ESTABLISHING A MORE REWARDING PAEDIATRIC NUTRITION OUTCOME BY IMPROVING DIETS FOR 0-6 YEAR OLDS IN DANGAMVURA, MUTARE

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ABSTRACT

The study which sought to improve paediatric nutrition was conducted in Mutare’s Dangamvura Township. It addressed issues to do with the 0-6 year olds in as far as attainment of balanced diets is concerned. The case study approach was used and thus employed the qualitative research paradigm. It has strength in that it seeks meanings and values of things or phenomenon, rather than quantity and is inductive in nature. The population comprised 200 women attending the well-baby clinic at Dangamvura Poly Clinic. From the target population, a sample of 30 women was extracted using simple random sampling method. The instruments used were the questionnaire for the mothers and the interview for the sister-in-charge. The major findings of the study revealed that the majority of women were not very conversant with proper foodstuffs that would make up a balanced diet. In as much as they knew various foodstuffs, linking them together to make a meal was the missing block. It was recommended that fathers be actively involved in their family feeding patterns and community nutritionists to make nutrition education an essential pre-requisite for all. It was also recommended that education on importance of breastfeeding to be slotted in schools’ curriculum, as well as the resuscitation of nutrition gardens and rearing of small animals and poultry.

BACKGROUND TO THE STUDY

Employing proper feeding practices for the 0-6 year olds is a challenge in many communities, of which Dangamvura Township in Mutare urban is no exception. Being a high density suburb, it caters for people of all walks of life from the young to the geriatrics, the unemployed, self employed and the formally employed. The economic hardships affecting the country Zimbabwe have not abandoned the city of Mutare, let alone the township of Dangamvura. This has resulted in an outcry on maternal and paediatric nutrition due to lack of balanced diets, with the children being the most vulnerable as they have a longer life to live ahead of them. There is one challenge faced by most young ones in as far their diets are concerned, that is mal-nutrition (under-nutrition) and this is more prevalent in developing countries. Lack of balanced diets in infants results in stunted growth, poor immune systems
and a compromised IQ. This is supported by Begum (1999), who avers that nutrition during infancy lays the foundation for health and infants need all nutrients in more quantities as compared to an adult.

Since there is rapid growth taking place at this time, the basal metabolic rate is also high and a newborn doubles its birth weight by the 5th month and trebles by one year, (Begum, 1999). Guthrie (1995), shares the same sentiments with Begum (1999) on the fact that the first years of life are marked by rapid growth and development and by about 4 to 6 years brain growth will be complete. Optimum brain and bone development is hindered by malnutrition since bones need to be constantly remodelled, as stated by Williams (1993). Davies (2000) also adds that inadequate nutrition during childhood has great potential for long time health impact than it does at any other time in life. Malnutrition has been known to do irreversible damage to the child’s mental and physical development. Begum (1999) further stresses that malnutrition impairs growth and development of the babies resulting in poor resistance to infection, impaired intellectual potentiality and reduction in working efficiency in adult life.

It has been observed that children from well fed, well-to-do sections of the community are taller, heavier, and more resistant to diseases or infections. It is therefore the thrust of this paper to spell out ways that will lead towards a more rewarding paediatric nutrition outcome.

**STATEMENT OF THE PROBLEM**

When nutritional stores are not well laid down in a person from a tender age, the future of that person is doomed as this will affect the person physically, socially and even intellectually. Young children still have a long way to go in as far as life is concerned as compared to the parents who might have lived the greater chunk of their lives. As such, proper nutrition from the pregnancy of the mother, birth of the child as well as rearing of the child need special attention and the balanced diet becomes very critical, in this regard. Yet challenges like poverty, poor breastfeeding practices and lack of nutrition education on the part of the mother remain the order of the day. This then gives rise to poor health, stunted growth and mal-nutritional diseases like kwashiokor and marasmus. This study therefore seeks to address these anomalies and create awareness in mothers on proper diets with which to feed their young ones.
CONCEPTUAL FRAMEWORK

Introduction
Williams (1993) clarifies that the word Nutrition comes from a Latin root “nutr-” which when translated means to nurture or nourish. Dunne (1990) further stresses that nutrition is the science of food values or food at work in the body and good diet is needed to sustain life. A good and adequate diet that yields nutrients in proper amounts and proportions is called a balanced diet, (Pyke,1988). It is necessary for people of all age groups but a good foundation has to be laid in the foundational years. This is supported by Guthrie (1995), when she states that nutrition during childhood is the most critical variable of adult outcome, therefore proper paediatric nutrition aids in the physical, mental and social development.

Stages in Infancy
Children are categorized into 3 main groups namely, infancy, early childhood (toddler) and late childhood (per-scholars). The infancy stage begins at birth and ends at 2 years, followed by early childhood from 2 to 4 years, then late childhood from 4 to 6 years. The differing categories of the children’s ages also call for differing meal requirements and patterns. During infancy, the baby solely depend on milk for the first 4 to 6 months, thereafter more solid foods are gradually added such as porridge, mashed carrot or potato among others. During these 2 years of breastfeeding, as is recommended by W.H.O, the mother has to ensure that the baby gets frequent feeds to facilitate growth and good health. Pyke (1988) adds that after the baby’s first birthday, a child is able to share most of the family dishes though it requires more protein of good quality than adults. By the end of 2 years, the baby’s milk requirements falls as the diet gradually approaches the adult pattern even though milk remains a valuable chief source of quality protein and calcium, which is needed for growth. From 2 years onwards the child can enjoy and share in the family meals but his are more frequent high energy foodstuffs since at this point in time, they are hyper active. A considerable amount of protein and calcium remain critical for growth to children of all age groups. The number of meals for pre-scholars (4-6 years) become reduced, but increased in quantity as they are now attending preschool so they have most of their time divided into many other activities including play time and they are now preparing to enter formal school.
Challenges in feeding young ones

In developing countries like Zimbabwe, many infants face the challenge of malnutrition in most cases in the form of under-nutrition. This is mainly due to parents’ lack of knowledge on appropriate nutritional practices and infants, being minors have no choice but to take that which is given to them. As put across by Whitney (1993), the menus at home influence the eating habits of the family and culture is transmitted from one generation to another by the individual families. In other words, dietary patterns of children under 5 years of age are learned from parents and the family as a whole. When children are born, they are fitted into the dietary patterns already established in the home and this influences their eating habits, where mothers or guardians usually choose the foodstuffs they think are good for their children. Wrong or poor choice on the part of the mother means consumption of a compromised foodstuff on the part of the infant.

Another challenge is that of poverty, resulting in parents failing to acquire certain foodstuffs necessary for the health or well being of their young one. These food shortages have been noted as negatively impacting on the food patterns of most children of 0-6 years. Hergarty (1995) stresses that people with high incomes generally have access to many different foods and easily obtain balanced diets if they understand the principles of good nutrition and have the desire to use them. However it has also been noted that high income earners have a tendency to over-eat or choose diets very rich in sugars as well as saturated fats, for their children. Nevertheless, more complex problems stem from effects of low income on nutritional status of the children. This is supported by Begum (1999) who states that in situations where money for food is restricted, it is usually the father, the children and finally the mother who have priority during meal times.

Another challenge is that of gender bias, where the boy child is given a more superior place in the home, with reference to the amount of food they are given. This is also confirmed by Whitney (1993) when she states that boys normally have higher rates of weight gain as compared to girls. Apart from gender bias, aspects on knowledge and occupation of parents, as well as their housing facilities also contribute to the determination of the quality and quantity of food the child will get. Hergarty (1995) stresses that adults, especially mothers can assist in the development and attainment of good dietary patterns in their infants and should also take time to take meals together with their children.
NUTRITIONAL REQUIREMENTS OF INFANTS
According to Begum (1999), infants from birth up to 4 months are mostly breastfed and even lactating mothers from poorer communities also secrete enough milk for their baby in the first three months. This is the only perfect food for the child offering multiple nutrients and advantages, as shall be elaborated herein. As such, parents especially mothers need to have proper knowhow in as far as breastfeeding is concerned because this marks the nutritional foundation of the infant’s life.

What is breast-feeding?
This can be defined as the process of feeding a young one with milk secreted by the breast. According to Worthington-Roberts and Williams (2000), human milk was designed for human infants and as such, the process of lactation is normal for mammals. Wardlaw and Smith (2011) add that breast feeding the new infant further fosters his/her health, and so complements the attention given to diet during pregnancy. Begum (1999) stresses that scientific studies have shown that the watery human milk is what the human infant needs. The nutritive value of breast-milk is better than buffalo’s or cow’s milk.

Advantages of breastfeeding
There are a number of advantages that have been defined for mothers and infants who breastfeed, as is highlighted below. Breast-feeding is best for baby in that it is designed or tailored specifically for meeting human infants nutrient needs for the first 4-6 months. It is nutritionally superior to any other alternative. Worthington-Roberts et. al. (2000) concurring with Wardlaw and Smith (2011) further state that it is bacteriologically safe and always fresh and ready to go, provides immunity to viral and bacterial diseases, stimulates infant’s own immunological defenses by providing a high concentration of antibodies. Begum (1999) also adds that milk contains elements in the correct proportion required by the body and is a dilute fluid which is easily digestible and is the ideal starting food for the baby. It is also very economical. It contributes to maturation of the GI tract via Lacto bacillus bifidus factor and thus decreases the risk of respiratory and diarrheal infections and diseases. Breast milk prevents or reduces the risk of food allergies and intolerances, promotes correct and proper development of jaws, teeth and better speech patterns. There is a decrease in ear infections and an enhancement of the nervous system development by providing fatty acids and eventual learning ability. There is a reduction in the risk of later development of hypertension.
and other chronic diseases, e.g. diabetes. Breastfed infants demonstrate a decreased tendency towards childhood obesity by about 20%. Breastfeeding promotes frequent tender physical contact with mother in addition to facilitating maternal-infant attachment, (Worthington-Roberts, 2000 concurring with Wardlaw and Smith, 2011). Begum, (1999) adds that this infant’s close physical relationship with the mother helps to provide emotional security and well-being of the baby.

Breast feeding has also been noted to be best for mother because it contributes to early physiologic recovery from pregnancy due to hormonal action that promote uterine involution and decreases the risk of post partum hemorrhage. In other words, there is a quicker return of the uterus to the pre-pregnant state. It also increases the potential for quicker return to pre-pregnant weight. It increases period of post-partum anovulation, thus delaying ovulation and reducing the chances of pregnancy, even though it is a term measure. It promotes psychological attachment and facilitates positive self-esteem in maternal roles. It also allows for daily rest periods, eliminates need to mix, prepare, use and wash feeding equipment. Breast milk also saves money not spent on formular and equipment. It also decreases the risks of premenopausal breast cancer and ovarian cancer, according to Worthington-Roberts (2000) sharing the same sentiments with Wardlaw and Smith (2011). Begum (1999) also concurs with the other scholars that apart from other advantages, emptying the breasts reduces the chances of mastitis and cancer.

According to the WHO, despite technological advances in infant formulas, breast milk is the best food for every newborn infant. Almost all women are physically capable of breast feeding their children, as propounded by Wardlaw and Smith (2011). Anatomical problems such as inverted nipples can be corrected during pregnancy. Breast size generally increases during pregnancy. Breast feeding is a learned skill and mothers need knowledge to breast feed safely, especially with the first child.

**Positions for breastfeeding**

Two basic or common positions of breastfeeding are in use that is, the sitting and lying down positions. There is also a third one being popular especially for small babies or twins. Each position is subject to a wide variety of individual adaptations. Worthington-Roberts (2000), notes that the chief requirements are the comfort of the mother throughout the feeding and the positioning of the baby so that the process of swallowing is not impaired.
Lying Down especially if mother has had an episiotomy or caesarian section, she may be comfortable lying down. She should position herself comfortably on her side, using pillows for additional support. Baby is to be placed on her side with the mouth parallel to the nipple, with a roll of receiving blankets providing a good support for the baby’s neck. Baby can comfortably feed from the lower breast without undue nipple traction or unnecessary distortion of the infant’s alimentary tract. However, both mother and child will probably need help in repositioning to feed from the other breast.

Sitting in a comfortable chair for providing good back support, arm rests and if possible, foot and leg support. Mother cradles the baby in her arm, placing the baby’s head over her elbow so that the mouth is adjacent to the nipple. A pillow may be required on her lap to support the baby’s body and under her elbow to prevent her arm from becoming too tired while holding the baby’s head in the proper position for feeding. The position must be reversed for feeding the opposite breast, (Worthington-Roberts, 2000).

Football hold is another popular position, especially with small babies or twins in which the baby’s head is held in the palm of the hand while the forearm is used to support the baby’s torso. This allows the mother to move the baby easily to achieve the proper position of the baby’s mouth relative to the nipple. The ‘football hold’ can be used while ‘tailor’ sitting in bed with the mother’s back supported. It is especially comfortable for mothers who have had caesarian deliveries.

NUTRITIONAL CONTRIBUTIONS OF HUMAN MILK

Human milk has been observed to be having differences in composition from cow’s milk. Unless modified, cow’s milk should never be used in infant feeding until infant is at least 12 months old. Even though proteins are essential for a healthy infant, cow’s milk is too high in minerals and protein. It does not contain enough carbohydrates to meet infant’s needs. Also, the major protein in cow’s milk is harder for an infant to digest than the major proteins in human milk. The proteins in cow’s milk may cause allergies in infants. Vitamins are also essential for the rapid development of the infant, with Vitamin A deficiency being very common in our children, (Begum, 1999).

(i) Colostrum

At the end of pregnancy, the first fluid made by human breast is colostrum. It is thick, yellowish and may leak from breast during late pregnancy. It is produced in earnest for a few
days to a week after birth. Worthington-Roberts and Wardlaw (2011) concur on the fact that colostrum contains antibodies and immune system cells, some of which pass unaltered through the infant’s immature GI tract into the blood stream. These immune factors and cells protect the infant from some GI tract diseases and other infections, compensating for the infant’s immature immune system during the first few months of life. One component of colostrums, is Lactobacillus bifidus factor, which encourages the growth of Lactobacillus bifidus bacteria. These bacteria limit the growth of potentially toxic bacteria in the intestine. Overall breastfeeding promotes the intestinal health of the breastfed infant in this way. Begum, (1999), highlights that this yellowish fluid called colostrum is very nutritious and good for baby as it is also a good source of Vitamin A. However, many mothers do not feed their babies with it because of the belief that it is not good for the baby, thus exposing their infants to higher possibilities of contracting infections.

(ii) Mature Milk
After colostrum, then comes mature milk. Human milk looks very different from cow’s milk. It is thin and almost watery in appearance and often has a slightly bluish tinge. Its nutritional qualities are however impressive. Human milk proteins form a soft, light curd in the infant’s stomach and are easy to digest. Some human proteins bind iron, reducing the growth of iron-requiring bacteria, some of which cause diarrhea. Other proteins offer immune protection (antibodies). The lipids in human breast milk are high in linoleic acid and cholesterol needed for brain development. Breast milk also contains long chain omega-3 fatty acids. This Poly Unsaturated Fatty Acid (pufa) is used in tissue synthesis in the brain and the rest of the CNS and in the eye retina. The fat composition of human milk changes with each feeding. The first milk is called the foremilk and its consistency resembles that of skim milk. Later, it has a greater fat proportion, similar to whole milk. Finally, the milk released after 10-20 minutes, known as hind milk, is essentially like cream. Therefore, babies need to nurse long enough, a total of 20 or more minutes to get the calories in rich hind milk to be satisfied between feedings and to grow well.

Human milk composition also allows for adequate fluid status of the infant, if exclusive breastfeeding is done. Giving infant additional water if stressed by hot water, diarrhea and vomiting or fever can be done only in consultation with a physician. This is so because greater amounts of supplemental water can lead to brain disorders, low blood Sodium and
other problems. Even though breastmilk is an almost complete food, it has few inadequacies. It lacks vitamin D, Iron and Fluoride and these must be supplemented by the diet.

**Frequency and duration of feeding infants**

Wardlaw and Smith (2011) states that WHO recommends breast feeding exclusively for the first six months, with the continued combination of breastfeeding and infant foods until one year. It also supports appropriate solid food introduction for at least two years. Baby needs frequent access to the breast, so the mother will be able to build a milk supply that will provide the fluids and kilocalories needed for the infant’s growth. Nursing every two to three hours represents a reasonable compromise which allows the baby to meet its nutritional needs, while the mother meets her comfort needs by moving milk through her breasts frequently. The bottom line is, when in doubt, feed the baby, according to Worthington-Roberts (2000).

Encouraging frequent, unlimited breast feeding produces increased milk output, which leads to greater infant weight gain, decreased nipple and breast damage or problems and increased duration of breast feeding. As the child grows, the time between feedings will lengthen, thus giving mother time to pursue other activities. After a while, parents begin to observe a pattern on the baby’s feeding. The baby will then have a ‘growth spurt’ and the pattern will change. Growth spurts occur at regular intervals during the first year of life and can be identified by a day when all the baby wants to do is nurse. If the baby is allowed to nurse liberally for the next 24 hours or more, the mother’s milk supply will increase and baby will settle down into a new pattern. However, if the mother gives formula to ‘fill the baby up,’ she will develop an insufficient milk supply and will be devastated to continue breast feeding. Breast-milk can be expressed by the mother using a manual, battery operated or electric breast pump. The milk can be stored for times when the mother is not available to breastfeed the infant. However, breastfeeding is not desirable if a mother has certain diseases or must take medication potentially harmful to the infant.

Worthington and Roberts (2000:191) acknowledge that, ‘It is a desirable goal that all new mothers comprehend the importance of breast feeding, for their infants as well as for themselves. Difficulties encountered along the way are manageable, contraindications are few, and failures are rare.’ This is also supported by Wardlaw and Smith (2000) when they state that recognition of the importance of breastfeeding has contributed to its popularity and
almost all women can breast feed. Therefore, breastfeeding mothers need to engage in a very balanced diet plan to sustain their health and that of their babies.

NUTRITION FOR TODDLERS AND PRE-SCHOOL CHILDREN

As has been noted by Begum (1999), the growth rate reclines after the child is one year old, but the foundation of good health is laid during the pre-school years. Davies (2000), stresses that a child who has failed to grow during this crucial period may not make up the loss in growth even with an excellent diet later in life. Vitamin A deficiency has also been noted to be very prevalent during the 1 to 5 year age group, together with kwashiorkor and marasmus. Studies have shown that performance of children who had earlier suffered from malnutrition was clearly inferior to that of children who had not gone through malnutrition. Some of the recommended foodstuffs for infants are sour porridge, peanut butter, butternuts, ‘maheu’, yoghurt, carrots, potatoes, plenty of fruits and vegetables, eggs, meat and milk.

When feeding toddlers, one need not panic, as most toddlers will only eat between one and two meals per day. It is perfectly fine, according to internet reference (www.Wholesometoddlerfood.com). It is common for toddlers to eat ‘great’ at breakfast, ‘ok’ at lunch and when it comes to dinner, the toddler may just bite leaving the rest of the food in the plate. Toddlers will not always be eating like the family does. However, their meals should still remain balanced and don’t forget to offer them healthy snacks here and there and plenty of milk at breakfast.

Daily needs of the Toddler

According to www.daily-nutritional.best-deal.com, concurring with Begum (1999), all the nutrients needed by an adult can still be offered to the toddler but in much smaller amounts. They need 4 servings of fruits and vegetables per day, 2 servings of protein per day which can be in the form of meat, eggs, fish and pulses. Toddlers also require dairy products of about 16 to 24 ounces per day in the form of cheese, yoghurt and milk for the provision of Calcium necessary for bone and teeth development. In as far as grains are concerned, 4 servings will do for the young ones. This can be in the form of bread, breakfast cereals, rice, pasta, toast, pasta, among many others. This generous serving of grains helps to provide energy much needed by the very energetic age group, which usually rest when sleeping otherwise as long they are awake, they are hyperactive. As stated by www.pediasure.com toddlers also need fats and sweets, though sparingly. Their meals are to be cut into small
pieces, which are not rounded to avoid choking. The mother should make sure that the baby is seated and supervised at all times while eating.

Over and above everything else, it has to be borne in the mind of the mother that the baby needs balanced diets on a daily basis. Their meals must be nutrient dense, frequent and colourful to attract baby’s eyes as well as arouse their appetite. Sweet foods should never be given before a main meal as these put off their appetite. Small servings are handy in that they avoid wastages due to many leftovers and at the same time the child will be motivated to eat by the mere thought that s/he will be able to finish the given measure without struggle. A variety of fruits and vegetables help to provide variety of colour, texture as well as nutrients. Always remember to serve the children’s meals on time to avoid getting them bored by waiting for long.

OBJECTIVES OF THE STUDY

The study sought to:

- Establish the food stuffs which were being given to the young ones by their mothers
- Examine nutritional adequacy of these foodstuffs in relation to the guidelines and recommendations from the World Health Organization.
- Educating mothers on what balanced meals are and how these could be provided to the young ones.

PURPOSE OF THE STUDY

The study purposed to enlighten mothers and caregivers on the proper nutritional practices to observe when feeding their young ones. Malnutrition in the form of under-nutrition being a great challenge needed to be addressed early and this called for practical intervention of the parents and community nutritionists. So this study was triggered in an effort to give birth to sound nutritional status of young ones which would be a lifelong foundation for a healthy living. The study also aimed at helping the society at large as the whole community would engage into nutrition gardens and the rearing of small animals, thus move away from poverty to self reliance.

ASSUMPTIONS

The following assumptions were made:
That lack of nutritional knowledge by mothers was a major hindrance towards the attainment of balanced diets in children

Poverty was a major contributory factor to poor diets consumed by children

Fathers were not actively involved in the family feeding plans and were given the lion’s share of food at the expense of the wife and children.

**KEY TERMS IN THE STUDY**

- Nutrition
- Malnutrition
- Infant
- Balanced diet
- Breastfeeding
- Paediatrics
- Diet

**METHODOLOGY**

Howard (1993) has defined methodology as a body of knowledge which describes the methods of data collection. Being an operational framework within which facts are placed, it ensures that their meaning is seen more clearly. On the other hand, the research design is the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles or theory which results in the prediction and ultimate control of events, (Best and Khan, 1993). This is also supported by Merville and Goddard (1996) who define research design as the plan, structure or strategy of an investigation in order to obtain valid answers to the research question.

The case study research design was adopted in this study and is qualitative in nature. It focused more on foodstuffs consumed by children 0-6 years old, why they were fed with such foodstuffs, frequency of feeding and whether parents were aware of the proper nutrient dense foodstuffs they could offer to their children. This is because the qualitative paradigm seeks more of meanings of words and values and is not interested in statistics. Rather, it is inductive in nature, creative and scholarly. According to Leedy (1993), it necessitates critical thinking.
Population
The population is a homogeneous mass of individual units that have one or more characteristics in common, that are of interest to the research, (Leedy, 1993). It entails a whole group of individuals to whom the study findings apply. In this study, the population comprised mothers or caregivers of 0-6 year old children Dangamvura’s P-section, which was estimated to be 200. Since it was not possible to deal with the 200 mothers, it necessitated the selection of a sample.

Sample and sampling procedure
Simple random sampling with yes and no cards was used to extract the sample of 30 women from the target population. Thirty women made 15 % of the total population and were in line with recommendations from research scholars. Leedy (1993) states that for a reasonable study, at least 10 % of the population must be the sample upon which generalizations can be made. A sample has been defined as part of the population which is representative of the population with its different characteristics, (Best and Khan, 1993). According to Borg and Gall (1989), simple random sampling is a process of selection from a population that provides every sample of a given size an equal probability of any other choice. It also allows the researcher to apply inferential statistics to the data. In this case, the researcher made inferences as to why children were given particular foodstuffs, how often and how much in relation to the individual needs of the young ones.

Research instruments
These are tools necessary in any research for the collection of data from participants. Best and Khan (1993) confirms that many different tools have been developed to assist the acquisition of data by employing distinctive ways of describing and quantifying the data. In this case, the questionnaires were used for the mothers, while the interview was for the sister-in-charge of Dangamvura Polyclinic. The use of multiple methods helps to counter biases and generate more adequate and reliable data, according to Dooley (1995). The instruments were validated and pilot tested among women who were not going to be part of the sample. This was to ensure reliability and consistency before the instruments were administered to the respondents involved. After data was collected and analysed, the following findings were established.
MAJOR FINDINGS OF THE STUDY

The results from the instruments revealed that the number of the girl children outnumber that of the boys (18:12). The results reveal that most of the children (65%) were between two and four years. These children were most affected given the fact that they had been weaned and depended solely on the family meals only. This is supported by Wardlaw and Smith (2011) who highlighted that under nutrition mostly affects children of the age group 2 to 5 as they are solely dependent on solid food.

On diseases which mainly attacked the young ones, Kwashiokor, Marasmus, Diarrhoea, and skin rashes topped the list. This could have been due to lack of balanced diets as the children were usually given porridge, sadza and rarely protein foods. Lack of nutritional knowledge on the part of the parent or guardian could have been a major contributory factor to the poor diets given to the toddlers.

As far as breastfeeding was concerned, only 38% were still breastfeeding, 42% had weaned their children at one year, while 14% had pulled up to two years. The remaining 6% had not breastfed at all. Failure to breastfeed at all could have been due to poor health status of the mother, especially in the light of HIV/AIDS where breastfeeding issues are highly debatable. Interesting to note was that the majority of the mothers had an idea of breastfeeding, though what may have lacked was the proper knowhow as well as the duration. The idea that 42% of the women had weaned at twelve months was a bit worrisome given the poverty background of the community, as this would pose a threat to the quality of the diets given to the young ones.

With regards to other foodstuffs given to children and the frequency of meals, various opinions were obtained. The majority of the women (18/30) fed their children with at least four meals a day; while 9/30 gave three times a day with the remaining 3/30 giving a pathetic two main meals a day. This was very alarming as the 3/30 had their children under starvation for the greater part of the day. According to Guthrine (1995), if a child lacks proper nutrition in the early years, this will result in irreversible damage in the life of the child even in later years. Davies (2000) also concurs with Begum (1999) that the early years of life are marked with rapid growth, therefore and deficiency in a nutrient will result in some malformations in the child both mentally and physically.

The following foodstuffs were cited by most mothers/guardians as ideal foodstuffs for their children. These included porridge either plain, sour, with peanut butter or egg, milk, sadza, “maheu”, potatoes, eggs (especially boiled), meat, vegetables and fruits, maputi, cereals like
cornflakes and cerevita, pulses like beans and cowpeas, tea, bread, butternut, rice, freezits, juice, among many others. However, most meals given at mid morning or afternoon generally lacked protein as the majority cited sadza and vegetables, drinks and biscuits/maputi/jiggies, while others gave porridge, potatoes, butternut and pasta. Generally, mothers have an idea of what foodstuffs to give, but the challenge remains on the frequency of feeding, the quantity and quality of the foodstuffs in relation to the nutritional requirements of the children. However, meat was sparingly given by many, but with a generous donation of sweets, jiggies, maputi, biscuits and freezits which are more of empty calories. In the evenings, it was mainly sadza and boiled vegetables. Another finding revealed that lack of nutritional knowledge as well as poverty also affected the consumption patterns of the mothers to a great extend. In some cases, mothers reserved food for the fathers at the expense of the toddlers and this triggered under nutrition in children. Cultural and religious beliefs also affected the way some parents fed their children, thus posing a threat to the positive paediatric nutrition outcome. For instance, some never gave eggs to their children until they were 5 years of age because it was believed that these would cause convulsions and eventually death in the young ones. Other women, whilst pregnant would not eat eggs for fear of giving birth to bald headed children. This however is contrary to what nutrition scholars recommend. According to Guthrie (1995) by about 4 years, brain growth and development will be complete. Cholesterol of which the egg is rich, is needed in facilitating brain development. Therefore depriving a child of eggs at a tender age will compromise the IQ of the child and giving her in later years will not reverse the harm or damage done in earlier years. Begum (1999) concurs with Uddoh (1980) that in Nigeria, it is not permissible for a woman to eat snails during pregnancy for fear of excessive saliva secretion by the infant. In Kenya and in some parts of Zimbabwe, children are not given meat as it is believed to cause the young ones to steal. Thus, many women serve their children with sadza, soup and vegetables. However, this is contrary to what the WHO recommends because it calls for a balanced diet, small frequent meals for children every 2-3 hours, frequent breastfeeding and also as per demand. Breastfeeding duration is up to a minimum of 24 months as well as exclusive breastfeeding for the first 4-6 months, (www.pediasure.com).

**SUMMARY**

Paediatric nutrition education remains an essential pre-requisite for any mother, if the children and nation at large are to be well nourished. There is need to ensure that infants are
given balanced diets. The World Health Organization (WHO) encourages proper breastfeeding and to employ proper weaning practice. Healthy eating in an infant’s life helps to lay a sound nutritional foundation, which will help develop a sound and well rounded individual intellectually, physically, socially as well as emotionally.

RECOMMENDATIONS AND WAY FORWARD

- Parents or guardians to examine their buying and feeding practices and look for substitutes for the more expensive foods.
- Fathers to be actively involved in the feeding patterns of their families to ensure balanced diets.
- Education about breast feeding in schools for both boys and girls, since later support by the father helps breast feeding succeed.
- Public education to be given through TV, radio, newspapers and magazines about breast feeding.
- Resuscitation of nutrition gardens and rearing of small animals and poultry will help curb challenges of poverty and malnutrition

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