

Evaluation of the impacts of care givers on malnourished children in Ishaka Adventist Hospital

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ABSTRACT

This study was done to evaluate the knowledge, attitude and practices of care givers of malnourished children less than five years in Ishaka Adventist Hospital, Uganda. This was a cross-sectional descriptive study that targeted care givers of malnourished children below five years. Forty two care givers (using fishers' method) were sampled using simple random technique and basing on the inclusion and exclusion criteria stated therein. Data was collected using semi structured questionnaires and data was analyzed using SPSS version 22.1 and was also assisted by excel in drawing charts and figures. During data collection, absolute ethical considerations were followed. 100% response rate was achieved, and the results showed that the majority of participants 20 (48%) were aged 18-24 years and 83% were females and majority of care takers were peasants 37(88%) and surprisingly 30(74%) had never completed primary level. 71% of respondents defined malnutrition as when the child is having a big head and a swollen stomach and a majority 26(62%) mentioned poor hygiene, un safe water, diseases and infection were the causes of malnutrition, good enough majority of them had knowledge on signs of malnutrition, care takers had a mixed attitude about malnutrition and some attributed it to bad lack in the family and majority of the mothers were breast feeding their children. In conclusion, participants had good knowledge and the care takers also had good attitude towards different feeding habits and it was recommended that outreach programs targeting care takers should be emphasized.

Keywords: malnutrition, feeding habits, care takers, infection

INTRODUCTION

Globally, Malnutrition in children is common and results in both short and long term irreversible negative health outcomes including stunted growth which may also be linked to cognitive developmental deficits, underweight and wasting [1; 2; 3]. The World Health Organization estimates that malnutrition accounts for 54 percent of child mortality worldwide, WHO also estimates that childhood underweight is the cause for about 35% of all deaths annually of children under the age of five years worldwide [1, 4].

In Africa, it's estimated that about 20% of the household have got an episode of malnutrition in one of the family members. Malnutrition contributes directly to increased poverty and, in the long term, it can have a negative effect on a country's economic growth of up to 3 percent of annual GDP. Children in poor, indigenous, and rural communities suffer

the worst rates of stunting (low height for age, an indicator of chronic malnutrition) [5, 6].

In East Africa especially Kenya, malnutrition is still a serious public health problem that requires urgent attention. There has been an upward trend, suggesting deterioration over the years. Well thought out and targeted intervention programmes are long overdue [7]. There is a need to emphasize on the importance of having a well-established surveillance system which would ensure necessary and timely action through involving stake holders like mothers and care takers [8, 3].

The population of Uganda is raising and this makes the population less likely to access food to feed the children and entire family. The persistent high rates of malnutrition in Uganda also attest to this reality: 38 percent of children under 5 suffer from chronic malnutrition

(stunting), 16 percent from underweight and 6 percent from acute malnutrition though Uganda has ratified a range of international covenants and committed itself to ending hunger and malnutrition [9].

Taking two broad forms, under nutrition and over nutrition, the under nutrition in children causes direct structural damage to the brain and impairs infant motor development and exploratory behavior. Children who are undernourished before age of two and gain weight quickly later in childhood and in adolescence are at high risk of chronic diseases related to nutrition. Studies have found a strong association between under nutrition and child mortality [10; 3; 8].

Undernourished girls tend to grow into short adults and are more likely to have small children. Prenatal malnutrition and early life growth patterns can alter metabolism and physiological patterns and have lifelong effects on the risk of cardiovascular disease. Children who are undernourished are more likely to have lower educational achievement and economic status, and give birth to smaller infants. Children often face malnutrition during the age of rapid development, which can have long-lasting impacts on health [11].

Once malnutrition is treated, adequate growth is an indication of health and recovery. Even after recovering from severe malnutrition, children often remain stunted for the rest of their lives. Even mild degrees of malnutrition double the risk of mortality for respiratory and diarrheal disease mortality and malaria. This risk is greatly increased in more severe cases of malnutrition [12, 8].

Problem statement

Globally, a recent analysis that compared different causes of mortality and morbidity showed that maternal and child malnutrition is the single leading cause of health loss worldwide [13]. Furthermore, the consequences of inadequate Infant and Young Child Feeding remain a common health problem usually most prevalent between 6-24 months, and one of the major underlying causes of morbidity and mortality in children of

developing countries with a direct and indirect contribution of up to 60% of child mortality reported in developing countries [14].

The burden of childhood malnutrition is significant globally, out of 555.729 million under five children population; 32% are stunted, 3.5% are severely wasted and 20.2% are underweight [15; 4]. Malnourished children experience developmental delays, cognitive impairment, weight-loss and illness as a result of inadequate intake of protein, calories and other nutrients [16; 6].

On Africa's continent, out of about 141.9 million under five population; 40% are stunted, 3.9% are wasted and 21.9% are underweight yet also it has been indicated that Inadequate Infant and Young Child Feeding practices are a major risk factor associated with childhood malnutrition; catalyzed by poverty, ignorance and lack of knowledge about balanced diet especially in developing countries of Africa [17, 8, 4].

In East Africa, Nutritional studies have been reported more frequently in countries like Kenya with the prevalence of stunting among children aged 6-59 months being 47%, and the prevalence increasing with age through 36-47 months (58%), Severe stunting was found in 23.4% of the children. Stunting peaked (56%) in children aged 36-47 months, and compared to other age-groups, stunting was significantly ($p < 0.01$) more likely in children aged 36-47 months.

A similar proportion (51.3%) of males were stunted as females (48.7%) with a stunting rate of 34.6%, under weight of 26.5%, and wasting of 6.2% among children aged five and below. In the same study, most (89.3%) caregivers reported that they were experiencing food shortages. Families dealt with food shortages by reducing the amount of food eaten (52%) and eating less-expensive food (39%) [18].

In Uganda, Childhood malnutrition has been reported to be one of the highest diseases among the developing countries and still affects over 2 million Ugandan children under the age of five years [19]. In Uganda, 33% of children aged five years

and below are stunted, 14% are underweight 5% are wasted, 250,000 children aged five and below suffer from acute malnutrition with 360 million in this age group dying daily from conditions like diarrhoea, anemia and respiratory infections. Preventative and Nutritional intervention could save at least 120 of these children daily. Majority (94%) of Infant and Young Child (6-24months) receive inappropriate complementary feeding hence a critical underlying factor to a high prevalence rate of under nutrition [20].

In Ishaka Adventist hospital, the records office indicated that malnutrition and Severe acute malnutrition (SAM) in particular is a problem in the area [21] monthly Reports. It's on this basis that the researcher decided to carry out the research to assess knowledge, attitude and practices of caretakers of malnourished children under five years towards malnutrition in Ishaka Adventist hospital.

Aim of the study

To assess knowledge, attitude and practices of caretakers of malnourished children under five years of age in Ishaka Adventist hospital

Specific objectives

The research was guided by the following specific objectives:

- i. To assess the level of knowledge of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.
- ii. To assess attitude of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.
- iii. To determine the practices of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.

Research questions

- (i) What is the level knowledge of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.
- (ii) What are the attitudes of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.

- (iii)What are the practices of caretakers of malnourished children under five years of age in Ishaka Adventist hospital.

Justification of the study

The statements below formed the justification of the study:

Malnutrition can be prevented using simple interventions and yet is estimated to contribute to more than one third of all child deaths globally, it has been proposed that, Lack of access to highly nutritious foods, especially in the present context of rising food prices, is a common cause of malnutrition. Poor feeding practices, such as inadequate breastfeeding, offering the wrong foods, and not ensuring that the child gets enough nutritious food, contribute to malnutrition. Infection - particularly frequent or persistent diarrhea, pneumonia, measles and malaria - also undermines a child's nutritional status also contribute to malnutrition [21]. The following point further justifies the study.

- (i) There is urgent need to understand if mothers and care takers know the causes of malnutrition, furthermore their attitude and practices toward malnutrition need to be urgently known if this killer disease is to decrease in our population.
- (ii) This study will help to create awareness to the district health leaders, health care providers and community about the knowledge, attitude and beliefs of mothers so that best suited approaches to prevent malnutrition can be implemented.
- (iii)The findings will contribute to existing literature on Knowledge, attitude and practices of caretakers towards malnutrition among children under five years of age in Ishaka Adventist hospital and to the community.
- (iv)Furthermore, will help the researcher to fulfill the academic requirements of the award of diploma of nursing of UNMEB.
- (v) There is evidence that countries with a high burden of malnutrition

have slow economic progress and malnutrition affects development in terms of education and productivity (mothers support project 01/01/2013, New vision

05/10/2013) hence this research will act to supplement implanters of national economic guideline in making informed decisions about health.

METHODOLOGY

Study design and rationale

A descriptive cross-sectional design was used for this study as it aims at determining the knowledge, attitudes and practices at a specific point in time. Primary data was collected from care givers using semi structured questionnaire and there was no follow ups to these care givers thus making the study design cheap.

Study area

The study was conducted in Ishaka Adventist hospital. It is located in Bushenyi-Ishaka municipality-Bushenyi district in western Uganda. The hospital is about 365 kilometers from the capital city of Uganda, Kampala.

The hospital is a church founded serving people from about 10 rural and surrounding districts. It's here that most children are referred to. The hospital has a special ward for people living with HIV and AIDS as these children are normally malnourished and receives about 20 patients daily below age of 5 with various conditions.

Study population

The study population was among all care givers of malnourished children below 5 years attending Ishaka Adventist hospital.

Sample size determination

Samples size was determined using a statistical formula adapted from Fishers given by:

$$n = \frac{z^2 pq}{d^2}$$

Where:

n= Number of samples required

Z= 1.96(95% confidence interval)

P = is the proportion of care givers whose knowledge, attitude and practices towards malnutrition is known.

q= 1-p

d= is the degree of precision required

when d= 15 % (0.15), p= 50 % (0.50)

n= $\frac{(1.96)^2 \times 0.50(1-0.50)}{(0.15)^2}$

n = 42 care givers were involved in the study. The sample size was low since the stated degree of precision is low, and the fact that the time and content scope are low then the sample size is low as above.

Sampling procedure

Simple random continuous method was used to recruit care givers in the study at OPD and Random sampling technique was used to select care givers who are admitted on ward. In simple random continuous method, the first care giver was sampled and then 4th and so on at intervals of four as they came in at OPD. In the ward, folded papers were used written on yes and no and put in a box from which those care givers that picked yes participated in the study.

Inclusion criteria

- (i) Care givers who were able to give informed consent.
- (ii) Care givers of malnourished children below five years.

Exclusion criteria

- (i) Care givers who did not give consent.
- (ii) Care givers with children not in specified age range and whose child was not malnourished.

Definition of variables

- (i) Independent variable is malnutrition.
- (ii) Dependent variables are Knowledge, attitude and practices of mothers towards malnutrition nurses.

Research instrument

The research used questionnaires that included open ended questions, structured and closed ended questions, this helped the care givers to give their views openly towards their knowledge, beliefs and practices towards malnutrition. It was also made in sections that is A, B, C and D. The participation was done by filling these questionnaires by the care givers of malnourished children below five years. A 4- point Likert Scale using items rated as "strongly disagree", "disagree", "agree", and "strongly agree" was used to measure

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beliefs. Knowledge and practices were measured by closed and open-ended questions according to WHO.

Data collection procedures

Data management

Caregivers were interviewed using questionnaires prepared. The care givers were given adequate time to read and understand the questions before answering them those that didn't not know English, the researcher translated the questions in local language. After collecting data successfully, the researcher carried out other two activities i.e., editing and coding. These were aimed at reducing unnecessary information into manageable proportions and summaries to facilitate the presentation and analysis of data.

Data analysis

Data was electronically analyzed using a computer program statistical package for social sciences (SPSS) version 20.1 and excel was also used for some forms of data analysis. The results were summarized and displayed into tables, graphs and pie charts. This gave way for other methods of data presentation including but not limited to descriptive discussion.

Pre-visiting visiting

Prior to the study, the researcher visited the hospital after obtaining permission from school of nursing to allow collect data. Permission was also obtained from the hospital administrator at Ishaka Adventist hospital to be able to access the premises and the care givers. This helped

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the researcher to establish rapport with the care givers and helped the researcher get oriented to the hospital especially the wards and the nurses handling these care givers.

Pre-testing

The research instrument was pre-tested for validity and reliability on a tenth of sample size on caregivers attending Kampala international university teaching hospital (KIU- TH). This is because KIU-TH has similar characteristics like those of Ishaka Adventist hospital.

Editing

While in the field, editing was done to check for accuracy and completeness of the data this ensured quality of collected data.

Coding

Post-coding was done by assigning code numbers to responses on a summary sheet to aid data entry and analysis.

Ethical Consideration

Approval was sought from KIU-SONS-Research committee. After approval of the proposal, the researcher presented it together with introduction letter to the hospital administrator to seek permission. Then proceeded to the wards and OPD for data collection. Respondents were assured of confidentiality regarding the researched information and their consent forms were obtained after a thorough explanation of the topic including the objectives and the outcomes before engaging them. Participation remained voluntarily throughout the study.

RESULTS
Care giver's bio data
SOCIO DEMOGRAPHIC

Table 1: Showing the distribution of age of care givers of the malnourished children.

Age Category(years)	Frequency(N)	Percentage (%)
Below 18	5	12
18-24	20	48
25-35	15	36
Above 35	2	5
Total	42	100
Gender		
Females	35	83
Males	7	17
Total	42	100
Occupation		
Peasant	37	88
House wife	4	21
Business woman/man	1	5
Total	42	100
Education level		
Never completed primary	30	74
Completed primary	7	21
Completed secondary	2	5
Completed university	0	0
Total	42	100
Marital status		
Married	26	62
Divorced	2	5
Separated	10	24
Single mother/father	4	10
Total	42	100

According to the results from the table: Majority of the respondents were between ages 18-24, 20(48) and the least were below the age 18,5(12).

The gender according to results in table 1, the majority 35(83%) were female and the least 7(17%) being males.

According to the results in the table 1, majority of the respondents were peasants 37(88%) and the least 1(5%) being business women/men.

Results according to the table, majority of the respondents 30(74%) never completed

primary and the least 0(0%) completed University.

Results in the table show marital status that the majority 26(62%) were married and the least 2(5%) were divorced.

Care giver's Knowledge towards malnutrition

Table 2: Showing definition of malnutrition

Definition	Frequency(N)	Percentage (%)
Child having poor nutrient status	05	12
Children who cry a lot of hunger	04	10
Children having large head and swollen stomach	30	71
I don't know	03	7
Total	42	100

71 % of Care takers defined, malnutrition as when a child is having large head and swollen stomach, 10% as a child who cry a

lot of hunger,12% as a child having good nutrition requirement.

Table 3: Causes of malnutrition

Responses	Frequency	Percentage (%)
When the child is exclusively breast feed for the first 6 month	5	12
Poor hygiene in preparing the child food, poverty, unsafe water, disease and infections	26	62
When the child is eating too much	6	14
I don't know	5	12
Total	42	100

Majority of respondents 26(62%) indicated that malnutrition is caused by Poor hygiene in preparing the child food, poverty, unsafe water, diseases, and infections, 6 (14%) respondents said it's

when the child is eating too much,5 (12%) said it's when the child is exclusively breast feed for the first 6 month.12% didn't know at all.

Care takers knowledge on signs and symptoms of malnutrition
Table 2: Showing knowledge of care takers on signs and symptoms

Sign and symptom	Frequency	Percentage (%)
The skin may become thin, dry and inelastic	21	50
Longer time for recovery from infection and illness	08	19
Repeated vomiting	04	10
In ability to eat	09	21
Total	42	100

21(50%) of the respondents said the skin may become thin, dry and inelastic, 9(21%) said inability to eat, 19%

longer time for recovery from infection and illness, 10% said repeated vomiting as also illustrated in the figure below.

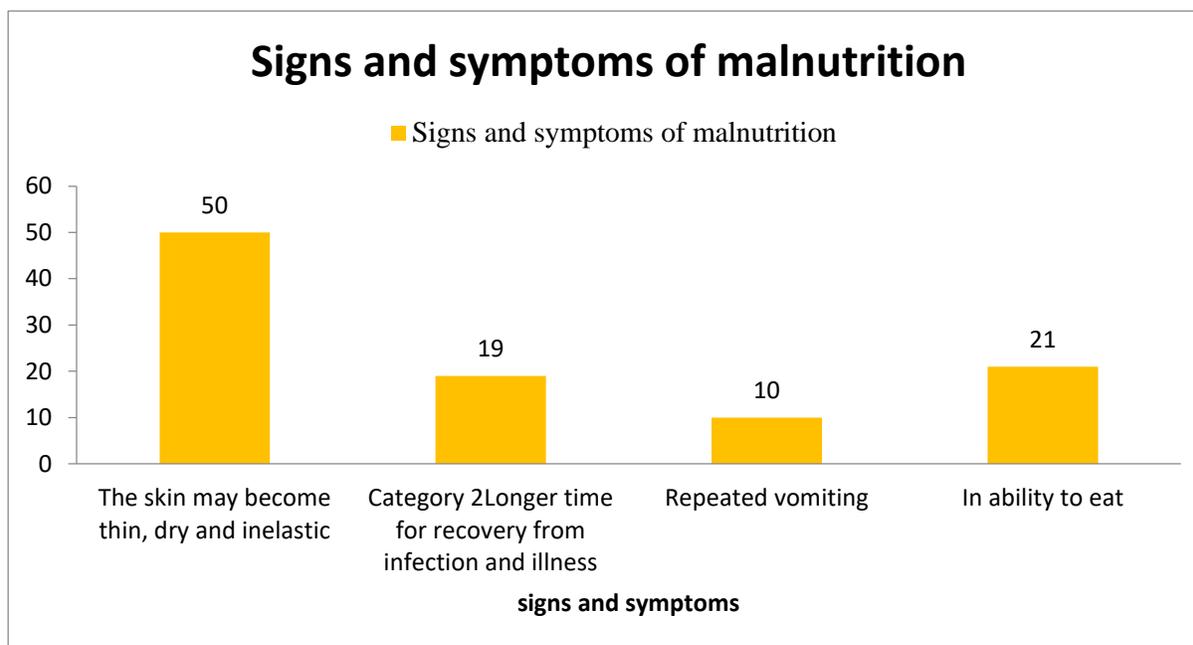


Figure 1: signs and symptoms of Malnutrition

Similarly, significantly it can be seen that, 21(50%) of the respondents said the skin may become thin, dry and inelastic, 21% said inability to eat, 19% longer time

for recovery from infection and illness, 10% said repeated vomiting as also illustrated above.

Table 3: Breast feeding related knowledge

Aspect of Knowledge	Frequency(N)	Percentage (%)
Appropriate time to initiate breast feeding Soon after birth	35	83
One day	2	5
One month	0	0
No idea	5	12
Total	42	100

Care takers were asked about appropriate time for initiation of breast feeding and

majority 35(83%) said soon after birth and minority 05(12%) had no idea.

Table 6: General knowledge about feeding related habits

Knowledge prompt	Frequency(N)	Percentage (%)
Duration of exclusive breast feeding 6 months.	8	19
One year	10	24
2-4 month	5	12
I don't know	19	45
Total	42	100
Benefits of colostrums Has more nutrients	30	71
Gives the baby defense against diseases	10	24
Don't know	2	5
Total	42	100

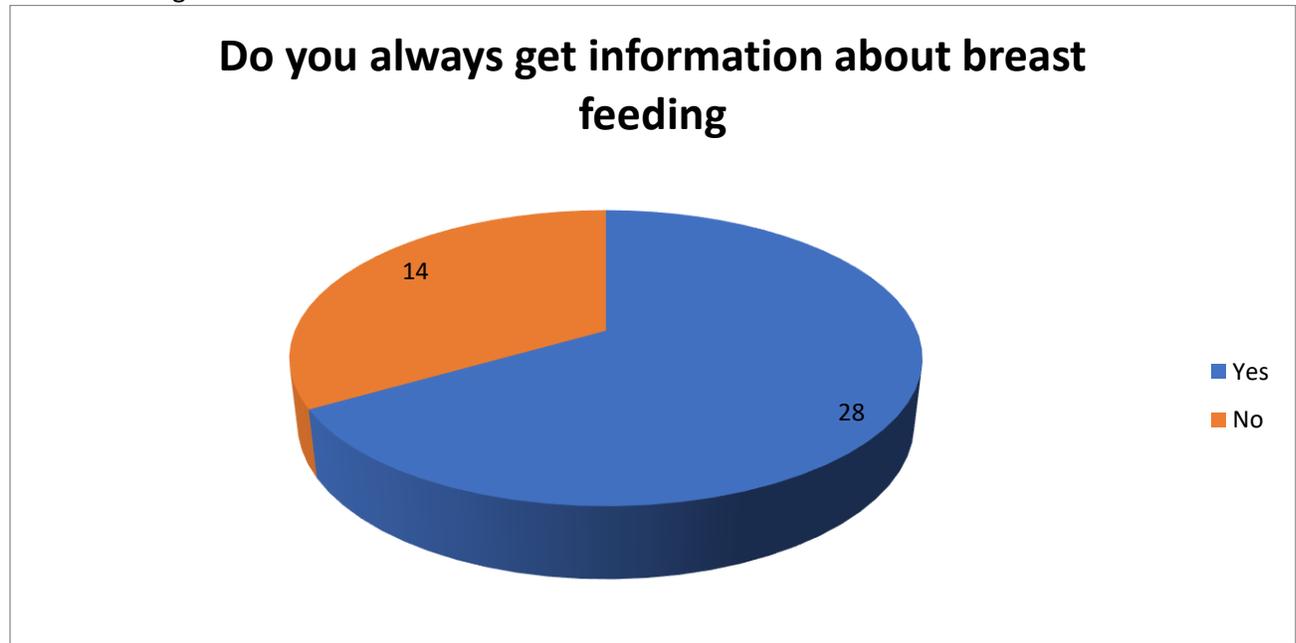


Figure 2: Information about breast feeding

According to the figure 1 above, majority of the respondents 28(67%) said Yes and 14(33%) said No. This

indicates that most of respondents had knowledge about breast feeding.

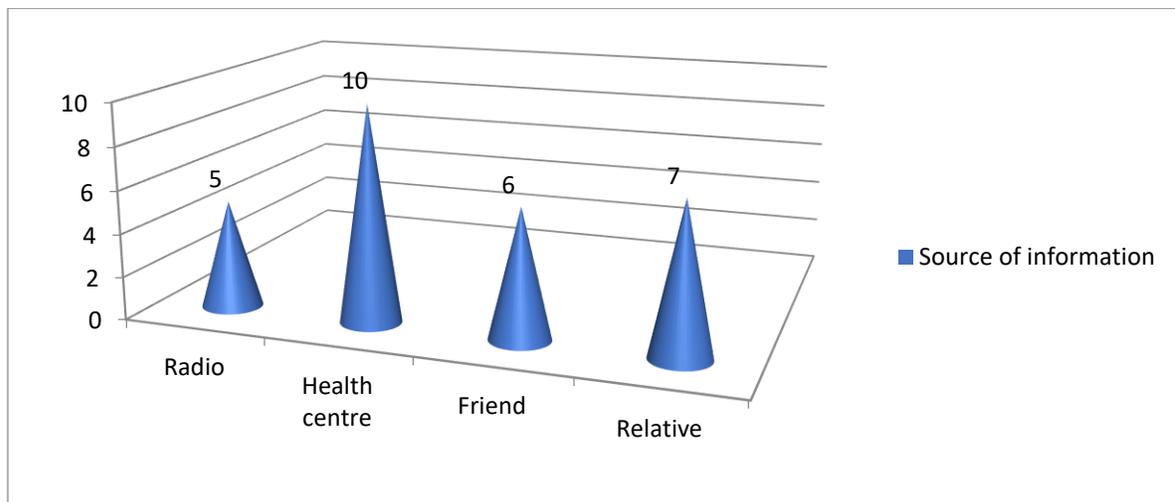


Figure 3: source of information.

According to the figure 2 above, Majority of the respondents 10(36%) got their information from the health centre and the least respondents 5(18%) got their information from the radios. This showed that majority of respondents got information which was adequate.

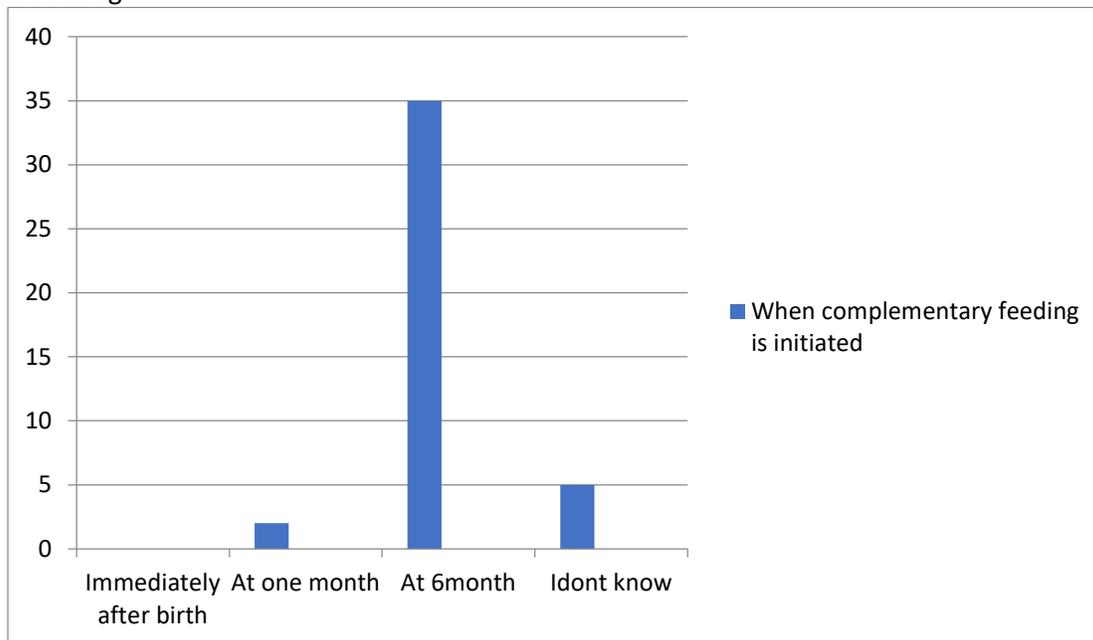


Figure 4:Time of initiation of complementary feeding

According to the figure 4 above, majority of the respondents 35(83%) initiated complementary feeding at 6months and the least respondents 0(0%) initiated complementary feeding immediately after birth. This showed that most of the care takers knew when to initiate complementary feeding.

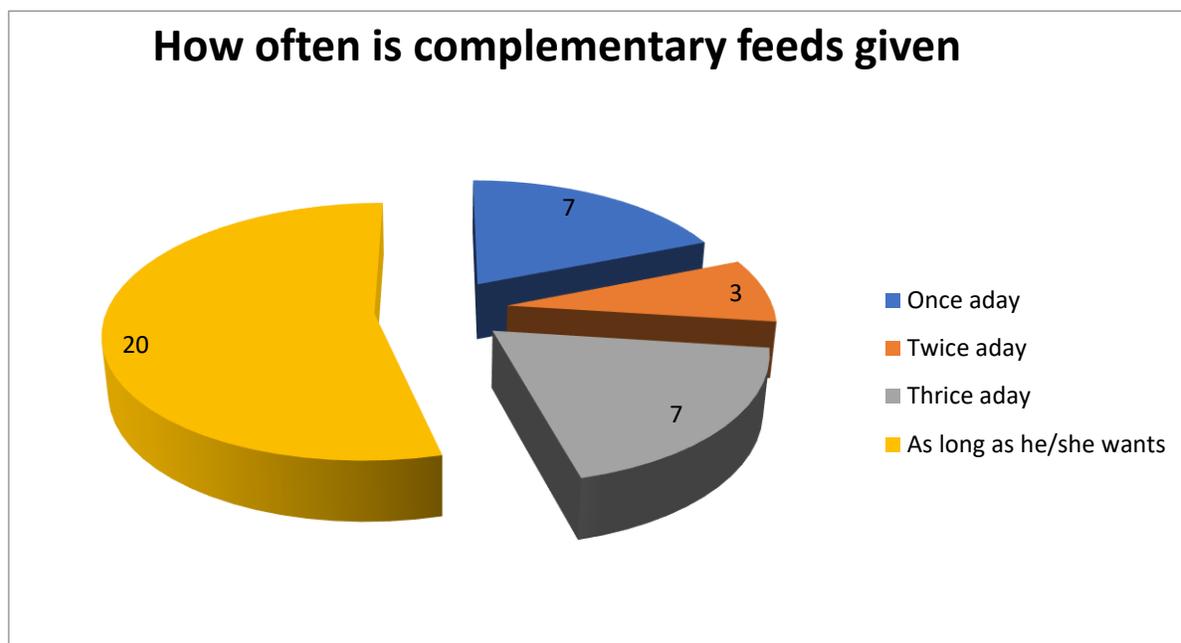


Figure 5: How often is complementary feeding.

According to the figure 4 above, majority of the respondents, 20(54%) oftenly gave complementary feeds as long as the child wanted and the least respondents 3(8%) oftenly gave complementary feeds twice a day.

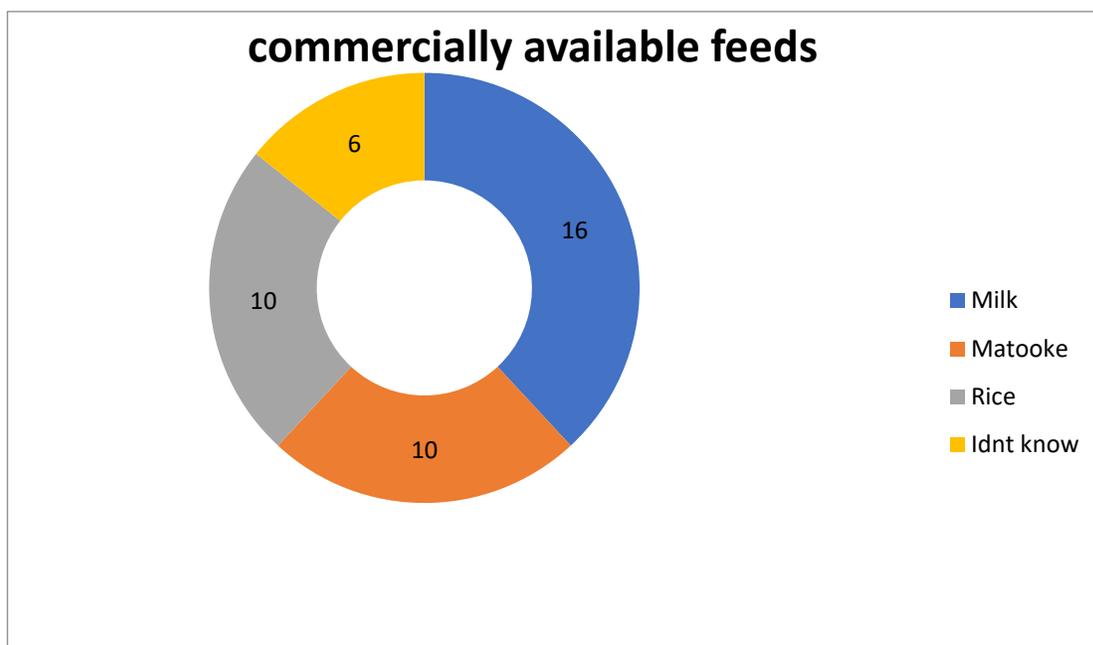


Figure 6: Commercially available feeds.

According to figure 6 above, majority of respondents, 16(38%) knew cow’s milk as their commercial feed, 10(23%) respondents knew matooke, 10(23%) respondents knew rice and 6(14%) respondents didn’t know anything.

Table 7: Attitudes of caregivers towards malnutrition.

Variable	Strongly agree	Percentage (%)	Agree	Percentage (%)	Disagree	Percentage (%)	Strongly disagree	Percentage (%)	Total
It is important to breast feed for extended period of time for malnourished child	20	48	10	24	05	12	07	17	42
It’s important to continue breast feeding when the baby is sick/malnourished	30	71	05	12	04	10	03	07	42
Breast feeding a malnourished baby is important for his/her healthy	33	79	06	14	01	12	02	05	42
Breast feeding stops me from having sex with my husband	05	12	08	19	15	36	14	33	42

Complementary feeding for malnourished child is hard to prepare and makes me like breast feeding more	16	38	04	10	08	19	14	33	42
Breast feeding is not in line with the culture	02	5	01	2	19	45	20	48	42
Malnutrition is caused by other conditions other than diet	20	48	07	17	03	7	12	29	42
I cannot breast feed my baby because it makes my breasts sag	05	12	05	12	15	36	17	40	42
Malnutrition is caused by bad lack in the family	15	36	18	43	07	17	02	5	42
I prefer home made to commercial complementary feeds	22	52	10	24	08	19	02	05	42
I don't like this child especially feeding him/her	02	05	05	12	22	52	13	31	42
Breast feeding the malnourished child is inconvenient, embarrassing, and adverse to mothers' figure	07	17	03	07	10	24	22	52	42

Most of the care givers had a modest attitude towards malnutrition and feeding related matters, 20 (48%) said it's important to breast feed for extended period of time for malnourished child and also a majority of respondents 30 (71%) said it's important to continue breast

feeding when the baby is sick. And majority of the care givers agreed that breast feeding malnourished babies is important. However, 15 (36%) of respondents said that malnutrition is caused by bad luck in the family.

Table 8: Practices of care takers towards malnutrition

Practice	Frequency	Percentage (%)
Breast feeding mothers	32	76
Non breast-feeding care takers	10	24
Total	42	100

From the table above, it can be seen that a majority of care takers admitted that their children were breast fed 32(76%) and

10(24%) said their children were not breastfed.

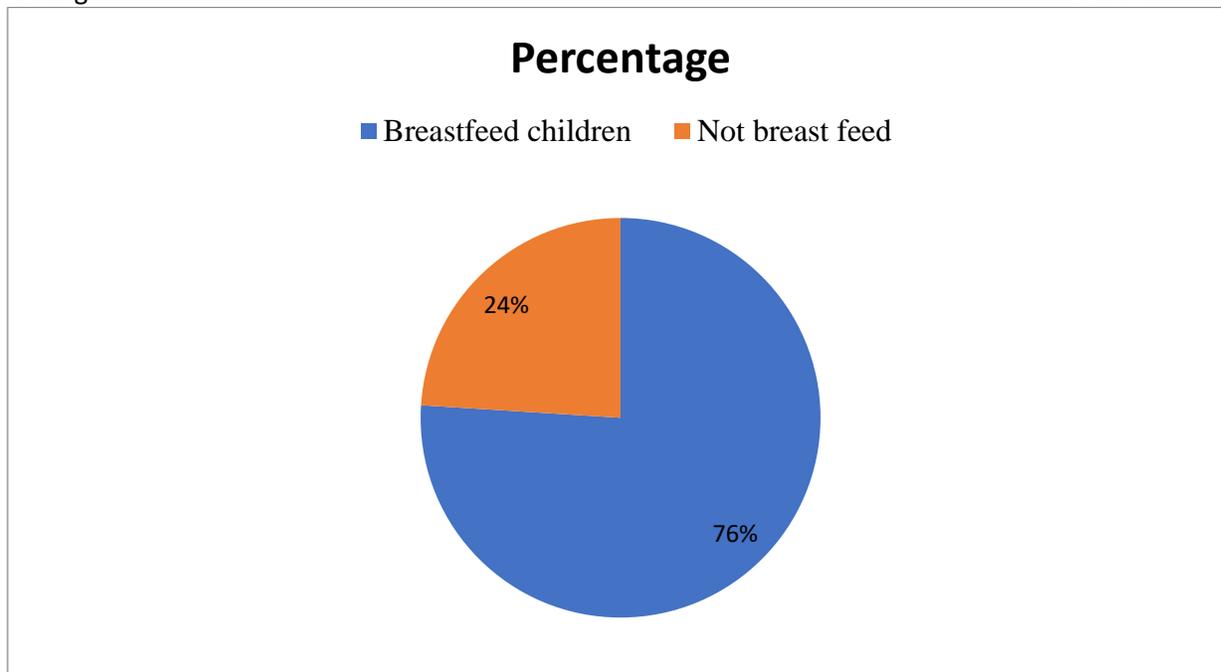


Figure 7: Breastfeeding practices

From the chart above, it can be seen that a majority of care takers admitted that their children were breast fed 32(76%) and

10(24%) said their children were not breastfed.

DISCUSSION

Care takers bio data

From the table 1 above of chapter four, the majority, 48% are between 18-24 years, while there were few care takers above the age of 35 year (5%). This is a category of youth in which most probably most of these care takers have not acquired enough and necessary knowledge to take care of their babies, Table 1 shows that majority of care takers were females 83% while males were few 17% this shows low involvement of female gender in fighting against malnutrition this results are in agreement with Jemide *et al*, [15] who also demonstrated that few males were able to participate in caring for malnourished children.

The majority of care takers were peasants 37(88%) while 1 care taker was a business woman (2%), the peasants are from the village areas as quoted by most care takers in this group as “*I come from the village*” when they were asked about their address, as reported by Ambadekar *et al*, [1] rural care takers hence their children are at an increased risk of malnutrition.

Majority never completed primary level 30 (74%), while none of the participants had completed university. Education level could have contributed to the malnutrition as reported by [16]. From the results, it is seen that most of the participant were married 26 (62%). However, it was not clear whether marital is connected to malnutrition, and this could be an area of future research.

Care takers knowledge about malnutrition

Majority of 30 care takers with a percentage of 71% on table 5 said malnutrition during child hood is when the child is having large head and swollen stomach, having weight loss and not having proper body nutritional requirements. This is line with WHO [22], which define malnutrition in children as a condition that develops when the body does not get the right proportions of food nutrients during child hood. Base on the data analysis on the causes of malnutrition in children, 26 mothers with majority percentage of 62% said child’s malnutrition is as a result of poor

hygienic condition is preparing the child's food, poverty, unsafe water diseases and infections.

This is in line with Sahu *et al.*, [23], who said diseases, poor hygienic condition, and poverty unsafe water can lead to malnutrition in children. On the definitive signs and symptoms of malnutrition, 21 mothers with majority of 50% said signs and symptoms of malnutrition in children include, skin may become inelastic, longer time for recovery from infection and illness. This is in line with Rahman *et al.*, [24], who said, inadequate food intake or consumption of non-nutritious food will lead to reduced muscle mass.

Ekambaram *et al.*, [12] study reported that the knowledge of the mothers was inadequate in areas of time of initiation of breastfeeding (92%) however our study shows that 83% of care takers had the right knowledge of initiation of breast feeding. However 45 % of respondents did not know the duration of exclusive breast feeding which we could partly associate with malnutrition in their patients which results are in agreement with Mohsin *et al.*, [25] study Which found out that 62% which was the majority, listed Poor hygiene in preparing the child food, poverty, unsafe water, diseases, and infections however these results are slightly diverging from those of Jemide *et al.*, [15] who in their study identified lack of nutrients, sickness, improper care and diseases and maternal knowledge on malnutrition and care of children as the causes of malnutrition.

According to Ambadekar *et al.*, [1] study showed mothers had different knowledge about complementary feeding and the time of initiation of complementary feeding. Some mothers knew it should be at least thrice a day, fifty-one (37%) considered twice a day was enough. The study revealed that majority 83 % knew that complementary feeding should be initiated at 6 months however it seemed that mothers did not know various foods to use for complementary feeding, most 10 mothers with 24% and 12(29%) said malnutrition in children had caused poor growth and loss of appetite

respectively in their children, these were the highest responses from the majority, such results were also reported by Olack *et al.*, [26] who in addition to these found in our study said mothers had knowledge that they had even identified that malnutrition had caused a reduction in the body immunity of their children and anemia (yellowing of eyes) and death. It therefore seemed that mothers in this study had basic knowledge about the diseases.

Attitude of care takers towards malnutrition

The results showed that 20 (45%) of the respondents strongly disagreed that breast feeding was against their culture and this results did not match Sriram *et al.*, [27] study in which mothers had reported that "breast feeding is not in line with the culture" this probably is because the two studies are done in different populations with different characteristics and cultural norms and the fact that our participants are from western part of the country where breastfeeding is not a cultural taboo. This illustrates a positive attitude in mothers to feed their children. However, 33% strongly disagreed that demand for sex was most likely to stop them from feeding their babies [28, 29, 30, 31, 32].

From table 10, (15)36% of respondents strongly said that malnutrition is caused by bad lack in the family and this could probably be the reasons why some care givers were seeking alternative care as the first intervention as seen in table 11. According to Dereje, [11] mothers did not have better attitude in selection of food items from different groups of food and this could have prevented mothers and care givers to feed on only few food stuffs. Attitude of mothers towards feeding during illness was also found to be varied as reported by Dereje, [11].

Similarly, as reported by Rahman *et al.*, [24] that mothers had poor attitude on different complementary foods to be given to the child, results showed that there was a tendency of mothers to prefer few homemade foods. Few commercial feeds were reported as the participants

were from the villages. Contrary to Megabiaw and Rahman, [20], 31% (13) of the mothers had positive attitude of feeding the malnourished children.

Zhou *et al.*, [28] shown that care givers of malnourished child had negative attitudes and beliefs towards breast feeding as it was inconvenient, embarrassing, and adverse to mothers' figure negatively influenced breast feeding. And care givers mentioned that they found bottle feeding a better option for feeding the malnourished children who were contrary from the results of this study (table 10), mothers generally had a good attitude towards their malnourished children

Practice of mothers toward malnutrition

The majority of mothers were breast feeding their children which leaves a question why these children were malnourished, maybe it could be due to other inborn infections that predisposed the children to malnutrition, a question that is left for future research. The results also showed that a group of care takers went for traditional herbal medicine as the initial step in management of malnutrition (table 11) could have worsened the disease as it was noted during the data collection.

Severe malnutrition was found in the uneducated class and youth age group stated earlier in bio data, this could have been because these care takers are not aware of best alternative food that could prevent malnutrition such results were also reported by [19] who showed that

CONCLUSION

From the data analyzed, it can be concluded that;

- (i) Majority of the study participants understand the causes of malnutrition in children 0-5 years.
- (ii) Majority of the mothers did not understand the signs and symptoms of malnutrition in children well 0-5 years.
- (iii) Majority of the study participants understand the definition malnutrition in children 0-5 years.
- (iv) Care takers of malnourished children had good attitude towards the disease and participation in care for their children

educations levels, times spent at home with the child were found to be low in the respondents who children with malnutrition. The relationship of gender of care taker and child malnutrition was not established which also forms a base for future research

It was seen that a few 08 (19%) of care takers took their children for routine medical checkup, a factor that could have accelerated the prevalence of malnutrition. This was seen in the illiterate class as was earlier reported by De Onis *et al.*, [10] who reported that "employment status of the family is important predictor of malnutrition, the risk of underweight and stunting was higher among children of illiterate mothers and children from lowest and middle households wealth index".

Some participants first sought health care from health centers at home and the fact that our health systems are not yet stronger the mothers could have missed best medical innervations that resulted into malnutrition, strengthening health centers even through VHT are important especially in rural areas. Poor access to health care including vaccinations and curative care which subsequently may put rural children on chronic and/or repeated illnesses [1]. According to Rahman *et al.*, [24] study, mothers seeking medical services during pregnancy and attending antenatal clinic was found to be better sources of information that enhanced better nutrition status of the children.

Recommendation

Recommendations have been presented as per objectives

Objective one:

- (i) Through village health teams and ANC, there is a need to put more emphasis on health talks with effects of malnutrition in children 0-5 years being the top priority so as to enable the care takers to know more about the effects, causes, signs and symptoms and the prevention of malnutrition in their children.
- (ii) Outreach campaign programmers should be organized constantly in

order to educate the mother more on the effects and prevention of malnutrition in children 0-5 years. Also, emphasis should be laid to mother on exclusive breast feeding from 0-6 months of a child since breast milk contain all the nutrients that a child need in order to grow healthy.

Objectives two:

As stated above, through outreach programmes and ANC visits the attitudes of mothers should be influenced so that in case a mother get a malnourished child goes and seeks immediate and proper medical care to avoid associated complications.

Objective three:

It's also recommended that, nurses attending to these care givers should

emphasis Family planning and Income generation activities.

The government should increase safe water coverage.

VHTs should get involved support care givers in villages to identify this illness before they are complicated.

Areas of future research

The researcher has identified the following areas as potential for future research

- (i) Outcome of patients admitted with malnutrition aged 5 years and below
- (ii) The roles of VHTs in fighting against malnutrition
- (iii) The impact of community outreach programs on malnutrition.
- (iv) Causes and risk factors of malnutrition among rural residents in selected sub counties in Uganda.

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