

**FACTORS THAT CONTRIBUTE TO OCCURRENCE OF MALNUTRITION AMONG
CHILDREN BELOW FIVE YEARS IN PEDIATRIC WARD**

ITOJO HOSPITAL, NTUNGAMO DISTRICT,

UGANDA

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ABSTRACT

The study was aimed at assessing the factors that have contributed the occurrence of malnutrition among children below five years in pediatric ward Itojo hospital, Ntungamo District, Uganda. The specific objectives of the study were; to find out demographic factors that contribute to occurrence of malnutrition, assess socio-economic factor that contribute to occurrence of malnutrition and to describe the cultural factors that contribute to occurrence of malnutrition. A descriptive cross-sectional study design was used where both qualitative and quantitative methods were applied. This was used to get information from 100 mothers records from Itojo Hospital of children diagnosed with malnutrition under the age of five years from Ntungamo district and simple random sampling was used. The study consider only mothers who had children below 5years of age and those of children with more than 5 years were not considered. And the data was collected using a questionnaire and analyzed using Microsoft Excel to come up with graphs, pie-charts and tables.

The study findings revealed that mothers' age at birth has a great impact on the health of the child. Malnutrition and stunting as the study indicates that 42% of the mothers with malnourished children were aged between 25 – 29 years. Findings further indicate that occupation of the mother had a great impact of the malnutrition of the child as more than a half 56% of the mothers with malnourished children were casual laborers and 20% were peasants. The socio-economic status of the mothers / family was found to be the major factor determining malnutrition of children. It was found out that mothers who are educated with good jobs, have much knowledge about the nutrition of mothers during pregnancy, have good health seeking behaviors and vice versa. Cultural beliefs were also reported to have an impact on the malnutrition of the children as there are some foods that mothers were not allowed to eat due to

different perceptions which lead to malnutrition in mothers and giving birth to malnourished children and some mothers still giving birth from homes by the help of the TBAs. Mothers sanitation was poor 18% had no toilets at home, 21% never washed their hands after visiting the toilet/ latrines. 44% did not hands before feeding the baby. The study concluded by recommending government and health workers should sensitive people about the importance of immunization since it was found out that some people still have poor perception about immunization. The government should and the area health inspector should enforce a toilet/ latrine in every household.

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DECLARATION

I, **TUMUHEKI DARIUS**, hereby declare that this research report is my original hand work and has never been submitted to any institution for any award.

Signature

Date

Tumuheki Darius

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AUTHORIZATION

The research report entitled “**factors that contribute to occurrence of malnutrition among children below five years in pediatric ward Itojo Hospital, Ntungamo district, Uganda**”, has been compiled by **Tumuheki Darius** under supervision and authorized for submission to **UNMEB** for examination purpose for the award of diploma in nursing science.

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DEDICATION

I dedicate this book to my beloved parents **Mr. Rukundo Caleb** and **Mrs. Kemigisha Enid** for their tires efforts to grant me education and good moral upbringing.

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First and foremost, I praise and thank **God**, for blessing me complete my task successfully.

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LIST OF ABBREVIATIONS

AIDS	Acquired immune deficiency syndrome
FMOH	Federal Ministry of Health
HIV	Human immunodeficiency virus
IMCI	Integrated Management of Childhood Illness
MOH	Ministry of Health
MDG	Millennium Development Goals
RUTF	Ready-to-use Therapeutic Feeds
UDHS	Uganda Demographic Health Survey
UFNP	Uganda Food and Nutrition Policy
UNICEF	United Nations Children Emergency Fund
WASH	Water, Sanitation and Hygiene
TBA	Traditional Birth Attendants

CHAPTER ONE

INTRODUCTION

This chapter includes back ground of study, problem statement, General Objective specific objectives, research questions and justification.

1.1 Background of the study

Malnutrition in children is common globally and results in both short and long term irreversible negative health outcomes including stunted growth which may also be linked to cognitive development deficits, underweight and wasting (Musaiger et al., 2011).

Another estimate also by WHO states that childhood underweight is the cause for about 35% of all deaths of children under the age of five years worldwide (Uganda MOH, 2013). The World Health Organization clarifies that prevalence of chronic malnutrition (stunting) among children in the poorest urban 20% households in Africa, Asia and Europe are more than twice as high, and in the Americas four times as high, as their richest 20% counterparts. Just like in Africa, malnutrition in South America 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) in South America. If malnutrition sets in before a child turns two years old, as is predominantly the case, the consequences are irreversible (Manary et al, 2013).

According to Totin et al (2012, p.428), there are three commonly used measures for detecting malnutrition in children: stunting (extremely low height for age); underweight (extremely low weight for age); and wasting (extremely low weight for height). These measures

of malnutrition are interrelated, but studies for the World Bank found that only 9 percent of children exhibit stunting, underweight, and wasting (Black et al, 2008, p.246). Children with severe acute malnutrition are very thin, but they often also have swollen hands and feet, making the internal problems more evident to health workers. Children with severe malnutrition are very susceptible to infection.

Malnutrition is still a serious public health problem in Kenya and requires urgent attention. The problem since the first survey in 1977 shows an upward trend, suggesting deterioration over the years. Well thought out and targeted intervention programmes are long overdue. There is a need to emphasize on the importance of having a well-established surveillance system which would ensure necessary and timely action (Ngure et al, 2012).

Malnutrition is a facet of poor nutrition and costs the UK alone up to £7.4 billion per year. Estimates vary, as methods for detection are not standardized. But the prevalence of malnutrition is undeniably high: up to 40% of patients of all ages are malnourished upon admission to hospital. Certain groups are particularly at risk: older people, patients with cancer, renal disease, chronic heart failure and patients who have had surgery. In all clinical and community settings and across the population, malnutrition is severely unrecognized (World Bank, 2014).

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 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 undernutrition and child mortality (Totin et al. 2002). 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 (Srinivansan, 2010)

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 (Horton, et al., 2011). Children who are undernourished are more likely to be short in adulthood, 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 (Kabubo-Mariara, et al., 2006).

Measurements of a child's growth provide the key information for the presence of malnutrition, but weight and height measurements alone can lead to failure to recognize kwashiorkor and an underestimation of the severity of malnutrition in children (ICF, 2010). Measures have been taken to reduce child malnutrition. Studies for the World Bank found that, from 1970 to 2000, the number of malnourished children decreased by 20 percent in developing countries. Iodine supplement trials in pregnant women have been shown to reduce offspring deaths during infancy and early childhood by 29 percent. However, universal salt iodization has largely replaced this intervention (Gulati, 2010).

1.2 Problem Statement

Adequate nutrition is an essential prerequisite for maintaining health status. The critical role nutrition plays in health and development warrants greater commitment to and investment in nutrition in Uganda. Moreover, such an investment is a necessary prerequisite for further progress on the Millennium Development Goals (MDGs), particularly the hunger and health

MDGs. While at the national level Uganda currently produces sufficient food to meet the needs of its rapidly growing population, the proportion of Ugandans unable to access adequate calories decreased from 23 percent in 1997 to 15 percent in 2006. 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. Uganda has ratified a range of international covenants and committed itself to ending hunger and malnutrition. Moreover, the 1995 Constitution of the Republic of Uganda pledged to ensure food and nutrition security for all Ugandans¹ and the Uganda Food and Nutrition Policy (UFNP), adopted in 2003, expressly recognizes the human right to adequate food for all. As a signatory of the Millennium Declaration 2000, Uganda has agreed to achieve the eight MDGs by 2015. There has been mixed progress to date in achieving targets for MDGs 1, 4, 5 and 6, which directly relate to and depend upon improvements in women's and children's nutrition. Uganda's most common malnutrition problems are high rates of chronic malnutrition and micronutrient deficiencies, especially of Vitamin A and iron.

Malnutrition is one of the most serious health problems affecting children and their mothers in Ethiopia. Undernourished mothers face greater risks during pregnancy and childbirth, and their children set off on a weaker developmental path, both physically and mentally. Undernourished children have lower resistance to infection and are more likely to die from common childhood ailments as diarrheal diseases and respiratory infections (Jesmin, et al., (2011). Those who survive may be locked into a vicious cycle of recurring sickness and faltering growth, often with irreversible damage to their cognitive and social development. Malnutrition prevents individuals and even the whole country from achieving full potential, and is closely related with survival, poverty and development (Ogunjuyigbe et al., 2008).

Malnutrition in all its forms remains largely a “hidden problem” since a majority of children affected are moderately malnourished and identifying malnutrition in these children without regular assessments is difficult. Increasingly Uganda is experiencing the double burden of malnutrition (MOH, 2013). This study ventured to analyze the actual reasons that contribute to the current malnutrition prevalence rates in Ntungamo district.

1.3 Objectives of the study

1.3.1 General Objective

To assess factors that contribute to occurrence of malnutrition among children below five years in pediatric ward Itojo hospital, Ntungamo District, Uganda

1.3.2 Specific objectives

- i. To find out demographic factors that contribute to occurrence of malnutrition.
- ii. To assess socio-economic factor that contribute to occurrence of malnutrition.
- iii. To describe the cultural factors that contribute to occurrence of malnutrition.

1.4 Research questions

- i. What are the demographic factors that contribute to occurrence of malnutrition?
- ii. What are the socio-economic factors that contribute to occurrence of malnutrition?
- iii. What are the cultural factors that contribute to occurrence of malnutrition?

1.5 Justification of the study

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 diarrhoea, pneumonia, measles and malaria – also undermines a child's nutritional status (Amhara Region, 2013). This fact will guide the researcher to determine the actual reasons why malnutrition remains to be a health burden in the country specifically in Itojo hospital, Ntungamo District. The results will be disseminated to relevant stakeholders in order to inform them of the current status of the condition in the district and might help them to forge the way forward into eradicating malnutrition in the region. The research will also act as a source of information and reference for future researchers willing to undertake the same topic of study and who share the common motivation of ridding malnutrition among children aged five years and below.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers literature review that is information related to malnutrition among children by various scholars. It is guided by objectives which are; to find out the demographic factors, socio-economic factor and the cultural factors that contribute to occurrence of malnutrition.

2.2 Demographic factors that contribute to occurrence of malnutrition.

According to Janevic et al., (2010), mother's education level affects child's nutrition through her choices and health seeking skills related to nutrition, hygiene, preventive care and disease treatment. Mother's responsibility to care for herself during pregnancy and her child through the most vulnerable stages of its life significantly affects under-five child malnutrition. The study by Uthman, (2009), revealed that mothers' education is associated with good nutrition practices and particularly under-five child nutrition.

FMOH (2008), points out the fact most women with low education spend more time in gardens and feed their children on less nutritious foods. Women who spend more time in gardening get limited time to attend to their children and prepare for them nutritious meals unlike their educated counterparts who normally focus on good child nutrition practices even when they are absent from home most of the time. Education helps mothers gain additional knowledge about the adequate intake of food for their children in terms of correct quantity, quality and frequency. It also determines her income and this helps her access proper nutrition for the child as well as health service (Black, et al., 2008).

According to Blössner, deOnis (2005), there is a negative association between the mother's education and under five child malnutrition. The higher the level of mothers' education, the lower the percentage of under-five children classified as undernourished. According to the study by UNICEF (2007), malnutrition was most prevalent among children whose mothers attended primary school. It is however important to note that the decline in the levels of malnutrition with increasing maternal education is not always gradual. In some countries, malnutrition levels are fairly similar among children whose mothers attended primary or secondary school while elsewhere there is a greater similarity with children whose mothers attended primary school or had no formal schooling. Median levels of malnutrition across all countries range from 36 percent for children whose mothers had some primary education to 16 percent for children of mothers with secondary or higher education (Amhara Region 2013).

According to Clara (2001), with increasing level of mother's education, the proportion of children who are malnourished goes down as found out in the Uganda Demographic and Healthy Survey. This result is consistent with the findings of Beka, et al., (2009), that highlighted the importance of human capital investment in improving child nutrition status. This implies that educated mothers are better aware about the nutrition requirements of their children by providing improved health care.

According to Mohiellin, Moawia Ali (2010), education of a mother has several potentially positive effects on the quality of care of children and consequently malnutrition. More educated women are better able to process information, acquire skills and model positive caring behaviours. More educated women tend to be better able to use healthcare facilities to interact effectively with health care providers, to comply with treatment recommendations and to keep their living environment clean. Education also increases women's ability to earn income but this

increases the opportunity cost of their time which may mitigate against some important care giving behaviours for example breastfeeding.

More to note is that mother's education is associated with more efficient management of limited household resources, greater utilization of available health care services, better health promoting behaviours, lower fertility as well as child centered caring practices. All this consequently results into a reduction in malnutrition among under-five children (Solomon, Zemene, 2008). Indeed from the above study, children whose mothers had primary or no education were less likely to be stunted, underweight or even wasted perhaps because most of these mothers were unemployed and were able to stay home and care for their children.

According to Kebede (2007), mothers age at birth has been associated with malnutrition among under-five year old children for example it was found out in Bangladesh that children whose mothers were less than 20 years at the time of birth were 1.22 times more likely to be stunted, wasted and underweight compared to children whose mothers were 20 years and above at birth.

According to Babatunde and Qaim, (2010), in the Ugandan settings identified some common risk factors for protein energy malnutrition, that is severely malnourished infants mostly from young mothers had low weight at birth with less access to breast feeding that is essential for the infants protein intake. Thirty four percent (34%) of children received supplementary food by three months and some mothers stopped breast feeding earlier.

A number of studies have reported that mothers' age at birth is one of the most important determinants of malnutrition among under-five children. It has been suggested that the risk is greater in younger mothers particularly those below 24 years because they are not ready to take care of the child including providing all the necessary attention required for the baby

(Babatunde, 2011). Similarly, under-five malnutrition is higher also among children whose mothers give birth when they are older especially after 35 years. This is attributed to the fact that giving birth at an older age is associated with a higher likelihood of giving birth to babies with a low birth weight (Government of Uganda 2010). However, it is important to note that children of the younger mothers are traditionally cared for by their grandmothers and this was associated with low levels of malnutrition among children of younger mothers less than 24 years (Faruque, 2008).

According to the study by Gibson (2005) in the Volta region of Ghana about malnutrition in children, it was found out that child's malnutrition is significantly associated with marital status. It was found out that under-five child malnutrition is higher among unmarried rural and divorced/separated women compared to married ones. Similarly, being a married mother was positively associated with good nutritional status among children under five years. Contrary to the above, a study in Tanzania revealed that mothers who are married were more likely to have undernourished children unlike those that were unmarried perhaps because of the cost of maintaining families hence sometimes these families fail to produce nutritious supplements to the under-five children ((Ergin, et al.,2007).

Gulati, (2010) in their studies have found out that mother's occupation is one of the determinants of under-five malnutrition in most developing countries. A study in Kenya by ICF Macro,(2010) revealed that children from mothers who were laborers or farmers and housewives had a greater prevalence of stunting, underweight and wasting than those from mothers who worked in office or were housewives. This is because working mothers rarely get time to take care of their children. They also leave their children at home with other siblings who may neglect feeding them following the right frequency and this sometimes worsens the problem of malnutrition. It is

also common for mothers to fail to provide complementary feeds including protein foods since most of them cannot afford them (Rukundo2013). Such findings are true especially among peasant farmers in Ntungamo, Mbarara and Isingiro districts who spend most of their time in gardens leaving the under-five children under the care of other siblings or housemaids who are sometimes too young or illiterate on proper under-five nutrition practices.

Mother's occupation is one of the indicators for access to adequate food supplies, use of health services, availability of improved water sources, and sanitation facilities which are prime determinants of child nutritional status. A study done on most of the DHS surveys conducted in developing countries Jesmin, et al., (2011), revealed that especially in the Southern Nations, Nationalities and Peoples Region (SNNPR) of Ethiopia showed that under-five children from low economic status households were the most affected by malnutrition.

The generally adopted conceptual framework for understanding the causes of malnutrition is that proposed by Jeyaseelan, (1997). This framework incorporates household food security, care for other and children, and healthy environment and service as key factors influencing malnutrition. As distinct and important as these factors may be, the educational level of mothers can play a facilitating role of ensuring that they make maximum impacts. For instance, educated mothers may have better paid jobs thus be able to earn higher income and take better care of their children, be resident in urban areas where there are functioning social infrastructures, possess commendable culture of hygiene needed to protect children from diseases, be more likely to participate in child health enhancing programs like immunization and child care talks, and be able to benefit maximally from nutrition- and health-related radio and television programs (Kabubo-Mariara, et al., 2006).

Department of Census and Statistics (Bhutta, 2013) found that in Sri Lanka, the key factor explaining stunting, wasting and under-weight in children were age of the child, sector of residence (urban or rural), work status of mother, access to media by the mother, mother's educational level, and type of toilet (Black, et al., (2008) analyzed the prevalence and correlates of stunting among children in rural Pakistan. Using data from 1878 children that were less than 3 years of age, their results showed that 26 percent, 55 percent and 15 percent of the children were wasted, stunted and wasted/stunted respectively. It was further revealed that mothers who were illiterate and fathers that were earning less than \$20 per month were more likely to have stunted children. Also, Bachou, et al., 2011), analyzed the determinants of child malnutrition in Ethiopia. The result showed that child's age, mother's height, household wealth, educational levels of the mothers and access to good water explain to a large extent the nutritional status of children.

According to the study by Kimokoti and Hamer (2008), the findings show that there is a strong linkage between maternal education and children's health. Children born to educated women suffer less from malnutrition which manifests as underweight, wasting and stunting in children. Maternal education has been associated with nutrition outcomes among children in studies in various settings. Dewan, Manju (2008) highlights three links through which education may affect child health. First, formal education of mothers directly transfers health knowledge to future mothers. Second, the literacy and numeracy skills that women acquire in school enhance their ability to recognize illness and seek treatment for their children. Additionally, they are better able to read medical instructions for treatment of childhood illness and apply the treatment. Third, increased number of years in school makes women more receptive to modern medicine (Ekoru, 2012).

Khan, et al., (2011), found that the employment status of mothers, the number of living children, the level of education of the mother and non-involvement of the mothers in the rural labour market significantly reduced the incidence of stunting, wasting and underweight among children.

Comrie et al., (2014) study on birth order as a risk factor for poor health, an important contribution to the field because it specifically focuses on a representative group of African countries where lifetime fertility and childhood mortality rates are persistently high. To understand the relationship between birth order and health in these countries, the researchers measured the differences in nutrition and mortality among siblings depending on the order in which they were born. On average, Howell et al. found that for each successive birth order position (e.g. the fourth born as opposed to the third born child), children ages one to four face a 13 percent increase in mortality risk, while children ages five to fourteen experience a 10 percent increase.

Biswas, S., & Bose, K. (2010) reveals that that birth order has a significant effect on the health and nutritional status of the children. The effect of birth order on child nutritional status is driven by the role of household decision-making processes and the impact in turn that child malnutrition has on long term outcomes. Collin, M. (2013), adds that birth order and the associated parental discrimination, though mostly concentrated in childhood, detrimentally affect a child's long-term nutritional status. This implies that the damage done through malnutrition in the early years of life is largely irreversible, resulting in hampered child cognitive and physical development.

In a cohort study of all children born in a Mexican village by Blössner & Deonis M (2005), in a sample of 30 families with a preschool child whose weight was normal, 30 with a child with first-degree malnutrition, 27 with a child with second degree malnutrition, and 27 with a child

with third degree malnutrition. In families with four or fewer children, 75 percent of the children were malnourished to some degree, and in those with five or more children, 76 percent were malnourished. The study by Ekoru, (2012) in Thailand, found out that 58 percent of the children in families with four or more children were malnourished, as opposed to 42 percent of the children in families with three or fewer children. The difference was statistically significant. However, this association between family size and malnutrition in preschool children has not been confirmed in certain other studies.

2.3 Socio-economic factor that contribute to occurrence of malnutrition.

McKinney, Phillip (2009), reveals that there are several factors that contribute to the malnutrition in children including poor socioeconomic status, mother's absence from home (Bhutta, 2013). He adds that poor mothers spend most of their time doing casual labour in order to get money buy foodstuff, poor weaning practices, leaving the infants with their siblings or their grandmothers may contribute to poor nutritional status of the younger children.

Ngure, et al., (2014) add that in the camp settings, it's notable that the most commonly provided complementary foods comprised maize, vegetables and tubers such as sweet potatoes and cassava. Animal based protein foods are rarely given as complementary feeds because the mothers/caretakers could not afford them. Furthermore, the communal feeding practices of the communities whereby the young children (less than 2 years) feed with the older children (persons) may predispose the younger siblings to under feeding as they may not be able to feed adequately alongside the older children on the meal provided.

Musaiger, et al., (2011) show that a family with low socio-economic status finds food prices high and they cannot afford to by the different varieties of food stuffs but only feed on available

foods. Most of the families feed on matooke, posho and beans they cannot afford to buy foods like fish, milk among others which are importance for the healthy growth of their children. Wasting or acute protein-energy malnutrition captures the failure to receive adequate nutrition during the period immediately before the survey, resulting from recent episodes of illness and diarrhoea in particular or from acute food shortage. Underweight status is a composite of the two preceding ones, and can be due to either chronic, acute malnutrition or PEM (Gulati, 2010).

According to the study by Prüss-Üstün, (2010) in Ethiopia on socio-economic status and malnutrition, it was found out that 29 percent of children under age five are underweight and 9% are severely underweight and it is highest in Amhara Region which is 33.4%. The proportion of under-weight children vary with each age cohort. And it is highest in the age groups 24-35 months (34%) and lowest among those under six months (10%). This may be their exposure infections and susceptible illness because foods for weaning are typically introduced and they expose to the environment those children in 24-35 age groups. This is due to inappropriate or inadequate feeding practices may contribute to -influence nutritional status among children in these age groups (Sue Horton, et al., 2011).

According to Srinivansan, (2010) in introduction of household wealth index into the model also minimally attenuates the effect of education on stunting, which somehow differs with findings from others settings. Moreover, it was found out that SES is also significantly related to child stunting similar to findings from other studies, which found a statistically significant relationship between SES and child malnutrition. It can be concluded that the introduction of slum residence marginally reduces the magnitude of the effect of mother's education on stunting.

According to Totin et al. (2002), the other risk factor of malnutrition is only paternal decision making to use money in the household. Paternal decision making to use money in the household is strongly associated with malnutrition among under five children than that of household decision made by both father and mother jointly. Similar finding was observed the study which was conducted in Ginchi in Oromia Region only paternal decision making to use money three times more associated to malnutrition than those who decided to use money jointly.

According to the study by MOH (2013), it was found out that there is a strong link between maternal education, social economic status and child nutritional status. This is because educated women are more likely to get steadier, higher paying jobs; to get married to men with higher education and higher income; and to live in better neighborhoods, which have influence on child health and survival. Studies have also found an association between maternal education and maternal depression, while maternal depression has been associated with poor child health outcomes, including poor nutritional outcomes (Christopher, et al., 2008).

2.4 Cultural factors that contribute to occurrence of malnutrition.

Culture encourages the feeding of an infant below six months with blood, animal's milk and bitter herbs. They also believe in feeding the baby with fatty concoction laced with ghee two weeks after birth. This reduces the rate of exclusive breast feeding (Solomon & Zemene, 2008). Without exclusive breastfeeding, infants are likely to have a low immune system becoming prone to infections. Other than being cheap and readily available, breast milk has been shown to have health benefits to both the mother and the child. Exclusive breastfeeding rates are low among the some cultures and this affects child's growth (Totin et al., 2002).

This study has shown high prevalence of global stunting of 52.1%, and global acute malnutrition 6.0% respectively in the IDP settings in Gulu district, northern Uganda. Findings indicated slight increment in the prevalence of malnutrition compared to those reported in previous studies in the settings. Although the studies were carried out during different seasons, the previous conducted during harvest and ours done during the planting season, nevertheless, both studies reveal high levels of both chronic and acute malnutrition, reflecting long standing food shortage experienced by the internally displaced populations in the camp settings. The lack of foodstuff for the internally displaced populations in encampment may be attributable to several reasons including inadequate and irregular food supply and limited productivity (Kimokoti and Hamer, 2008).

According to Babatunde, (2011), child care givers or mothers hand washing only at the time of after visiting latrine strongly contributes to malnutrition which was threefold higher than whose mothers had practices hand washing at each activity.

Uthman (2009) reveals that complimentary feeding is important for children at the age of six month but food handling practices have its own negative effect on children health and nutrition. Higher prevalence of malnutrition (94.1%) was observed in children whose mothers' didn't wash their hand after handling of rubbish. Hand should be wash immediately after handling of any surface and before contact of children. Hand washing of the care giver is critically important to break the link between foods and drink intake and development of infection. Care givers need to wash their hand with clean water and soap before preparing food, before feeding baby and after visiting of toilet or disposing of child feces (Gibson, 2005).

According to the study which was conducted by Gibson (2005) in Tanzania, malnutrition in unimmunized children were threefold times higher than that of immunized with appropriate age.

Similar finding was observed in study conducted in Oromia Region Ginchi district and revealed that the risk malnutrition among children who didn't receive any vaccine dose was three times more associated to malnutrition than those who received vaccine dose FMOH (2008). But the study done in India revealed unimmunized children were 10 times more likely associated to malnutrition than those who immunized under five years children. The study observed in India is higher than that of Ginchi and this study. The reason may be attributed to the socio-demographic characteristics of population (Gulati, 2010). Therefore mothers' poor attitude and non-adherence to immunization increases the malnutrition in children.

Jeyaseelan, (1997), the alcohol drinking culture of men contributes to malnutrition among children. Men are reported to spend most of the time drinking alcohol leaving the women to do most of the cultivation and to look for money to feed their families in the settings. Hence women tend to engage in a variety of casual labour activities to generate money to buy foodstuff to feed their families. Thus, most mothers tend to stay away from home for long duration compounding the problem of caring for and feeding their children in the camp settings (Jesmin, et al., 2011).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the study area in terms of location, size of the area, population size, study design, sample size, data collection tools, pre-test, method of data collection, data analysis and presentation, ethical consideration and study limitations

3.2 Study design and rational

The study used descriptive cross-sectional study design where both qualitative and quantitative methods were applied. This method was preferred because of its rapidity, cost effectiveness and ability to obtain data in depth and because it helps to capture information which can easily be transformed into numerical form. This approach helped to get detailed information about the factors that contribute to occurrence of malnutrition among children below five years in pediatric ward Itojo hospital

3.3 Study setting and rational

This study was conducted at Itojo Hospital in Ntungamo District, in Western Uganda. Itojo Hospital is located on the Mbarara-Kabale highway, approximately 52 Kilometres (32 mi), by road, southwest of Mbarara, the largest town in the sub-region. This location lies approximately 22 Kilometres (14 miles), by road, northeast of Ntungamo, where the district headquarters are located.

3.4 Study population

The population in study comprised of health records acquired from Itojo Hospital of children diagnosed with malnutrition under the age of five years from Ntungamo District.

3.4.1 Sample size determination

The sample size was calculated using the Fischer's et al 1990 formula. I.e. $n = Z^2 PQ / d^2$:

- Where n is the desired sample size
- Z is the standard normal deviation taken as 1.96 at a confidence interval of 95%.
- P is the proportion of the target population estimated to have similar characteristics=7%(Fischer's et al, 1990).
- d is the desired error= 0.05.
- Q= (1-P) which is the population without the desired characteristics.

Therefore;

$$n = 1.96^2 \times 0.07 (1-0.07) / (0.05)^2 = 100 \text{ health records}$$

3.4.2 Sampling Procedure

The researcher used a randomized sample to select mothers with children below 5 years who were attending Itojo. With the help of the health workers, all patients who had turned up to collect their drug were collected in the same location and simple random sampling was used thus giving everyone a chance of participating in the study without bias however, the patients' consent was first sought and those who declined participating in the study were not interviewed. Upon the patients consent to participate in the study, the researcher identified a clear place with no interferences where he did the interviews from.

3.4.3 Inclusion and exclusion criteria

All mothers who were at the clinic had an equal chance of participating in the study however, those that consented for the study were interviewed.

Mothers with children more than 5 years shall not take part in the study.

3.5 Definition of variables

The study focused on finding out the factors that contribute occurrence to malnutrition among children below five years in pediatric ward Itojo hospital, Ntungamo District, Uganda. Therefore the demographic factors, socio-economic factor and cultural factors are believed to have an effect or contribute to malnutrition therefore they are the independent variables and then malnutrition the independent variable.

3.6 Research instruments

3.6.1 Data collection methods

Primary data was collected using a self-administered questionnaire; they were administered to all participants that were involved in the study. Personal interviewing was chosen on two grounds. First, this approach is more likely to improve the response rate, as people have a greater obligation to respond when they have face-to-face or engagement, and secondly, interviews with respondents may afford insight into issues not anticipated by the study.

3.6.2 Data Collection Tools

A data table was created for the purpose of collecting relevant data based on the set objectives of the study. The data table had the following columns: age of patient, sex of patients, and cause of malnutrition, form of malnutrition diagnosed, management given and prognosis after management.

3.7Data collection procedure

The researcher got an introductory letter from the head of Department, Nursing that introduced him to the Administration of Itojo Hospital seeking permission to carry out the study. Then after the permission was granted the researcher went on to carry out research in the area of study.

3.7.2 Data Analysis and Presentation

The data was cleaned, organized and tallied from file records of patients at Itojo Hospital. The acquired results were analyzed by Microsoft Excel and eventually presented using Microsoft Word.

3.8Ethical Considerations

An introductory letter from the school of nursing was obtained before embarking on the research. Another letter was sorted from the administration of Itojo Hospital for the purpose of getting necessary permission to collect the health data.

3.9Limitations to the study

Anticipated limitations and how to overcome them.

Some respondents trying to conceal data for the sake of personal and official reasons while some were not willing to express their feelings freely. However, minimized by promising confidentiality of the responses given in the process of conducting the study.

The other limitation was bad weather; it was rainy so an umbrella used to cater for these problems.

The study was expensive and tiresome because it involved a lot of money for meals and transport, this was dealt with by using the resources that were available like money sparingly.

The researcher also formulated a study budget to enable him finish the study with minimal financial challenges.

3.10 Dissemination of results

After the approval of the report, results will be published to generate knowledge to others and to be used by other researchers.

A copy of the book will be published to the internet for other readers who are online.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Introduction

This chapter presents results from the study findings that was corrected form 100 respondents in a study which was aimed at establishing the factors that contribute to occurrence of malnutrition among children below five years in pediatric ward Itojo hospital, Ntungamo district, Uganda. . The study involved a total of 100 respondents where some were interviewed and others given questionnaires to fill. And the response rate was 100%.

4.1 Demographic factors that contribute to occurrence of malnutrition among children below 5 years at Itojo hospital in Ntungamo.

Thus the demographic characteristics presented in table 4.1 below have were got from the interview with the respondent.

Table 1: Respondent characteristics

Age of respondents	Frequency (F)	Percent (%)
18 – 24	42	42
25 – 29	18	18
30 – 34	25	25
35 – 39	12	12
40 and above	3	3
Total	100	100

Marital Status of the mothers		
Married	75	75
Separated	12	12
Divorced	6	6
Widow	5	5
Total	100	100
Occupation		
Peasant	20	20
Employment	18	18
Business Owner	6	6
Casual labour	56	56
Total	100	100
Education		
Never went to school	10	10
Primary	74	74
Secondary	12	12
University	4	4
Total	100	100
Number of children		
1 – 2	4	4
3 – 4	26	26
5 – 6	49	49
7 and above	21	21

Total	100	100
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Source: Primary data (2017)

From the study findings, majority of the respondents 42 (42%) were aged between 18 – 24 years, only 18 (18%) were in the age range of 25 – 29 years and the least 3 (3%) were above 40 years. This implies that mothers' age has an effect on the malnutrition of the child.

Three quarters (75%) of the mothers with malnourished children were married however those that had separated contributed as greater percentage 12(12%) and the least were widows 5(5%).

Findings also reveal that more than a half 56 (56%) of the mothers with malnourished children were casual laborers however the peasants also contributed a greater percentage 20 (20%) while the least 6 (6%) were those engaged in business. This indicates that most of these casual workers would be getting little earning which could not cater for every food staff needed for the better feeding and growth of the babies.

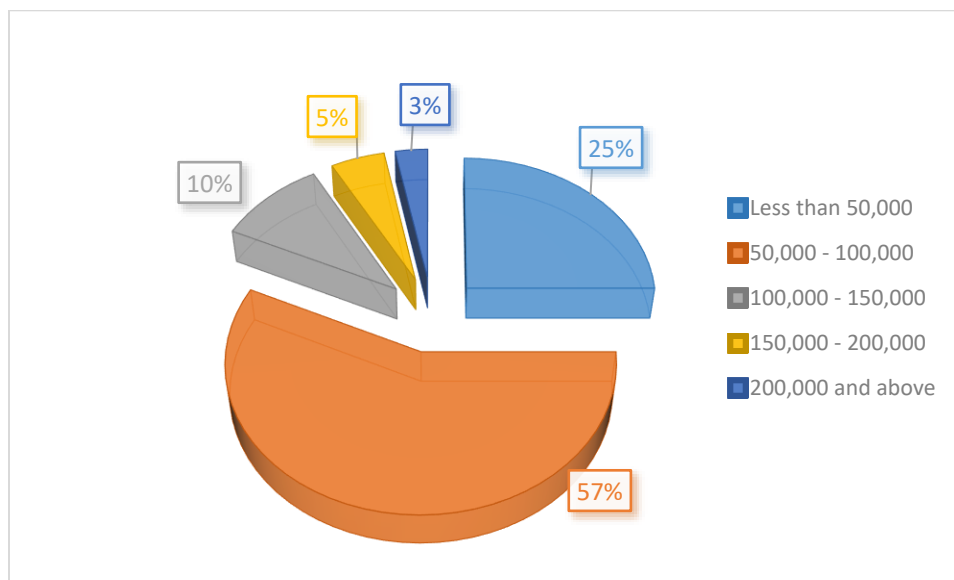
Study results also show that almost three quarters 74 (74%) of the respondents had just attended primary education but also those who never went to school contributed a greater percentage 10 (10%) and the least 4 (4%) had attained the university level. This indicates that education level of mothers really contributes much to the nutrition levels among the children.

Findings further indicate that among the mothers with malnourished children, almost a half 49 (49%) had 5 – 6 children but also those had children more than 7 also contributed a bigger percentage of 21% however there were some with few children 1 – 2 and these were the least 4 (4%). This implies that in a family where there many children, there are high cases/ chances of children being malnourished.

4.2 Socio-economic factor that contribute to occurrence of malnutrition.

In order to determine the socio-economic factors that have contributed to the occurrence of malnutrition in Itojo among children below 5 years, mothers were asked a number of questions and their responses are presented in tables, pie-chart and graphs below.

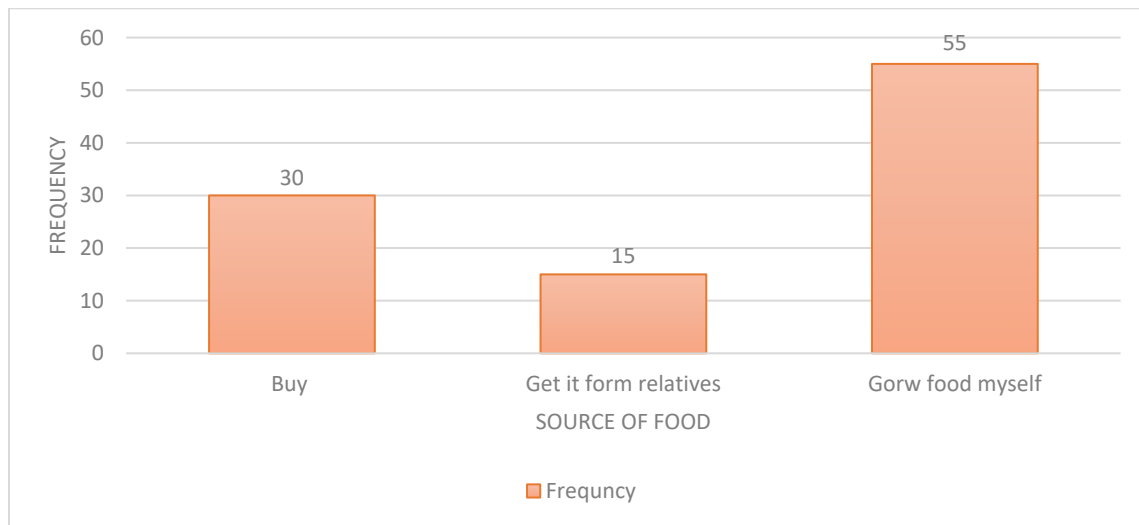
Figure 1: Income level of the mothers



Source: Primary data (2017)

Finding in the pie-chart above indicate that more than a half of the mothers 57 (57%) had their monthly income between 50,000/= to 100,000/= but also those that were less than 50,000/= had a bigger percentage which contributes to a quarter 25(25%) of the mothers and the least 3 (3%) of the mothers had monthly income equivalent to 200,000/= and above.

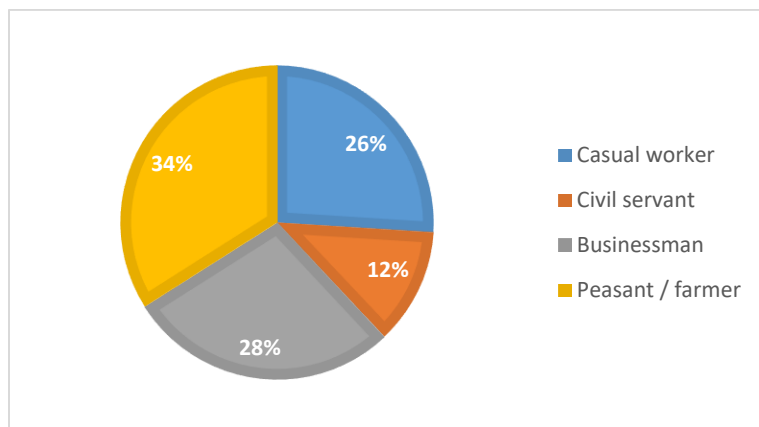
Figure 2: Sources of food



Source: Primary data (2017)

More than a half 55 (55%) of the respondents grew food at home and the minority 15 (15%) got food from relatives. This implies that most of the mothers had land where they did agriculture however almost a quarter of the respondents indicated that they bought food.

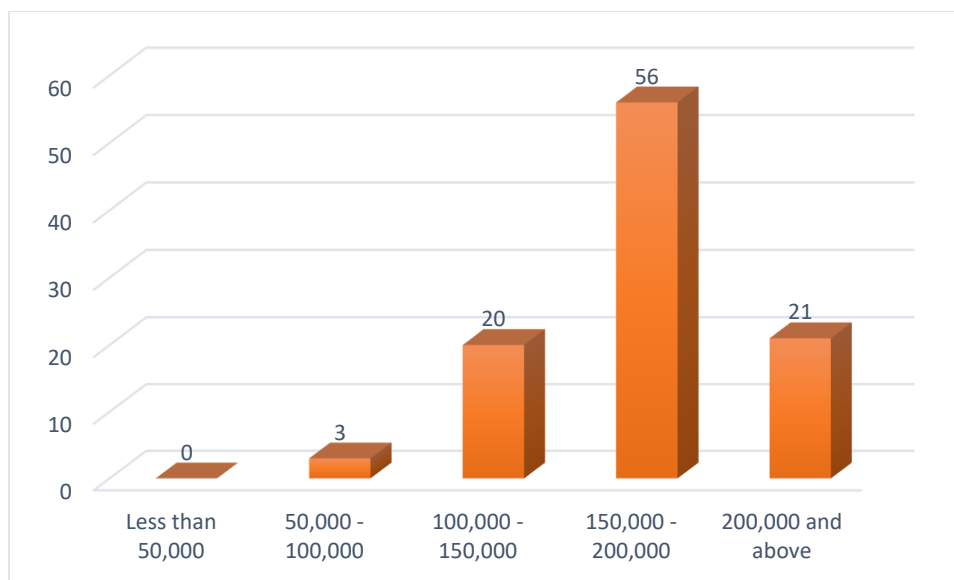
Figure 3: Husband's occupation



Source: Primary data (2017)

Results indicate that majority 34 (34%) of the mothers had their husbands who were peasants / farmers and the minority 12 (12%) had their husbands that were civil servants. This clearly indicates that most of the families relied on agriculture and casual work as their source of income which is less paying. Therefore high levels of malnutrition could have been lack of enough money to buy different food staffs which nutritious and important for the children's growth.

Figure 4: Husbands' monthly minimum income



Source: Primary data (2017)

Slightly more than a half 56 (56%) of the respondents' husbands had their monthly income between 150,000/= to 200,000/=. Only a few 21 (21%) had an income more than 200,000/= per month and the minority 3(3%) had income between 50,000= to 100,000/=. From these findings it can be believed that poverty is one of the factors leading to the persistence of malnutrition among most children below the age of 5 years.

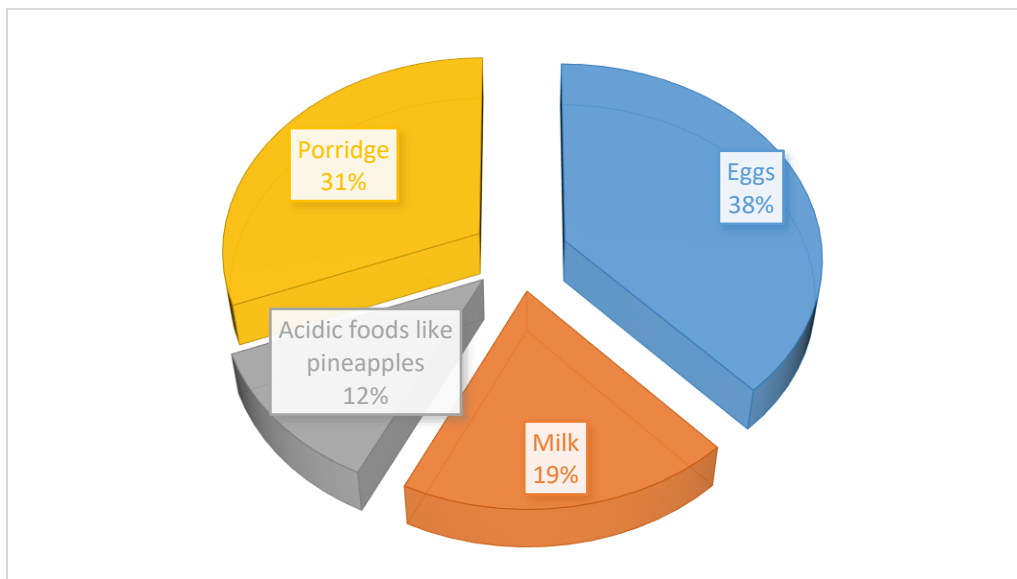
4.3 To find out cultural factors that contribute to occurrence of malnutrition.

Respondents were asked questions regarding culture practices and beliefs that influence food intake by mothers and feeding of babies that could result to child malnutrition.

Firstly, respondents were asked whether there were some foods that their culture did not allow them to eat when they were pregnant and only 40(40%) said that there are some foods that they were not allowed to eat and the other 60(60%) said their cultures did not stop them from eating any foods.

Among some food that the culture did not allow are presented in the pie-chart bellow

Figure 5: Foods not accepted by culture

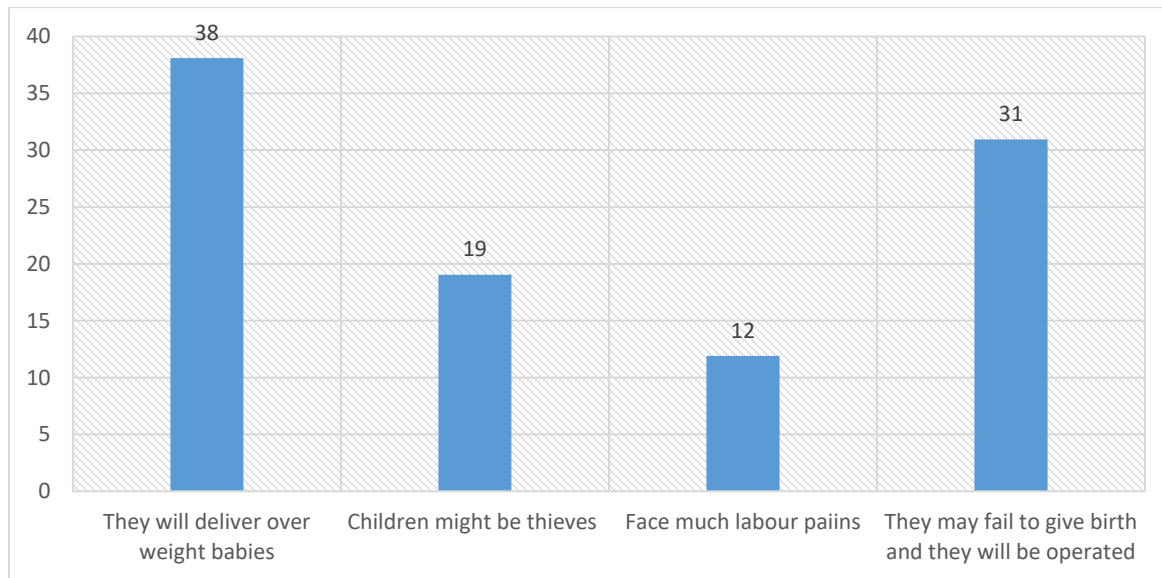


Source: Primary data (2017)

15(38%) said that they were not allowed to eat eggs, while 12 (31%) were not allowed to drink porridge and 5(12%) were not allowed to take acidic foods like pineapples.

When respondents were asked about the reasons for not allowing them to take such foods they gave different reasons which are shown in the figure below.

Figure 6: Reasons for not accepting some foods.

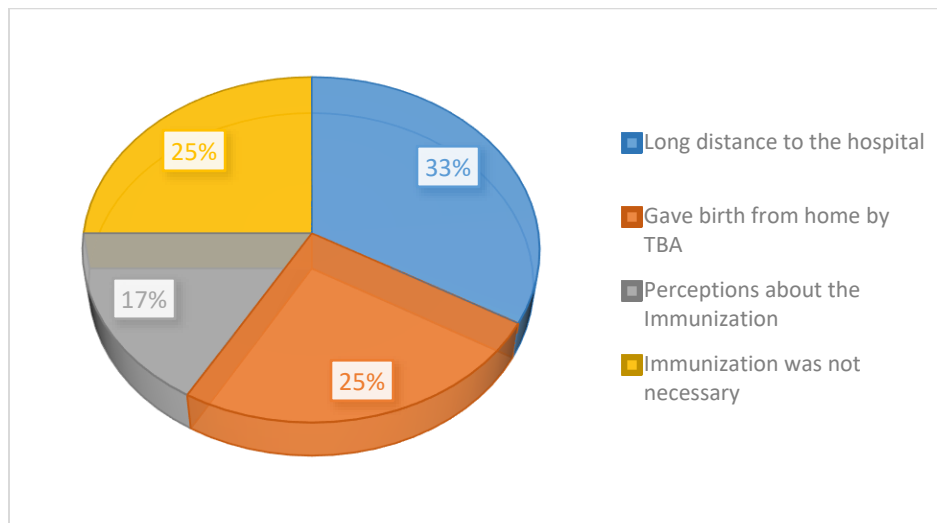


Source: Primary data (2017)

15 (38%) of the respondents said that the major reason for avoiding some foods was they would deliver over weight baby if they don't stop those foods, 12 (31%) that they may fail to give birth and they will be operated and the least 5 (12%) had perception that they would face much labour pains.

Mothers asked whether they immunized their children and 88 (88%) of the respondents were found to have immunized their children while 12 (12%) had not immunized their children. The researcher further asked respondents about the reasons for not immunizing their children and the reasons are presented in the figure below.

Figure 7: Reasons for not immunizing their children



Source: Primary data (2017)

4(33%) of the revealed that the major reason for not immunizing their children was long distance to the hospital while the minority 2 (17%), giving birth from home by the TBA 3 (25%) and poor perceptions about immunization by the least 2 (17%)

The researcher also asked their mothers about their sanitation in different questions which are presented in table below.

Table 2: Sanitation of the mothers

Whether they have toilets at home	Frequency	Percentage
Yes	82	82
No	18	18
Total	100	100

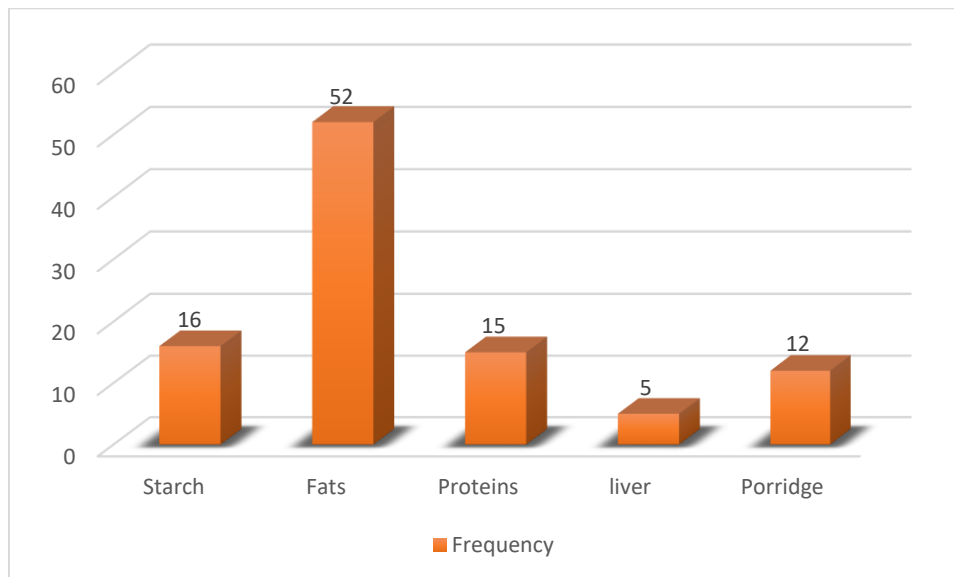
Wash hands after visiting the toilet		
Yes	79	79
No	21	21
Total	100	100
Wash hands before feeding the baby		
Yes	56	56
No	44	44
Total	100	100

Source: Primary data (2017)

Study findings show that majority 82 (82%) of the respondents had toilets at home while 18(18%) revealed had no toilets at home. 79% washed their hands their after visiting the toilet, 21 (21%) never washed their hands after vising the toilet. 56(56%) washed their hands before feeding the baby while 44(44%) did not. This shows that the sanitation by some mother is not yet high since there are some mothers who never washed their hands after visiting the toilet and other never washed their hands before feeding the baby.

The researcher asked respondents if there are some foods they avoided when they were pregnant and all the respondents 100% revealed that they avoided some food and these are presented in figure below.

Figure 8: Foods avoided mothers during their pregnancy



Source: Primary data (2017)

Almost a half of the respondents 52 (52%) avoided fats, 16 (16%) avoided foods rich in starch and the least 5 (5%) avoided lever.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses and concludes the findings of the study. It also presents the recommendations made by the researcher and the implication to the nursing practice.

5.1 Discussion of findings

The study was aimed at assessing the factors contributing to the occurrence of malnutrition among children below five years in pediatric ward at Itojo hospital, Ntungamo district, Uganda. The study used a total of 100 respondents who were mothers in the pediatric ward.

5.1.1 Demographic factors that contribute to the occurrence of malnutrition among children below 5 years at Itojo hospital in Ntungamo.

According to the study findings, majority of the mothers 42% were aged between 25 – 29 years, only 18% were the youngest with in the age range of 18 – 24 years and the least 3% were above 40 years. This implies that mothers' age may also contribute to the malnutrition of the child. These findings are in agreement with Kebede (2007), who reveals that mothers age at birth has been associated with malnutrition among under-five year old children for example it was found out in Bangladesh that children whose mothers were less than 20 years at the time of birth were 1.22 times more likely to be stunted, wasted and underweight compared to children whose mothers were 20 years and above at birth. Similarly, Babatunde (2011) adds that the risk is greater in younger mothers particularly those below 24 years because they are not ready to take care of the child including providing all the necessary attention required for the baby.

The study further shows that three quarters of the mothers with malnourished children were married however those that had separated contributed a greater percentage 12% and the least 7% were widows. This implies that child's malnutrition is closely related to mothers' marital status since a mother who is separated or divorced may face a challenge in caring for the babies while the one who is married may get support from the spouse. The findings concur with Gibson (2005) in his study in the Volta region of Ghana about malnutrition in children, where he found out that child's malnutrition is significantly associated with marital status. He was found out that under-five child malnutrition is higher among unmarried rural and divorced/separated women compared to married ones. Similarly in comparison to Ergin, et al., (2007), being a married mother was positively associated with good nutritional status among children under five years.

It was also found out that more than a half 56% of the mothers with malnourished children were casual laborers and also peasants also contributed a greater percentage 20% while the least 6% were those engaged in business. Most of the casual workers get little money and looking after their family always a challenge. This is in agreement with Gulati, (2010) who also found out that mother's occupation is one of the determinants of under-five malnutrition in most developing countries. Similarly a study carried out in Kenya by ICF Macro, (2010) revealed that children from mothers who were casual laborers or farmers and housewives had a greater prevalence of stunting, underweight and wasting than those from mothers who worked in office or were housewives.

According to the study findings, it was also found out that most cases of malnourished children were found with mothers whose education levels were low where by almost three quarters 74% of the mothers had just attended primary education, 10% never went to school and very little cases 4% were found in mothers who attained the university level. This indicates that education

level of mothers really contributes much to the nutrition levels among the children. This is in correspondence with Janevic et al., (2010) who reveals that mother's education level affects child's nutrition through her choices and health seeking skills related to nutrition, hygiene, preventive care and disease treatment. Additionally Black, et al., (2008) explains that education helps mothers gain additional knowledge about the adequate intake of food for their children in terms of correct quantity, quality and frequency. It also determines her income and this helps her access proper nutrition for the child as well as health service. Similarly Blössner and Deonis (2005), shows that there is a negative association between the mother's education and under-five child malnutrition. The higher the level of mothers' education, the lower the percentage of under-five children classified as under nourished.

According to the study findings, greater levels of malnourished children were also found with mothers who had many children as it is indicates that almost a half 49% had 5 – 6 children and 21% had children more than 7 and those with few children 1 – 2 the prevalence was less with 4%. This implies that in a family where there many children, there are high cases/ chances of children being malnourished. However these findings oppose the findings of Blössner & Deonis M (2005) in a cohort study done on all children born in a Mexican village in a sample of 30 families with four or fewer children, 75% of the children were malnourished to some degree, and in those with five or more children, and 76% were malnourished.

5.1.2 Socio-economic factor that contribute to the occurrence of malnutrition.

According to the study most of the mother 57% were low income earners with their monthly income ranging between 50,000/= to 100,000/= and 25% with less than 50,000/= and very few were found with monthly income equivalent to 200,000/= and above. This implies that these mothers don't have enough money to cater for nutritional food staff for their children. The study

findings further revealed that more than a half 56% of the husbands to these mothers had their monthly income between 150,000/= to 200,000/=, only a few 21% had an income more than 200,000/= per month. This is great indicator that most of the families that had malnourished children had very low levels of income and therefore getting food on the table is not easy. In accordance to these findings Musaiger, et al., (2011) show that a family with low socio-economic status finds food prices high and they cannot afford to buy the different varieties of food stuffs but only feed on available foods.

The study findings also show that majority of the families 55% grew food at home, 30% bought the food and only 15% got food from relatives. This implies that most of the mothers had land where they did agriculture however an investigation into the types of foods they grew was not investigated. In correspondence to McKinney and Phillip (2009), they reveal that the foods given to children have a great contribution to their malnutrition. In their study, they found out that 70% of the families with malnourished children, they only feed on matooke, posho and beans they cannot afford to buy foods like fish, milk among others which are important for the healthy growth of their children. Similarly, adds that Srinivansan, (2010) in introduction of household wealth index into the model also minimally attenuates the effect of education on stunting, which somehow differs with findings from other settings. Moreover, it was found out that SES is also significantly related to child stunting similar to findings from other studies, which found a statistically significant relationship between SES and child malnutrition.

5.1.3 To find out cultural factors that contribute to occurrence of malnutrition.

According to the study findings, it was 42% mothers revealed that there are some foods their culture did not allow them to eat when they were pregnant. Among the foods that they were not allowed to eat included eggs 16%, milk 19%, while 13% were not allowed to drink porridge. The major reasons for denying mothers some foods were that some foods was they would deliver over weight baby if they don't stop those foods (38%), they may fail to give birth and they will be operated (31%) while 12% had perception that they would face much labour pains. Therefore the malnutrition of the children could have resulted due to nutritional deficiencies from mothers during their pregnancy since they were denied some foods. In agreement to Jesmin, et al., (2011) undernourished mothers face greater risks during pregnancy and childbirth, and their children set off on a weaker developmental path, both physically and mentally. Undernourished children have lower resistance to infection and are more likely to die from common childhood ailments as diarrheal diseases and respiratory infections.

The study findings also revealed that some mothers 12% had not immunized their children however most of them 88% had immunized their children. However there were some cultural factors that affected mothers to immunize their children which included long distance to the hospital (33%), giving birth from home by the TBA (25%) and poor perceptions about immunization by the least (17%). These findings concur with Gibson (2005) in his study in Tanzania, malnutrition in unimmunized children were threefold times higher than that of immunized with appropriate age. Similar finding was observed in study conducted in Oromia Region Ginchi district and revealed that the risk malnutrition among children who didn't receive any vaccine dose was three times more associated to malnutrition than those who received vaccine dose. But the study done in India revealed unimmunized children were 10 times more

likely associated to malnutrition than those who immunized under five years children. Therefore mothers' poor attitude and non-adherence to immunization increases the malnutrition in children.

In assessment of the mothers sanitation status, majority of the mothers 82% had toilets at home while 18% revealed had no toilets at home. 79% washed their hands their after visiting the toilet, 21% never washed their hands after vising the toilet. 56% washed their hands before feeding the baby while 44% did not. This shows that the sanitation by some mother is still low since there are some mothers who never washed their hands after visiting the toilet and other never washed their hands before feeding the baby. However these findings are in contrast to Babatunde, (2011), who found out that child care givers or mothers hand washing only at the time of after visiting latrine strongly contributes to malnutrition which was threefold higher than whose mothers had practices hand washing at each activity and he did not look that the time of feeding the baby. But the study finding are in line with Gibson, (2005) who also observed higher prevalence of malnutrition (94.1%) among children whose mothers' didn't wash their hand after handling of rubbish.

5.2 Conclusions

According to the study findings, it can be concluded that mothers' age at birth has a great impact on the health of the child and malnutrition and stunting as the study indicates that 42% of the mothers with malnourished children were aged between 25 – 29 years. Findings further indicate that occupation of the mother had a great impact of the malnutrition of the child as more than a half 56% of the mothers with malnourished children were causal laborers and 20% were peasants.

The socio-economic status of the mothers / family was found to be the major factor determining malnutrition of children. It was found out that mothers who were educated with good jobs, had employed husbands with high income reported low levels of malnutrition of their children. Because educated people have much knowledge about the nutrition of mothers during pregnancy, nutrients that are needed for the healthy growth of the baby, most of them had jobs could afford to buy the food stuffs and have good health seeking behaviours and vice versa.

However cultural beliefs were also reported to have an impact on the malnutrition of the children as there are some foods that mothers were not allowed to eat due to different perceptions which lead to malnutrition in mothers and giving birth to malnourished children and some mothers still giving birth from homes by the help of the TBAs. An assessment of the mothers sanitation status, it can be concluded that the sanitation was poor 18% had no toilets at home. However, 79% washed their hands their after visiting the toilet, 21% never washed their hands after vising the toilet. 56% washed their hands before feeding the baby while 44% did not. This shows that the sanitation by some mother is still low since there are some mothers who never washed their hands after visiting the toilet and other never washed their hands before feeding the baby.

5.3 Recommendations

The government and health workers should sensitive people about the importance of immunization since it was found out that some people still have poor perception about immunization.

The government should and the area health inspector should enforce a toilet / latrine in every household.

The health workers and Village Health Teams should educate the mothers the proper ways of feeding their babies and the importance of washing hands after visiting the latrine/toilet. And also to ensure washing hands before feeding the baby.

5.4 Implication to Nursing Practice

The study findings will be very significant in saving the lives of babies and reducing mortality rates in babies due to malnutrition.

The study findings will help in creating awareness to mothers about the importance of seeking Antenatal care during their pregnancy and giving birth from hospital/health centres instead of visiting the Traditional Birth Attendants.

The study findings will help health workers to be aware about the perceptions and beliefs of the mothers about some foods during pregnancy and find out the appropriate measures to increase their awareness about proper feeding rather than perceptions.

REFERENCES

- Ali Mohiellin M, Moawia Ali H (2010) The impact of feeding practices on prevalence of under nutrition among 6-59 months aged children in Khartoum.
- Amhara Region (2013) ANRS bureau of finance and economic development, Amhara Ethiopia, 2013.
- Babatunde, R. O. (2011). Prevalence and determinants of malnutrition among under-five children of farming households in Kwara state, Nigeria. *Journal of agricultural science*, 3, 3.
- Babatunde, R.O., and Qaim, M. (2010). Impact of Off-farm Income on Food Security and Nutrition in Nigeria. *Food Policy*, 35, 303-311. doi:10.1016/j.foodpol.2010.01.006, <http://dx.doi.org/10.1016/j.foodpol.2010.01.006>.
- Bachou, H, T Thorkild, R Downing, and J Tumwine. 2011. Severe malnutrition with and without HIV-1 infection in hospitalized children in Kampala, Uganda: differences in clinical features, haematological findings and CD4+ cell counts.
- Beka T, Wambui K, Zewditu G, Girum T (2009) Magnitude and determinants of stunting in children under five years of age in food surplus region of Ethiopia: The case of West Gojam Zone. *EJHD* 23: 2
- Bhutta, Z. A.; Ahmed, T.; Black, R. E.; Cousens, S.; Dewey, K.; Giugliani, E.; Haider, B. A.; Kirkwood, B.; Morris, S. S.; Sachdev, H. P. S.; Shekar, M.; Maternal Child Undernutrition Study Group (2013). "What works? Interventions for maternal and child undernutrition and survival". *The Lancet* **371**.

- Black R, Allen I, Bhutta Z, Caulfield EL, de Onis M, et al. (2008) Maternal and child under nutrition: global and regional exposures and health consequences 371: 243-260.
- Black, Robert E, et al. 2008. Maternal and child undernutrition: Global and regional exposures and health consequences. Lancet Series on Maternal and Child Undernutrition. The Lancet 371: 243-60.
- Blössner M, deOnis M (2005) Malnutrition: quantifying the health impact at national and local levels. WHO Document Production Services: Environmental Burden of Disease Series.
- Christopher Duggan, John B. Watkins, W. Allan (2008). *Nutrition in pediatrics: basic science, clinical application*. Hamilton: BC Decker. pp. 127–141. ISBN 978-1-55009-361-2.
- Clara A (2001) A longitudinal, prospective study of daily feeding practices, health and growth in a sample of Swedish infants, Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine:1016.
- Dewan, Manju (2008). "Malnutrition in Women" (PDF). Stud. Home Comm. Sci. 2 (1): 7–10.
- Ekoru, K. 2012. Nutritional Status and Change in Nutritional Status among Hiv-Infected Adults Initiating Antiretroviral Therapy at Selected Health Facilities in Uganda, AED/Food and Nutrition Technical Assistance (FANTA) project, DC Washington.
- Ergin, F., Okyay, P., Atasoylu, G., and Beser, E.(2007).Nutritional status and risk factors of chronic malnutrition in children under-five years of age in Aydin, a western city of Turkey. *The Turkish journal of pediatrics*, 49, 283-289.

- Faruque, A.S.G., Shamsir, A.M.A., Tahmeed, A., Munirul, M.I., Iqbal, M.H., Roy, S.K., Nurul, A., Kabir, I., and Sack, D.A. (2008). Nutrition: Basis for healthy children and mothers in Bangladesh. *Journal for health and population health*, 26(3), 325-339.
- FMOH (2008) Ethiopia National Nutrition Strategy, Addis Ababa, Ethiopia, January.
- Gibson, R.S. (2005). *Principles of nutritional Assessment*. New York. Oxford University Press, Inc.
- Government of Uganda (2010). *Growth, employment and socio-economic transformation for prosperity*. National Development Plan (2010/11-2014/15) for the Republic of Uganda, National Planning Authority. Kampala, Uganda.
- Government of Uganda (2013). *A transformed Ugandan society from a Peasant to a Modern and Prosperous country within 30 years*. Uganda Vision 2040 for the Republic of Uganda, National Planning Authority. Kampala, Uganda.
- Gulati, J.K. (2010). Child Malnutrition: Trends and issues. *Anthropologist*, 12(2), 131-140.
- ICF Macro. (2010). *Nutrition of Children and Women in Ghana: A new look at data from the 2008 Ghana Demographic and Health Survey*. Calverton, Maryland, USA: ICF Macro.
- Janevic T, Petrovic O, Bjelic I, Kubera A (2010) Risk factors for child hood malnutrition in Roma settlements in Serbia. *BMC public health* 10: 509.
- Jesmin, A., Yamamoto, S., Malik, A., and Haque, M. (2011). Prevalence and determinants of chronic malnutrition among preschool children: A cross sectional study in Dhaka city, Bangladesh. *Journal of Health, Population and Health* 29(5), 494-499.

- Jeyaseelan, L. (1997). Risk factors for malnutrition in South India children. *Journal of Biosocial Science*, 1, 93-100.
- Kabubo-Mariara, J., Ndenge, G.K., and Kirii, D.M. (2006). *Determinants of Children's Nutritional Status in Kenya: Evidence from Demographic and Health Surveys*. Paper Presented at the Centre for the Study of African Economies Conference, University of Oxford, March 17-21, 2006.
- Kebede E (2007) Prevalence and determinants of child malnutrition in Gimbi district, Oromia region, Ethiopia faculty of medicine, community health department, Addis abeba.
- Khan, MM; Kraemer, A (August 2011). "Factors associated with being underweight, overweight and obese among ever-married non-pregnant urban women in Bangladesh". *Singapore medical journal* 50 (8): 804–13.
- Kimokoti, R.W., and Hamer, D.H. (2008). Nutrition, health and aging in sub-Saharan Africa. *Nutrition reviews*, 66(11), 611-623.
- McKinney, Phillip. 2009. Comprehensive Food Security and Vulnerability Assessment: Uganda. VAM Food Security Analysis. Rome: WFP.
- Musaiger, Abdulrahman O.; Hassan, Abdelmonem S., Obeid, Omar (August 2011). "The Paradox of Nutrition-Related Diseases in the Arab Countries: The Need for Action". *International Journal of Environmental Research and Public Health* 8 (9): 3637–3671.
- Ngure, Francis M.; Reid, Brianna M.; Humphrey, Jean H.; Mbuya, Mduduzi N.; Pelto, Gretel; Stoltzfus, Rebecca J. (January 2014). "Water, sanitation, and hygiene (WASH),

- .environmental enteropathy, nutrition, and early child development: making the links". *Annals of the New York Academy of Sciences* 1308 (1).
- Prüss-Üstün, A., Bos, R., Gore, F., Bartram, J. (2010). Safer water, better health - Costs, benefits and sustainability of interventions to protect and promote health
- Solomon A, Zemene T (2008) Risk factors for Sever acute malnutrition in children under the age of five: A case-control study. *Ethiop J Health Dev* 22: 1.
- Srinivansan, M. 2010. The efficacy of zinc as adjunct therapy in the treatment of severe pneumonia in children admitted to Mulago Hospital. Masters thesis, Makerere University.
- Sue Horton; Harold Alderman, Juan A. Rivera (2011). "The Challenge of Hunger and Malnutrition" (PDF). Copenhagen Consensus Challenge Paper. Archived from the original (PDF) on November 15, 2012.
- Totin et al. 2002. Iron deficiency anemia is highly prevalent in HIV-infected and uninfected infants in Uganda. *Journal of Nutrition* 132(3): 423-429.
- Uganda MOH. 2013. Ministry of Health Child Survival Strategy for Uganda – 2008-2015. Draft. Kampala, Uganda: Uganda MOH.
- UNICEF (2007) Children and the Millennium Development Goals. Progress for children a report card on nutrition.
- Uthman OA (2009) Using extended concentration and achievement index to study socioeconomic inequalities in chronic malnutrition; the case of Nigeria. *International journal for equity in health* 8: 22.

- World Health Organization. (2013). *Essential nutrition actions: Improving maternal, newborn, infant and young child health and nutrition*. WHO Document Publications Services, Geneva, Switzerland.
- Biswas, S., & Bose, K. (2010). Sex differences in the effect of birth order and parents' educational status on stunting: A study on Bengalee preschool children from eastern India. *HOMO-Journal of Comparative Human Biology*, 61 (4), 271–276.
- Collin, M. (2013). Persistence in the effect of birth order on child development: Evidence from the Philippines. University of Oxford, Centre for the Study of African Economies (CSAE).
- Comrie-Thomson, L., Davis, J., Renzaho, A., & Toole, M. (2014). Addressing child under nutrition: evidence review. Canberra: Office of Development Effectiveness, Australian Government Department of Foreign Affairs and Trade.

APPENDICES

APPENDIX I: CONSENT FORM

ID No. _____

Date of Interview ____/____/____

I am **Tumuheki Darius**, a student of Kampala International University pursuing a Diploma in Nursing. You have been selected to participate in my study. The purpose of the study is to assess the factors that contribute occurrence to malnutrition among children below five years in pediatric ward Itojo Hospital, Ntungamo district, Uganda

You are requested to participate in the study by giving your response to the questions asked in the questionnaire and will require some of your time. Your participation is voluntary, you have a right to choose to participate or not. If you chose to participate and later change your mind, you also have a right to withdraw from this study at any time, if you so wish. Your participation is highly appreciated. Thank you for your cooperation.

Declaration of the respondent

I have understood the purpose, I realized that I might contact again if need be. I have read the above information (or it has been read to me). I have had the opportunity to ask about it and any question that I have asked has been answered that I have the right to withdraw from the study at any time without in any way affecting my further medical care at the facility.

.....

.....

Participant's signature

Researcher's signature

Date:

Date:

APPENDIX II: QUESTIONARE

SECTION A: Demographic factors that contribute occurrence to malnutrition.

1. Age (years)

- a) 18-24 ☐ b) 25-29 ☐
c) 30 – 34 ☐ d) 35 – 39 ☐ e) 40 and above ☐

2. Marital Status

- a) Married ☐ b) Divorced ☐
c) Separated ☐ d) Widow ☐

3. If married which type of marriage?

- a) Monogamy ☐ b) Polygamy ☐

4. Level of education

- a) Never went to school ☐ b) Primary ☐
c) Secondary ☐ d) University ☐
e) Others (specify).....

5. Number of children

- a) 1-2 ☐ b) 3 – 4 ☐
c) 5-6 ☐ d) 7 and above ☐

6. Occupation

- a) Casual workers ☐ c) Civil servant ☐
b) Business person ☐

SECTION B: Socio-economic factor that contribute occurrence to malnutrition

7. What is your monthly minimum income?

- a) Less than 50,000/= ☐ b) 50,000/= - 100,000/= ☐
b) 100,000/= - 150,000/= ☐ d) 150,000/= - 200,000/= ☐
d) Above 200,000/= ☐

8. Where do you get the food you eat at home?

- a) Buy ☐ b) Plant it my self ☐
c) Get it from home ☐ d) Others (specify)

9. What is the occupation of your husband?

- a) Casual workers ☐ b) Civil servant ☐
c) Business person ☐

10. What is the monthly salary of your husband?

- a) Less than 50,000/= ☐ b) 50,000/= - 100,000/= ☐
b) 100,000/= - 150,000/= ☐ d) 150,000/= - 200,000/= ☐
d) Above 200,000/= ☐

Section C: Cultural factors that contribute occurrence to malnutrition.

11. Are there some foods that your culture does not allow you to eat when you are pregnant?

- a) Yes ☐ b) No ☐

12. If yes what are these foods?

13. What could be the reasons why they deny these types of food?

14. Did you immunize you child?

- a) Yes ☐ b) No ☐

15. If no, give reasons?

Do you have a toilet/latrine at home?

a) Yes ☐

b) No ☐

16. Do you wash your hands before and after visiting the latrine/ toilet?

a) Yes ☐

b) No ☐

17. Do you wash your hands before feeding the baby?

a) Yes ☐

b) No ☐

18. Are there some foods that your culture does not allow to feed the baby?

a) Yes ☐

b) No ☐

19. Which types of food did you avoid when you were pregnant?

.....

APPENDIX III: MAP OF UGANDA SHOWING NTUGAMO DISTRICT



NTUGAMO DISTRICT

APPENDIX IV: MAP OF NTUGAMO DISTRICT SHOWING ITOJO





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TO WHOM IT MAY CONCERN

Dear Sir/Madam

RE: TUMUHEKI DARIUS - DNS/E/1837/153/DU

The above mentioned is a student of Kampala International University – School of Nursing Sciences undertaking Diploma in Nursing Science and he is in his final academic year.

He is recommended to carry out his data collection as a partial fulfillment for the award of the Diploma in Nursing Science.

His topic is **FACTORS THAT CONTRIBUTE TO OCCURRENCE OF MALNUTRITION AMONG CHILDREN BELOW FIVE YEARS IN PEDIATRIC WARD ITOJO HOSPITAL, NTUNGAMO DISTRICT, UGANDA.**

Any assistance rendered to him will be highly appreciated.

Thank you in advance for the positive response.



Nabaliisa Sarah
RESEARCH COORDINATOR

