CAUSES AND EFFECTS OF MALNUTRITION ON CHILDREN AGED 1-7 YEARS,
A CASE STUDY OF RWAMPARA COUNTY, MBARARA DISTRICT, UGANDA

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF A DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES, NKUMBA UNIVERSITY.

OCTOBER, 2018
DECLARATION

I ARUHO PHILIP hereby declare that this research report is my original research work of the study conducted in Rwampara County. This research report has never been presented to any university or institution for any award of academic qualification.

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Date: 7th/10/2018 .................................................
Name: ARUHO PHILIP ........................................
APPROVAL

This is to certify that Aruho Philip conducted this research study under my supervision.

MS. ELIZABETH NORAH MUSOKE

(Research Supervisor)
Signature: ..........................  
Date: .................................
DEDICATION

This research work is dedicated to MS. ELIZABETH NORAH MUSOKE, my university supervisor for all her technical assistance towards the success of this study report and my beloved parents MR. MWEBAZE DAVID and MRS. MONIC KATUSHABE for the continued love, support and motivation. May God reward you abundantly.
ACKNOWLEDGEMENT

What I am today is because of the love of our Almighty God. Without Him, I would not have the strength, courage and wisdom to come up with this report. At the outset, I greatly thank Him.

My sincere thanks go to my family godson, Ruth, Hudson, Lordson, and Simon, Rose and friends Sharon, Baram, Rodgers, Anthony, Smith, Theobold and others for the moral, spiritual and financial support offered in the due course of this study.

My special appreciation goes to the entire Kinoni Health Centre Staff for granting me the permission to conduct my research with in the hospital.

May God bless each one of you all the days of your life.
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ABSTRACT

The principle objective of carrying out this study was to assess the causes and effects of malnutrition on children aged 1-7 years in Mbarara district, a case study of Rwampara County and to come up with particular issues that need to be addressed in order to reduce malnutrition in children.

The study used cross section design where data was gathered just once over a period of time in Rwampara County, (2017- 2018). The research used descriptive research design which describes the phenomenon, it was undertaken in order to ascertain and be able to describe the characteristics of variables of interest. The study used a sample size of 33 respondents who were purposively selected self-administered questionnaires and interview guides were the main instruments of study and data was analyzed using frequencies and percentages.

From the literature review, the researcher analyzed causes of malnutrition, effects of malnutrition and ways of reversing the trend of malnutrition.

Findings on malnutrition were that there are some causes that arise such as; dietary practices, diseases, poverty and food prices. Effects of malnutrition include stunting, marasmus kwashiorkor vitamin and mineral deficiency.

Findings on the ways of reversing the trend on malnutrition were provision of food security, breast feeding of children, controlling on the world population and deworming of children on health facilities.

Basing on researcher recommendation, the Rwampara County health facilities should be well put in place and adhered to; in order to guide the daily operations of employees and to provide them with guiding principles. This helps to reduce malnutrition in children aged 1-7 years in Rwampara County, Mbarara District.
CHAPTER ONE
INTRODUCTION

1.0 Overview

This chapter presents the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, research hypothesis, scope of the study, significance of the study, conceptual frame work, and operational definitions of terms and concepts.

1.1 Background of the study

According to (Sharifah Nooraïda Wan Hasan 2015) Malnutrition is a dangerous condition that develops when your body does not get enough nutrients to function properly. Malnutrition can be caused by a lack of food or an unbalanced diet that is missing or insufficient in one or more nutrients.

The World Health Organization says that malnutrition affects about 792 million people worldwide. At least a third of them are children. Childhood hunger affects one of every four children in the United States, with as many as 17 million children at risk of malnutrition. (“The state of food insecurity in the world 2017”, Food and Agricultural Organization of the United Nations, June 19 2018)

On 1 April 2016, the United Nations (UN) General Assembly proclaimed 2016–2025 the United Nations Decade of Action on Nutrition. The Decade is an unprecedented opportunity for addressing all forms of malnutrition. It sets a concrete timeline for implementation of the commitments made at the Second International Conference on Nutrition (ICN2) to meet a set of global nutrition targets and diet-related NCD targets by 2025, as well as relevant targets in the Agenda for Sustainable Development by 2030 - in particular, Sustainable Development Goal (SDG) 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and SDG 3 (ensure healthy lives and promote wellbeing for all at all ages). (WHO and the Food and Agriculture Organization of the United Nations (FAO), the UN Decade of Action on Nutrition)

According to (Volkert D. 2002), malnutrition is a condition that results from eating a diet in which nutrients are either not enough or are too much such that the diet causes health problems. It may involve calories, proteins, carbohydrates, vitamins or minerals. Not enough nutrients are termed under-nutrition or undernourishment while too much is termed over nutrition. Malnutrition is often used specifically to refer to under nutrition where there are not enough calories, proteins, or micronutrients. If under- nutrition occurs before two years of age, it may result in permanent problems with physical and mental development of the foetus / baby. Extreme undernourishment, known as starvation, may
have symptoms that include: a short height, thin body, very poor energy levels, and swollen legs and abdomen. People also often get infections and are frequently cold. The symptoms of micronutrient deficiencies depend on the micronutrient that is lacking in one’s body. (Volkert D. 2002)

(United Nations Convention on the Rights of the Child) defines child as "a human being below the age of 18 years unless under the law applicable to the child”. This is ratified by 192 of 194 member countries. In U.S. Immigration Law, a child refers to anyone who is under the age of 21.

Biologically, a child is anyone between birth and puberty. Some English definitions of the word child include the foetus (sometimes termed the unborn). In many cultures, a child is considered an adult after undergoing a rite of passage, which may or may not correspond to the time of puberty. Recognition of childhood as a stage different from adulthood began to emerge in the 16th and 17th centuries. Society began to relate to the child not as a miniature adult but as a person of a lower level of maturity needing adult protection, love and nurturing. This change can be traced in paintings: In the Middle Ages, children were portrayed in art as miniature adults with no childlike characteristics. In the 16th century, images of children began to acquire a distinct childlike appearance. From the late 17th century onwards, children were shown playing with toys and later literature for children also began to develop at this time.

Globally, malnutrition is the most important risk factor for illness and death. It affects children and pregnant women disproportionately. It is the direct cause of about 300,000 deaths per annum and indirectly responsible for about half of all deaths in young children (malnutrition increases the risk of death from diarrhea, lower respiratory tract infection, malaria and measles). The World Health Organization (WHO) prevalence of malnutrition, 2016 worldwide found the vast majority living in developing countries in southern Asia and sub-Saharan Africa. An additional 29% had stunted growth due to poor nutrition. (Bhutta, ZA, N; Horton, S; Webb, A; Black, Aug 3, 2013)
1.2 Statement of the problem

Despite the strategy gear in place to ensure that there is enough nutrients such as calories, protein, carbohydrates Vitamins or minerals to reduce health problem but there is still malnutrition due unbalanced diet that's missing or insufficient in one or more nutrients.

Nutrition in Uganda has been neglected for a long time. However, according to nutritionists, if the government does not address this matter, it will be forced to spend loads of taxpayers' money to counter the problem, writes Eve Mashoo, nutritionist.

Dr. Robert Mwadime, the Regional Senior Nutrition Adviser for the Academy for Education Development Food and Nutrition, says the consequences on economic productivity for Uganda between 2006 and 2016 was projected at $920 million as broken down to the three main nutrition deficiencies;( iron deficiency $380million, $150million for iodine and $390million on stunted growth).

According to the 2012 Human Development index, about 12 per cent of women in Uganda were malnourished, 38 percent of children are underweight, 16 percent are stunted and 6 percent are wasted.

Dr. Mwadime speculates that in the next eight years, there will be 340 million clinic attendances that will be related to current rates of the vitamin A deficiencies (VAD) and sub optimal breastfeeding and that 25 million of these are going to be admitted for hospital care due to severity. About 157,000 child deaths were estimated to occur in 2015 to 2020 due to VAD alone, while 425,000 children die due to protein energy malnutrition like marasmus, kwashiorkor and stunting. However, the number of nutritionists countrywide is still wanting, according to Dr. Mwadime. “Only five out of the 80 districts have managed to recruit a nutritionist, so where does this leave the nutrition status in our country? However, most NGOs have included an aspect of nutrition in their programs,” he says.

Kenya, Rwanda and Tanzania have managed their nutrition related issues, Uganda the so called east African food basket should therefore do the same thing or else more deaths are going to continue.

The central and south west regions have the highest malnutrition levels and yet the latter is considered to be Uganda's food basket with malnutrition still at the rate of 50 per cent compared to the internally displaced camps and northern region at 37 and 40 per cent respectively.

Gloria Kirungi, a nutritionist at Kim's clinic told Saturday monitor that over 50 per cent of children in Kampala, Mbarara are now overweight due to high junk food intake other than nutritious foods. Good
nutrition means the outcome of the quality and quantity of food a person takes is coupled with other activities like exercise.

According to Dr. Nambayta, parents have substituted fast food, high carbohydrates and high sugar-content food, for healthy food. She adds that this will cause an increase in the rate of overweight children.

Nutritional problems in Uganda according to the Uganda Demographic Health Survey (UDHS) indicate that 39 per cent of children less than five years of age are stunted; nine per cent of women of reproductive age have chronic energy deficiency. Over 65 percent of children less than five years of age and 30 percent of women 15-49 years of age are anemic, while 28 per cent of children and 52 percent of women are vitamin A deficient.

Given these high levels of under nutrition in Uganda, it is likely that deficiencies of other nutrients such as zinc, selenium, magnesium and vitamin C that are important for the immune function are prevalent in Uganda.

For optimum nutrition, one needs adequate food security; however, in Uganda food insecurity results from poverty.

1.3 Purpose of the study

The main objective of the study is to investigate the causes and effects of malnutrition on children aged 1-7 years in Rwampara County, Mbarara Districts and then give recommendations for the mothers and authorities.

1.4 objectives of the study

i. To identify the main causes of malnutrition in children aged 1-7 years in Rwampara County.

ii. To establish the effects of this malnutrition on the children affected.

iii. To identify the ways to reverse this trend of malnutrition on children aged 1-7 years in Rwampara County by using participatory methods.
1.5 Research questions

i. What are the main causes of malnutrition in children aged 1-7 years in Rwampara County?

ii. What are the effects of this malnutrition on the children affected?

iii. What are the suggested ways by parents and technocrats to reverse this trend of malnutrition on children aged 1-7 years in Rwampara County?

1.6 Scope of the Study

1.6.1 Time Scope

The research will be done between March to July 2018 and the research intends to concentrate on the literature published from 2000-2018 in order to identify the variable problems.

1.6.2 Subject Scope

The study shall be done in Mbarara, Rwampara County. The people to be interviewed in the study are the mothers, fathers, technocrats and civil leaders in Rwampara County. The contextual scope of this study will focus on the causes and effects of malnutrition on children aged 1-7 years in Rwampara County attending Kinoni Health Centre.

1.6.3 Geographical Scope

The study will be carried out in Rwampara County located in South Western Uganda, Mbarara district.

1.7 Significance of the Study

The research will be significant in the following ways:

Researcher

The study will help improve my skills and knowledge as a researcher in doing research. The study will also help me as researcher to obtain more information about the causes and effects of malnutrition on children aged 1-7 years.

Government

The study will also help the government in appreciating the feeding on balanced diet with all nutrients. The study will also help the government to implement the solutions of curbing the causes and effects of malnutrition among children aged 1-7 years.
Other researchers

The research will also contribute knowledge as literature review to other researchers interested in the same area of research.

Parents and civil leaders

The research will also help the parents and civil leaders to implement solutions to prevent malnutrition among children aged 1-7 years.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter deals with review of the related literature on the study of the variables specifically malnutrition and children aged 1-7 years in Rwampara County.

2.1 Causes of malnutrition

Malnutrition is a nutrient deficiency state of protein, energy or micronutrients (vitamins and minerals). This causes measurable harm to body composition, function or clinical outcome. Malnutrition is both a cause and consequence of ill health. We tend to visualize malnutrition as solely affecting starving children in the developing world but it is common at home, particularly in elderly and hospitalized populations and massively increases a patient's vulnerability to disease. (Liz Young 2004).

2.1.1 Medical conditions

Some types of medication may increase ones’ risk of developing malnutrition. More than 250 types of medicine are known to disrupt the body's ability to absorb and then break down nutrients.

According to Kammann EE, 2007 Medical conditions that can lead to malnutrition include:

- A condition that causes a lack of appetite, such as cancer, liver disease, persistent pain or nausea.
- A health condition that requires frequent hospital admissions.
- A health condition that disrupts the body's ability to digest food or absorb nutrients, such as Crohn's disease or ulcerative colitis.
- Dysphasia-- a condition that makes swallowing difficult or painful.
- Persistent vomiting or diarrhea.
- An eating disorder, such as anorexia nervosa.

2.1.2 Physical factors

According to Caputo A, 2003 the physical factors can also contribute to malnutrition. For example:

- If one’s teeth are in a poor condition, or if dentures don’t fit properly, eating can be difficult or painful.
- When there is no or lack of food in a home, one will have nothing to eat.
• One may lose appetite as a result of losing one’s sense of smell and taste.
• One may have a physical disability or other impairment that makes it difficult for one to cook or shop food for self.

2.1.3 Social factors

Social situations that can contribute to malnutrition include:

• Living alone and being socially isolated
• Having limited knowledge about nutrition or cooking
• Poor feeding
• Reduced mobility
• Alcohol or drug dependency
• Low income or poverty

2.1.4 Diseases

Malnutrition can be a consequence of health issues such as gastroenteritis or chronic illness, especially the HIV / AIDS pandemic. Diarrhea and other infections can cause malnutrition through decreased nutrient absorption, decreased intake of food, increased metabolic requirements and direct nutrient loss. Parasite infections, in particular intestinal worm infections (helminthiasis), can also lead to malnutrition. A leading cause of diarrhea and intestinal worm infections in children in developing countries is lack of sanitation and hygiene. People may become malnourished due to abnormal nutrient loss due to diarrhea or chronic illness or increased energy expenditure (secondary malnutrition). Newnham ED (2017)

2.1.5 Dietary practices

2.1.5.1 Under nutrition

A lack of adequate breastfeeding leads to malnutrition in infants and children, associated with the deaths of an estimated one million children annually. Illegal advertising of breast milk substitutes continues three decades after its 1981 prohibition under the WHO International Code of Marketing Breast Milk Substitutes. (Brady JP (June 2012). Maternal malnutrition can also factor into the poor health or death of a baby. Over 800,000 neonatal deaths have occurred because of deficient growth of the fetus in the mother's womb. Deriving too much of one's diet from a single source, such as eating almost exclusively corn or rice, can cause malnutrition. This may either be from a lack of education about proper nutrition, or from only having access to a single food source. It is not just the total amount
of calories that matters but specific nutritional deficiencies such as vitamin A deficiency, iron deficiency or zinc deficiency can also increase risk of death (UNICEF, 2013).

2.1.5.2 Over nutrition

Over nutrition caused by overeating is also a form of malnutrition. In the United States, more than half of all adults are now overweight a condition that, like hunger, increases susceptibility to disease and disability, reduces worker productivity, and lowers life expectancy. Over eating is much more common in the United States, where for the majority of people, access to food is not an issue. Many parts of the world have access to a surplus of non-nutritious food, in addition to increased sedentary lifestyles. Yale psychologist Kelly Brownell calls this a "toxic food environment" where fat and sugar laden foods have taken precedence over healthy nutritious foods. The issue in these developed countries is choosing the right kind of food. More fast food is consumed per capita in the United States than in any other country. The reason for this mass consumption of fast food is its affordability and accessibility. Often fast food low in cost and nutrition, is high in calories and heavily promoted. When these eating habits are combined with increasingly urbanized, automated, and more sedentary lifestyles, it becomes clear to why weight gain is difficult to avoid. Overeating leads to many diseases, such as heart disease and diabetes that may result in death (Gardner, Gary, Halweil, Brian (2000)).

2.1.6 Poverty and food prices

Poor socioeconomic position is associated with chronic malnutrition since it inhibits purchase of nutritious foods such as milk, meat, poultry, and fruits. As much as food shortages may be a contributing factor to malnutrition in countries with lack of technology, the FAO (Food and Agriculture Organization) has estimated that eighty percent of malnourished children living in the developing world live in countries that produce food surpluses. The economist (Amartya Sen) observed that, in recent decades, famine has always been a problem of food distribution and/or poverty, as there has been sufficient food to feed the whole population of the world. He states that malnutrition and famine were more related to problems of food distribution and purchasing power. It is argued that commodity speculators are increasing the cost of food. As the real estate bubble in the United States was collapsing, it is said that trillions of dollars moved to invest in food and primary commodities, causing the 2007-2008 food price crisis. The use of bio fuels as a replacement for traditional fuels and raises the price of food. The United Nations special reporters on the right to food, Jean Ziegler proposes that agricultural waste, such as corn cobs and banana leaves, rather than crops themselves are used as fuel. (Ferrett, Grant (October 27, 2007)
2.1.7 Agricultural productivity

Local food shortages can be caused by a lack of arable land, adverse weather, lower farming skills such as crop rotation, or by a lack of technology or resources needed for the higher yields found in modern agriculture, such as fertilizers, pesticides, irrigation, machinery and storage facilities. As a result of widespread poverty, farmers cannot afford or governments cannot provide the resources necessary to improve local yields. The World Bank and some wealthy donor countries also press nations that depend on aid to cut or eliminate subsidized agricultural inputs such as fertilizer, in the name of free market policies even as the United States and Europe extensively subsidized their own farmers. Many, if not most, farmers cannot afford fertilizer at market prices, leading to low agricultural production and wages and high, unaffordable food prices. Reasons for the unavailability of fertilizer include moves to stop supplying fertilizer on environmental grounds, cited as the obstacle to feeding Africa by the Green Revolution pioneers (Norman Borlaug and Keith Rosenberg, Aug 2011).

2.1.8 Future threats

There are a number of potential disruptions to global food supply that could cause widespread malnutrition. Global warming is of importance to food security, with 95 percent of all malnourished peoples living in the relatively stable climate region of the sub-tropics and tropics. According to the latest IPCC reports, temperature increases in these regions are very likely. Even small changes in temperatures can lead to increased frequency of extreme weather conditions. Many of these have great impact on agricultural production and hence nutrition. For example, the 1998-2001 central Asian droughts brought about an 80 percent livestock loss and 50 percent reduction in wheat and barley crops in Iran. Similar figures were present in other nations. An increase in extreme weather such as drought in regions such as Sub-Saharan Africa would have even greater consequences in terms of malnutrition. Even without an increase of extreme weather events, a simple increase in temperature reduces the productivity of many crop species, also decreasing food security in these regions. Colony collapse disorder is a phenomenon where bees die in large numbers. Since many agricultural crops worldwide are pollinated by bees, this represents a threat to the supply of food. (Climate Change, 2007)

2.2 EFFECTS OF MALNUTRITION

2.2.1 Stunting

Under nutrition encompasses stunted growth (stunting), wasting, and deficiencies of essential vitamins and minerals (collectively referred to as micronutrients). The term hunger, which describes a feeling of discomfort from not eating, has been used to describe under nutrition, especially in reference to food
insecurity. Stunting is one of the main long-term effects of malnutrition in children. Malnutrition can hinder a child's ability to grow normally, leaving both his height and his weight well under normal when he is compared with children of the same age. Stunted growth can be permanent, and a child may never achieve normal height or body weight if he is chronically malnourished. According to the "British Medical Journal,” malnutrition in children can also adversely hinder brain development and intellectual capacity in the early stages of life. (Black, R. Allen, L. Bhutta, Ezzati, Rivera, J. Maternal and Child Under Nutrition Study Group (2008)

2.2.2 Marasmus

Marasmus is a severe protein-energy deficiency that can develop as a result of malnutrition. It is characterized by a lack of nearly all nutrients, particularly protein and calories. Also called an energy deficiency, marasmus is characterized by pronounced and severe weight loss, thin and papery skin that is sometimes darker than normal, pronounced hair loss, a pinched facial expression and long periods of apathy. Marasmus ('to waste away') is caused by an inadequate intake of protein and energy. The main symptoms are severe wasting, leaving little or no edema, minimal subcutaneous fat, severe muscle wasting, and non-normal serum albumin levels. Marasmus can result from a sustained diet of inadequate energy and protein, and the metabolism adapts to prolong survival. It is traditionally seen in famine, significant food restriction, or more severe cases of anorexia. Conditions are characterized by extreme wasting of the muscles and a gaunt expression. (Nikolaos Katsilambros (2011)

2.2.3 Kwashiorkor

Kwashiorkor ('malnourished child') is mainly caused by inadequate protein intake resulting in a low concentration of amino acids. The main symptoms are edema, wasting, liver enlargement, hypalbuminaemia, statuses, and possibly depigmentation of skin and hair. Kwashiorkor is identified by swelling of the extremities and belly, which is deceiving of actual nutritional status. Kwashiorkor is an acute type of protein-energy deficiency that is common in children who are malnourished. Kwashiorkor differs from marasmus in that calorie intake can be sufficient, but protein intake is severely restricted. Symptoms of kwashiorkor include discolored, brittle hair that has a copper sheen, rashes, water retention, a distended belly caused by bloating, an enlarged liver and apathy. Severe cases of kwashiorkor are 'rare in the United States. If left untreated, this condition leads to coma and death. (Chowdhury, Akhter, Haque, M. Nahar, N. 2009)
2.2.4 Vitamin and Mineral Deficiency

Malnutrition can involve not only insufficient macronutrients such as protein, carbohydrates and fat, but also insufficient micronutrients such as vitamins and minerals. Vitamin and mineral malnutrition can have an array of effects, depending on the specific micronutrient that is lacking in the diet. For example, a deficiency in the mineral iron can lead to anemia, or a low red blood cell count. A deficiency in vitamin C can lead to scurvy, which causes apathy and discoloration of the skin. Ingesting adequate amounts of vitamins and minerals can prevent deficiency.

2.3 Ways to reverse the trend on Malnutrition

2.3.1 Food security

The effort to bring modern agricultural techniques found in the West, such as nitrogen fertilizers and pesticides, to Asia, called the Green Revolution, resulted in decreases in malnutrition similar to those seen earlier in Western nations. This was possible because of existing infrastructure and institutions that are in short supply in Africa, such as a system of roads or public seed companies that made seeds available. An investment in agriculture, such as subsidized fertilizers and seeds, increases food harvest and reduces food prices. For example, in the case of Malawi, almost five million of its 13 million people used to need emergency food aid. However, after the government changed policy and subsidies for fertilizer and seed were introduced against World Bank strictures, farmers produced record breaking corn harvests as production leaped to 3.4 million in 2007 from 1.2 million in 2005, making Malawi a major food exporter. This lowered food prices and increased wages for farm workers. Such investments in agriculture are still needed in other African countries like the Democratic Republic of the Congo. New technology in agricultural production also has great potential to combat undernutrition. By improving agricultural yields, farmers could reduce poverty by increasing income as well as open up area for diversification of crops for household use. The World Bank itself claims to be part of the solution to malnutrition, asserting that the best way for countries to succeed in breaking the cycle of poverty and malnutrition is to build export-led economies that will give them the financial means to buy foodstuffs on the world market. (Dugger, Celia W. (December 2, 2007).

2.3.2 Breastfeeding

As of 2016 it was estimated that about 821,000 deaths of children less than five years old could be prevented globally per year through more widespread breastfeeding. In addition to reducing infant death, breast milk feeding provides an important source of micronutrients, clinically proven to bolster the immune system of children, and provide long-term defenses against non-communicable and allergic diseases. Breastfeeding has also been shown to improve cognitive abilities in children, with a
strong correlation to individual educational achievements. As previously noted, lack of proper breastfeeding is a major factor in child mortality rates, and a primary determinant of disease development for children. The medical community recommends exclusively breastfeeding infants for 6 months, with nutritional whole food supplementation and continued breastfeeding up to 2 years or older for overall optimal health outcomes. Exclusive breastfeeding is defined as only giving an infant breast milk for six months as a source of food and nutrition. This means no other liquids, including water or semi-solid foods. (Lessen, Rachelle; Kavanagh, Katherine (March 2015)

2.3.3 Fortified foods

Manufacturers are trying to fortify everyday foods with micronutrients that can be sold to consumers such as wheat flour for Beladi bread in Egypt or fish sauce in Vietnam and the iodization of salt. For example, flour has been fortified with iron, zinc, folic acid and other B vitamins such as thiamine, riboflavin, niacin and vitamin B 12.

2.3.4 Population Size

Restricting population size is a proposed solution. Thomas Malthus argued that population growth could be controlled by natural disasters and voluntary limits through moral restraint. Robert Chapman suggests that an intervention through government policies is a necessary ingredient of curtailing global population growth. However, there are many who believe that the world has more than enough resources to sustain its population. Instead, these theorists point to unequal distribution of resources and under- or unutilized arable land as the cause for malnutrition problems. For example, Amartya Sen (1981) advocates that, "no matter how a famine is caused, methods of breaking it call for a large supply of food in the public distribution system. This applies not only to organizing rationing and control, but also to undertaking work programs and other methods of increasing purchasing power for those hit by shifts in exchange entitlements in a general inflationary situation.

2.3.5 Food sovereignty

One suggested policy framework to resolve access issues is termed as food sovereignty, that is the right of people to define their own food, agriculture, livestock, and fisheries systems, in contrast to having food largely subjected to international market forces. Food first is one of the primary think tanks working to build support for food sovereignty. Neoliberals advocate for an increasing role of the free market. (Lazzerini, M; Robert, L; Pani, P (June 21, 2013).

2.3.6 Health facilities
Another possible long term solution would be to increase access to health facilities to rural parts of the world. These facilities could monitor undernourished children, act as supplemental food distribution centers, and provide education on dietary needs. These types of facilities have already proven very successful in countries such as Peru and Ghana. (Waters, Penny, Creed-Kanashin, H.Narro, Caulfield, L; 2006)

2.3.7 Food Aid

There is a growing realization among aid groups that giving cash or cash vouchers instead of food is a cheaper, faster, and more efficient way to deliver help to the hungry, particularly in areas where food is available but unaffordable. The UN’s World Food Program, the biggest non-governmental distributor of food, announced that it will begin distributing cash and vouchers instead of food in some areas, which Josette Sheeran, the WFP's executive director, described as a "revolution" in food aid. The aid agency Concern Worldwide is piloting a method through a mobile phone operator, Safaricom, which runs a money transfer program that allows cash to be sent from one part of the country to another. However, for people in a drought living a long way from and with limited access to markets, delivering food may be the most appropriate way to help. (Fred Cuny) stated that "the chances of saving lives at the outset of a relief operation are greatly reduced when food is imported. By the time it arrives in the country and gets to people, many will have died. U.S. law, which requires buying food at home rather than where the hungry live, is inefficient because approximately half of what is spent goes for transport. Cuny further pointed out "studies of every recent famine have shown that food was available in-country though not always in the immediate food deficit area" and "even though by local standards the prices are too high for the poor to purchase it, it would usually be cheaper for a donor to buy the hoarded food at the inflated price than to import it from abroad. (World Food Programme, February 12, 2009).

2.3.8 Educating children and mothers

According to the FAO, women are often responsible for preparing food and have the chance to educate their children about beneficial food and health habits, giving mothers another chance to improve the nutrition of their children. (Gender and Nutrition, August 22, 2016)
Types of food and their sources and their functions

There are various types of food and sources of vitamins according to (Brennan R J, 2006).

Proteins

A protein is an essential nutrient, responsible for multiple functions in the body, including tissue, cells and muscle.

Sources of proteins

Eggs

King of food protein is the humble egg. A medium egg has around 6g of protein of the highest biological value, meaning it comes complete with all the essential amino acids in the most digestible form.

Milk

Dairy foods are packed with protein and contain bone-building calcium too. Chocolate milk is the age-old recovery food after exercise, since it contains energy-replenishing carbohydrates and a blend of both slow and fast release whey and casein proteins.

Yogurt

A combination of casein and whey protein, yogurt is a great protein-rich food. Since most of the lactose is removed, it can work for most people who are lactose intolerant.

Fish and seafood

Fish and seafood are good sources of protein and are typically low in fat. While slightly higher in fat than other varieties, salmon packs in heart-healthy Omega-3 fatty acids which can reduce joint stiffness and inflammation.

Pistachio nuts

High quality proteins also contain a branch chain of amino acids which are key in supporting muscle recovery. Leucine in particular, makes up one third of muscle protein and helps to stimulate repair after exercise.
Functions of proteins

According to Brennan RJ, 2006 the following are the functions of proteins to children aged 1-7 years.

Repair and maintenance

Protein is termed the building block of the body. It is called this because protein is vital in the maintenance of body tissue, including development and repair. Hair, skin, eyes, muscles and organs are all made from protein. This is why children need more protein per pound of body weight than adults; they are growing and developing new protein tissue.

Energy

Protein is a major source of energy. If you consume more protein than you need for body tissue maintenance and other necessary functions, your body will use it for energy. If it is not needed due to sufficient intake of other energy sources such as carbohydrates, the protein will be used to create fat and becomes part of fat cells.

Hormones

Protein is involved in the creation of some hormones. These substances help control body functions that involve the interaction of several organs. Insulin, a small protein, is an example of a hormone that regulates blood sugar. It involves the interaction of organs such as the pancreas and the liver. Secretin, is another example of a protein hormone. This substance assists in the digestive process by stimulating the pancreas and the intestine to create necessary digestive juices.

Enzymes

Enzymes are proteins that increase the rate of chemical reactions in the body. In fact, most of the necessary chemical reactions in the body would not efficiently proceed without enzymes. For example, one type of enzyme functions as an aid in digesting large protein, carbohydrate and fat molecules into smaller molecules.

Transportation and storage of molecules

Protein is a major element in transportation of certain molecules. For example, hemoglobin is a protein that transports oxygen throughout the body. Protein is also sometimes used to store certain molecules. Ferritin is an example of a protein that combines with iron for storage in the liver.
Antibodies

Protein forms antibodies that help prevent infection, illness and disease. These proteins identify and assist in destroying antigens such as bacteria and viruses. They often work in conjunction with the other immune system cells. For example, these antibodies identify and then surround antigens in order to keep them contained until they can be destroyed by white blood cells.

Carbohydrates

Carbohydrates are found in almost all living things and play a critical role in the proper functioning of the immune system, fertilization, and blood clotting and human development.

Sources of carbohydrates

According to Gwatkin DR, 2006 the following are the sources of carbohydrates

Brown rice

Brown rice can be a great source of energy not only nutritionally but economically as well. These are inexpensive yet rich in carbohydrates. A cup of brown rice has 4g fiber which prevents fat storage and creates ongoing energy in the body. Some other sources of carbohydrates rich in fiber include quinoa and buckwheat.

Chickpeas

Chickpeas are one important source of carbohydrates, especially for those who want to be lean. They are important for weight loss as they have low glycemic index which makes hunger level stable.

Oats

Oats are perfect sources of carbohydrates. A cup of oats contain total of 104 g carbohydrates and 17 g fiber. Oats make the digestion process slower and keep you full for a longer period of time.

Blueberries

Berries especially blueberries are great sources of carbohydrates. They have good amount of minerals and vitamins and also transform whole fat into calorie burning fat.
Bananas

Bananas have high amount of rapidly-acting carbohydrates and are easy to digest. They are also loaded with potassium which helps to maintain the functions of muscle and nerve. One large banana contains 31g of carbohydrates.

Chestnuts

Chestnuts are low in fat and proteins, which makes them different from other nuts. They have good amount of starch and carbohydrates. In 100 g portion of chestnuts, there are 44g of carbohydrates from which 11g is sugar and 8g is fiber. They are exceptionally loaded with folates, vitamin C and monounsaturated fat. (Gwatkin D.R, 2006)

Other good sources of carbohydrates include our own local staple foods such as cassava, millet, sorghum, yams, and Irish potatoes.

Functions of carbohydrates

The following are the functions of carbohydrates according to (Gwatkin DR, 2006).

Provide energy

The main thing carbohydrates give is the energy for metabolism. This is why dieticians recommend that more than half of our calories should be supplied in the form of carbohydrates. Some carbohydrates are used immediately for cellular processes, while excess carbohydrates are stored in the form of glycogen, which is present in the liver.

Use protein in other beneficial ways

Without the functions of carbohydrates, our body would have to use protein for fuel, however, its necessary for other cellular processes and when it is wasted as fuel, carbohydrates allow our body to use protein for what its primary purpose is and not just for fuel.

Are necessary for fat oxidation

The body needs carbohydrates in order to burn fat. A breakdown product of carbohydrates is called oxaloacetic acid, which is necessary to metabolize fats. Without this breakdown product, fats get turned into ketones, which can be toxic to the bodies. Carbohydrates are important in order to allow fats to be metabolized correctly.
**Help gastro-intestinal system**

Carbohydrates play a role in the production of B complex vitamins made by beneficial bacteria in the body. The beneficial bacteria live off the carbohydrates digested by the gastro-intestinal tract and can then help in return by producing valuable vitamins. Carbohydrates, such as lactate, help the body absorb better, which is good for bones.

**Make food more flavorful**

Carbohydrates provide more flavors in the diet. Carbohydrates come in more varieties than just about any other food. They are easily digested by the gastro-intestinal tract, especially when cooked and give us the staple food our bodies need to function.

**Help cellular recognition processes**

This means that carbohydrates are important to our immune system. Many antibodies and proteins used in the immune system contain both carbohydrates and protein. Without carbohydrates, these combination carbohydrates molecules cannot form. The carbohydrate component helps the liver know when to degrade the antibody by being cleaved off the proteins making up the body immunoglobulin.

**Vitamins**

Vitamins and minerals are essential for the maintenance of good health and the prevention of a number of diseases.

**Types of Vitamins**

According to Tomkins A. there are various types of vitamins which include the following;

**Vitamin A (retinol)**

This vitamin is essential for growth and healthy skin and hair. It is found in animal products that include milk, butter, eggs and fish oils. Other source of vitamin A is a substance called beta-carotene. This is converted by the body into vitamin A .it is found in orange, yellow and green vegetables and fruits.
**Vitamin B complex**

The complex of B vitamins includes the group of substances: B1-thiamine, B2-riboflavin, B3-nicotinic acid, B6-pyridoxine, B12-cobalamin, folate-folic acid. The body requires relatively small amounts of vitamins B1, B2 and B3.

**Vegetarians and B12**

Vitamin B12 deficiency can occur in vegetarians because all dietary sources are lacking. The best dietary sources of the B vitamins, especially B12 are animal products and yeast extracts and other sources include bananas, potatoes, milk, egg and brown rice.

Dietary sources of vitamin B6 are similar to those for vitamin B12 and also include avocado, herring, salmon, sunflower seeds and walnuts.

**Folic acid (folate)**

Folic acid works closely in the body with Vitamin B12. It is vital for the production of healthy blood cells. Liver contains the greatest amount of folic acid, with lower levels found in beef, lamb and pork and a range of green vegetables and citrus fruits.

**Vitamin C**

Vitamin C is one of the most potent antioxidant vitamins. Vitamin C is important for the growth, health body tissue, wound repair and an efficient immune system. In addition, it also helps with the normal function of blood vessels and helps to absorb iron from plant sources as opposed to the iron in red meat.

**Vitamin D (calciferol)**

Vitamin D is essential for healthy bones and teeth. It helps the body to absorb calcium. The action of sunlight on the skin enables the body to manufacture Vitamin D even on a cloudy day. Foods rich in Vitamin D are oily fish, liver, cod liver oil and dairy products.

**Vitamin E**

Vitamin E is important in cell maintenance and also plays an active role in the maintenance of a healthy heart, blood and circulation. The following foods are rich in Vitamin E and include blackberries, mangoes, mackerel, salmon, nuts and soft margarine.
**Vitamin K**

Vitamin K is involved in the blood clotting process and in the maintenance of strong bones. It is found in small quantities in meat, most vegetables and wholegrain cereals.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Functions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamine (vitamin B1)</td>
<td>Part of an enzyme needed for energy metabolism; Important to nerve function.</td>
<td>Found in all nutritious foods in moderate amounts: pork, whole-grain, legumes, nuts and cereals.</td>
</tr>
<tr>
<td>Riboflavin (vitamin B2)</td>
<td>Part of an enzyme needed for energy metabolism; Important for normal vision, grain and skin health.</td>
<td>Milk and milk products; leafy green vegetables; whole-grain, enriched breads and cereals.</td>
</tr>
<tr>
<td>Pyridoxine (vitamin B6)</td>
<td>Part of an enzyme needed for making new cells especially red blood cells.</td>
<td>Leafy green vegetables and legumes, seeds, orange juice and liver.</td>
</tr>
<tr>
<td>Cobalamin (vitamin B12)</td>
<td>Part of an enzyme needed for making new cells; important to nerve function.</td>
<td>Meat, poultry, fish, seafood, eggs, milk and milk products.</td>
</tr>
<tr>
<td>Ascorbic acid (vitamin C)</td>
<td>Antioxidant; part of an enzyme needed for protein metabolism; important immune system health; aids in iron absorption.</td>
<td>Found only in fruits and vegetables, especially citrus for fruits, vegetables in the cabbage family, peppers, tomatoes, potatoes and mangoes.</td>
</tr>
</tbody>
</table>
Types of diseases caused by poor feeding

According to DR. Gwatkin (2006) the following are the diseases caused by poor feeding to children aged 1-7 years.

**Diabetes**

This is a condition in which blood glucose levels are higher than normal but not high enough to be diabetes. Obesity, high blood pressure and increased cholesterol are strong risk factors for developing diabetes. Oftentimes, establishing good nutrition and exercise habits can prevent pre-diabetes from progressing to full blown diabetes.

**Anemia**

Anemia occurs when red blood cells are unable to carry enough oxygen to the body cells. Symptoms of anemia include fatigue, sensitivity to cold temperatures, headache and a fast, irregular heartbeat. Anemia can be caused by lack of vitamin 13, 12, which the body needs to make red blood cells. Vitamin B 12 is found in fortified grains and animal products.

**Rickets**

Rickets are caused by a deficiency of vitamin D, calcium or phosphate. These vitamins are found in dairy products, fortified foods and vegetables. Rickets occurs in children and causes soft, weak bones, pain and muscle weakness. Replacing the missing nutrients in the nutrients in the diet will relieve most systems of these diseases.

Types of foods needed by pregnant and lactating mothers

According to Mahan k, Escott-Stump S. Krauses food, nutrition diet therapy (2005) the following are the foods needed by pregnant and lactating mothers;

**Calcium**

It is important to have a healthy daily intake of calcium. Dairy foods, such as milk, cheese, yoghurt are rich in calcium. If the mother is vegetarian, she should consider the following calcium-rich foods, calcium-fortified soy milk and juices, calcium -set tofu, soybeans, bokchoy, broccoli, collards, Chinese cabbage, okra, mustard green, kale and soy nuts.
Zinc

Zinc is a vital trace element. It plays a major role in normal growth and development, cellular integrity and several biological functions, including nucleic acid metabolism and protein synthesis. The best sources of zinc are chicken, turkey, ham, beans, eggs and rice.

Fiber

Wholegrain foods, such as whole meal, bread, wild rice, whole grain pasta, pluses, fruit and vegetables are rich in fiber. Women have a higher risk of developing constipation during pregnancy; eating plenty of fiber is effective in minimizing that risk.

Fats

Fats should make up between 25% and 35% of a woman's daily calories. This depends on her carbohydrates goals. Monounsaturated fats are preferable to saturated fats.

Proteins

Good animal-sourced proteins include fish, lean meat and chicken as well as eggs. Vegan mothers should consider the following foods as good sources of proteins such as beans, legumes, nuts, seeds and nut butters.

Types of food needed by growing children aged 1-5-10-18 years

The following are the foods needed by the growing children aged 1-5-10-18 years according to the different authors:

Iron

One of the most important diet considerations during 1-5-10 years is an increase in the intake of iron-rich foods such as lean meats and fish as well as beans, dark green vegetables, nuts and iron-fortified cereals and other grains. Iron from animal foods is much better absorbed then iron from non-animal sources (Wardley B.L 2004)

Calcium

The skeleton accounts for at least 99% of the body stores of calcium and the gains in skeletal weight are most rapid during the adolescent growth spurt. The achievement of peak bone mass during
childhood and adolescence is crucial to reduce the risk of osteoporosis in later years. By eating several servings of dairy products such as milk, yoghurt and cheese, the recommended calcium intake can be achieved. Physical activity is also essential, particularly weight-bearing exercise, which provides the stimulus to build and retains bone in the body (Weaver, C.M 2003).

**Fiber**

With the growing recognition of the importance of dietary fiber to health, children are encouraged to increase their dietary fiber intake. Children should consume their age plus 5 grams of the fiber per day (Freedman, D.S)

**Fat**

Many children consume too much dietary fat, which can lead to excessive calorie consumption and weight gain. As a result, nutrition experts believe that by the age of 5, children should follow adult recommendations for the consumption of fat. These consumptions suggest that total fat intake 110t exceed 30%) of calories and saturated fat should account for no more than 10% of the total calories (James, J. 2001).

**Protein**

The amount of protein needed per kilogram of body weight decreases after infancy and early childhood, from 1.2 gram/kg at 3 years to 1 gram/kg at 10 years. Protein deficiency is relatively rare in children but may be seen in children with severe food allergies, in those in strict vegan diets or in those who have limited access to food (Berenson, G.S.2004).

**Calories**

Caloric needs vary depending on the child's current rate of growth, the amount of physical activity and the child's metabolism. It is important that children consume enough calories to ensure proper growth and to spare protein from being used for energy. However, many children, especially those who are not physically active, tend to consume too many calories (Aspres, N.B. 2002)
2.4 CONCEPTUAL FRAMEWORK

Figure 2.1 CONCEPTUAL FRAMEWORK

Independent variables

Causes of malnutrition
- Medical conditions
- Diseases
- Poverty
- poor Agricultural Productivity
- Change of weather, like climate change
- Poor feeding
- Natural calamities

Intervening variables

Ways to reverse the trend
- Food security
- Breastfeeding or proper nutrition for children
- Population control or birth control
- Economic system, market economy
- Hygiene (improvement like house to cleanliness, environment health cleaning, immediate treatment)
- Deworming of children at health facilities
- Food Aid

Results (dependent variables)

Results of malnutrition
- Full growth and health
- Low death number of children
- Health of children
- Happiness for mothers and can do other work

Source: Primary data
Explanation


**Intervening factors** include food security, breastfeeding, population size, food aid, and health facilities.

**2.5 Summary of literature Review**

This chapter has presented the conceptualization of key terms encompassing definitions of malnutrition. Review of studies on malnutrition on children aged 1-7 years, causes of malnutrition, effects of malnutrition and ways of reversing malnutrition. This chapter is therefore important part of research as it brings in different perspectives from other studies which were conducted with other people in different contexts with different objectives around malnutrition which helped in defining the direction and focus of the study.
CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses how the study will be carried out. It discusses the research design, the sampling design, sources of the data, data collection methods, tools, data processing, analysis, and presentation.

3.1 Research Design

The design used will be case study of Rwampara County in Mbarara district where data will be gathered just once over a period (2017-2018). The research will use descriptive research design which describes the phenomenon it will be undertaken in order to ascertain and be able to describe the characteristics of variables of interest. The research sought to explain the relationship between the causes and effects of malnutrition on children aged 1-7 years.

3.2 Study Population

The study population comprised of mothers, health workers and children attending treatment and medication at Kinoni Health Center in Rwampara County, Mbarara district.

3.3 Sampling Size

Determining the sample size using the formula by Krejcie and Morgan (1970) method will be of 33 members.

3.3.1 Sampling Design

Stratified random sampling and simple random sampling without replacement will be used. Simple random sampling of size n is produced by a scheme which ensures that each subgroup of the population of size n has an equal probability of being chosen as the sample.

Stratified random sampling refers to the division of the population into strata. There can be any number of these. Then choose a simple random sample from each stratum and combine those into the overall sample.
Table 3.1: Showing sampling frame

<table>
<thead>
<tr>
<th>Category of respondents</th>
<th>Population</th>
<th>Sample size</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers</td>
<td>30</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Health workers</td>
<td>35</td>
<td>20</td>
<td>61</td>
</tr>
<tr>
<td>Children</td>
<td>23</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>33</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: primary data.

Percentages

Mothers = sample size ÷ population size

= 10 ÷ 33 x 100

= 30%

Health workers = sample size ÷ population

= 20 ÷ 33 x 100

= 61%

Children = sample size ÷ population size

= 3 ÷ 33 x 100

= 9%
3.4 Source of Data

3.4.1 Primary Data

Primary data will be obtained from Kinoni Health Center through the use of interviews and questionnaires.

3.4.2 Secondary Data

Secondary data will be obtained from the already existing information both internal sources which are found within the organization and external sources were collected from publication and journals.

3.5 Data Collection Methods

3.5.1 Observation

The researcher intends to use none controlled non-participant observation where the researcher will not participate and will watch everything from a distance while watching the researcher will be noting down the phenomenon.

3.5.2 Questionnaires

A questionnaire requires respondents to fill out the form themselves and so requires a high level of literacy. Where multiple languages are common, questionnaires should be prepared using the major languages of the target group. Special care needs to be taken in these cases to ensure accurate translations.

3.6 Data Collection tools

3.6.1 Primary

Questionnaires, tape records, interviewing, focused photos, observation. Semi structured questionnaires will be distributed to respondents who will be given time to answer them and return them for analysis by the researcher.

3.6.2 Documentary review

Secondary data will be obtained from reading already existing notes and taking notes of materials that are related to the research and a conclusion reached from them. That is to say books, formal and newspapers.
3.7 Data Processing Analysis and Presentation

3.7.1 Data processing

Data processing refers to the converting of raw data to machine-readable form and its subsequent processing such as storing, updating, rearranging or printing out by a computer. Data processing is defined as a series of operations on data, especially by a computer, to retrieve, or classify information. It includes the conversion of raw data to machine-readable form. The researchers after gathering the data will edit, code, classify and tabulate the data.

3.7.2 Data analysis

The researcher will use computer programs like Microsoft excel and (SPSS) statistical package for social sciences, this will result in computation of certain measures finding the relationships transforming and modeling data in order to highlight useful information.

3.7.3 Data presentation

Data presentation is a method by which people summaries, organize and communicate information using a variety of tools, such as diagrams, distribution charts, histograms and graphs. The methods used to present mathematical data vary widely. Data presentation includes the description of the dataset disseminated with the main variables covered. The researcher will put the results of the research into graphs, charts and tables as a visual way for data to look.

3.8 Ethical considerations

During the data collection, the researcher sought for the consent of respondents to participate in the study freely before it was undertaken. The researcher was emphasizing issues of confidentiality and respondents were informed that the study was causing no damage to them, either directly or indirectly. The findings of the study would be used for advocacy and policy development in future and the information would not leak to the other ministry authorities or people. It would be kept confidential.

3.9 Limitations of the study

One of the limitations to this study is the fact that I did not use focus group discussions as a tool in collecting data. Focus group discussions are recommended in qualitative research since they give the researcher a more in depth assessment of the situation when collecting data but because of a number of constraints this was not possible.
CHAPTER FOUR

PRESENTATION OF FINDINGS, DISCUSSION AND INTERPRETATION

4.0 Introduction

This chapter presents analysis done in relation to the study objectives and research questions in Chapter one of this report under the topic; causes and effects of malnutrition on children aged 1-7 years.

4.1 Demographic Characteristics of Respondents

Table 4.1: Category of respondents

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>10</td>
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</tr>
<tr>
<td>Children</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

Table 4.1: According to Table 4.1 above it was found out that 30% were mothers and 61% were health workers and 9% were children. This implies that most of the information was obtained from health workers on how children below the age of 7 years are affected by causes and effects of malnutrition.

Table 4.2: Showing the age of the respondents

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 29</td>
<td>13</td>
<td>39</td>
</tr>
<tr>
<td>30 - 39</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>40 - 49</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>50 and above</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

Most respondents were in the age group 20 - 29 comprising 39% followed by age bracket 30 - 39 with 25% 18% in the age bracket 40 - 49 and 50 and above both comprising 18%. This implies that most of the respondents are aged below 50 years. This also shows maturity in a way how questions were answered and approached by the respondents.
Table 4.3: showing gender of the respondents

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>76</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: primary data

According to table 4.3 above; most of the respondents were female comprising 76% and only 24% of the respondents were male. This implies that more of the respondents were females because even by their number they constituted the majority of the health workers.

Table 4.4: Showing the Level of Education

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Diploma</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Degree</td>
<td>20</td>
<td>61</td>
</tr>
<tr>
<td>Post graduate</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>others</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: primary data

From table 4.4 above; the level of education was found to be as follows; those holding a certificate were 6% , 12% of the respondents were diploma holders while majority of the respondents were degree holders 61% with 18% being post graduates while 30% were holding other qualification. This implies that most of the respondents were mature in answering questionnaires and had ideas on malnutrition in children.
Table 4.5: Showing Marital status

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Married</td>
<td>18</td>
<td>55</td>
</tr>
<tr>
<td>Windowed or divorced</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

From the above table 4.5; 42% of the respondents were single while 55% are married with 3% being widowed or divorced. This shows that most respondents were married and helped the researcher to know those who were single parents facing the problem of malnutrition.

SECTION B: 4.2 CAUSES OF MALNUTRITION IN CHILDREN AGED 1 - 7 YEARS

To identify the main causes of malnutrition in children aged 1-7 years in Rwampara County.

4.2.1 Findings on lack of food in homes

The researcher sought to find out whether lack of food in homes causes malnutrition. Different questions were formulated by the researcher on lack of food in homes and questionnaires were distributed in different departments in the organization. This helped the researcher to acquire enough information from the respondents.

Table 4.6: Responses on lack of food in homes

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>13</td>
<td>39</td>
</tr>
<tr>
<td>Not sure</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

From table 4.6 above; 6% strongly agree there is lack of food in homes while 39% agree there is lack of food in homes 24% were not sure whether lack of food in homes causes malnutrition while 21%
disagreed, 10% strongly disagreed. It therefore shows that there is lack of food in homes. However, health workers should encourage parents that is, mothers to gather food for the children.

4.2.2. Findings on poor feeding of children

The researcher sought to find out whether poor feeding of children is a cause of malnutrition. The researcher distributed the questionnaires to the different departments in order to get clear information to be used in the research findings.

Table 4.7: Responses on poor feeding of children

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Agree</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>Not sure</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

According to table 4.7 above; 33% of the respondents strongly agree that poor feeding of children has greatly caused malnutrition, 45% agreeing also, 18% of the respondents were not sure whether poor feeding of children cause malnutrition while 10% disagree with none of the respondents strongly disagreeing. This implies that the poor feeding results into malnutrition.

4.2.3 Findings on diseases among children aged 1-7 years

The researcher sought to find out on whether diseases among children aged 1-7 years causes malnutrition.
Table 4.8: Responses on diseases among those aged 1-7 years

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Not sure</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

According to the results of table 4.9 above; 27% of the respondents strongly agree that diseases among children aged 1-7 years lead to malnutrition with 42% agreeing while 6% were not sure 12% disagreed and 12% strongly disagreed. Diseases like kwashiorkor can be prevented through micronutrients such as proteins, carbohydrates, fats, vitamins and minerals. The problem is that parents may not have the money to take their children for treatment.

4.2.4 Findings on poverty and food prices as a cause of malnutrition

The researcher opted to find out on poverty and food prices are a cause of malnutrition. The researcher distributed the questionnaire in different departments and organizations which helped him to get relevant information concerning the findings.

Table 4.9: Responses on poverty and food prices as a cause of malnutrition

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Agree</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Not sure</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

Results from table 4.9 above shows that; 24% of the population strongly agreed that poverty and food prices cause malnutrition with 30% agreeing while 21% were not sure with 15% disagreeing that poverty and food prices causes malnutrition and 10% strongly disagreed. This means that the
respondents agreed that poverty and food prices contribute to malnutrition. Causes of poverty are unemployment, population increase especially among the poor.

SECTION C: 4.3. EFFECTS OF MALNUTRITION ON CHILDREN AGED 1 - 7 YEARS

The researcher opted to find out the effects of malnutrition among children aged 1-7 years in Rwamponara County.

4.3.1 Findings on marasmus

The researcher opted to find out how marasmus is an effect of malnutrition. Different questions were formulated by the researcher on how marasmus is an effect of malnutrition and questionnaires were distributed in different departments in the organization. This helped the researcher to acquire enough information from the respondents.

Table 4.10: Responses on marasmus

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Agree</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Not sure</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: primary data

From table 4.10 above; 27% strongly agree that marasmus is an effect of malnutrition with 33% agreeing while 18% of the respondents were not sure, 12% of the respondents disagree that marasmus is an effect of malnutrition with 10% strongly disagreeing. This implies that marasmus is an effect of malnutrition.

4.3.2 Findings on kwashiorkor

The researcher opted to find out on kwashiorkor in children. Different questions were formulated by the researcher on how kwashiorkor in children is an effect of malnutrition and questionnaires were distributed in different departments in the organization. This helped the researcher to acquire enough information from the respondents.
Kwashiorkor is mainly caused by inadequate protein intake resulting in a low concentration of amino acid. And children suffer from kwashiorkor because of lack of protein, carbohydrates, vitamins, fats and minerals.

Table 4.11 Responses on Kwashiorkor

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Not sure</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

The results in the table 4.11 show that; 42% of the respondents agreed that kwashiorkor is an effect of malnutrition. 21% strongly agreed while 12% were not sure. 15% of the respondents disagreed that kwashiorkor is an effect of malnutrition with 10% strongly disagreeing. This indicates that kwashiorkor is an effect of malnutrition in children aged 1-7 years.

4.3.3 Findings on vitamin and mineral deficiency

The researcher sought to find out on how Vitamin and mineral deficiency is an effect of malnutrition. Different questions were formulated by the researcher on how vitamin and mineral deficiency is an effect of malnutrition and questionnaires were distributed in different departments in the organization. This helped the researcher to acquire enough information from the respondents.

Table 4.12: Responses on vitamin and mineral deficiency

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Not sure</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data
From table 4.12 above; 30% of the respondents strongly agreed that vitamin and mineral deficiency are effects of malnutrition with 42% agreeing while 12% were not sure. 10% of the respondents disagreed with 6% strongly disagreeing. This indicates that Vitamin and mineral deficiency are effects of malnutrition in children aged 1-7 years.

SECTION D: 4.4 WAYS TO REVERSE THE TREND OF MALNUTRITION

The researcher opted to find out the ways to reverse the trend of malnutrition on children aged 1-7 years.

4.4.1 Findings on food security as a way of reversing the trend on malnutrition

The researcher found out how food security can reverse the trend of malnutrition. The researcher distributed the questionnaires to the respondents in order to help him in getting the information regarding the research findings.

Table 4.13: Responses on food security

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>13</td>
<td>39</td>
</tr>
<tr>
<td>Agree</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Not sure</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

From table 4.13 above; 30% of the respondents strongly agreed that food security is a way of reversing the trend with 18% agreeing while 27% were not sure. 3% of the respondents disagreed that food security is not a way of reversing the trend with 18% strongly disagreeing what is food security. This means that food security is a way of reversing the trend of malnutrition in children aged 1 – 7 years.

4.4.2 Findings on breastfeeding and how it is a way of reversing malnutrition trend

The researcher sought to find out on how breastfeeding is a way of reversing the trend. The researcher provided questionnaires to the respondents where the researcher got the data in order to satisfy the findings.
Table 4.14: Responses on breastfeeding

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Agree</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Not sure</td>
<td>14</td>
<td>42</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data

From table 4.14 above; 10% of the respondents strongly agreed that breastfeeding is a way of reversing the trend of malnutrition with 27% agreeing while 42% were not sure. 18% of the respondents disagreed that breastfeeding is not one of the ways of reversing the trend of malnutrition with 3% strongly disagreeing; This means that breast feeding is a way of reversing the trend of malnutrition among children aged 1-7 years. Problems associated with breast feeding are lack of balanced diet, diseases.

4.4.4. Findings on health facilities

The researcher found out how health facilities reverse the trend of malnutrition. The researcher distributed the questionnaires to the respondents in order to help him in getting the information regarding the findings.

Table 4.15: Responses on health facilities

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>Agree</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Not sure</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: primary data
From table 4.15 above; 45% of the respondents strongly agreed that health facilities are ways of reversing the trend with 33% agreeing while 18% were not sure. 10% of the respondents disagreed that health facilities are not ways of reversing the trend with 0% strongly disagreeing. This means that health facilities contributes to reversing the trend of malnutrition on children aged 1 - 7 years. What are health facilities? These are facilities that help in monitoring undernourished children, act as supplemental food distribution centers, and provide education on dietary needs.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

Under this chapter, the researcher summarized the findings, concluded and recommended as per the study objectives and the research questions in chapter one.

5.1 Summary of findings on the causes of malnutrition

5.1.1 Findings on the causes of malnutrition in children aged 1-7 years in Rwampara County

Findings revealed that the causes of malnutrition in children aged 1-7 years was mostly by poor feeding with (78%) of the respondents affirming it. This shows that it has a large percentage and therefore health workers, parents have to come up with polices to curb this and to ensure its effectiveness in providing good foods for feeding the children.

Findings were done on lack food in homes, poverty and food prices

5.1.2 Findings on the effects of malnutrition on children aged 1-7 years

The findings revealed the effects of malnutrition on children aged 1-7 years. This was revealed by 72% of the respondents who confirmed that vitamin and mineral deficiency are the major effects of malnutrition on children aged 1-7 years.

Findings on kwashiorkor in children were revealed by 63% of the respondents as an effect of malnutrition. Different questions were formulated by the researcher on how kwashiorkor in children is an effect of malnutrition and were distributed in different departments in the organizations. This helped the researcher to acquire enough information from the respondents

5.1.3 Reversing the trend of malnutrition on children aged 1-7 years

Findings revealed that ways of reversing the trends of malnutrition on children aged 1-5 years which mostly contributed to food security with 78% of the respondents, breast feeding with 37%. This is to be maintained and a focus should be put on the food because it is a contributing factor to malnutrition and that feeding of the children should be checked.
5.2 Conclusion

From the above findings; it can be concluded that Rwampara County acknowledges the ways of reversing malnutrition in children aged 1-7 years with help of health facilities. The health facilities are mostly used and contribute to a way of reversing malnutrition with 78% of the respondents affirming to it. Therefore, this should be maintained and focus on health facilities like clinics, health centers and pharmacies of Rwampara County because it is a contributing factor to reversing the trend of malnutrition in children.

5.3 Recommendations

From the study results presented; the following was recommendations that may be helpful in improving the survival, health and nutrition status of children.

➢ There is need to improve the counselling skills of health providers, community health workers and peer educators and their ability to negotiate with mothers to try the recommended breast feeding practices
➢ It is important to offer health education to parents that is mothers in order to ensure they prevent malnutrition among the children.
➢ The mothers should breast feed the children to prevent malnutrition in children in order to guide the daily feeding of children and to provide them with guiding principles.
➢ Increase access to health facilities in rural parts of the district. These facilities could monitor undernourished children, act as supplemental food distribution centers and provide dietary needs.
➢ Finally, the results of this study were not generalized because of the sample size.so other studies if possible should be conducted with a larger sample size that could present results with general implications.
REFERENCES


Progress for Children: A Report Card on Nutrition" (PDF). UNICEF.


APPENDIX (1)

Questionnaire

Dear respondent, I am ARUHO PHILIP and I am conducting a study on; causes and effects of malnutrition on children aged 1 - 7 years in Rwampara County as part of my study program in Nkumba University. Your opinion is of great importance to this study and the information you will provide will only be used for academic purposes and will be treated with a high degree of confidentiality.

QUESTIONNAIRES TO BE FILLED BY MOTHERS AND HEALTH WORKERS IN RWAMPARA COUNTY

Section A. Social economic characteristics

1. What is your age bracket?
   20-29 years ☐ 30-39 years ☐ 40-49 years ☐ 50 years and above ☐

2. What is your gender?
   Female ☐ male ☐

3. What is your level of education?
   Certificate ☐ diploma ☐ degree ☐ post graduate ☐
   Other …………………………………………………………………………………………………

4. What is your marital status?
   Single ☐ married ☐ windowed or divorced ☐

5. Religion affiliation?
   Catholic ☐ Anglican ☐ SDA ☐ Islam ☐
   Other …………………………………………………………………………………………………
In questionnaire sections B, C and D, tick appropriately using the liked scale below:
SD-Strongly Disagreed, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

SECTION B: Causes of malnutrition in children aged 1 – 7 years in Rwampara County

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>6  Does lack of enough food in homes lead to malnutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7  Does poor feeding of children lead to malnutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8  Diseases are major causes of malnutrition among children aged 1 – 7 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9  Poverty and food prices are also causes of malnutrition.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Give reasons why does lack of food in homes lead to malnutrition
.................................................................................................................................................................
........................................................................................................................................................................

7. Give reasons for poor feeding as a cause of malnutrition to children.
........................................................................................................................................................................
........................................................................................................................................................................

8. Give reasons why diseases are being the major cause of malnutrition among children.
........................................................................................................................................................................
........................................................................................................................................................................

9. Give reasons if you think poverty and food prices are causes of malnutrition
........................................................................................................................................................................
........................................................................................................................................................................
SECTION C. Effects of malnutrition on children aged 1 – 7 years

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Marasmus is an effect of malnutrition in children aged 1 – 7 years</td>
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<td>11 Kwashiorkor is a major effect of malnutrition in children aged 1 – 7 years</td>
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<td>12 Vitamin and mineral deficiency are also effects of malnutrition in children aged 1 – 7 years</td>
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10. Suggest ways that can stop marasmus as an effect of malnutrition
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11. Give foods that can stop kwashiorkor as a major effect of malnutrition in children aged 1 – 7 years
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12. Suggest ways that can reduce vitamin and mineral deficiency in children aged 1 – 7 years
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### SECTION D: Ways to reverse malnutrition

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<th>Statement</th>
<th>SA</th>
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<tr>
<td>13  Food security is a way of reserving the trend of malnutrition</td>
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<td>14  Breastfeeding is a major way of reversing the trend.</td>
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<td>15  Health facilities are also ways of reversing the trend of malnutrition</td>
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13. What are other ways of reducing lack of food?

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14. What are the best ways of breastfeeding children aged 1 – 7 years?

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15. What are the best health facilities to reduce malnutrition in children aged 1 – 7 years?

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APPENDIX (II)

INTERVIEW GUIDE

1. Is there malnutrition among the children aged 1-7 years in Rwampara County?

2. Are there effects of malnutrition in children aged 1-7 years in Rwampara County?

3. What are the causes of malnutrition in children aged 1-7 years in the County?

4. Are there ways of reversing the trends of malnutrition in children aged 1-7 years in the County?

5. Are there foods needed by growing children aged 1-5-10 years to prevent malnutrition?

6. What are the different types of foods and their sources needed by the children aged 1-7 years?

7. What are the functions of the foods needed by the children aged 1-7 years?