

Assessment of Nutritional Contribution of Pre-scholar Packed Meals: A Case of a Day-Care Centre in Sakubva Township, Mutare

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ABSTRACT

The study sought to assess the nutritional contribution of the foods packed for pre-scholars attending a certain early childhood development (ECD) day-care centre in Sakubva Township, Mutare. Well-nourished children are healthy physically, emotionally, socially, cognitively and are less prone to infections and diseases. The target population consisted 60 parents/guardians of all the pre-scholars (3-6 years) attending the selected day-care centre. A sample of 10 parents was selected using the simple random sampling technique. All the three pre-school teachers manning the selected day-care centre participated in the study. The research was inclined towards a qualitative paradigm, with the case study research design being adopted. Observations and focus group discussions were the instruments for data collection. The inductive approach was used to thematically analyse data before discussion. The major findings of the study revealed that parents were generally lacking nutritional knowledge and consequently the correct food to pack for the pre-scholars. The researchers observed that most of the food items packed for the pre-school learners were mainly carbonated beverages, energy dense cereals and sweet snacks. This kind of diet has detrimental effects on the dental health of the pre-scholars. The results of the study suggest that the socio-economic conditions prevailing in Zimbabwe were so intense that families struggled to obtain decent meals due to the high rates of inflation, unemployment and poverty. Consumption of unbalanced meals, especially empty calories, consequently affects the child's health and these effects continue through to adulthood. Consumption of healthy food, with varied nutrients, colours and textures, helps to ensure that pre-scholars enjoy a good state of health and enhance cognition. The study recommends that parents be exposed to nutrition education seminars, through nutrition programs organised at community level by Non-Governmental Organisations (NGOs) and the Ministry of Health and Child Care.

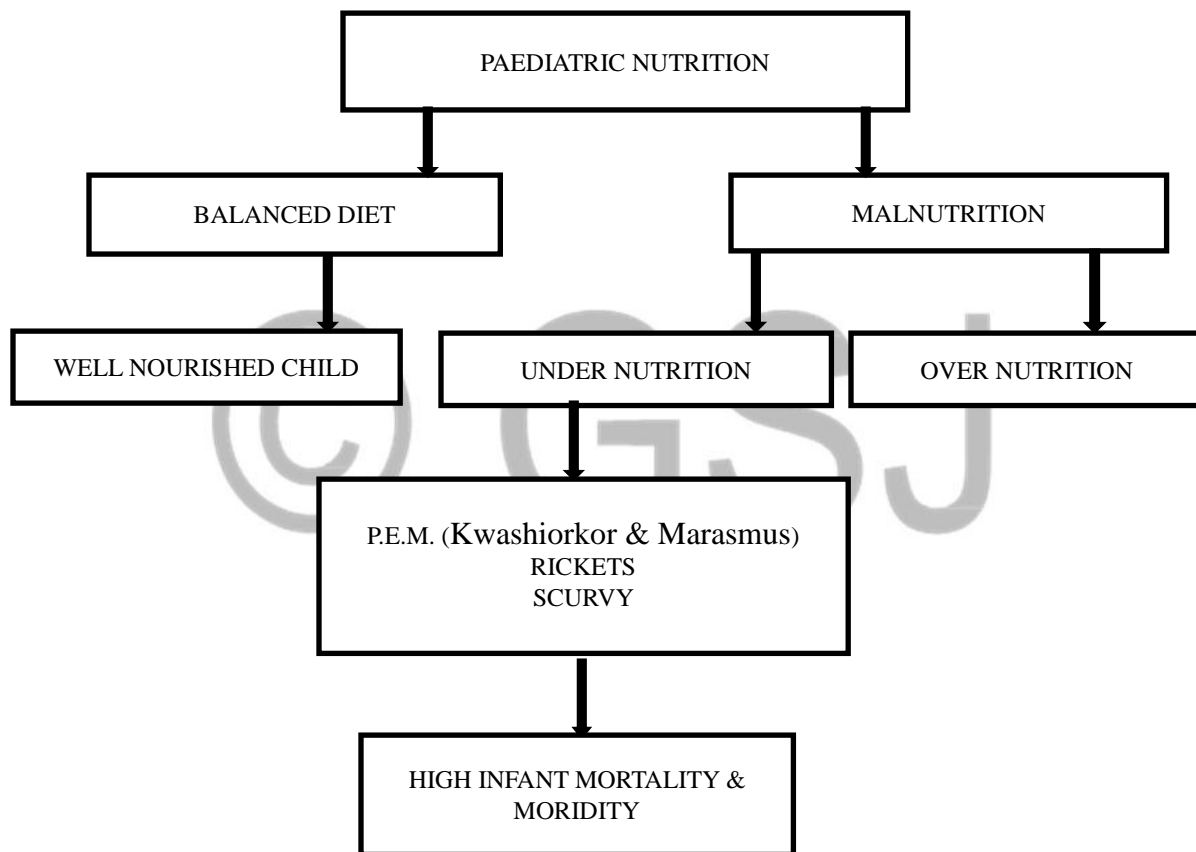
Key words: Nutritional contribution, pre-scholar, packed meal, day-care centre, health.

Introduction and background to the study

The study on assessment of the types of food and nutritional contribution of pre-scholar packed meals was carried out at a day-care centre in Sakubva Township, in Mutare. Pre-scholars attending the particular day-care centre spent a considerable amount of their days' time whilst at school. As such, there was need to ensure that they consumed the right types of foods in adequate amounts, so that they enjoy utmost good health. Consumption of meals that contribute to a balanced diet is a challenge among many pre-school children, resulting in malnutrition or under-nutrition (Parks 2019). Brown (2017), states that the first years of life are marked by rapid growth and development. Sharing the same sentiments, Wardlaw & Smith (2011), stress that by about the age of four to six years, brain growth will be complete. Therefore, if parents or guardians of pre-scholars fail to prepare and pack nutrient dense and balanced foodstuffs, pre-scholars will not be able to excel academically as their brains will not be fully developed to the maximum (Ministry of Health & Childcare, 2014; World Health Organization, 2013).

Carbohydrate foods are usually the most abundant and readily available in children’s lunch boxes, yet they are not the only nutrients required by the body. There are other more critical nutrients essential for good health to facilitate complete brain development (Brown 2017; Abrahamz, de Villiers, Steyn, Fourie, Hill, Draper & Lambert 2011). Apart from brain development, bones need to be constantly remodelled, since malnutrition affects both the brain and bone development (Brown 2017; Wardlaw& Smith 2011). Therefore, inadequate nutrition during childhood has greater potential for long time health impact, than it does at any other time in life (United Nations Children’s Fund 2017; WHO 2013). The damage done by under-nutrition is not reversible, especially if it occurs over long periods of time at a very tender age (WHO 2013; Wardlaw& Smith 2011). When young children are exposed to long periods of undernutrition, their resistance to infections is lowered, thereby making them more susceptible to various illnesses and infections (Brown 2017; WHO 2013). According to Wardlaw& Smith (2011), malnutrition eventually results in high infant mortality and morbidity. It is against these paediatric nutrition challenges, that this study sought to assess types of foods packed for pre-school children and the nutritional value of these foods. The study also sought to enlighten parents or guardians on proper nutritional practices to follow when preparing and packing meals for pre-school children 3-6 years.

Conceptual framework



A well-nourished child will enjoy good health and is not susceptible to infections. Just like the air we breathe or water we drink, food is essential for human existence. A good diet is needed to sustain good health and consequently facilitate high levels of cognition, as well as growth in young children.

Management of children’s diets

According to Brown (2017), it is important to exercise proper management of children’s diets. A child’s diet is best taken equally divided into 3 main meals, which are breakfast, lunch and supper. Breakfast is usually taken with the family, even though frequently skipped by many adults. As emphasised by Gregoire (2010), it is however important for young children to go to school with a good breakfast inside them. In many countries, it is customary to give children a glass of milk at midmorning and this is sound practice.

Since the 3-6 year pre-scholars spend most of their day at school, hence a good packed meal is needed. A mid-morning and late afternoon snack can be given where necessary; otherwise most children are best without snacks between meals (Brown 2017; Gre-

goire 2010; Kinton, Ceserrani&Foskett 2003). At school, teachers should ensure that pre-scholars do not eat food from other learners' lunch boxes. Some children readily become obese and there is need to watch that weight gain is not excessive (Abrahamzet *al* 2011; Bevans, Sanchez, Tenerall& Forrest 2010; Kahlor, Mackert, Junker & Tyler 2010).

Wardlaw and Smith (2011) explain that an excessive consumption of sweets and candies spoils the appetite for the main meal and predisposes the child to dental caries. Nevertheless, it is worth noting that these sweets and candies, when taken in moderation, especially after a meal, they do no harm at all. They are however, a legitimate pleasure of childhood (Gregoire 2010). Since the danger of excessive consumption is always present, there is need for discipline (Wardlaw& Smith 2011; Kintonet *al* 2003).

Packed meals for children

Children from the age of pre-school right through to adolescence, spend a considerable part of their day away from home, as they will be at school. As such, they need to have nutritious or wholesome meals packed for them, for the meals they will take away from home. According to Abrahamzet *al* (2010), it is important that parents ensure that their children's lunch boxes contain foods that provide all the necessary nutrients. All the nutrients are required to facilitate energy provision, normal functioning and regulation of body processes, as well as facilitating growth and repair of worn out tissues in young children (Brown 2017; FDA 2017; Abrahamzet *al* 2010; Kahloret *al* 2010). Lucan, Karpyn& Sherman (2010), share the same sentiments with Wardlaw and Smith (2011) that a healthy, balanced and nutritious diet for children and young people is essential for normal growth and development. Thus, it is therefore important to determine what foods and beverages are categorised as healthy and unhealthy. The FDA (2017) defines unhealthy foods as those containing a lot of fat, added sugar and sodium, with poor nutrient density and low amounts of dietary fibre. Healthy food is described as having low fat, restricted sodium and cholesterol containing at least 10% vitamin A, C, Calcium and protein per serving (Brown 2017; FDA 2017; Kahloret *al* 2010; Lucan *et al* 2010).

Foods offered to young children should not be difficult to handle. Kintonet *al* (2003) concurs with Gregoire (2010) that children's meals should be more of finger foods which are not difficult to handle. The foods are supposed to be consumed at the correct temperature, and packed in the right food containers. Parents or guardians need to ensure that warm to hot foods are packed in small user-friendly flasks and food-warmers which the young children can handle (Brown 2017; Gregoire 2010; Kintonet *al* 2003). Likewise, chilled drinks should be served in correct bottles that maintain the cool temperature, to avoid drinks getting warm (Gregoire 2010). It is critical that parents minimise the use of stews in children's packed meals. These are usually very difficult to handle and soups easily spill on children's clothes, causing an unnecessary mess (Abrahamzet *al* 2010; Gregoire 2010). Stewed foods easily get spoiled in warm weather. Therefore, baked, roasted, boiled, fried or steamed foods can be ideally packed for young children (Kahloret *al* 2010). Children's foods should be tasty, colourful and mildly spiced. Parents should avoid hot flavours as much as possible (Brown 2017; Gregoire 2010; Kinton 2003). On the other hand, the portions of meals packed for pre-school children should not be unnecessarily too much or too little (Parks 2019; Gregoire 2010). They just have to be adequate to meet the physiological needs of the growing child (Parks 2019; Brown 2017; Bevans *et al.*, 2010; Gregoire 2010).

In ensuring that meals packed for young children are balanced with all the necessary nutrients in the right proportions, it is important that parents do advance meal planning (Abrahamzet *al* 2010; Kahloret *al* 2010; Kintonet *al* 2003). Advance planning also helps to avoid repetition of the same meals which becomes monotonous to the pre-school children. Gregoire (2010) advises that children's meals should include a variety of generous servings of fruits, with the minimum being at least two fresh fruits per day. A variety of fresh fruits offers a good supply of vitamins, which have a protective effect on the health of young children. Fruits also contain good amounts of water and dietary fibre, which helps in ensuring normal bowel movement and prevention of constipation in the young children (Wardlaw& Smith 2011). According to FDA (2017), a glass of milk offered to young children daily does not only provide proteins, fats and mineral salts, but also supplies healthy fluids needed by the body. Due to the hyperactive nature of the young children, it is important to ensure that a substantial serving of carbohydrate is offered to them for energy supply (Brown 2017). On the other hand, high and low biological value proteins, supplied in adequate amounts will help to ensure normal regulation of body processes, facilitating growth, as well as repairing of tissues that may wear away (Brown 2017; Wardlaw& Smith 2011). Therefore, the need for balanced packed meals for pre-scholars cannot be undermined, since the damage caused by under-nutrition will cause irreversible damage, which will affect the child in later life.

This study focused on the types of foods packed for pre-scholars and the nutritional contribution of these foodstuffs. It sought to address how parents of pre-school children can enhance the health of their children by packing nutrient dense foodstuffs to ensure their complete well-being.

The study contributes to the body of knowledge in Food and Human Nutrition which strives to ensure that there is consumption of a variety of foodstuffs, which offer various nutrients. Failure to adequately pack nutritious foods for pre-school children may result in them suffering from various mal-nutritional disorders, chief among them protein-energy malnutrition, such as kwashiorkor and ma-

rasmus. These deficiency diseases disturb the children's concentration when learning and result in general ill health, which may then cause irreversible damage in the life of the child

Aim: To assess the types of food and nutritional contribution of the foods packed for pre-scholars, and to enlighten parents on the proper nutritional practices to observe when packing meals for pre-scholars.

Objectives

The objectives of the study were to:

- Assess the types of food and nutritional contribution of packed meals for pre-scholars.
- To determine awareness on the proper nutritional practices when packing meals for pre-scholars among parents or guardians.

Methodology

A qualitative research paradigm was adopted in this study, using the case study research design. According to Cresswell (2014), a case study is a qualitative strategy for generating data by exploring real situations and providing detail on a study of phenomena, using several sources of data. In the current study, the case study was based on a selected day-care centre in Sakubva Township which comprised of three classes, the infants, ECD A and ECD B. Each class had approximately 20 pre-scholars. Each pre-scholar was represented by one parent or guardian, thus giving a target population of 60 parents. A population is defined as a homogeneous mass of individual units who have one or more characteristics in common, that are of interest to the researcher (Crossman 2018; Cresswell 2014; Cooper, Chenail& Fleming 2012). A sample is a sub-set of the population which is representative of the population, upon which inferences about the population are made (Crossman 2018; Annum 2017; Cooper *et al* 2012). In the current study, a sample of 10 parents was selected from the population of 60 using the simple random sampling method. All the three teachers manning the day-care centre were purposively selected to participate in the study by virtue of also being directly involved with pre-school learners. Instruments used for data collection were focus group discussions (FGD) for parents and observation schedules for pre-school teachers, as they directly observed the packed food brought in by pre-scholars from home. According to Annum (2017), data collected using the observation method is usually first hand and direct. In this case, respondents cannot pretend or lie because they are not aware that they are being observed (Annum 2017; Cresswell 2014).

Findings of the study and Discussion

It was revealed that the pre-scholars attending the day-care centre under study, had ages ranging from three to six years. As such, balanced meals are a pre-requisite in order to meet the nutritional needs of the growing child.

Table 1: Age Range

Age range	Frequency	Percentage
3 to 4 years	18	30
4 to 5 years	19	31.67
6 years and above	23	38.33
Total	60	100

According to Wardlaw and Smith (2011), proper nutrition given during the early years of a child's life, lays a proper foundation for later years. Brown (2017) also confirms that the first years of life are marked by rapid growth and development. Sharing the same sentiments, Brown (2017) concurs on the fact that inadequate nutrition during childhood has great potential for long time health impact than it does at any other time of life. This therefore implies that under-nutrition can do irreversible damage on the child's physical and mental development [World Health Organisation (WHO) 2013; United Nations Children's Fund (UNICEF) 2011].

The major findings from this study revealed that meals offered by the majority of the parents (70%, n=42) were generally unbalanced. More than half (55%, n=33) of the parents packed mostly carbohydrate rich foods for children to eat whilst at school, such as homemade bread, biscuits, sweets and various brands of sweetened corn snacks. All these carbohydrates were packed at the expense of other nutrients, such as proteins, mineral substances, fats and vitamins. Beverages packed by most of the parents (60%), included energy dense, micronutrient poor, homemade drinks, and the commercial fizzy and carbonated drinks such as *mirinda* and *pepsi*. These were preferred by many parents for their cost which was said to be affordable, yet they were just empty calories.

Table 2: Food packed for the pre-scholars

Foods packed	Everyday	Once per week	Never
Carbohydrates			
Homemade bread		✓	
biscuits	✓		
Sweetened corn snacks	✓		
Fermented mealie-meal drink (<i>mahewu</i>)		✓	
Carbonated beverages	✓		
Homemade drinks	✓		
Sweets	✓		
boiled rice	✓		
Proteins, fats, minerals and vitamins			
Eggs		✓	
Milk		✓	
Milk products (e.g. yoghurt, cheese)		✓	
Peanut butter		✓	
Meat and meat products			✓
Fresh fruits		✓	

However, it should be noted that the sweet taste in most packed foods and beverages has a detrimental effect on the dental health of pre-scholars which could not be under-estimated because of the frequency with which the foods were consumed (Brown 2017; Food & Drug Association (FDA) 2017; Lucan *et al* 2010).

By implication, pre-scholars would suffer from mal-nutritional deficiency diseases, it is not because they had refused to eat healthy foods, rather the foods had not been offered to them by the parents, or the amounts offered were not sufficient to meet the needs of a growing child (Abrahamzet *al* 2011; Bevans *et al* 2010). While other parents packed for their children rice, sadza and vegetables or beans, the greatest challenge was that by the time the children sat down for the meals, the food would have gone very cold. Since nutrition is the science that seeks the relationships existing between the foods consumed to the health of the body, it is important that pre-scholars be well nourished (Parks 2019). According to Lucan *et al* 2010, proper nutrition is essential to the health of pre-scholars.

Proper nutrition therefore implies that all the essential nutrients, which are proteins, fats, carbohydrates, minerals, vitamins and wa-

ter are supplied and utilized in adequate balance to maintain optimal health and well-being (Parks 2019; Brown 2017; Wardlaw& Smith 2011; Lucan *et al* 2010). The imbalance in children's meals, according to Brown (2017), is the major cause of paediatric nutritional disorders such as scurvy, rickets, protein energy malnutrition (PEM). Protein energy malnutrition (PEM) describes a range of clinical disorders, which occurs characteristically in children under the age of 5 years (Brown 2017; FAO 2014; WHO 2013; Wardlaw& Smith 2011). It presents itself, either as kwashiorkor or as marasmus (FAO 2014).

Continuous consumption of other nutrients, especially high carbohydrate foods such as plain porridge, biscuits, bread, fizzy drinks and sweets, at the expense of quantitative and qualitative protein will trigger kwashiorkor, even though energy intake will be adequate (Brown 2017; FDA 2017; Wardlaw& Smith 2011). On the other hand, marasmus occurs as a result of continued restriction of dietary energy and protein, as well as other nutrients (Brown 2017; Wardlaw& Smith 2011). As expressed by Parks (2019), no age is immune to PEM, but in older persons PEM is much less frequent. Protein energy malnutrition is the most critical public health paediatric nutritional challenge affecting developing countries today, mainly as a result of poverty and ignorance [UNICEF 2017; WHO 2013; Department for International Development (DFID) 2012]. Consequently, proper and correct nutritional practices have to be introduced right from a tender age to help to avoid health challenges and abnormalities that will affect the child later in life (WHO 2013). In as much as the young children may recover from PEM, it has to be noted that they may have permanent mental disabilities (WHO 2013; Wardlaw& Smith 2011). According to Brown (2017), for PEM treatment to be effective, it is usually necessary for severely mal-nourished children to be treated as patients admitted in a hospital or health-care centre. If such treatments are not given, children may develop complications, lose weight, and become prone to infections (DFID 2012; Kahloret *al* 2010). Therefore, it is important to ensure that pre-scholars are provided with adequate carbohydrates, proteins, mineral salts, vitamins, fats and water, in the correct proportions (Kahloret *al* 2010). It is important to ensure the provision of plenty of healthy fluids such as water, milk, original fruit juices, soups, and plenty of fresh fruits in the diet (Abrahamzet *al* 2011; Bevans *et al* 2010; Kahloret *al* 2010).

Findings from the study also revealed that a sizeable percentage of parents (65%), packed a variety of starchy snacks such as biscuits, *zapnacks*, *jiggies*, *things*, *corn curls*, and *chicken flings*, among others. However, it must be realised that most of these food items packed for children were snack foods and not real meals, thus many parents spoiled their children's appetites by offering sweet snacks for their children to eat while at school. When the children came home from school, they would refuse to eat main meals or would just eat a bit, which was not nutritionally sound. According to Kintonet *al* (2003), whenever snack foods are offered to children, this should be done in moderation and especially after a main meal. Snacks also have a tendency of putting off children's appetite, which is usually good (Gregoire 2010). Snacks are in-between foods that are supposed to be offered at any other time besides main meal times (Gregoire 2010; Kintonet *al* 2003). Therefore, these cannot replace main meals and are not supposed to be offered as rewards for an empty plate, otherwise the child will attach more importance to the reward than to the nourishing food (Abrahamzet *al* 2011; Bevans *et al* 2010; Gregoire 2010).

The study findings also revealed that very few parents (15%) offered milk and milk products to their children. A very small group of parents (5%) occasionally packed fruits for their children; with others also offering fermented mealie meal drink (*maheu*) instead of fizzy drinks. According Kahloret *al* (2010), a very critical aspect that a parent should remember to do is that of ensuring that his or her child eats healthy food, while at home and even at school. A culture of good eating habits should be inculcated and developed in young children from a very tender age (Parks 2019; Bevans *et al* 2010; Gregoire 2010).

Observations made by all the three pre-school teachers revealed that most pre-scholars loved fruits, even though very few brought these to school. This was evidenced when many of these learners would pester the few pre-scholars who would bring fruits, asking to be given a portion or a small bite. The pre-school teachers also observed that approximately 75% of the parents packed the same

type of food for their children every day, for instance sweets, biscuits and a beverage of same flavour on a daily basis. This lack of variety becomes monotonous, such that with the passage of time, children end up disliking the food that is packed for them because of boredom (Gregoire 2010). According to Abrahamzet *al* (2011), young children need to be served a variety of foodstuffs, with varying colours and textures. Variety in colours is associated with variety in nutrients.

The study findings also revealed that apart from the fizzy drinks packed by the parents for the pre-scholars, there was no drinking water bought to school. Parents assumed that the pre-school children would drink water from the taps at the day-care centre. The teachers also explained that those who were thirst whilst at school would go and drink water from the two taps behind the ablution block, within the pre-school premises. However, according to Brown (2017), pre-school children should have time-tabled routines, where they will be asked to drink healthy beverages and water at least after every meal. This will help to ensure that children are not dehydrated and that all body processes are functioning normally. There should be many clean water sources within the pre-school premises for pre-scholars to readily access water whenever they need it (UNICEF 2011). It has to be noted also that taps by the ablu-

tion blocks are best used for washing hands after visiting the toilet, and are not meant for use as drinking points, as these may be hazardous to health because of the minor children who may still be incapable of correct procedures for washing hands.

There was also no specific meal reserved for break time or for lunch. Most pre-school children brought one lunch box containing food for consumption at break-time, as well as lunch food. The children would be advised by the teachers to eat part of the packed food during break-time and leave the other portion for lunch. However, despite being advised by the teachers, some of the learners failed to separate food for consumption during break time or lunch, and would eat and finish everything at break time. Others would leave some food for the next meal, but the quantities would not be enough for the next meal, such that during lunch time, they would have nothing to eat or drink. They would ask from other children. It is important and very critical that parents ensure adequate provision of correct foodstuffs to their children, to avoid malnourishment (Abrahamzet *al* 2011; Kahloret *al* 2010). Children should not be known to disturb and beg food from other learners as a result of a parent who does not adequately provide for his own child. According to Bevens *et al* (2010), children's eating behaviours should be controlled such that they are not an unnecessary bother to others and that they observe acceptable table manners.

Among those pre-scholars who finished all of their food during break-time, the pre-school teachers observed that there were some few boys, who had a tendency of bullying others, demanding that they be given food. The girl children were the target points of these boys. The pre-school teachers indicated that they usually cautioned the boys to desist from such behaviour. Nevertheless, besides the pre-school teachers seriously reprimanding such behaviours, parents also had a part to play. In addition to the gender stereo-typing placed on the boy-child by many societies, Brown (2017), stresses that the physiological makeup of male children calls for intake of a lot more nutrients in balanced proportions, as compared to girl children. This is meant to cater for their stronger bone matrix and masculine appearance later in the life of the child. Thus, adequate and proper nutrition given during these early years, lays a sound foundation for later years (Brown 2017; FDA 2017; Wardlaw& Smith 2011).

As observed by the pre-school teachers from the type of foods packed for children, it was revealed that many parents or guardians did not have adequate nutrition knowledge or education. They were generally not aware of the specific nutritional needs of their children and the precise foodstuffs to prepare and pack for the pre-scholars. Findings from focus group discussions with parents or guardians revealed that eight out of the ten parents had never been exposed to formal nutrition education. Thus, regarding feeding their children, their expertise was highly lacking. Some indicated that whenever they packed rice in the pre-scholar's lunch-box, it was because it was the left-over food in the previous day's supper meal. The majority of the parents acknowledged that they never gave serious thought or planning to issues regarding the child's packed meal. In fact, they just packed what was available at that particular time, despite the nutritional value of the food. Yet, in actual fact, taking care of the toddler is mainly the responsibility of the mothers, and these years are most important in the development of the child, especially from the first to the sixth year of the child's life (Brown 2017; Wardlaw& Smith 2011; Bevens *et al* 2010). Habits that are cultivated during these years are normally very difficult to get rid of, thus parents need to ensure that good habits are trained in the pre-school children. According to Bevens *et al* (2010), it has to be noted that the forming and learning of good eating habits can only be successful if taught with love and patience. The parents and pre-school teachers are all responsible for the general development and education of the children, as they all form part of the micro-systems that interact with each other for the total development of the young children (UNICEF 2011; DFID 2012).

Focus group discussion findings also revealed that, in as much as proper nutrition knowledge was generally lacking among most parents, poverty was another notable and very critical factor affecting many parents. Almost all the ten parents who participated in the focus group discussions acknowledged that they were socio-economically challenged. One parent had this to say:

'Tinengetichidakupawovanaveduzvekudyazvakanakauyezvinovakamuviri, asimariyekutengachikafuchachondoopasinda' (We also desire to give good and nutritious food to our children, but we do not have the money to buy the food).

Yet another parent explained that:

'Hataruzivorwakakwanapamusoropekudyakwakanakwevana, pamwechetenemariyekutengachikafuidambudziko guru ratakatariisananarosevabereki' (We do not have adequate nutrition knowledge on how best to feed our children. As parents, we are also failing to afford decent meals for our children).

This made it difficult for many parents to make ends meet, or to provide their children with any nutrient dense food. Bhoroma (2019) concurs with Mutasa (2015) that the cumulative economic and corporate earnings decline, rising inflation, high unemployment and poverty rates in Zimbabwe are so alarming. The hyper-inflation prevailing in Zimbabwe has caused most of those that are employed to earn well below the poverty datum line (PDL) (Bhoroma 2019; Mutasa 2015). This has also been worsened by the environmental conditions such as recurrent droughts and natural disasters such as the recently occurred Cyclone Idai. Consequently, these conditions have resulted in the standard of living being very difficult and unbearable for many households, with the frequency and quality of meals diminishing each day (Bhoroma 2019; The Economist Intelligence Unit Limited (EIUL) 2016; Mutasa 2015). Therefore, in light

of these economic hardships, it becomes very difficult for pre-school parents to be able to offer any balanced diets to their children, because procurement of the basic commodities is a great challenge. At the end of the day, a child will be offered what is readily available or what is affordable at that moment, without considering nutritional value or contribution of the foodstuff to the pre-school child.

According to a study by Wiles (2011), it has been proved that socio-economic status of parents, directly influences the nutritional quality of food offered to their children. Poor families are prone to provision of poor quality food and beverages. Thus, children from lower socioeconomic levels, tend to consume more energy dense foods, carbonated beverages and less fruit, as compared to children from high income families (Wiles 2011).

Conclusion

The study concluded that it is critical to pack balanced meals for pre-scholars. As much as many parents were very keen to pack good meals for their pre-school children, lack of adequate nutrition knowledge on the part of parents has been major hindrances. This has affected the well-being of pre-scholars. The study also concluded that parents packed food stuffs that were not nutritionally balanced, some of which had a very low satiety value, which were mainly snacks and this disturbed the child's appetite. By the time the young children came home from pre-school, their appetites will have been disturbed already. Many parents are not aware of nutritionally balanced meals or foodstuffs that are necessary when feeding pre-school children. Another notable factor that prevented parents of pre-school children from packing balanced meals for their children was poverty. Even though some parents might have had sound nutrition knowledge, but because of the socio-economic challenges affecting the majority of parents in Zimbabwe, it has become a great challenge to provide balanced meals for family consumption. The hyper-inflationary conditions and high rate of unemployment have caused untold suffering among households. Thus, provision of balanced packed meals for pre-school learners to help them develop an appreciation of the need to eat good food has not materialised. Rather, could trigger paediatric mal-nutritional disorders such as PEM and permanent health disabilities, which will continue to haunt the child for the whole lifetime.

Recommendations

In light of the aforementioned findings, the following recommendations were made:

- NGOs and The Ministry of Health and Child Care should expose parents to nutrition education seminars, through training programmes organised at community level. This can be achieved through Training of Trainers (TOT) programmes, where few capable individuals are selected and trained. After training, they go into the community to train their peers, and by so doing dissemination of nutrition education becomes fast and effective.
- Food-aid donor organisations should intervene in pre-schools, so that children can be provided donor-funded nutrient dense food-stuffs to avoid malnutrition and curb some irreversible nutrition related damages that may affect young children.
- Community programs like the nutrition gardens should be introduced, where parents are trained on nutritious crops to grow for ensuring consumption of balanced diets among households.
- Pre-schools should provide hot meals to learners, especially during the winter season.
- Parents should make use food warmers and small flasks for hot food, especially during winter when it is cold.
- Preschools should work closely with parents to ensure that the nutritional needs of the child are met in order to promote complete paediatric health of the learner.

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