A STUDY TO EVALUATE WEANING PRACTICES IN RELATION TO DEVELOPMENT OF MALNUTRITION IN CHILDREN UNDER TWO YEARS OF AGE ADMITTED AT THE UNIVERSITY TEACHING HOSPITAL

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DECLARATION

I hereby declare that this work presented in this study for the degree of Bachelor of Science in Nursing, has not been presented wholly or in part for any other degree or it being currently submitted for any other degree.

Signed: _____
CANDIDATE

Approved by: _____
SUPERVISING LECTURER

STATEMENT

I hereby certify that this study is entirely the result of my own independent investigation. The various sources to which I am indebted, are clearly indicated in the paper and in the references.

Manipumbu

DEDICATION

I dedicate this book to my dear family, especially my husband Collin, my children MULAKO, CHUNDA and CHINYAMA. To my dear mother, Ms. D. Mumba, Aunt G. Chama, and my mother-in-law, Mrs. E. Chipumbu.

"And we know that in all things"
God works for the good of those
who love Him, who have been
called according to
His purpose."

(Romans 8 Vs 28)

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ABSTRACT

OBJECTIVE

The aim of the study was to evaluate the weaning practices in relation to development of malnutrition in children under two years of age admitted at the University Teaching Hospital.

DESIGN

A descriptive study was conducted using a structured interview schedule.

SETTING

The study was carried out in A-Block Ward A07 of the University Teaching Hospital in Lusaka. Out of 20-25 Admissions in A-Block, 6-7 children are malnourished and are admitted to A07.

SUBJECTS

Respondents were parents or guardians taking care of the malnourished children in A07.

RESULTS

The results show that most mothers lack knowledge about their children's nutrition and good weaning practices. Most of the families are poor and are unable to support their families economically. Most families were not practicing Family Planning and that most of their children started getting sick by having diarrhoea first. Mothers admitted that they did not get much help from health workers because they are usually few and busy at their clinics.

CONCLUSION

The findings of this study show that bad weaning practices contribute a lot to the development of malnutrition in children admitted to the University Teaching Hospital - Ward AO7.

CHAPTER 1

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Protein energy malnutrition (PEM) is the term used to describe all degrees of energy and protein deficiency from mild to severe cases of marasmus and kwashiorkor.[1] In young children, malnutrition is evidenced by slow growth rate which is usually detected by monthly weighing of the child and plotting on the Children's Card.

There are many predisposing factors to malnutrition. Poor dietary intake is one of the factors leading to malnutrition. This problem is world-wide, especially in developing countries like Asia, Africa and South America. Children suffer poor health and malnutrition due to growing poverty around the world. "It is estimated that, at present, 40 to 45 percent of the population of the average city in the developing world, live below the poverty datum line".[2] In Zambia, according to the Demographic Survey 1994, two thirds of the households are poor and live below the poverty datum line, 55 percent are so poor that even if they spent their total income on food only, it would not be enough to carry them through the month.[3]

Frequent child births, is another major cause of malnutrition. This is due to very few women using

contraceptives in the third world today. In Zambia, western family planning methods were rejected by politicians on grounds that the land was vast and unoccupied and had wealth, through natural resources like copper. They called on the people to multiply and fill the vast land. This appeal had consequences on the country, as women got pregnant yearly; they became unhealthy and delivered low birthweight babies. This resulted also in high maternal and infant mortality rates.

HIV/AIDS related conditions in children, cause malnutrition in that, the immunity is lowered, predisposing the child to many diseases and infections. Statistics in the developing countries, estimate that, by the year 2000, ten million children under five years, will be infected with HIV and 80 percent will die before the age of five.[4] Other diseases like diarrhoea, measles and chest infections, will cause malnutrition, especially when the body resistance is already low, due to poor diet.

Acute PEM is usually seen in the child's second year of life when breast-feeding has decreased, or the child is suddenly weaned. Malnutrition comes about when the child stops getting adequate nutrients from the breast milk, to make him grow well. Children are usually weaned on plain porridge with little nutrients. The child will consequently fail to thrive and later die from malnutrition.

Malnutrition is one of the leading causes of child deaths in developing countries. Each day, 23,000 children die from malnutrition alone.[5] In Zambia, more children die of PEM than any other disease. Zambia is one of the countries with a high rate of under-weight children. Under five mortality rates have risen from 152 to 191 per 1000 live births in 1994.[6]

Malnutrition is a condition which can be prevented. Botha states

> "Any condition or problem where interventions prove beneficial, deserve priority, particularly where prevention is possible."[7]

The government is spending a lot of money in trying to treat malnutrition. It has intensified nutrition programmes to try and help the vulnerable groups, who are mostly children. In 1994, the government pledged to reduce moderate and severe malnutrition by 20 per cent or more, by 1995. Some of the government programmes are:-

(1) Nutrition rehabilitation programme attached to the Ministry of Community Development and Social Welfare.

(2) Maternal and child health services, at the Ministry of Health.

(3) Food and Agriculture Organisation at the Ministry of Agriculture and Water Development.

(4) World Food Programme, which was initiated in 1988.

(5) Food and Nutrition Surveillance Commission.

(6) Programme to Prevent Malnutrition which was initiated in 1992.

(7) Other organisations like World Health Organization (WHO), United Nations Children's Fund (UNICEF).[8]

However, despite the government's efforts to reduce malnutrition, malnutrition is increasing. It has reached 60 per cent in rural areas and 53 per cent in urban areas. The magnitude of the problem remains vast and underlying causes are not yet addressed fully.

Malnutrition can not be tackled by Ministry of Health alone, but requires intersectional co-operation between the Ministry of Health and other Ministries such as Agriculture, Labour and Social Services, Education, Commerce and Industry, etc. This will be done through research. The government should find out to what extent the programmes are being achieved.

It is important to research into the weaning practices of children, especially those under two years because, statistics have shown that malnutrition is commonly seen after the age of six months, especially when the child is one year and above.

To fight against malnutrition, everybody in the country must get involved, including parents. Health workers must give the required information to the

families, and should discourage harmful traditional practices related to child nutrition. This study, therefore, tries to evaluate the weaning practices of Zambian families and how far these contribute to the development of malnutrition. Once this background information is found, then it will be easy for the government to know where to start from, in tackling this problem.

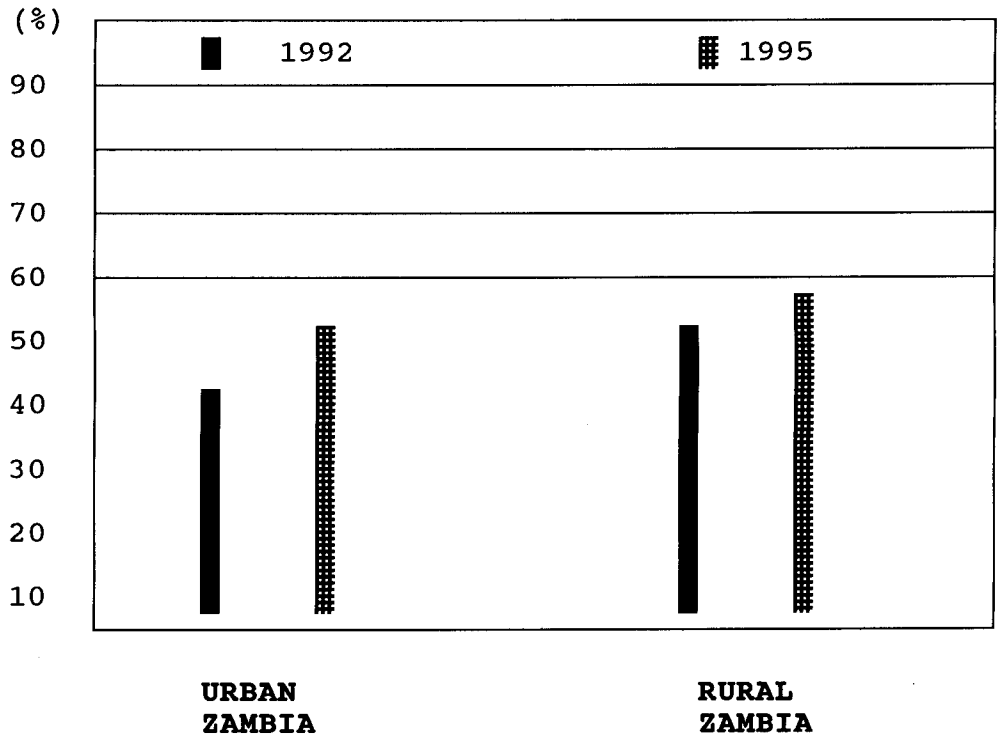
1.2 STATEMENT OF THE PROBLEM

Severe malnutrition is escalating in both rural and urban areas of Zambian to-date. The need to address this issue is urgent. The long term impact of malnutrition on children and the population as a whole, can have a debilitating effect on both the physical and economic development of the country.

Good health is essential for the growth and development of children. Without an adequate diet and proper child-care or protection from disease, children are unlikely to grow normally and may suffer from malnutrition. During the first five years of life, the child grows quickly both physically and mentally. Development of malnutrition before five years, may result in a reduction of mental and physical growth and development. Malnourished children have poor school performance and often grow into adults with a reduced work capacity.

Malnutrition makes children more susceptible to diseases. They are more likely to die from minor illnesses. They have twice the risk of dying, than those who are well nourished. The risk is tripled in moderate and severe malnutrition. Chronically malnourished children tend to grow slowly than healthy children. In Zambia at present, 53 per cent of all children under five years, are under-weight and, therefore, chronically malnourished. 30 per cent of all children are severely malnourished. These rates of malnutrition have increased steadily over the past few years. In 1995, chronic malnutrition has increased in both urban and rural areas. In urban areas, malnutrition has increased from 39 per cent in 1992 to 53 per cent in 1995. In rural areas, it has increased from 52 per cent in 1992 to 60 per cent in 1995.[10]

DIAGRAM SHOWING MALNUTRITION RATES IN ZAMBIA FROM 1992 TO 1995.[11]



The implication of malnutrition is far reaching. A country with a high incidence of chronic malnutrition is more likely to rely on a labour force whose work output is low and, therefore, find it difficult to effect economic growth.

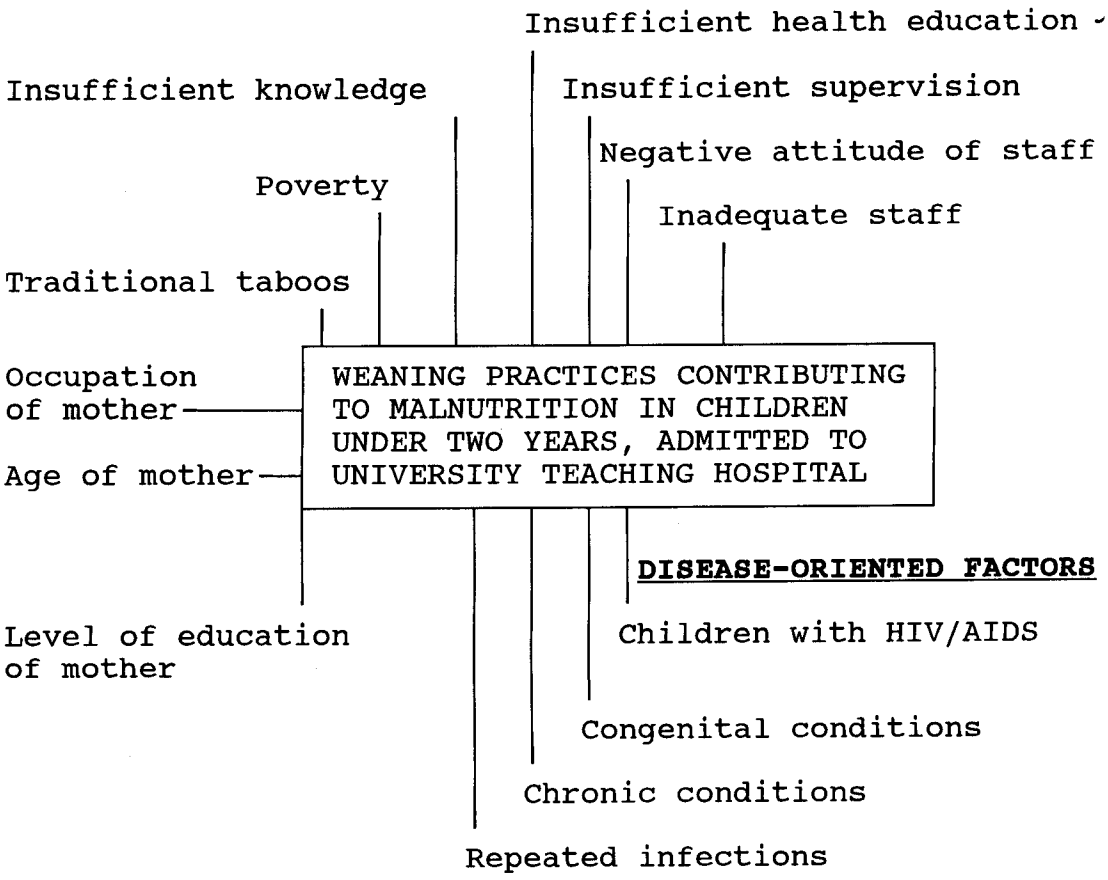
There are many contributing factors to development of malnutrition, especially those in relation to weaning practices. The mother may have inadequate knowledge on the importance of adequate breast-feeding, gradual weaning practices and required

food supplements for the child. In addition, the mother may have inadequate supervision from health personnel like the Community Health Nurses. The health workers are supposed to follow up, supervise and demonstrate good cooking habits to families with underweight children, before these children develop moderate or severe malnutrition.

Other factors are disease-oriented. A child with HIV/AIDS related conditions, will not adjust well to weaning, especially if it is sudden weaning. Special attention should be paid to such children in that, all nutritional needs should be met. Children with congenital conditions such as heart diseases and repeated infections, will find it difficult to adjust to poor weaning practices, especially when compounded by lack of balanced diet.

Other socio-cultural factors are occupation of the mother. Working mothers do stop breast-feeding early, compared to rural women, who breast-feed their children longer. Insufficient knowledge can be attributed to the age of the mother. Young mothers may have inadequate knowledge on child feeding as they have very little experience. The level of education of the mother is also associated with insufficient knowledge, if she is not well educated.

DIAGRAM SHOWING POSSIBLE CONTRIBUTING FACTORS TO MALNUTRITION IN RELATION TO WEANING PRACTICES.



Despite many causes of malnutrition, the researcher would like to concentrate on the weaning practices and how far these contribute to the development of malnutrition. Therefore, the following research questions are asked:-

(1) Why is malnutrition not commonly seen in children under six months of age?

(2) Why does malnutrition start after a child is a year old and above.

(3) What type of weaning practices are carried out by mothers in Lusaka District?

When these questions are answered, the researcher will draw conclusions on whether there are many undesirable weaning practices that may result in children developing malnutrition. The results will help the policy makers and health personnel in the fight against malnutrition.

1.3 STUDY OBJECTIVES

1.3.1. GENERAL OBJECTIVE

To establish current weaning practices in relation to development of malnutrition in children under two years of age admitted at University Teaching Hospital.

1.3.2 SPECIFIC OBJECTIVES

(1) To find out how much knowledge mothers have about children's nutrition and good weaning practices.

(2) To assess the economic status of families with malnourished children.

(3) To find out whether mothers with malnourished children are practising family planning, in order to avoid unwanted pregnancies.

(4) To establish common infections that contribute to the development of malnutrition.

(5) To find out how much help families with malnourished children get from health workers at their nearest health centres.

1.4 STATEMENT OF HYPOTHESES

(1) Mothers' knowledge on children's nutrition and good weaning practices, can prevent development of malnutrition.

(2) Planned pregnancies and good child spacing, helps to prevent malnutrition.

(3) Immunizations and early treatment of infections, prevent development of malnutrition in children under two years.

1.5 DEFINITION OF TERMS

ABBREVIATIONS

P.E.M.:-	Protein Energy Malnutrition.
M.C.H.:-	Maternal and Child Health.
U.T.H.:-	University Teaching Hospital.
W.H.O.:-	World Health Organization.
UNICEF:-	United National Children's Fund.
AIDS:-	Acquired Immune Deficiency Syndrome.
HIV:-	Human Immune Virus

DEFINITIONS

Protein Energy Malnutrition

This is all degrees of energy and protein deficiency ranging from mild to severe cases of Kwashiorkor and Marasmus.

Kwashiorkor

This is a condition caused by lack of or deficiency in proteins in the body.

Marasmus

This is a condition when energy intake is insufficient to meet energy needs even if intakes of other nutrients are fully adequate.

Family Planning

This is the process by which families, couples, or sometimes individuals, decide how they will regulate their reproductive health and take necessary action to do so.

Weaning

This is detaching or alienating from an acustomed habit or enjoyment. In infant feeding, it is to detach from the breast slowly and accustom to taking solid foods in addition to breast milk.

Exclusive breast-feeding

This is when the baby is given only breast milk for the first six months of life.

Mortality

Any condition that causes death.

Morbidity

Any condition that causes illness.

CHAPTER TWO

2.0 LITERATURE REVIEW

The health of children under five years of age is now one of the main objectives of basic health services in developing countries. In this context, emphasis is laid on the monitoring, both when children are sick or when they are well. Poor nutritional status is associated with an increased risk of dying which can be prevented.[12]

Despite many scientific advances in the subject of nutrition, the overall burden of malnutrition has not changed much in the world. It could be stressed that, if only the available knowledge were uniformly applied, there would be less malnutrition in the world. Thus, the main constraints appear to be inability to create viable national systems for delivering nutritional information and care to the majority of people.[13]

It is estimated that, at present, 40-45% of the population of the average city in the developing world, live below the poverty line. Thus, there is a continued build up of individuals and families who have grown up in the culture of poverty. The traditional life style and practices concerning food, child-bearing and family formation, continues. At the same time, the culture of poverty imposes constraints

in housing, sanitation, personal hygiene, availability of food and utilization of services.

Poverty is a major factor, and the resources available to the average family for nutrition, housing and improvement of environment, are acutely limited. It is estimated that, up to 40% of the population of the average developing country, exists below the bread line. Environmental sanitation is virtually non-existent so that, there is high endemicity of water-borne diseases in all rural communities. The lack of hygiene, poor nutrition, lack of clean water, inadequate health facilities, widespread ignorance and a traditional attitude, act together to perpetuate a vicious spiral of disease and death. The feeding and rearing of infants in the third world should be viewed against this background of the environmental, social and disease situation.[15]

Malnutrition adversely affects the life, development and health of more people throughout the world than any disease. Malnutrition results from too few calories, too little high quality proteins and multiple deficiencies of minerals and vitamins. It is complicated further by parasitic, bacterial and viral infections.[16]

Serious infant nutrition problems have been attributed to a rapid decline of breast-feeding in developing countries. Increased use of formula (commercial) and other breast milk substitutes which

accompany the breast-feeding has brought about serious infant nutrition problems.[17]

The shortages of basic foods, coupled with exceptionally high prices, created serious nutritional and health problems, particularly for young children under five years of age and their mothers in Iraq.[18]

Persistent diarrhoea and protein energy malnutrition, are more frequently observed in children of single parent household because, when mothers work, breast-feeding is abandoned and this predisposes the child to diarrhoea and malnutrition. Persistent diarrhoea may lead to malnutrition through administered food intake, impaired absorption and utilization of nutrients, increased metabolic losses and subtle losses of proteins in stools. Malnutrition may impair host defence, worsen or prolong diarrhoea and increase the risk of death from diarrhoea and malnutrition, showed a high rate of re-admissions for recurrent diarrhoea.[19]

The first cause of malnutrition in Niger is inadequate food practices. Weaning usually takes place at 23 months for the girls and 24 months for the boys in Djerma and Haoussa areas. The child is separated from the mother and goes to live with a grandmother or aunt in another area. Often, the geographical separation between the child and his mother requires brutal weaning which results in psychological disorders like anorexia in the child.

More frequently, weaning is due to a new pregnancy of the mother - whatever the age of the child, weaning will take place because, it is believed that the *breast milk becomes poisonous when one is pregnant. Early weaning may also be due to the illness of the* mother or child, as it is believed that the milk is not suitable for the baby.[20]

The bacterial quality of weaning foods and water given to infants in developing countries, is a matter of concern as poor hygienic quality can result in diarrhoeal disease and consequent growth failure. If, however, the introduction of supplementary foods is delayed beyond six months of age, the infant suffers a nutritional deficit as breast milk becomes insufficient for growth, thus the ability of the mother to prepare both clean and nutritious weaning foods. According to the study, bacterial count of water was not affected by boiling, due to poor cleaning and frequent re-use of utensil. Weaning foods were contaminated during preparation and via mode of cleaning of utensils.[21]

In the poor neighbourhoods of the large cities in the tropics, there is a definite tendency to returning to work very early or due to advertisements that attract them. For these reasons, mothers stop breast-feeding during the second or third months or even sooner. The child then receives an inadequate diet, as their financial resources are limited, level of

hygiene is deficient. All these factors, increase the risk of dietary imbalance.[22]

In developing countries, breast-feeding is described as one of the best preventive measures against protein energy malnutrition and death in small children. In addition, one of the advantages of breast-feeding is that, it contributes to a special mother-child relationship, while weaning from the breast is often tied to psychological and emotional weaning as well. In Kigali, the mortality rate is low in breast-fed babies. It is more in the weaned children in all children admitted with protein energy malnutrition.[23]

The importance of breast-feeding for the infants in terms of nutrition, immunological protection, economic biochemical, anti-infective, anti-allergic, contraceptive and emotional bond between mother and child, has been extensively documented. World Health Organization reported that breast-feeding has become a serious issue in public health and clinical medicine. It is a major factor in the prevention and treatment of diarrhoea, protein energy malnutrition. It helps to protect against respiratory infections for the first few months of life and globally, it contributes more to the regulation of fertility than all other methods of contraception put together.[24]

MALNUTRITION IN ZAMBIA

Much more work is needed outside the hospitals to investigate the whole epidemiology of protein energy

malnutrition. More dietary studies and weaning patterns and parental attitudes to the child feeding, must be studied.[25]

Due to various factors such as low income, low levels of literacy and low agricultural productivity, the diets of the majority of infants and children, are deficient in calories and proteins. Lack of and/or non-availability of appropriate low cost infant food, is one of the causes of malnutrition in Zambia. A substantial amount is being spent in the import of infant foods which are very expensive and are not within the purchasing power of low income groups who need them most. Countries like South Africa and India, produce their own low cost and nutritious foods which most families buy for their infant children.[26]

Kwashiorkor is caused by protein deficiency. This deficiency can be due to an inadequate intake of protein or excessive loss of proteins like in diarrhoeal diseases. For the first six months of life, protein and calorie requirements are normally met by the amount of breast milk available. Thereafter, increasing amounts of supplementary food are necessary if nutrition is to be adequate. In Zambia, supplementary feeding usually starts at a much later age and consists mainly of thin porridge made from cassava, foods which, while they provide calories, contain very little proteins.[27]

MALNUTRITION AT UTH - LUSAKA

YEAR	TOTAL CHILDREN'S ADMISSIONS	PEM ADMI-SSIONS	% OF PEM ADMI-SSIONS	PEM DEATHS	% OF PEM DEATHS
1991	17422	2412	14	599	24
1992	21149	2010	10	1064	53
1993	17049	1543	9	797	52
1994	16554	1641	10	816	50
1995	22660	3023	13	1196	40
1996	25024	3210	13	1430	45
TOTAL	**119858**	**13839**	**12**	**5902**	**43**

TOTAL UTH PAEDIATRIC ADMISSIONS AND P.E.M. ADMISSIONS AND DEATHS FROM 1991 TO 1996.

The percentage of UTH Paediatric admissions has been stable throughout the five years from 1991 to 1996. The percentage of PEM admissions has been increasing, especially from 1993 to 1996. The PEM admissions has increased from 9% of total paediatric admissions to 13% in 1995 and 1996.

The P.E.M. death rate has also increased tremendously, fluctuating between 24% to 53% of the total children admitted with PEM at UTH. From these statistics, it is concluded that, P.E.M. is still not under control at UTH.[28]

PROTEIN ENERGY MALNUTRITION (P.E.M.)

The body needs to ingest food in adequate amounts to obtain energy, as well as protein and the other essential nutrients to maintain normal metabolic functions at any age and physiological state. In children, these amounts have to account for maintenance and growth unlike in adults where they only account for maintenance only. Large segments of the world's population live under conditions where the availability and intake of food, are in deficit in relation to their needs. This is the case in many developing countries where food consumption is deficient both in quantity and quality. Insufficient food intake leads to chronic caloric deficiency, and ingestion of foods with insufficient protein concentration induced protein deficiency. There is also poor intake of other essential nutrients such as calories, vitamins and minerals, leading to vitamin and mineral deficiencies.[29]

Even when a child is properly breast-fed, at the age of six months when the child needs other foods apart from the breast milk which now becomes insufficient, complementary feeding practices for the child are poor and thus, induce some degree of protein energy malnutrition in late infancy. When weaning occurs, most children are fed diets that provide insufficient amounts of calories and proteins. Most children are weaned on starchy gruels or porridge.

After weaning, children are fed the usual family foods, with little or no milk or other animal products, and at this time or later, may also suffer from acute severe infections.[30]

The first year of life is characterized by rapid growth and changes in body composition, to meet the demands for growth and development and adequate intake of energy and a variety of nutrients required. The composition from breast milk feeding to solid food during infancy, is based on each infant's developmental stages, activity level and requirements for physical growth. The recommended dietary allowances are the levels of intake essential nutrients considered to be adequate to meet the known nutritional needs of healthy individuals. The recommended dietary allowances in the first six months in provided primarily by breast milk. After six months, they are provided by increasing solid foods. Sufficient energy is required during infancy as the fuel for basal metabolic rate, growth and physical activity. Carbohydrates should supply a large proportion of energy intake. The major carbohydrate source in early infancy, is lactose, predominant in breast milk. Proteins provide nitrogen and essential amino acids for the synthesis of body tissues and maintenance of existing muscle mass. Amino acids are incorporated with other nutrients into enzymes, hormones and antibodies that regulate and perform physiologic and

metabolic functions. Adequate intakes of vitamins and minerals are also required for normal growth and development of infants. Many of these nutrients play important roles as cofactors and catalysts for cell function and replication.[31]

It seems necessary to consider the possibility that malnutrition during infancy may exert significant adverse effects on later performance even in the absence of permanent mental damage. Adequate achievement in school, requires extensive pre-school education which must begin during early infancy. Chronic illness during infancy may change a reasonably well-motivated child to one who is apathetic and disoriented in his surroundings. Deficiency of calories or of any essential nutrients is likely to have this effect, and a year or two of interruption in the pre-school educational process may yield a child who, at six years of age has reached the level of maturity of a normal four to five year old. Such a child may perform poorly in the early school years and then be inadequately prepared to benefit maximally from late schooling.[32]

Kwashiorkor is a pure protein deficiency, while energy and other nutrients are in adequate supplies in the body. It is mostly caused by malabsorption syndrome, inadequate utilization of proteins like in nephrosis and burns or prolonged use of intravenous glucose without sufficient amino acid supplements.

Kwashiorkor may progress to advanced stages in two or three weeks until it gets worse if nothing is done to reverse the situation.

Marasmus results when energy intake is insufficient to meet energy needs even if intakes of other nutrients are fully adequate. Causes of Marasmus include the breast-fed infant who outgrows the mother's milk supply, or when the child is given dilute milk formula. Malabsorption may aggregate poor intake and may produce negative energy balance. Recurrent diarrhoea has a negative impact on the nutritional status of some children. The important sign in both Kwashiorkor and Marasmus is the slowing of the growth rate. Weight-for-age gives a good indication of size at different stages of life. Height gives an indication of linear growth over a period of time, it gives an indication of chronic malnutrition over a period of time. Relationships between muscle and fat, give an indication of the body's protein and calory reserves. The triceps Fat Fold and calculated mid-arm muscle circumference are relatively simple measurements to obtain more logical relationships can be achieved between protein and calorie nutrition and arm muscle or fat areas.[33]

RECOMMENDATIONS FOR PREVENTION OF PROTEIN ENERGY MALNUTRITION.[34]

1. Optimal maternal diet during pregnancy. Mother needs an ample diet containing all necessary food factors, especially proteins, during pregnancy.

2. Optimal maternal diet during lactation.

   An abundant flow of breast milk is best continued, particularly in prolonged lactation, by feeding the mother adequately, especially ensuring a good intake of proteins.

3. Prolonged breast-feeding through the first two years of life is a measure of the greatest importance and value and must be encouraged in every possible way.

4. Use of all available animal proteins.

   Infants from the age of six months upwards, must be made to consume all available animal proteins like milk, yogurt, powdered meats, sour milk, soft cheese, fish, etc.

5. Use of plant proteins.

   Almost all sub-tropical and tropical countries, the supplies of animal proteins are quite inadequate. It is of great importance to make the best possible use of all locally available plant-protein foods like groundnuts (protein content 23g/100g), peas (24g/100g), lentils (24g/100g), soya beans (35g/100g), sunflower seeds (27g/-100g), whole wheat, (11.5g/100g), yeast (40-50g/-100g).

   Families should be encouraged to grow some of these foods in their gardens.

6. Health education.

Health workers must give health education to mothers and families at every opportunity they get. They need to intensify it when mothers are pregnant and when they give birth.[35]

BREAST-FEEDING

Successful breast-feeding during the first few days after delivery, is known to be important in security effective, long-term lactation. Women are more likely to breast-feed for longer durations, less likely to introduce weaning foods and milk supplements too early, and more likely to develop a good, loving relationship with their babies.[36]

Breast milk is the appropriate of all available milks for human infants with its unique nutritional, immunological and psychosocial features. Beast-feeding is widely practised in African countries. This apparent persistence of breast-feeding, however, masks problems such as reduced duration of breast-feeding, early introduction of breast milk substitutes, bottle feeding and other feeding patterns.[37]

Breast-feeding is a normal way of feeding infants in all peasant societies. In a world-wide study of forty-five different cultural and ethnic groups, it was found that, on average, the infant is breast-fed for two years, though four years was not uncommon. In the book written by Jacques Gillemeau, a French obstetrician, in 1612. It states that "there was no

difference between a woman who refuses to breast-feed her own baby and one that kills it as soon as it is born."[38]

WEANING PRACTICES

To wean, is "to cease to be suckled" or "to detach or alienate from some accustomed pursuit or enjoyment". In infant feeding, the verb is used for weaning from the breast and accustom to taking sieved foods in addition to breast milk. The introduction of solids is made in the sixth month. About this age, the infant bites on the nipple or teat, and if sieved foods are placed on the back of his tongue, he can now successfully transfer it t the back of his mouth and swallow it. If the child is now allowed to practise this new skill, he will enjoy it. There is no advantage in giving sieved foods before the age of six months. If food is given in the earliest months, there is a danger of developing antibodies to foreign proteins, if infant is hungry, more breast milk will satisfy him. When a child is now six months old, solids are introduced by adding an egg-york to his meal. If he cannot finish all of it, give bits at a time and later, the whole. Later, the whole of the egg can be given to him through beating it in hot porridge or hot milk. Next to be given are potatoes - mashed potatoes with a little milk or butter or meat gravy. The third addition may be a sieved meat food

and the fourth, a cereal food. A mixture of sieved meats, cereals and powdered milk, are highly nutritious foods for the baby.[39]

The time has come when the baby will begin to wean himself from total nutritional dependency at his mother's breast, to the stage where he is completely independent of her body as a food source. In many developing countries, there is a practice of weaning the child abruptly. Mothers are advised by older women to shorten the weaning process to one day. Mother refuses to nurse the child and let him cry it out. The baby will get tired of crying and take the bottle. The best way of weaning is a gradual process that is controlled largely by the baby himself. It is import-ant for the mother to wait until baby is naturally ready for solids. When natural weaning occurs, some babies may wean themselves rather quickly while others will continue to breast-feed heavily, for a long period of time, even though they are eating many solid foods. A mother can tell when the baby is ready for his first taste of solid foods, when he has the desire to put everything into his mouth. He will not be satisfied with only breast milk until he puts other foods into his mouth. He will also suck his fingers after breast-feeding. Normally, the child will begin to show interest in solid foods in the middle of the first year.[40]

Under normal circumstances breast milk provides all the energy and nutrients needed by the infant for the first six months of life. Afterwards, additional food must be introduced so that the infant gradually and progressively adapts to an adult diet. This adaptation constitutes weaning. In relation to their size and body weight, infants and young children have much greater nutritional needs than do older children and adults, but they have limited gastric capacity and their ability to chew develops only gradually. Weaning is, therefore, a critical process. This is particularly so where the adult diet is based on cereals or starchy roots with little or no foods of animal origin. On such diets, typical of most tropical or sub-tropical areas, the nutritional needs of older children and adults can usually be met if they eat enough of those foods. During or immediately after weaning, however, infants may be unable to eat enough of such bulky foods for their nutritional needs, especially if breast-feeding is discontinued early. It is observed that weaning practices in traditional societies as well as new scientific knowledge is generally feasible to meet nutritional needs of older infants and young children with proper combinations of foods regularly taken by older children and adults. This is true even where milk and milk products are unavailable. Children can be properly weaned on starchy foods with animal proteins,

fats, vegetables and fruits. Mothers need advice on proportions of food, how to prepare and give it, and the frequency of feeding.[41]

Weaning with local foods is socio-culturally more acceptable and has economic advantages for families, communities and countries, since it eliminates the need to import expensive weaning foods. Governments should take the necessary measures to ensure that products needed for the home and community prepared weaning foods, are readily available at an affordable cost. Their local production should be encouraged and supported. There may be a need to consider subsidizing such products. Where milk and milk products are available, they can be used as supplementary foods during weaning period.[42]

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The study was descriptive in nature, with both qualitative and quantitative components practices in relation to development of malnutrition in children under two years old, admitted to UTH. A descriptive research design was chosen for this study. Treece and Treece, define it as a study or research that does not involve experiments but rather, aims at describing the existing situation. Collection of data was done in a natural setting and the method is less expensive.

3.2 RESEARCH SETTING

The study was carried out in A-Block of the University Teaching Hospital, in Lusaka, composed of seven wards - A01 to A07, dealing with paediatric medical conditions. The A-block gets about 25 admissions per day and out of these, 5 to 6 children have malnutrition. Malnourished children are admitted in A07 and stay there for a minimum of 10 days, and a maximum of one month.

3.3 STUDY POPULATION

The study population comprised of women or mothers with protein energy malnutrition children, admitted to A-block of the University Teaching

Hospital. The population had varied backgrounds and came from different townships around Lusaka.

3.4 SAMPLE SIZE

All subjects with PEM children who are two years and less admitted to A07 were used in the study. The sample comprised of 50 subjects.

3.5 SAMPLING METHOD

All women with malnourished children under two years of age, were interviewed.

3.6 DATA COLLECTION TECHNIQUE

Data was collected using a structured interview schedule. Face to face interviews were conducted because of various reasons, some of which were as follows:-

(i) Structured interviews use a script and set questions for the interview.

(ii) The interviewer is allowed to clarify the questions or answers and device individualised probes.

(iii) Women who cannot read and write, could still be interviewed.

(iv) The researcher has an opportunity to read non-verbal messages.

(v) Structural interviews are a relatively simple method of obtaining data.

(vi) Analysis and interpretation of data can be easily accomplished.

3.7 ETHICAL CONSIDERATIONS

Before the study was conducted in UTH, permission was sought from the Director of Nursing and Nursing Officer in A-block, including the Sister-in-Charge of AO7.

The purpose and nature of the study was explained as well as how the results would be used.

Prior to the interview the respondents were asked as to whether they would accept to be interviewed or not. They were reassured of confidentiality.

3.8 PILOT STUDY

A pilot study was conducted at Kabwata Clinic, in order to pretest and assess the validity of the data collection tool. Ten (10) subjects were selected for the study, so as to be able to assess the reactions of the respondents to the research procedure. Time needed for the study was estimated. Feasibility of the sampling procedure was assessed as well as the appropriateness of the format of the questionnaire. A few amendments were made to the questionnaire.

CHAPTER FOUR

4.0 PRESENTATION OF FINDINGS AND DATA ANALYSIS

4.1 INTRODUCTION

Following collection of data from A-Block, *Malnutrition Ward (AO7), each questionnaire was* checked for accuracy and completeness. Data from open-ended questions were categorised and coded. Data was put on a data master sheet for easy analysis manually. this made it easy to draw frequency and cross tabulations for conclusions on the variables and objectives of the study.

4.2 PRESENTATION OF FINDINGS

TABLE I - Background data of respondents.

AGE IN YEARS	FREQUENCY/PERCENTAGE
15-19	8 (16%)
20-24	24 (48%)
25-29	8 (16%)
30-34	10 (20%)
TOTAL	**50 (100%)**

MARITAL STATUS	FREQUENCY/PERCENTAGE
Single	2 (4%)
Married	46 (92%)
Widowed	2 (4%)
Divorced	- -
TOTAL	**50 (100%)**

EDUCATIONAL LEVEL	FREQUENCY/PERCENTAGE
No Schooling	5 (10%)
Primary	41 (82%)
Secondary	4 (8%)
College	- -
University	- -
TOTAL	**50 (100%)**

OCCUPATION	FREQUENCY/PERCENTAGE
Housewives	32 (64%)
Businesswomen	15 (30%)
Cleaner	- -
Professional	- -
School drop-out	3 (6%)
TOTAL	**50 (100%)**

RESIDENTIAL AREA	FREQUENCY/PERCENTAGE
High density area	31 (62%)
Medium density area	18 (36%)
Low density area	1 (2%)
TOTAL	**50 (100%)**

Table I shows that most of the mothers or respondents were aged between 20-24 years (48%) and most of them were married (92%), and that, their educational level was mainly primary education (82%). There were few business women (30%), most of them were housewives and the majority resided in high density areas of Lusaka Urban.

TABLE 2 - Background data of respondents' spouses.

OCCUPATION OF SPOUSE	**FREQUENCIES/PERCENTAGE**
General worker	15 (23%)
Businessman	26 (64%)
Professional	3 (7%)
School drop-out	2 (6%)
TOTAL	**46 (100%)**
SPOUSES' EARNING/MONTH	**FREQUENCIES/PERCENTAGE**
10,000 - 49,000 Kwacha	- -
50,000 - 69,000 Kwacha	6 (12%)
70,000 - 99,000 Kwacha	26 (56%)
100,000 - 149,000 Kwacha	10 (22%)
150,000 - 200,000 Kwacha	2 (5%)
No earnings	2 (5%)
TOTAL	**46 (100%)**

Table 2 reveals that most of the respondents' spouses were businessmen (64%) and that, most of them earned between 70,000 - 99,000 Kwacha per month (56%). A few (22%) earned between 100,000 - 149,000 Kwacha per month.

TABLE 3 - Data on Respondents' obstetric history.

NUMBER OF PREGNANCIES	FREQUENCY/PERCENTAGE
1-2	2 (4%)
3-4	37 (74%)
5-6	11 (22%)
7-8	- -
> 9	- -
TOTAL	**50 (100%)**
IS RESPONDENT PREGNANT?	
YES	35 (70%)
NO	15 (30%)
TOTAL	**50 (100%)**
NUMBER OF LIVE CHILDREN	
1-2	28 (56%)
3-4	16 (32%)
5-6	4 (8%)
7-8	2 (4%)
> 9	- -
TOTAL	**50 (100%)**
NUMBER OF WOMEN WHO HAVE LOST THE FOLLOWING CHILDREN	
1	10 (67%)
2	4 (27%)
3	1 (6%)
>4	- -
TOTAL	**15 (100%)**

Table 3 shows that most of the respondents (74%) have had 3-4 pregnancies and that 70 percent were currently pregnant. 56 percent had 1-2 children, 32 percent had 3-4 children and 67 percent of them had lost at least one child.

TABLE 4 - Respondents' sick children admitted with malnutrition.

AGE OF SICK CHILD IN MONTHS	FREQUENCY/PERCENTAGE	
0 - 6	-	-
7 - 12	3	(6%)
13 - 18	18	(36%)
19 - 24	29	(58%)
TOTAL	**50**	**(100%)**
DIAGNOSIS OF CHILD		
Marasmus	27	(54%)
Kwashiorkor	18	(36%)
PTB with malnutrition	5	(10%)
TOTAL	**50**	**(100%)**
BIRTHWEIGHT OF CHILD IN KG		
1.5 - 2	1	(2%)
2.1 - 2.5	18	(36%)
2.6 - 3	24	(48%)
3.1 - 3.5	7	(14%)
TOTAL	**50**	**(100%)**
IS CHILD STILL BREAST-FEEDING?		
YES	10	(20%)
NO	40	(80%)
TOTAL	**50**	**(100%)**
AGE WHEN BREASTFEEDING STOPPED		
0 - 11 months	1	(3%)
12 - 18 months	36	(90%)
19 - 24 months	3	(7%)
TOTAL	**40**	**(100%)**
REASON FOR STOPPING BREAST-FEEDING		
Pregnancy	30	(75%)
Child was sick	4	(10%)
Mother was sick	3	(7.5%)
Child was not eating	3	(7.5%)
TOTAL	**40**	**(100%)**

AGE WHEN CHILD WAS SICK	FREQUENCY/PERCENTAGE
0 - 11 months	5 (10%)
12 - 18 months	36 (72%)
19 - 24 months	9 (18%)
TOTAL	**50 (100%)**

Table 4 shows most of the sick children were aged between 19 - 24 months and that, most of them were suffering from Marasmus (54%), 36 percent had Kwashiorkor. 62 percent had birthweight above 2.6kg, only 2 percent had birthweight below 2kg. 80 percent of the children had stopped breastfeeding at the age of one year (90%). Most of the children stopped breastfeeding due to mothers' pregnancy (75%). The majority of the children also started getting sick at the age of one year (72%).

TABLE 5 - Respondents' sick children's weaning practices.

SUDDEN WEANING	**FREQUENCIES/PERCENTAGE**
YES	40 (80%)
NO	10 (20%)
TOTAL	**50 (100%)**
CHILD SENT AWAY AFTER WEANING	
YES	32 (80%)
NO	8 (20%)
TOTAL	**40 (100%)**
CHILD BOTTLEFED	
YES	9 (18%)
NO	41 (82%)
TOTAL	**50 (100%)**
CHILD REFUSING MEALS	**FREQUENCIES/PERCENTAGE**
YES	33 (83%)
NO	7 (17%)
TOTAL	**40 (100%)**
NUMBER OF TIMES CHILD WAS FED PER DAY	
2	- -
3	48 (96%)
4	2 (4%)
5	- -
6	- -
TOTAL	**50 (100%)**

Table 5 shows that 80 percent of the children were suddenly weaned and were sent away from home. Most of the children were not bottlefed and after sudden weaning, most of them (83%) refused meals. They were fed three times in a day (96%).

TABLE 6 - Respondents' knowledge, opinions and practice on weaning practices.

KNOWLEDGE OF FOOD PREPARATION	**FREQUENCIES/PERCENTAGE**
Knowledgeable	3 (6%)
Not knowledgeable	47 (94%)
TOTAL	**50 (100%)**
KNOWLEDGE OF TYPES OF PROTEINS	
Knowledgeable	25 (50%)
Not knowledgeable	25 (50%)
TOTAL	**50 (100%)**
WHAT CHILD WAS GIVEN IN 1ST 6 MONTHS	
Breast milk only	4 (8%)
Breast milk with porridge	44 (88%)
Breast milk with nshima	2 (4%)
TOTAL	**50 (100%)**
CHILD EATING FROM SAME PLACE WITH MOTHER	
YES	18 (36%)
NO	32 (64%)
TOTAL	**50 (100%)**
CAN MOTHER BREASTFEED EVEN WHEN PREGNANT?	
YES	6 (12%)
NO	44 (88%)
TOTAL	**50 (100%)**
WHERE MOTHERS FIRST GOT ADVICE ON WEANING PRACTICES	
Health worker	2 (4%)
Relative	39 (78%)
Friend	9 (18%)
TOTAL	**50 (100%)**

MOTHERS' OPINION OF HEALTH WORKERS' HELP ON WEANING PRACTICES	FREQUENCIES/PERCENTAGE
Health workers are helpful	23 (46%)
Health workers are not helpful	27 (54%)
TOTAL	**50 (100%)**
MOTHERS; OPINION ON WHY HEALTH WORKERS ARE NOT HELPFUL	
Health workers are few and busy	12 (74%)
Women fear them	8 (14%)
Health workers are not friendly	7 (12%)
TOTAL	**50 (100%)**

Table 6 is showing respondents' knowledge, opinions and practice on weaning practices.

50 percent of mothers were knowledgeable on the proteins to give to their children while the other 50 percent were not knowledgeable. Most women (94%) did not know how to prepare and give these proteins to their children. Most mothers did not exclusively breastfeed their children, only 8 percent practiced exclusive breastfeeding. 88 percent of mothers felt that they cannot breastfeed their children when they

fall pregnant and most of the advice on the weaning practices came from their relatives (78%) and not from health workers. Mothers felt that most health workers were not helpful to mothers concerning the weaning practices (54%) and this was mostly because, health workers were few in their clinics and they were quite busy.

CHAPTER FIVE

5.0. DISCUSSION OF FINDINGS

5.1. INTRODUCTION

The results of this study are based on the analysis of responses from fifty (50) women with malnourished children aged between 0 - 2 years. The aim of the study was to evaluate the weaning practices in relation to development of malnutrition in children under two years of age admitted to the University Teaching Hospital - A. Block. This study is of concern because of the following reasons:-

(1) Malnutrition is one of the leading conditions causing high death rate in children under five years of age.

(2) Malnutrition causes continued ill health such that the child fails to develop adequately both physically and mentally.

The study is of importance in that it will improve mothers' knowledge on proper weaning practices in order to prevent malnutrition in their children.

5.2. DISCUSSION OF FINDINGS

All respondents were woman aged between 15-35 years. Table 1 shows that 24 women out of 50 (48%) were aged between 20-24 years and that 92% were already married. 41 out of 50 (82%) had only primary education and that the majority (62%) lived in high density areas. From these results, one concludes

that most mothers with malnourished children are young mothers who have dropped out of school because of pregnancy. They quickly get married to the same men. These mothers are young and lack knowledge on how to raise children, especially feeding them. These young mothers are forced into early marriages. 64% were full-time housewives who depended on their husbands to provide for the family. Only 30% were businesswomen on a low scale trying to compensate for the families' earnings.

In the Times of Zambia Newspaper of 3rd October, 1997, the government announced that the girl-child at school will be given an opportunity to return to school after getting pregnant and giving birth. This is a good move forward because it will empower the women to be self-supporting and can look after their own children after they have finished school and/or college.

Most of the mothers came from high density areas such as George, Kamanga, Chibolya and Chawama compounds. These are highly populated compounds were people rent single rooms and the whole family will live in this single room.

The single rooms serve both as bedrooms and living rooms. Most of these families do not have refridgerators. So storage of both cooked and uncooked foods is poor resulting in children developing diarrhoeal from the fermented foods. Sanitation is

also poor. Many families share one toilet and there is eratic supply of water. All these lead to poor hygiene. Most families drink contaminated water which lead to diarrhoeal and later to development of malnutrition.

Table 2 shows the background data of respondent's spouses. The majority of these women's spouses worked for themselves as businessmen (64%) and earned little between 70,000 to 99,000 Kwacha per month. These husbands are equally young men with little formal education. They are unemployed and earn little from what they sell that they are unable to support their families.

Table 3 shows respondent's obstetric history. These results are important in that they are showing the fertility of these young mothers and how they get unplanned pregnancies. At the age of twenty years, most of the mothers (74%) have had 5-6 pregnancies already. At the time of the study, 70% of respondents were already pregnant. Despite having many pregnancies they had few living children, 56% had one to two children. According to the Zambia Demographic Health Survey (ZHDS) 1992 conducted by the Central Statistics office in conjunction with University of Zambia (UNZA), it indicated that 90% of Zambian women have heard about Family Planning from friends, family members and 44% have not heard about Family Planning. To those that have heard

about Family Planning, only about 26% have heard from Health Workers. This means that health workers are not carrying out health education regarding Family Planning as they should. The issue of inadequate manpower in health institutions should not arise. Frequent pregnancies of mothers contribute to development of malnutrition in that families do not have money to feed themselves especially children under two years who are likely to develop malnutrition if not properly fed. Mothers need to be in good health in order for them to look after their children properly.

Table 4 shows data on malnourished children. Most of these children were born with normal birth weight between 2.5 to 3.5kg (62%). Most of the children stopped breastfeeding after turning one year (90%) and the reason was that most mothers (75%) fell pregnant. Most of the children with malnutrition were aged between 19-24 months. It is interesting to note that most of these children (72%) started getting sick after the age of one year when they had stopped breast-feeding. According to the study carried out by Waihenya 1996 in Kenya, it showed that most children started developing malnutrition after the age of six months when mother's milk became insufficient or when child was suddenly weaned at one year due to mother's pregnancy. What is important is that foods used to supplement or replace breast

milk do not have energy density. Porridge usually have high starch content. A lot of proteins should be added to the porridge if malnutrition is to be prevented.

Table 5 shows that most of these children were suddenly weaned (80%) and were sent away from home. 83% refused meals after weaning. Sudden weaning has a negative psychological effect on the child, it will feel neglected and unloved. The child is denied the food it is used to since birth, now it has to start getting used to other foods. To complicate the situation even more, the child is sent away from home to a new environment and new people. This frustrates the child and it refuses to take meals.

Most of the children were fed three times per day instead of five times per day just like adults do. Even in homes were food is a bit adequate, children still feed three times per day. Mothers lack knowledge on the importance of feeding children frequently. They also needed to be taught on the importance of gradual weaning.

Table 6 shows respondents' knowledge, opinions and practices on weaning. When these women were asked on the type of proteins they give their children, 50% were knowledgeable. When asked about the preparation of these food, most mothers answered wrongly (94%). Ojofeitimi (1996) states that most

nutrition education programmes in Kenya operate on the premise that nutritional knowledge can have an impact on children's nutritional status. The study revealed that most mothers (97%) who had access to nutrition education have an improvement in their children's nutritional status. Women need a lot of health education on the cheap, but nutritious food to give to their children and how to prepare these foods. It is the most of every health personnel to teach mothers constantly on the required foods for the growing children and how to prepare them. Mothers were asked on the type of foods they gave to their children in the first six month of life. Only 8% gave breastmilk while 88% gave breastmilk with porridge. Mothers gave porridge to the children at the age of two months as breast-feeding alone was not adequate and children cried a lot. Most mothers are not practicing exclusive breastfeeding. Exclusive breastfeeding is one of the recent strategies that the government has put in place to help reduce malnutrition in Zambia. It is the duty of all health workers to teach this new trend to all pregnant women and those with new babies. Mothers were asked whether they can breast feed their children when they are pregnant, 88% indicated that they can't breast feed because the milk gets sour and is not good for the baby. This is why they abruptly wean their babies the moment they discover that they are pregnant.

Mothers were also asked where they first got their information on the weaning practices. 78% said that their relatives told them about care of the babies and weaning practices, only 4% were first given advice by health workers. Most mothers indicated that health workers were few in the clinics and were too busy to spare time to teach the mothers.
A few mothers said that they feared health workers and others said that health workers were unfriendly. There is need for health workers to intensify their teachings and improve their attitude towards the mothers. There is need for health workers to visit mothers who are pregnant or those with small children in their own homes so that women are free to express themselves and ask questions. The staff in the clinic must also run programmes that help reduce malnutrition. Bijisma 1997, states that in an environment of poverty and poor weaning practices, often aggravated by underlying illnesses, a child supplementary Feeding Programme can improve growth in undernourished children. Within the limitation of its coverage. In this regard, every clinic in Lusaka should run these supplementary Feeding Programmes where mothers learn the types of nutritious foods and how to prepare them for their children.

SUMMARY

From this study, it has been discovered that most mothers lack knowledge about children's nutrition and good weaning practices, most of the families do not earn enough to support their families economically. The majority of the mothers were not practicing Family Planning in order to avoid unwanted pregnancies, most children suffered first from diarrhoeal diseases before getting malnutrition.

Mothers complained that they did not get a lot of help concerning the weaning practices of their children from health workers because they are busy and few at the clinics.

IMPLICATIONS ON THE HEALTH SYSTEM

Children are the future leaders of our country Zambia. Zambia's development depends on the physical and emotional development of children. They need to have the required food in appropriate quantities in order for their brains and body to develop adequately.

The Zambian government is worried about the large number of children getting malnutrition. It is losing a lot of money in purchasing drugs to try and treat ailments that are associated with malnutrition such as diarrhoea and chest infections. All children under five years do not pay for medical services and this implies that the government is subsidizing from them.

The government need to train more nurses to cater for all children suffering from malnutrition. There is need for service providers to intensify health education to families on

the required foods for the growing children. Health workers need to visit families in their homes and demonstrate how to prepare foods for the children. In addition nurses need to review the effectiveness of their professional practice by devising ways of improving the care of malnourished children. The Ministry of Health and other organizations dealing with nutrition programmes should ensure that food and nutrition surveillance are properly conducted and food supplements are given to the vulnerable group.

In conjunction with other ministries, health workers should ensure that there is adequate housing, good sanitation and water supply as well as proper refuse disposal to prevent occurrence of diseases.

CHAPTER SIX

6.0. CONCLUSION AND RECOMMENDATIONS

6.1. CONCLUSION

The study sought to evaluate the weaning practices in relation to development of malnutrition in children under two years of age admitted to the University Teaching Hospital. The results of this study strongly indicate that mothers have little knowledge on the proper weaning practices in order to avoid development of malnutrition. Most of what these mothers practice is traditional knowledge passed on from their parents. All mothers have the right to have proper information on weaning practices from trained health workers instead of out-dated information from their relatives.

6.2. RECOMMENDATIONS

In view of the findings:-

1. There is need for the government to train more Community Health Nurses who will assist families in the prevention of malnutrition.
2. Programmes such as Health Education, Home Visiting, Cooking Demonstrations should be intensified and every family from the community should benefit.

3. Health workers must undertake refresher courses in order to improve their clinical competencies. They must also improve their public relations with families so that mothers can feel free to approach them. They should not scold mothers who have malnourished children, instead they must assist and encourage them.
4. All children under five years have the right to adequate food in required proportions. If families are poor and unable to feed their children, the government must subsidize and provide the required foods. Children must be the country's priority.
5. Mothers must be encouraged to exclusively breastfeed their babies for the first six months then gradually wean them.
   Children must continue breastfeeding for at least two years while other foods are given to the child as well. This is the best way to prevent malnutrition.
6. This study must be done at a larger scale so that results can be generalized.

6.3. LIMITATION OF THE STUDY

The major limitation of the study was financial, which determined the sample size as a result only few women, fifty (50) were covered in the study.

APPENDIX I

SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF STUDY: A study to evaluate the weaning practices in relation to development of malnutrition in children under two years, admitted to the University Teaching Hospital.

QUESTIONNAIRE NUMBER: _____

PLACE OF INTERVIEW: _____

DATE: _____

INSTRUCTION TO INTERVIEWER

1. No name should appear in this questionnaire.
2. Information given will be kept strictly confidential.
3. Tick ( ) against the appropriate number of the response in boxes provided.
4. For responses without alternatives, write the responses on the spaces provided.
5. Ask question(s).
6. Thank the respondent at the end of the interview.

SECTION 1

DEMOGRAPHIC DATA

1. How old are you?_____

2. What is your residential address?_____

_____

3. What tribe are you?_____

4. What tribe is your spouse?_____

5. What is your religion?_____

6. What is your marital status?

(a) Single ( )
(b) Married ( )
(c) Widowed ( )
(d) Divorced ( )

7. How far did you go in your education?

(a) No schooling ( )
(b) Primary ( )
(c) Secondary ( )
(d) College ( )
(e) University ( )

8. What is your occupation?

(a) Housewife ( )
(b) Business woman ( )
(c) Cleaner ( )
(d) Professional ( )
(e) School drop out ( )

9. What is the occupation of your spouse?

(a) General Worker ( )
(b) Business man ( )
(c) Student ( )
(d) Professional ( )
(e) Not employed ( )

10. How much money do you earn or make per month?

(a) 10,000 - 49,000 Kwacha ( )
(b) 50,000 - 69,000 Kwacha ( )
(c) 70,000 - 99,000 Kwacha ( )
(d) 100,000 - 149,000 Kwacha ( )
(e) 150,000 - 200,000 Kwacha ( )
(f) None ( )

11. How much money does your spouse earn or make per month?

(a) 10,000 - 49,000 Kwacha ( )
(b) 50,000 - 69,000 Kwacha ( )
(c) 70,000 - 99,000 Kwacha ( )
(d) 100,000 - 149,000 Kwacha ( )
(e) 150,000 - 200,000 Kwacha ( )
(f) None ( )

12. How many pregnancies have you had including abortions, still births and live births?

(a) 1-2 pregnancies ( )
(b) 3-4 pregnancies ( )
(c) 5-6 pregnancies ( )
(d) 7-8 pregnancies ( )
(e) 9 and above pregnancies ( )

13. How many live children do you have now?

(a) 1-2 children ( )
(b) 3-4 children ( )
(c) 5-6 children ( )
(d) 7-8 children ( )
(e) 9 and above children ( )

14. How many children have died after they were born alive?

(a) None ( )
(b) One ( )
(c) Two ( )
(d) Three ( )
(e) Any other number - specify _____ ( )

15. If dead, what caused it?

(a) Diarrhoea ( )
(b) Chest pains ( )
(c) Marasmus ( )
(d) Kwashiorkor ( )
(e) Any other - specify _____ ( )

16. Are you pregnant now?

(a) Yes ( )
(b) No ( )

17. How old is your sick child?

_____

18. What is he/she suffering from? (Confirm from file.)

(a) Marasmus ( )
(b) Kwashiorkor ( )
(c) PTB with malnutrition ( )
(d) Any other - specify _____ ( )

19. What was her/his birth weight? (Confirm from Under-Five Card.)

_____

20. How much is he/she weighing now? (Confirm from file.) _____

21. Is your child still breast-feeding?

(a) Yes ( )
(b) No ( )

22. If not, at what age did he/she stop breast-feeding? _____

23. Why did you stop breast-feeding him?

(a) Pregnancy ( )
(b) I was sick ( )
(c) Child was sick ( )
(d) Child was not eating ( )
(e) Any other reason, specify

_____

24. When did your child start getting sick?

_____

25. Do you think you can breast-feed your child even when you are pregnant?

(a) Yes ( )
(b) No ( )

26. What did you give your child in the first six months of life?

(a) Breast milk only ( )
(b) Breast milk and water ( )
(c) Breast milk and porridge ( )
(d) Breast milk and small lumps of nshima ( )

27. Is your child bottle fed?

(a) Yes ( )
(b) No ( )

28. Was your child weaned suddenly?

(a) Yes ( )
(b) No ( )

29. If suddenly weaned, did you send him/her away?

(a) Yes ( )
(b) No ( )

30. After weaning, did your child refuse meals?

(a) Yes ( )
(b) No ( )

31. How many times did you feed your child in a day?

(a) Two times ( )
(b) Three times ( )
(c) Four times ( )
(d) Five times ( )
(e) Six times and above ( )

32. Who first gave you advice on weaning practices?

(a) health staff ( )
(b) relative ( )
(c) friend ( )

33. Give three examples of proteins you were giving to your child.

_____

34. How would you give meat to a seven month old baby?

(a) Giving soup from meat ( )
(b) Giving the child the lump of meat ( )
(c) Pounding the meat and putting in porridge ( )
(d) Any other - specify

_____

35. Do you eat from the same plate with your child?

(a) Yes ( )
(b) No ( )

36. Do you find health personnel at your Rural Health Centre, helpful regarding weaning practices?

(a) Yes ( )
(b) No ( )

37. If 'No', why not?

_____

_____

THANK YOU FOR YOUR ANSWERS.

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THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

DEPARTMENT OF POST BASIC NURSING

Dear Sir/Madam,

This is to introduce MRS. MIRIAM CHIPUMBU - 964233315 a Fourth Year BScN student in the School of Medidine, Department of Post Basic Nursing. This student is carrying out a Research study in partial fillfulment of the Degree requirement. The name of the Research Topic is "A STUDY TO EVALUATE THE WEANING PRACTICES IN RELATION TO DEVELOPMENT OF MAL-NUTRITION IN CHILDREN UNDER TWO YEARS, ADMIT TO THE UNIVERSITY TEACHING HOSPITAL.

We shall be most grateful if you could access the student to information on the subject, clients or interviews and any other assistance the student may require.

Yours faithfully,

UNIVERSITY OF ZAMBIA
DEPT. OF POST
1997 -07- 16

for Ngoma

Patricia M. Ndele (Mrs)
ACTING HEAD/RESEARCH LECTURER

/cm

23 June 1997

The Nursing Officer,
University Teaching Hospital,
A-Block,
P/Bag RW 1X,
LUSAKA.

Dear Madam,

RE: COLLECTION OF DATA (RESEARCH) FROM A-BLOCK DEPARTMENT

May you grant permission to **Miriam M Chipumbu**, who is a 4th year PBN student, to collect research data from Ward AO7.

Her topic is as follows: "A study to evaluate weaning practices in relation to development of malnutrition in children who are two years and below, admitted to UTH.

The research data should be collected between 27th June to end of July 1997.

Your help will be greatly appreciated.

Yours faithfully,

P. Ndele (Mrs)
HEAD - DEPT OF POST-BASIC NURSING

THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE

Telephone: 252641
211440 (UTH) 254824 (Pre-Clinical) Ridgeway Campus
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Telex: UNZALU ZA 44370
Fax: + 260-1-250753

Department of Post Basic Nursin
P.O. Box 50110
Lusaka, Zambia

Your Ref:

Our Ref:

23 June 1997

The Clinic In-Charge,
Kabwata Urban Clinic,
LUSAKA.

Dear Sir/Madam,

RE: RESEARCH PILOT STUDY TO BE CARRIED OUT AT YOUR CLINIC

This letter serves to introduce **Mrs Miriam Chipumbu**, a 4th year PBN student at the above mentioned school, who wishes to carry out a Pilot Study at your clinic. Her research study reads as follows: "A study to evaluate weaning practices in relation to development of malnutrition in children who are less than two years, admitted to the University Teaching Hospital".

The study should be carried out after 27th June 1997 and before the end of July 1997.

Your help will be greatly appreciated.

Yours faithfully,

P. Ndele (Mrs)
HEAD - DEPT OF POST-BASIC NURSING

University of Zambia
School of Medicine
Dept of Post-Basic Nursing
P O Box 50110
LUSAKA

19th May, 1997

The Nutrition Coordinator
United Nations Children's Fund (UNICEF)
P O Box 33610
LUSAKA

UFS: The Head
Post-Basic Department
LUSAKA

UNIVERSITY OF ZAMBIA
DEPT. OF POST
BASIC NURSING
SCHOOL OF MEDICINE

Dear Sir/Madam

RE:- APPLICATION FOR SUPPLEMENTARY SPONSORSHIP FOR RESEARCH STUDY

I am a Fourth year student at the above institution undertaking a Bachelor of Science Degree in Nursing Programme.

As part of the BSc Nursing Programme, I am required to carry out a research project, the topic is "A Study to evaluate weaning practices and development of malnutrition in children under Five years of age admitted at UTH".

My Sponsors - Bursaries Committee paid me only 25% of the required budget.

Please find enclosed my budgetary requirements and a summary of my research.

I shall be most grateful for your kind consideration of my request.

Yours faithfully

Mchipumbu

MIRIAM M. CHIPUMBU (MRS)
COMPUTER NO. 96423315 Bc No. 97107331