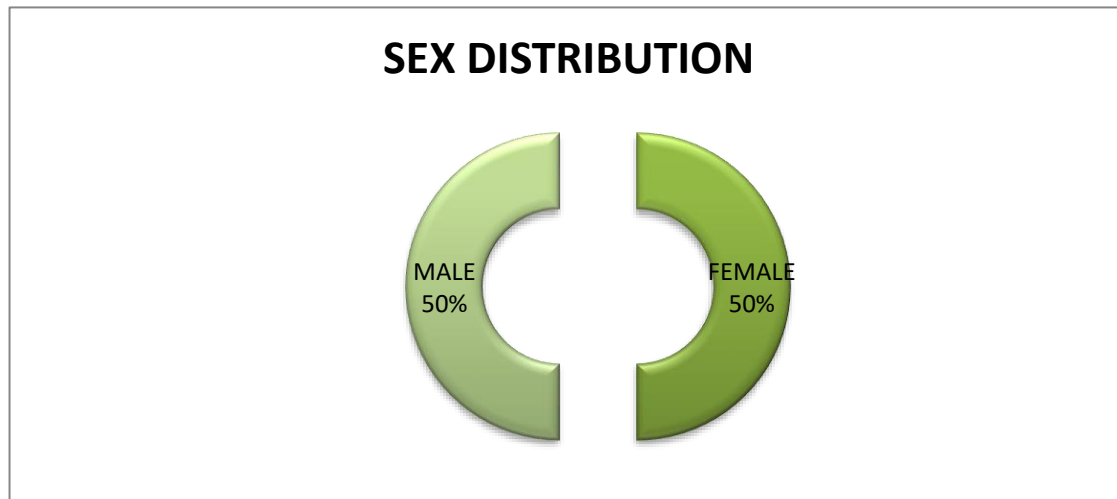
The above graph show how children become more at risk as they grow. Majority (40%) of those admitted were aged between 2-5 year and the least were 0month to 4 months because they do have natural body immunity got from the mothers blood during time of gestation and enhanced with breast feeding.

**Figure 2:** Weight distribution of the age groups



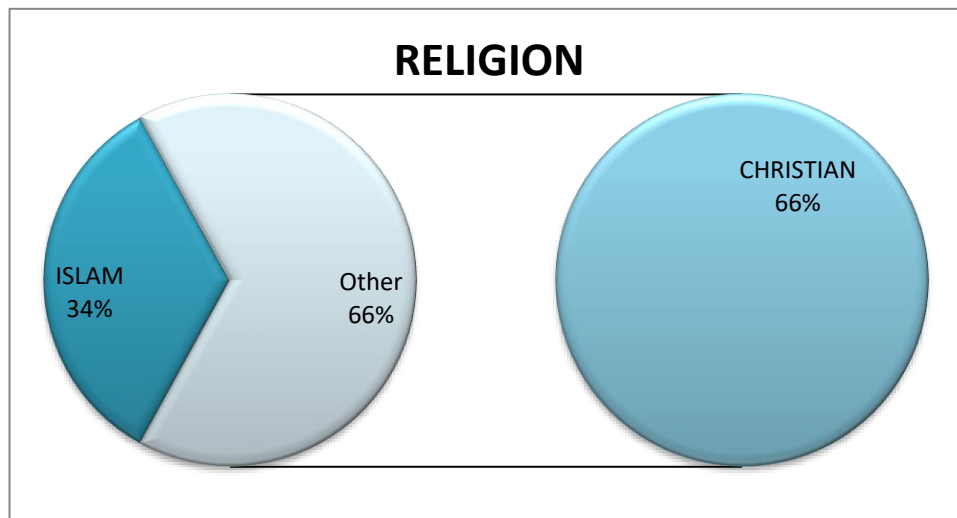
Weight is a very important parameter in nutritional assessment of the children aged 0-5yrs and general care and management in treatment of the sick children. It was encouraging that 99% of children had weight taken on admission apart from one.

**Figure 3: Sex of the Respondents**



The Sex Ratio of Female to Male admitted aged 0-5 years was 1:1

**Figure 4: Religion**



Majority (66%) of the respondents were Christians of different churches, while the Muslim community was 34%.

## TRIBE

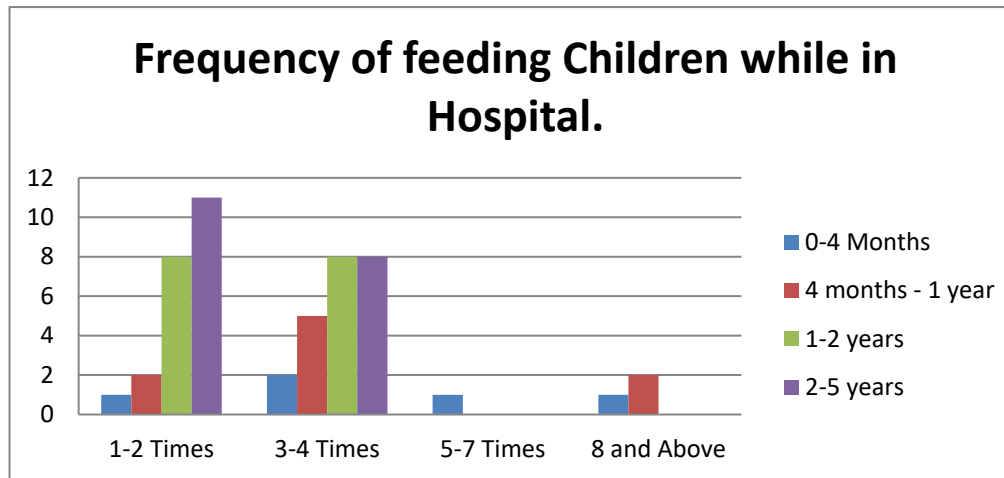
**Table 2:** Showing the Frequency of Tribes

	<b>Tribe</b>	<b>Frequenc y</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Langi's	31	62.0	62.0	62.0
	Acholilabwor	9	18.0	18.0	80.0
	Lango	3	6.0	6.0	86.0
	Iteso	5	10.0	10.0	96.0
	Kumam	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

This being in Lango sub region the majority of the respondents were Langi and the most spoken language was Langi but other tribes were also there as represented by this table.

## BACKGROUND INFORMATION

**Figure 5:** Frequency of Feeding Children while on the Ward.

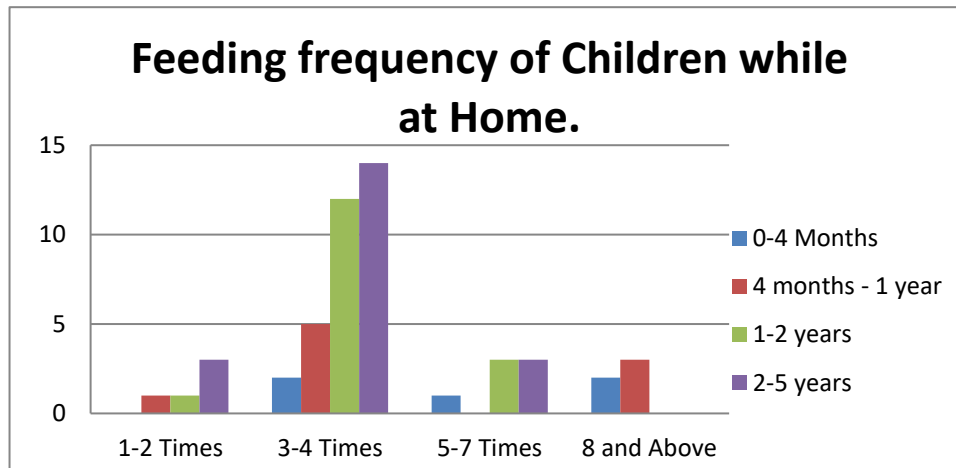


This is really a significant table showing the age groups in relation to the feeding pattern. One child aged 0-4 months ate 1-2 times in a day. We realized that there was again one child who at this age was already not breast feeding but eating carbohydrates and proteins. This frequency cut across all age groups with majority (11) aged 2-5 months.

It was closely followed by children eating 3-4 times that also cut across all ages. Now majority (2/5) aged 0-4 month falling in this frequency category. Worse still those aged 4 months- 1 year (5) who even are supposed to be breastfeeding also eat 3-4 times. On analysis of Breastfeeding, this age group seems to stop much earlier as we shall see. Only 3/50 (6%) children (0-4 month=1 and 4months-1year=2) seem to be getting ideal feeding frequency.

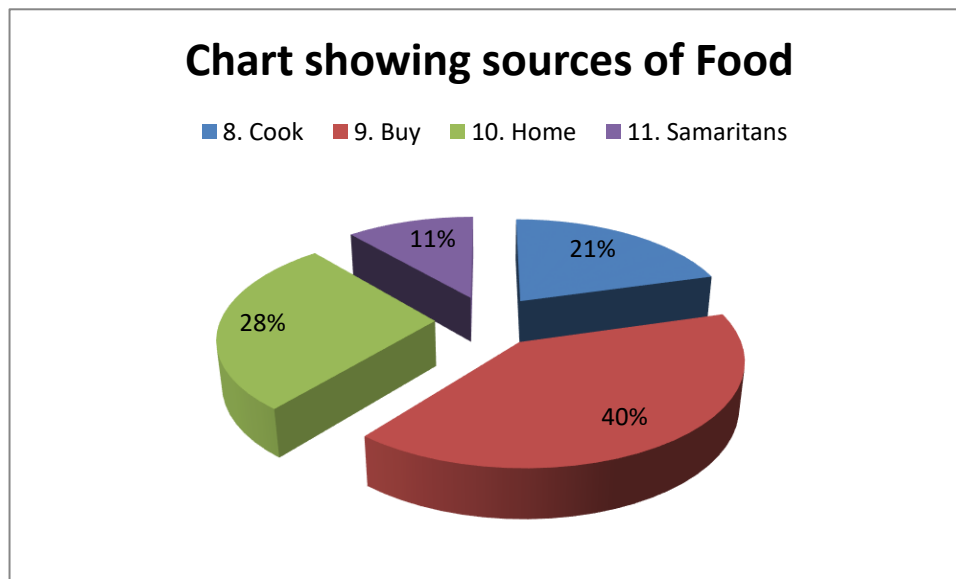


**Figure 6:** Feeding frequency of children while at Home



On analyzing the frequency of feeding the children while at home, appreciate the shift in the feeding pattern, whereby only 5 children were fed 1-2 time while at home as compared to 22 children being fed 1-2 times while in the hospital. The number of those who had ideal feeding for age increased to 11 [0-4month=2, 4months to 1 year=3, 1-2 years=3 and 2-5 years=3]

**Figure 7:** Sources of Food while in Hospital



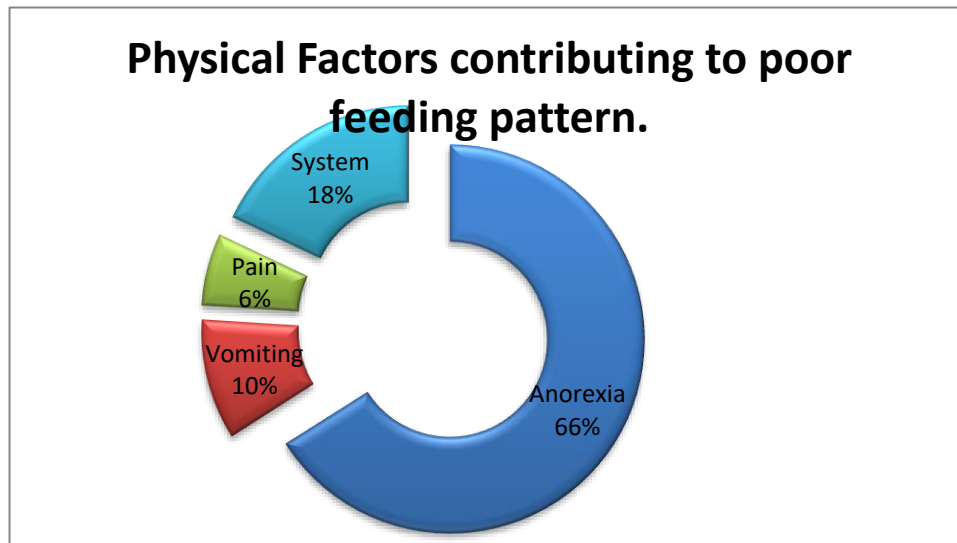
Majority (40%) of the caretakers buy food from the outside hospital eating houses, while minority (11%) gets from Samaritans or well wishers.

Table 3: Shows environmental factors contributing to poor feeding pattern among children aged 0-5 years admitted

		Responses		Percent of Cases
		N	Percent	
Environmental Hindrance	expensive	45	32.1%	91.8%
	Role	30	21.4%	61.2%
	Ingredients	33	23.6%	67.3%
	Unavailability	22	15.7%	44.9%
	Procedures	10	7.1%	20.4%
Total		140	100.0%	285.7%

The Table shows majority of the responses were that food was very expensive (32.1%) or they did not have required equipments or ingredients (23.6%) with the least response being ward procedure interference (7.1%).

**Figure 8:** Physical Factors that contribute to poor feeding pattern among children admitted on children's Ward.



Sickness to impact negatively on the child's food intake as majority (66%) reported of the children having anorexia. While minority (6%) reported of pain contributing to poor feeding. Only 18% reported of the children not being affected in any way.

#### 1. Types of food Eaten while in Hospital in comparison with Age Breast Feeding pattern.

**Table 4: Shows types of food eaten and Breastfeeding as compared to age group among children admitted on pediatric ward-LRRH**

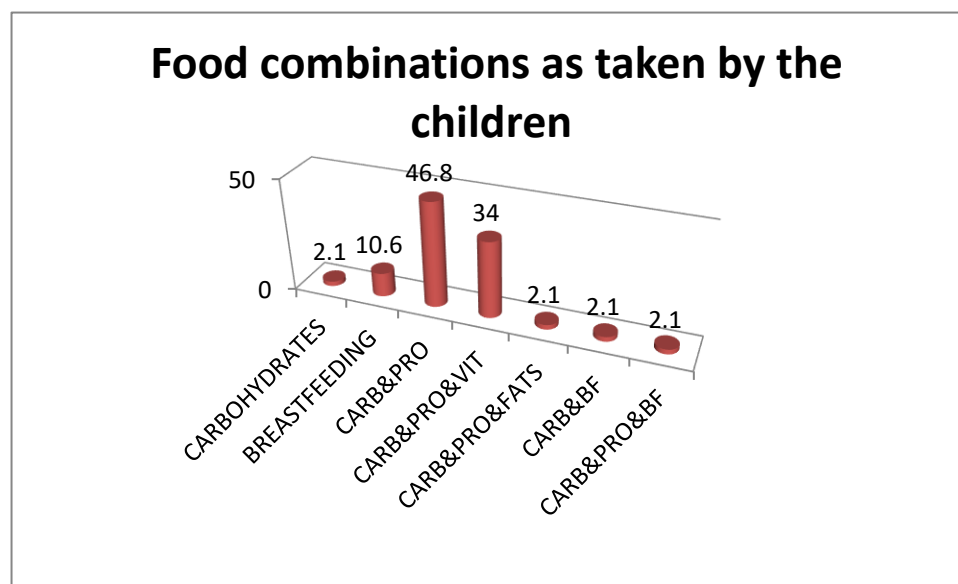
Types of food eaten by children				Breastfeeding		Total
				Yes	No	
1. Age	1. Age	0-4 Months	Count	4	1	5
	Total		Count	4	1	5
Carbohydrates	1. Age	0-4 Months	Count	0	1	1

		4 months - 1 year	Count	1	7	8
		1-2 years	Count	1	14	15
		2-5 years	Count	0	20	20
	Total		Count	2	42	44
Proteins	1. Age	0-4 Months	Count	0	1	1
		4 months - 1 year	Count	0	7	7
		1-2 years	Count	1	14	15
		2-5 years	Count	0	20	20
	Total		Count	1	42	43
Fats	1. Age	1-2 years	Count		1	1
		2-5 years	Count		4	4
	Total		Count		5	5
Vitamins	1. Age	4 months - 1 year	Count	0	2	2
		1-2 years	Count	1	5	6
		2-5 years	Count	0	6	6
	Total		Count	1	13	14
Breastfeeding	1. Age	0-4 Months	Count	4		4
		4 months - 1 year	Count	2		2

	1-2 years	Count	1		1
	Total	Count	7		7

Among the infants aged 0-4 months, 4 out of 5 had exclusive breastfeeding while 1 had mixed feeding. Majority of the children 42 ate carbohydrate and proteins. While only 13 included vitamins in their diet, again still only 2 out of 50 mothers included Fats in the diet of children aged 0-5 years. Breastfeeding that was known to be cheap, affordable, readily available was only provided to 7 children among the 50 respondents.

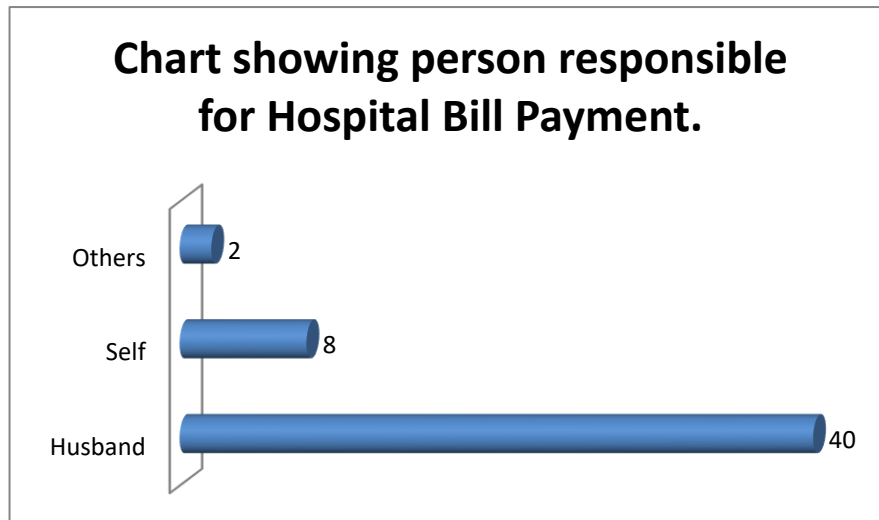
**Figure 9:** Food combinations as taken by the children



Majority (46.8) took carbohydrate combined with proteins which was mostly Boiled Bananas and G-nuts or Beans where as a few eat meat or milk as a protein. A balanced diet for a growing child needs the three classes of carbohydrates, proteins and fats. It was realized that Fats were not included in the majority of the diet as only 2.1% had fats in their diet.

## The economical factors contributing to poor feeding pattern

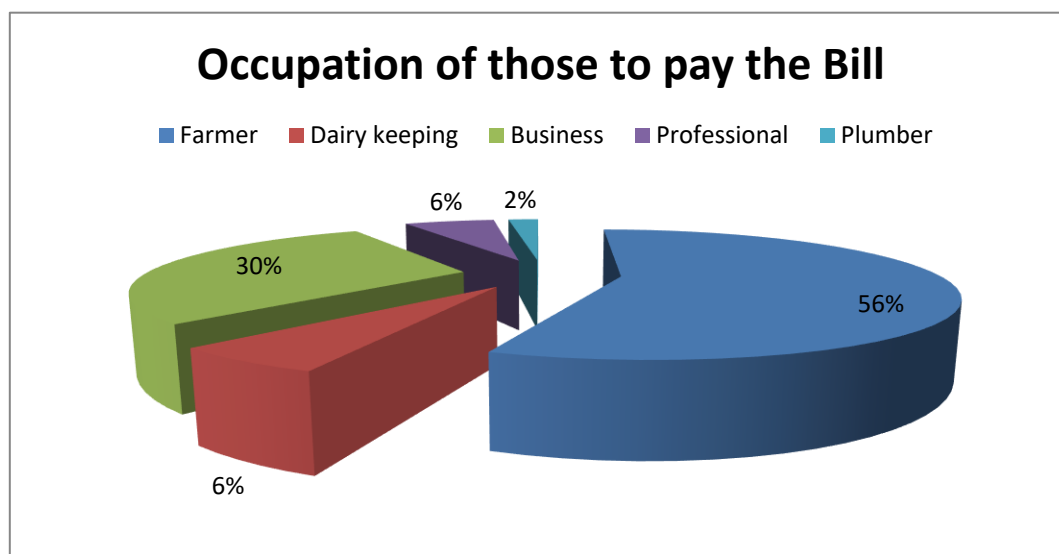
**Figure 10:** The Person Responsible for payment of Hospital Bill.



The figure above reveals that hospital bill payment was mostly going to be paid by the Husbands [80% (40)]. This shows how these mothers mostly depend on their husbands, where as only 16% (8) mothers could pay for themselves. Others were the minority with only 4% (2) responsible for hospital bill payment.

### 1. Occupation of those to pay the bill

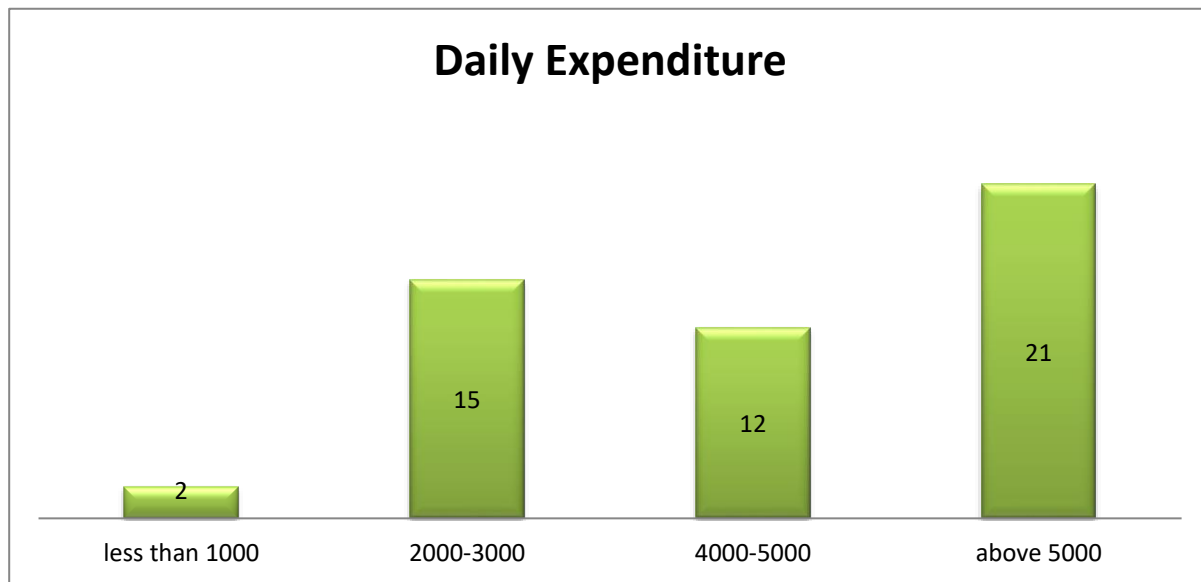
**Figure 11:** occupation of those to pay the bill



Majority (56%) of those responsible for bill payment were Farmers whose income is really not reliable and not always available, with the professionals accounting for only 6%.

## 2. Approximation of daily expenditure while in the Hospital

**Figure 12:** Daily Expenditure



Majority (21/50) estimated expenditure of above 5000, increasing with the number of people staying in the hospital to take care of the child. With the least estimating at less than 1000, these actually reported of the money they had, they used for investigations and treatment and remained without. They were now depending of well wishers for their survival, yet their children were already having severe malnutrition.

## 3. Daily Cash availability

**Table 4:** Daily cash availability among the caretakers

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	12	24.0	24.0	24.0
No	38	76.0	76.0	100.0

On asking about those who had the estimated cash at hand to facilitate the feeding of the child, Majority 76% reported that they are not always having this money at hand as the child's sickness in most cases come as an emergency and are forced to borrow and refund later. However, Minority (24%) acknowledged of being able to have the money at hand for their use.

### 3. Preferred source of getting meals for the children while in the Hospital

**Table 5:** Preferred source of food provision

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Hospital	5	10.0	10.0	10.0
Self	43	86.0	86.0	96.0
NGO/ Government	2	4.0	4.0	100.0
Total	50	100.0	100.0	

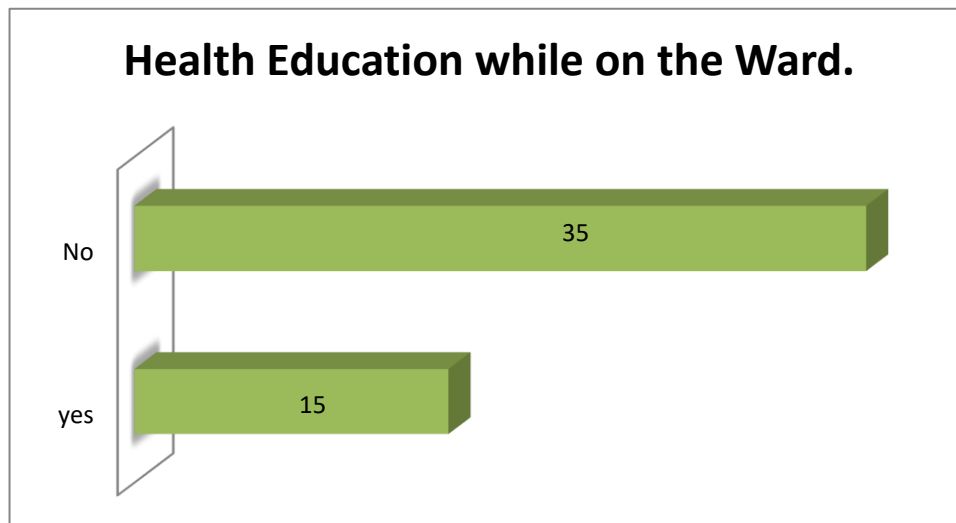
In as much as the majority did not have money at hand, preferred to obtain food by themselves (86%), Only 10% preferred Hospital to provide at a fee while only 2% suggested of help by NGO/Government to have a feeding program for the children that they receive food for free.



## THE POSSIBLE STRATEGIES TO IMPROVE THE FEEDING PATTERN AS PROPOSED BY THE CARE TAKERS

### 4. Caretakers who Received Nutritional Health Education While on the ward

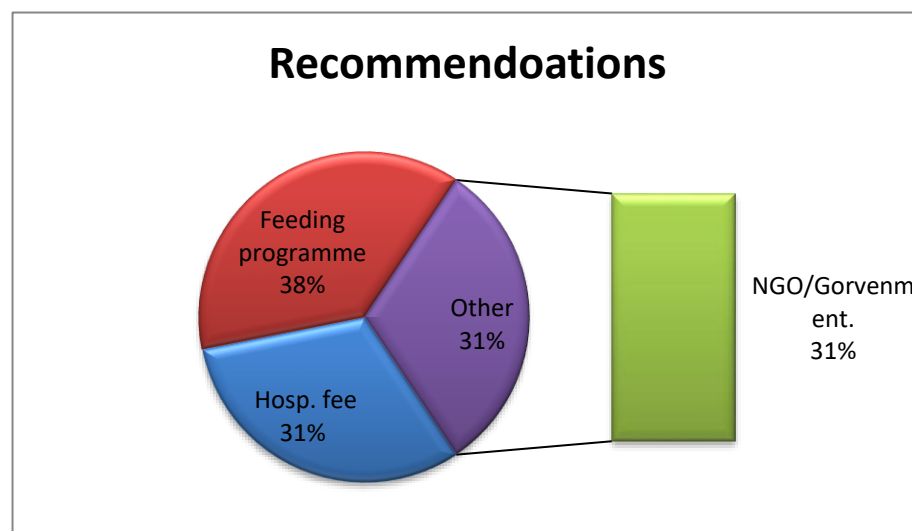
**Figure 13:** Health Education while on the ward



It was realized that majority [70% (35)] of the caretakers did not receive any health education on nutrition while in the ward. Minority [30% (15)] had received health talk on nutrition. This is possibly because of the over whelming work load to the health workers.

### 5. Recommendations of the possible preferred source of food by the caretakers.

**Figure 14:** Recommended preferred source of food



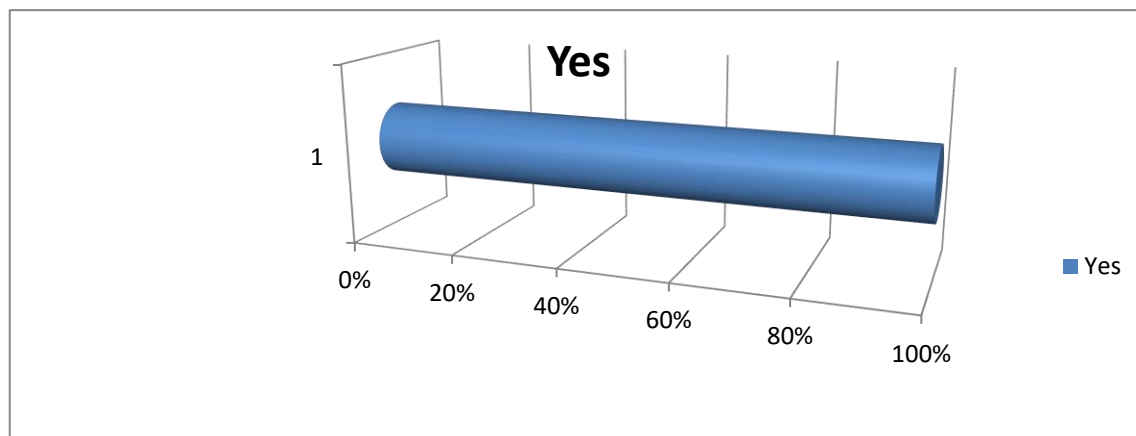
Among the respondents who knew about other methods of sources of food for the children and those who could suggest and recommend on the best method of food provision to the children aged 0-5 years admitted in the ward, majority (38%) of the response was starting of a feeding programme for the children, Other responses were Hospital to provide at a fee (31%) and NGO/Government to aid in the funding of feeding the children while on the ward.

## DATA ANALYSIS FOR PART B

In this section the respondent were the health care providers working in pediatric ward at the time of the study.

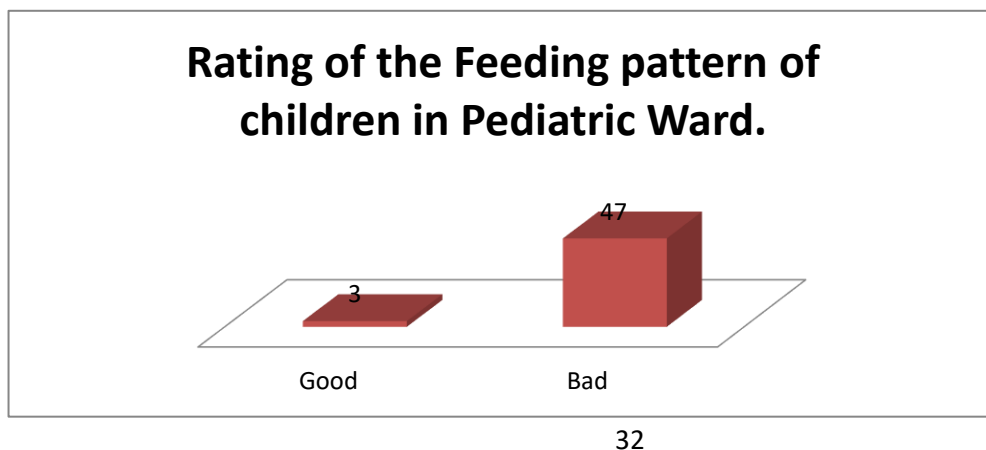
### Significance of feeding pattern among children aged 0- 5 years admitted on the ward to the health care providers

**Figure 15:** Response on knowledge of the significance of nutrition in the daily care provision



100% acknowledged that nutrition of children aged 0-5 years admitted on the ward was very significant to their daily care provision.

**Figure 16:** Rating of the feeding pattern of children on the paediatric ward



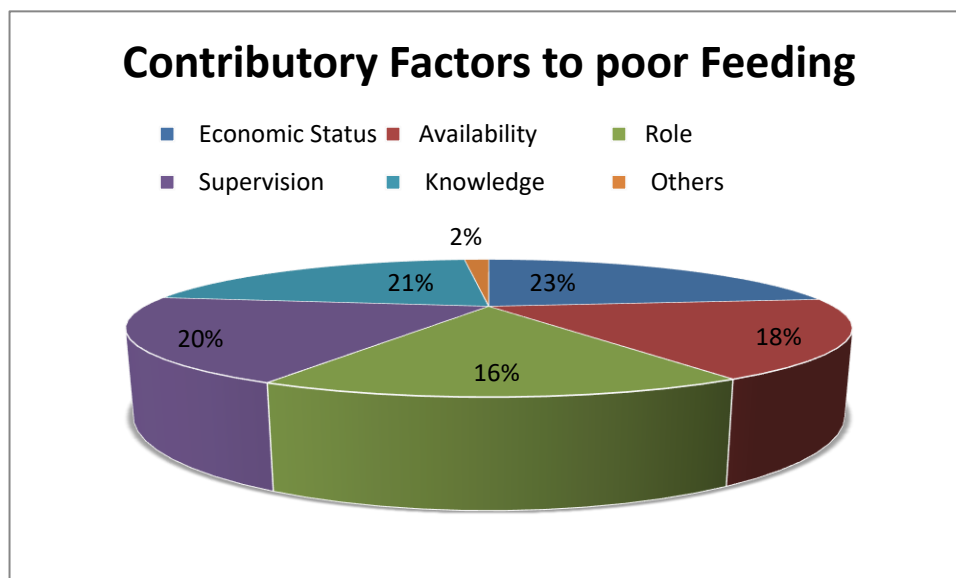
Majority 94% (47/50) rated feeding pattern as bad for the children fed less than 5 times in a day. While minority 6% (3/50) said the children fed more than 5 times indicated by a Good.

### 1. Factors contributing to poor Feeding among children admitted in Pediatric Ward.

**Table 6:** Environmental factors contributing to poor feeding frequencies

		Responses		Percent of Cases
		N	Percent	
Contributory factors to poor feeding	Economic Status	47	23.2%	95.9%
	Availability	37	18.2%	75.5%
	Role	33	16.3%	67.3%
	Supervision	40	19.7%	81.6%
	Knowledge	43	21.2%	87.8%
	Others	3	1.5%	6.1%
Total		203	100.0%	414.3%

**Figure 17:** Contributory factors to poor feeding



Majority of the respondents pointed out low economic status (23%) as first in priority, Others that cut across in all responses with close range were, insufficient knowledge, Insufficient supervision by the health care providers, unavailability of the needed food from the hospital environment and Role conflict by the care givers. While minority were others that included lack of programme to support and polygamous family as it increases the number of family dependants as shown below under specify.

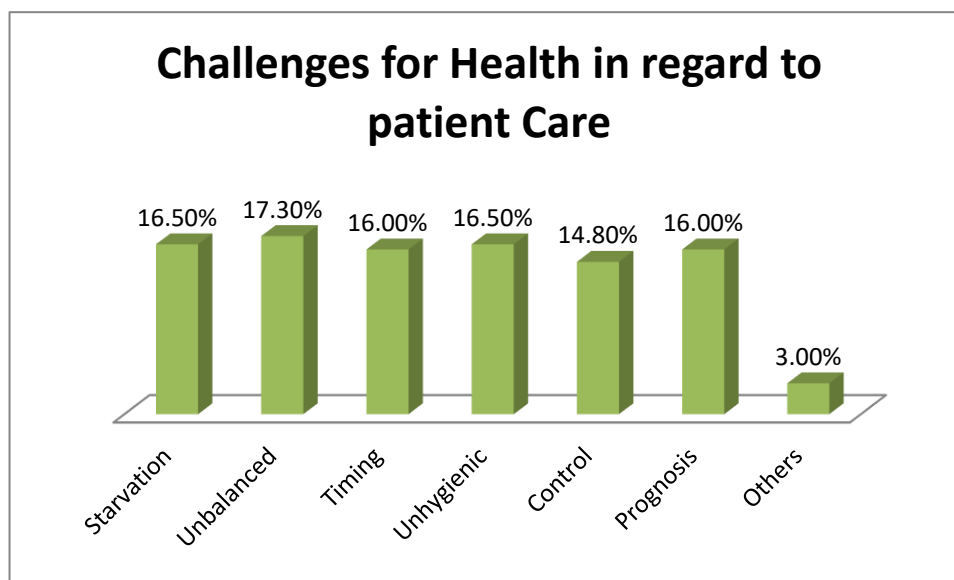
#### 10. Specify (Others in Question 9 above)

Specify (Other in question 9.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Others Specify	No programme	1	2.0	2.0	98.0
	Polygamy	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

11. Challenges to Health care providers as a result of the above in the care and management of the children admitted on the ward.

**Figure 18:** Challenges for health in regard to patient care

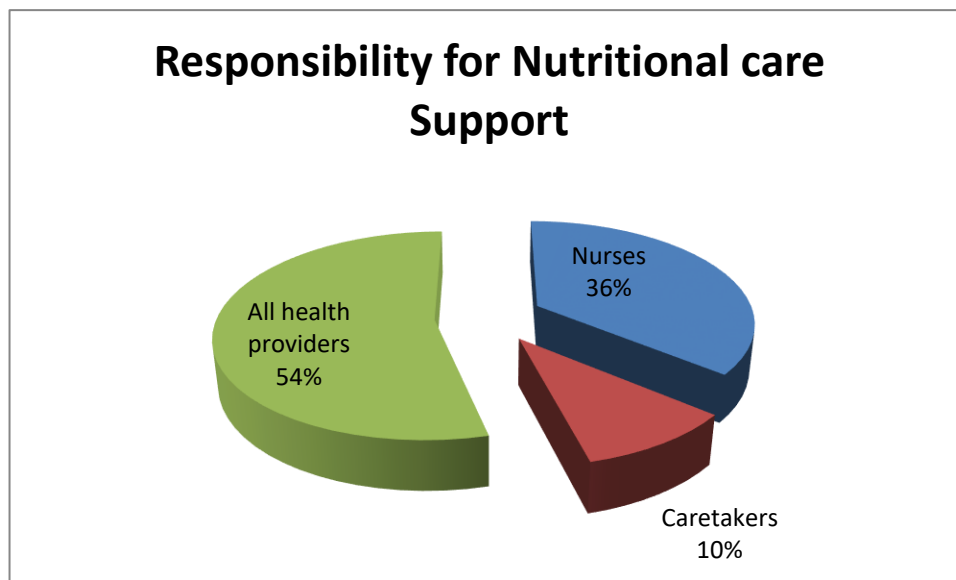


The health care providers expressed several challenges that were realized by majority of them where the highest in frequency being unbalanced diet (17.5%), Starvation of the children and unhygienic food preparation conditions both had 16.5%, with the least response (3%) being others.

## 12. Responsibility for Nutritional care and support

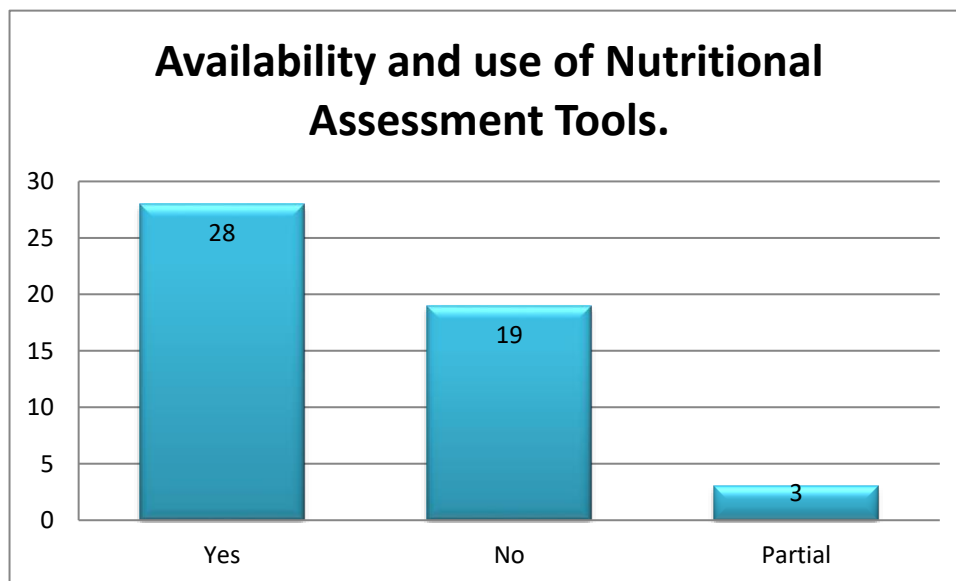
Figure\_\_\_ below shows clearly how health care providers are divided and are not sure of who should be responsible of patient's nutrition. Majority (54%) feel that all health care providers should be responsible, where as 36% feel that it is the responsibility of the nurses. It is alarming that even 10% still thought that it should be the work of the caretakers.

**Figure 19:** Responsibility for nutritional care support



### 13. Availability of Functional nutritional assessment tools in pediatric ward.

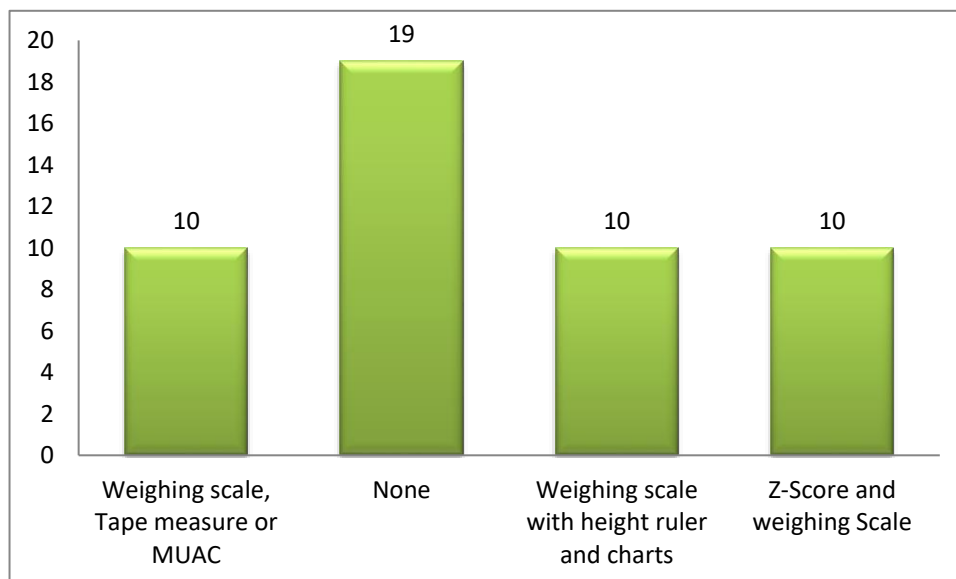
**Figure 20:** Availability and use of nutritional assessment tools



It was realized that not all health care providers were aware of the availability of tools and if they were functional. Majority (28/50) acknowledged the presence of functional tools, while 19/50 reported of no tools. However, 3/50 observed that they were available but partially functional

### 14. Asked to name the available tools.

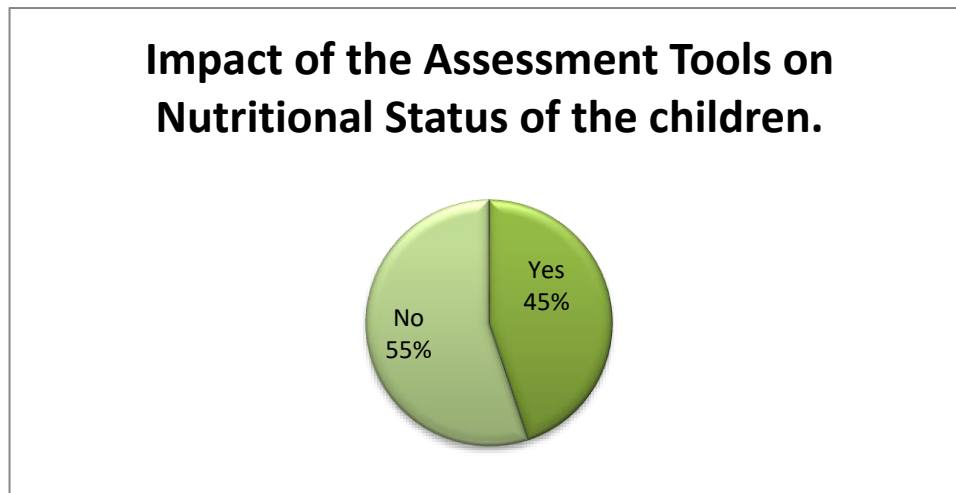
**Figure 21:** Showing the types of tools named by the respondents.



The 19/50 are the once who said that there was no tools used. 31 who said yes, one declined to name, while the 30/50 distributed their responses as above with equal frequency of 10/50. In as the above were mentioned, most of the literature review recognizes these as basic parameters used in different tools to assess nutritional status.

**15. The impact of the above tools in the early identification and treatment of those children at risk on the ward.**

**Figure 22:** Impact of the assessment tools on nutritional status of the children



Majority (55%) observed that there was no impact while 45% reported of having impact on the early identification and treatment of those at risk.

**16. Effects of insufficient nutritional assessment tools**

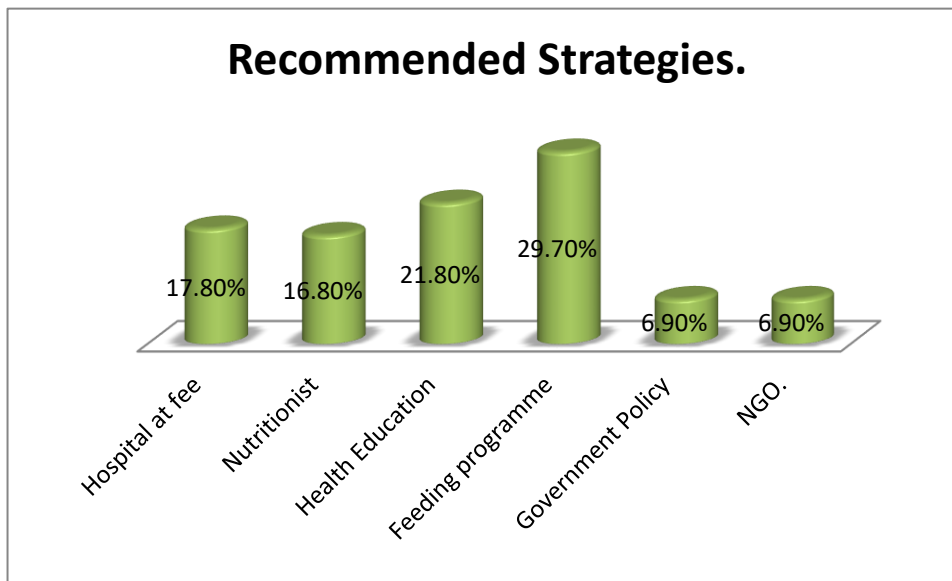
**Table 7:** Effects of insufficient nutritional assessment tools

		Responses		Percent of
		N	Percent	Cases
Effects insufficient assessment tools	Opportunity	36	35.0%	94.7%
	Long Stay	34	33.0%	89.5%
	Retardation	33	32.0%	86.8%
Total		103	100.0%	271.1%

Those who observed that there were insufficient functional tools, majority (35%) expressed that this could lead to having missed opportunities in the identification of those at risk. Other expressed effects included hospital long stay 33% and Growth retardation 32%.

### 17. Recommended Strategies

**Figure 23:** Recommended strategies



Majority of the responses (29.7%) pointed out the need of having a feeding program in the hospital for pediatric ward to assist all those admitted in the ward. Others responses included Health education to the caretaker (21.8%), Hospital to provide food at a fee (17.8%), Employment of a nutritionist (16.8%), while minority (6.9%) recommended that the government to formulate policies on feeding of patients and Non- governmental support in feeding of children in pediatric ward.



## **CHAPTER FIVE**

### **DISCUSSION OF RESULTS**

#### **5.1 Introduction**

This chapter discusses all the analyzed data in the previous chapter and it draws conclusions and gives recommendations which will be adopted as a model for improving the nutritional status of children aged 0-5 years in any health facility in this country.

#### **5.2 Discussion**

Among all the respondents that were interviewed, it was found that the greatest number of children who were hospitalized was of the age group 2-5 years and this accounted for 40% of the total respondents. This was attributed to the weaning effect as this is the age bracket where children are weaned from breast feeding and this could have affected their immune system. This finding is in line with a WHO study done in 2008 which established that children in this age group (2-5years) were hospitalized due to malaria and was associated lowered immune status due to weaning.

Nutrition is best assessed by weight measurement and according to assess the road chart; it monitors a child from birth up to 5 years of age. In my findings therefore, it was encouraging to note that 99% of the children had their weights taken on admission and all their weights were in line with their corresponding ages. The reason as to why the 99% had their weights measured was for the purposes of drug administration and growth monitoring MOH HSP (2012)

Common knowledge has it that boys fall sick more often than girls which means hospital admissions would be dominated by boys but in my study the male to female ratio was 1:1 which disagrees with the findings by Morat (2000) which stated that children who were hospitalized were in the ratio 2:1 for boys and girls respectively. In my study, this was probably because the children faced the same environmental factors that made them succumb similarly to the infections.

The reason as to why the children were well nourished is probably because of the staple foods eaten by these people which includes cassava ,millet ,sweet potatoes, which are accompanied with green vegetables, beans, cereals('lapena'),fish, simsim paste('odii') ,These foods are both rich in proteins and carbohydrates which try to cater for the nutritional requirements of the children.

In my study ,it was found that children were eating about 3-4 times in a day and this cuts across all age groups and this is in line with Buttriss et al (2002) and Hendricks (2002)

While at home it was found that most of the children were fed 3-4 times in a day which included major meals and snacks which helped to keep them healthy. Very few had less than 2 meals in a day. This signified that majority of the respondents were aware of the feeding methods of the children.

While in hospital a majority of the respondents bought food from the eating houses around the health facility while others were bringing food from home and others got from well wishers. These sources of food definitely affected the time and number of feeds a child consumed. The socio-economic status of the parents has a role to play on the number and type of food eaten. This is in line with Parson et al (2008)

It was noted that sickness was the greatest physical factor that contributed to poor feeding patterns as 65% of the children had no appetite for food and 10% could vomit on seeing food and the rest were disinterested in feeding. This is in line with Marteletti et al (2005) and Koen et al (2008).

Among the infants aged 0-4 months ,most of them had exclusive breast feeding and so their nutritional status and feeding pattern was good because breast feeding was cheap, affordable and readily available among all the respondents but the challenge was to feed the mothers so that they have enough milk for the children. However, in Alebtong most of the food combinations taken by children were found to be consisting of carbohydrates, proteins, vitamins and fats as most of the respondents accounting for 46.8% stated that they were feeding on cassava, fish ,beans, millet, green vegetables and odii.

Looking at the economic status of the persons taking care of the children, a majority of them were found to be farmers who practice small scale farming and accounted for 56% and their income was meager compared to the cost of hospitalization where the daily expenditure was above 5000shs and yet a farmer in Lira district earns <5000shs a day and so most of the patients tend to ignore feeding and concentrate on meeting hospital bills.

76% of the respondents did not have cash at hand while only 24% had money at hand and were able to pay their hospital bills, while in hospital 70% of the caretakers did not receive health talk

on nutrition while only 30% received. This was because neither the Doctors nor the Nurses took responsibility for the child's diet.

### **5.3 CONCLUSION**

Having looked at these findings ,generally it has been established that the factors affecting the feeding patterns of children in this hospital is mainly the effect of the illness in which children lose appetite and tend to vomit. Otherwise parents try to provide as much as they can although sometimes they are left with no option but to consider meeting hospital bills before thinking of the child's food since 70% of the caretakers don't have ready money at any one time.

It is also seen that there is a health education gap in the system which is one of the MHCP as per MOH.

It has also been seen that the economic status of the parents has a negative effect on the availability of food to the children yet a weak immune system increases hospital stay.

### **5.4 RECOMMENDATIONS**

#### **To the community**

- The community should be engaged in income generating activities and modern agricultural practices such as NAADS so that they can improve their household incomes.
- The community should be encouraged to seek for healthcare before the disease gets worse to reduce time wasted in hospital caring for the sick.
- Integrate the community into the health system by electing community health workers who help to oversee the general health situation of the village and report early enough e.g VHT's,TBA's and LC's

#### **To the District Stake Holders**

- To allocate more funds to their health facilities and advocate for the addition of more staff to their health facilities.
- To be integrated into the health system as stated in the pillars of PHC.

#### **To the Government**

- To lift the ban so that the MOH can recruit staff accordingly to meet the demands of the country.
- To encourage CBO's and NGO's to assist in providing health services.

## **To the Health Workers**

To emphasize on health education on nutrition

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## QUESTIONNAIRE

### The Research Questionnaires for hospital management staff

Dear Participant,

I am Orec Isaac, an under graduate student of Kampala International University offering bachelors of medicine, and surgery. Am carrying out a study on “Factors contributing to poor feeding patterns among children aged 0-5 years admitted to pediatric ward in Lira Regional Referral Hospital”. You have been randomly selected to participate in this study, and your participation is voluntary. Any information given will be treated with high confidentiality and will be used for the purpose of this study and reference, and shall be used to improve on the results obtained in relation with poor feeding patterns among children.

**N.B: Tick the correct answer and write where necessary.**

1. Age of respondent .....

2. Marital status.

I. Single ☐

II. Married ☐

III. Widowed ☐

IV. Separated/divorced ☐

3. Educational level

I. None ☐

II. Primary ☐

III. Secondary ☐

IV. Tertiary/University ☐

4. Occupation of respondent

I. Peasant ☐

II. Self employed ☐

III. Civil servant ☐

5. On average, how much do you earn in a day?

I.<1000shs ☐

II.2000-3000shs ☐

III.4000-5000shs ☐

IV.>5000shs ☐

6. How much do you spend in a day ?

I. <1000shs ☐

II. 2000-3000shs ☐

III.4000-5000shs

Iv. >5000shs ☐

7.Did you receive health education on nutrition while on the ward ?

I.Yes ☐

II.No ☐

8.Was the child's weight and height measured ?

I.Yes ☐

II.No ☐

9. Tribe of the respondent

I. Lango ☐

II. Itesot ☐

III. Acholi ☐

IV. karamojong ☐

V. Others ☐

10. Religion of the respondent

a) Catholic ☐

b) Protestant ☐

c) Muslim ☐

d) Others (specify) ☐

11. a) Does this child fall sick often?

I. Yes ☐

II. No ☐

b) How often does this child fall sick ?

I. once a month ☐

II. once in three months ☐

III. once in six months ☐

12. Is the child fully immunised?

I. Yes ☐

II. No ☐

13. What are the common foods this child feeds on?

Cassava ☐ Posho ☐ Fish ☐

Millet ☐ sweet potatoes ☐ Beans ☐

Orthers.....



14. For how long did this child breast feed?

I. Six months ☐

II. one year ☐

III. Two years ☐

IV. Not breast fed ☐

15. How many times does this child feed in a day ?

I. Twice ☐

II. Thrice ☐

III. Four times ☐

18. What are your sources of food?

I. Hospital ☐

II. Canteen ☐

III. Relative ☐

19. Has the child's appetite changed since the initiation of treatment ?

I. Yes ☐

II. No ☐

**Thank you for your participation.**