CULTURAL PRACTICES AND BELIEFS OF CAREGIVERS OF MALNOURISHED CHILDREN, AGED 6-24 MONTHS, REGARDING FEEDING AND DIETARY INTAKE IN GWERU, ZIMBABWE

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Keywords

Caregiver

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Abstract

Background: The burden of malnutrition continues to persist and is the major cause of morbidity and mortality in children. According to the results of the Zimbabwe Multiple indicator cluster survey in 2019, stunting remains high at (26.8%) and the leading form of malnutrition, affecting 1 in 3 children less than 5 years in Zimbabwe. Suboptimal feeding practices have been identified as one of the many causes of malnutrition. Various studies have shown that many risk factors of malnutrition can be addressed during the crucial first 1000 days of life. Cultural beliefs, values, and practices play a vital role in the pre and postnatal period. However, there is a knowledge gap in how culture influences the caregivers regarding feeding and dietary intake. Therefore, the study's major aim was to explore the cultural beliefs and practices of caregivers of malnourished children between 6-24 months, regarding dietary intake and feeding practices in Gweru, Zimbabwe.

Methodology: An exploratory study using a qualitative approach was used. Data was collected utilizing in-depth interviews with caregivers and two key informants, i.e. nutritionist and a nurse in charge at the hospital. The interviews were facilitated by the researcher and trained research assistants. The target groups were caregivers of malnourished children between the ages of 6-24 months who resides in Gweru, Zimbabwe. A total number of 21 caregivers aged 18-40 years were purposively sampled for inclusion in the study. Ethics approval was obtained from the Biomedical Research Ethics committee of the University of Western Cape. Thereafter permission to conduct the study was obtained from the Medical Research Council of Zimbabwe and the Provincial Medical Director of Midlands where the study was carried out. The participants signed a consent form before taking part in the study. The principles of ethics were maintained throughout the study, i.e. justice, autonomy non-maleficence, and beneficence.

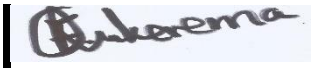
Results: The study findings showed that although caregivers had an appreciation of the benefits of breastfeeding the adherence to the recommended exclusive breastfeeding until six months was low. Prelacteal feeding was influenced by elderly members of the family such as grandmothers and mothers/in-laws who are regarded as "experienced" in terms of child-rearing. The mean age for early initiation of complementary feeding was 3 months and the diet lacked diversity with reliance on starchy foods being observed. The results showed that caregivers have limited knowledge of the appropriate food for children under two. The results identified household food

insecurity as the cause of the lack of dietary diversity. Mixed feeding was the preferred form of feeding among the caregivers, and it was revealed that it was socially acceptable. Time constraints due to workload was another factor that negatively impacted infant feeding.

Conclusion: The study recommends that an understanding of local beliefs helps in the designing and implementation of nutrition interventions which include context-specific messages to address cultural barriers to optimal infant feeding practices. Engage family members who are involved in, and influence infant feeding practices such as fathers, mothers/in-laws, and grandmothers in nutrition education and hospital visits.

Declaration

I declare that "**Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 months, regarding feeding and dietary intake in Gweru, Zimbabwe"** is my original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full Name: Fiona Chikerema **Signature**: 

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Acronyms

CDC:	Centers for Disease Control
CF:	Complementary Feeding
DHIS:	Demographics Health Information System
EBF:	Exclusive Breastfeeding
GAM:	Global acute malnutrition
IMAM:	Integrated management of acute malnutrition
IYCF:	Infant young child feeding
MAM:	Moderate acute malnutrition
MICS:	Multiple Indicator Cluster Survey
MOHCW:	Ministry of Health and Child Welfare
MUAM:	Mid Upper Arm Circumference
SAM:	Severe acute malnutrition
SD:	Standard deviation
SDGs:	Sustainable development goals
UNICEF:	United Nations Children's Emergency Fund
USAID:	United States agency of international development
WAZ:	Demographics Health Information System eight for age
WHO:	World Health Organization
ZDHS:	Zimbabwe Demographic and Health Survey
ZIMVAC:	Zimbabwe Vulnerability Assessment Committee and the Global Food Security Cluster
ZNNS:	Zimbabwe national nutrition survey

Definition of Key Terms

Caregiver: a person who provides direct care to children, elderly people, or the sick. (www.merriamwebster.com/dictionary).

Complementary feeding: refers to the timeous introduction of solid food which is nutritionally rich in addition to breast milk from 6 months to 24 months **(WHO, 2017).**

Conceptual framework: is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas **(UNICEF, 1998).**

Cultural beliefs: the totality of socially transmitted behaviour patterns, arts, beliefs (https://www.merriamwebster.com/dictionary/culturee).

Determinants: (causes, risk factors) of health-related states and events in specified populations. (https://www.cdc.gov).

Dietary practices: refers to the daily eating patterns of an individual, including specific foods and calories consumed and relative quantities (www.encyclopedia.com).

Eating one's totem people do not eat their totem animals as they believe they are their relatives. (https://www.thepatriot.co.zw/old_posts/totems-our-cultural-heritage/.

Exclusive breastfeeding: Breastfeeding is a natural process of infant feeding that involves giving the baby no other food or drinks other than breast milk for six months **(WHO, 2017).**

Feeding practices: feeding practices are the specific strategies and actions (the "when what and how") of giving foods to infants**. (Vaughn et al., 2016).**

Malnutrition: is defined as a condition that develops due to a lack of essential nutrients which include both macro and micronutrients and the presence of a disease. **(WHO, 2015)**.

Sadza thick porridge made from maize meal that is a staple food in Zimbabwe. (https://www.definitions.net/definition/sadza).

Wet nurse: a woman who breastfeeds someone else's child. (www.encyclopedia.com).

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Globally, malnutrition remains a major public health concern (WHO, 2015). According to the Global Nutrition Report (2016), one in every three people suffers from one form or another of malnutrition (IFPRI 2015a). It has also been shown that about 45% of under-five mortality is linked to malnutrition (Black et al. 2013). In 2015, global leaders adopted sustainable development goals (SDGs) and pledged to end malnutrition by 2030 (Global Nutrition Report, 2014). Despite this, malnutrition continues to pose a serious burden on the health sector in sub-Saharan Africa and globally (UNICEF, 2014).

In children, under-nutrition can result in stunting (length/height-for-age below the -2 z-score of the median WHO Child Growth Standards), wasting (weight-for-length/height below the -2z scores of the median WHO growth standards), or underweight (weight-for-age below the -2 z scores of the median WHO growth standards). There are two classes of under-nutrition, namely acute and chronic malnutrition. Acute nutrition is a condition that results from a lack of energy and nutrients over a relatively short time. It is further categorized as moderate or severe malnutrition. Severe malnutrition is defined by very low weight for height (below -3z scores of the median WHO growth standards), by visible severe wasting, or by the presence of nutritional oedema (Bhutta & Salam, 2016).

Mid upper arm circumference (MUAC) is another screening tool used for measuring malnutrition. A fixed cut-off figure of 125mm is used to diagnose malnutrition whereby a figure less than <125mm is classified as moderate acute malnutrition, and the child is recommended for a supplementary feeding programme. MUAC of less than <115 mm indicates severe acute malnutrition SAM and the child is recommended to undergo treatment. MUAC of between 125mm and 135 mm indicates a risk of acute malnutrition, counselling, and follow up on growth promotion and monitoring is recommended. (UNICEF, 2012). According to WHO standards, the MUAC remains constant for children aged between 6 months to 60 months therefore, avoids the

calculation of age. The determinants of malnutrition are multifaceted according to the conceptual framework developed by UNICEF in 1998, which shows it is more than just inadequate dietary intake and food insecurity and a multispectral approach to combating malnutrition is required (UNICEF, 2013).

However, despite the articulated three main determinants which are basic, immediate and underlying determinants, research evidence has shown that interventions during the 1000 window period can mitigate the burden of malnutrition caused by the above-mentioned determinants (UNICEF, 2012). Preventive efforts continue to focus on the first 1,000 days, this is between pregnancy and a child's second birthday (Bhutta, et al., 2013). This is a critical window of opportunity with short and long-term impacts on the wellbeing of the child and mother. Research evidence has shown that active neurodevelopment occurs in the first 1000 days and is influenced importantly by nutritional factors (Schwarzenberg, et al., 2018). Evidence has shown the failure to provide essential micro and macronutrients leads to irreversible brain damage lower intelligence quotient (IQ), weakened immune systems, and greater risk of infections and non-communicable diseases later on in life. Furthermore investing in maternal and child nutrition has social benefits as it combats poverty, lessens healthcare costs, and create healthy human capital that helps economies to grow and thrive (Schwarzenberg, et al., 2018). Research on child health states that during the first few years of a child's life, the social determinants of malnutrition such as religion, family norms, home distribution, domestic violence, caregiving, and maternal depression exerts an influence on the health status of the child (Quansah, et al., 2016). Social norms, taboos, and traditional practices significantly influence feeding behaviours, for example, many cultures believe babies mustn't consume colostrum and may be fed another liquid, such as drinking water, honey, or animal milk, before beginning breastfeeding (UNICEF, 2019). Children can thus be exposed to both positive and negative social influences that can affect their growth and development, and the effect of these changes may extend into adulthood (International Food Policy Research Institute, 2019). Therefore, development interventions must not only address the biological aspect of the disease but also social initiatives that can improve the wellbeing of children and women.

1.2 Study Setting

The study will be conducted at Gweru Provincial Hospital which is located 164km northeast of Bulawayo and 75 km southwest of Harare. Gweru Provincial Hospital is a referral hospital located in the Midlands province. It has a population of over 231,675. The centre caters for clients from eight district hospitals and clinics. It operates 24hrs catering for referred cases and unreferred cases from the local clinics. It has approximately 300 health personnel.

1.3 Problem Statement

Despite progress being made in reducing the prevalence of malnutrition over the past three decades, the statistics of underweight and wasted children remain alarming high in Zimbabwe (Zimvac, 2019). Even after the adoption of the WHO policies and guidelines on infant and young child feeding practices (IYCF), there still is low compliance to recommended practices across the country. The aetiology of malnutrition is multifaceted and most studies and research on the endemic problem have traced it to economic, social, and political causes (UNICEF, 1998). However, Gulati (2010) argues that culture (i.e. family norms, ethics, women supportive socio-cultural norms, and intrahousehold food distribution) also plays a big role in the nutritional status of a person. Akinpelu (2015), in his study, articulated that economic development or food security at the household level is no guarantee that good and stable health status is achieved. Contrary to previous findings and research that attributed the major determinants of malnutrition to poverty and lack of education, cultural beliefs and practices concerning feeding practices have been identified as major causes of under-five malnutrition (Howard, 1994). Karigi et al (2016), points out that the prevalence of malnutrition in children aged 6-24 months is linked to suboptimal feeding during the weaning stage, which includes breastfeeding and complementary feeding practices. Complementary feeding practices involve perceptions, behaviours, and decisions a caregiver makes, which is highly influenced by cultural beliefs and practices of the caregiver and community context (Nousiainen, 2014). Karigi et al (2016), also found that the vulnerable groups that suffer from the persistent burden of malnutrition are always women and children, and this is a cause for concern. The influence of cultural beliefs and practices on the nutritional status of children regarding infant feeding practices has not been extensively researched. Furthermore, there is a paucity of data regarding cultural beliefs and practices and how it predisposes children under

two to malnutrition. Thus this study is an attempt to bring forth in-depth knowledge and data to fill the research gap present.

1.4 Significance of the Study

This study aims to explore the influence of cultural beliefs and practices regarding dietary practices and feeding practices of caregivers of malnourished children aged 6 – 24 months. Through the study findings, it seeks to add a breadth of knowledge on the determinants of suboptimal infant feeding practices. The findings of the study will further be of significance to stakeholders such as non-governmental organizations, government agencies, and policymakers that are responsible for improving the nutritional status of children under-five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Malnutrition is defined as a condition that develops due to a lack of essential nutrients which include both macro and micronutrients. This condition comes in three forms that are under-nutrition (stunting, wasting and underweight), micronutrient-related malnutrition, deficiencies in micronutrients (vitamins and minerals) or excess of micronutrients, and over nutrition (WHO, 2012). In the same vein there are four sub-forms of under nutrition which can be measured by calculating *z*-scores, that is, the difference between a child's weight or height and the median value at that age and sex in the reference population, divided by the standard deviation (SD) of the reference population (WHO, 2009). A child who is considered stunted has height-for-age which is less than −2 SD because the chances of the child's height being normal are less than 3 percent (UNICEF, 2013). This usually results from chronic or recurrent under-nutrition, which is associated with poor socioeconomic conditions, poor maternal health and poor nutrition, frequent illness, and/or inappropriate infant and young child feeding (IYCF) practices and care in the 1000 days window period. The 1000 first days of life is a period between pregnancy and the child's second birthday, it is considered a period of opportunity in which the child's fundamental health and development are established (UNICEF, 2013). Research evidence has shown that children that adequate nutrition in the first 1000 days are more likely to overcome childhood illness, finish school, become productive and have healthier families as adults (UNICEF, 2012). A child who is considered underweight has weight-for-age which is less than −2 SD, and one whose weight-for-height is less than −2 SD is deemed wasted (MOHCC, 2012). It usually indicates severe weight loss, because of inadequate dietary intake and/or due to an infectious disease, such as diarrhoea, which has resulted in weight loss (WHO, 2020). A child with low weight-for-age is classified as underweight, the child could be stunted, wasted or both.

Overweight and obesity are defined as excessive fat accumulation that may impair health and it characterizes the double burden of malnutrition being faced by many countries globally (WHO, 2017). The overweight rate among children under five is the percentage whose weight-for-height

is above plus 2 standard deviations from the median weight-for-age. Among adolescents and adults, it is the percentage of individuals with a Body Mass Index (BMI) equal to or higher than 25 (WHO, 2017).

Tackling the burden of malnutrition requires urgent attention because it is an intergenerational cycle, it hampers human capital development. The cycle of malnutrition begins at birth with low birth weight, continues to the infancy stage (stunting, wasting and underweight), adolescence and culminates in the reproductive age which in turn results in the malnourished children and the cycle begins anew (UNICEF, 2015). The consequences of malnutrition as noted by UNICEF (2015), including impaired cognitive and motor development, increased mortality and morbidity by the impaired immune system which results in increased infections, increased healthcare expenditures, decreased socio-emotional development, and increased risks of non-communicable diseases such as (diabetes, hypertension) in adulthood. Therefore, improving the nutritional status of children and the general populace as a whole, the healthier and more productive its future generations. Therefore the 1000 days window of opportunity is a very crucial and critical time for intervention (UNICEF, 2013). It is at this point that critical developmental phases of life occur which include growth, brain development and the strengthening of the immune system. Because this phase does not reoccur later in life, reversing or treating the developmental consequences of early childhood under-nutrition is almost impossible (Black et al., 2008).

2.2 Prevalence of Malnutrition

2.2.1 Global context

Currently, millions of children are still at risk of malnutrition, and thus have lower chances of survival (UNICEF, 2014). According to UNICEF (2015), the major cause of 50 % of the mortality among children under-five was under-nutrition, a form of malnutrition. This translates to a loss of about three million young lives a year. Globally 159 million children under five are stunted, and they come from poor households, making poverty and inequality a key marker for stunting (UNICEF, 2015). Nearly a third (16 million) of the children were severely wasted, equating to a global prevalence of 2.4%. The Global Nutrition Report (2020), states that one in nine people is undernourished currently which translates to 820 million worldwide. Fifty percent of stunted children are found in Asia and a third in Africa. Progress in addressing the burden of stunting in

sub-Saharan Africa (SSA) has been slow with rates between 1990 to 2014 standing at 48.9% and 35.7% respectively (UNICEF, 2014). The rate of underweight in SSA has also fallen notably from 30% to 20% in 2017. Despite South Asia having the highest prevalence before, it is important to note it has made significant progress in reducing underweight by 20% from 1990-2017 (Roser & Ritchie, 2013).

The current COVID-19 pandemic experienced globally has a great socio-economic impact, especially in low-income countries. It has been estimated that an additional 6.7 million children under the age of five could suffer from wasting (UNICEF, 2020). According to the analysis done in the recent series of "The Lancet" 80% of these children would be from sub-Saharan Africa and Asia (UNICEF, 2020). In 2019, 47 million children were wasted, without urgent action, the number is likely to increase to 54 million. It's worrying to note that the analysis finds that the prevalence of wasting among children under five years could increase by 14.3% in low- and middle-income countries due to the impact of COVID 19. This translates to over 10 000 under-five deaths per month with half of these deaths expected in sub-Saharan Africa (UNICEF, WORLD BANK, WHO, 2020)

2.2.2 Causes of malnutrition in the global context

The causes of malnutrition are a combination of factors which include poverty, poor diets, poor infant and young child feeding practices, and poor water and sanitation (UNICEF, 2015 & Global Nutrition Report, 2020). Poverty amplifies the risk of malnutrition as poor people are likely to suffer from different forms of malnutrition (WHO, 2015). Suboptimal breastfeeding practices alone contribute to 12% of all under-five deaths. The rate of malnutrition is said to peak between one and two years of age (UNICEF, 2015). It has been established that the key determinants of malnutrition during this period include weaning practices, sociocultural factors and healthcare of both mother and child. WHO (2011), noted that the major causes of malnutrition are inadequate food intake and illness, creating a vicious cycle of one sustaining the other.

2.2.3 Strategies to address malnutrition in the global context

For the past decade, there have been major international commitments made to reduce malnutrition. Some of the conferences from which these commitments emanated include the World

Summit for Children in 1990, the 1992 International Conference on Nutrition, and the scaling up nutrition (SUN) movement which is a worldwide effort to end under-nutrition(Scaling up nutrition,2011). The year 2000 saw the establishment of The Millennium Development Goals (MDGs) with eight voluntary development goals to be achieved by 2015. Three of the eight goals focused on health, with the fourth (MDG) aiming to reduce the global under-five mortality rate by two-thirds between 1990 and 2015. However, by end of 2015, it was apparent that the MDGs were unattainable and a new set of goals were developed (United Nations, 2015).

During the Second International Conference on Nutrition (ICN2) global nutrition targets were made which included the A*g*enda for Sustainable Development by 2030. The most crucial targets being *the* Sustainable Development Goal (SDG) 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and SDG 3 (ensure healthy lives and promote wellbeing for all at all ages) (WHO, 2017). However good nutrition is not only achieved by ending hunger but by achieving all of the set (SDGs). The foundation of good nutrition of a child begins with improving the mother's wellbeing before, during and after pregnancy followed by adherence to the WHO recommended IYCF practices (UNICEF, 2015).

According to the 2016–2025 nutrition strategy, WHO advocated that individual governments address inequalities in the food and health system to address global nutrition equitably (Global Nutrition Report, 2020). They must ensure that healthy and sustainable food is accessible and affordable to their populations. There is a need to integrate nutrition actions into health care systems as it is cost-effective and reduce the burden on healthcare spending in the long term (Global Nutrition Report, (2020).

2.3 Recommended infant and young child feeding practices

2.3.1 Exclusive breastfeeding

In 2003, WHO and UNICEF developed the Global Strategy for Infant and Young Child Feeding (IYCF) which recognizes appropriate feeding practices that are crucial in improving the nutritional status of children under five (WHO, 2003). Breastfeeding is a natural process of infant feeding that involves giving the baby no other food or drinks other than breast milk (WHO, 2017). The process involves two forms that are, exclusive and partial breastfeeding, with the latter being the

trendiest and the former being recommended by the (World Health Organization (WHO) and UNICEF (Amira & Houfey et al., 2017). Infant and young child feeding (IYCF) practices that include initiation of breastfeeding in the first hour of birth, exclusive breastfeeding for the first six months and continued breastfeeding throughout the second year of life is recommended by WHO. Delayed introduction of complementary feeding up to the age of six months is highly recommended, and initiation of breastfeeding should be done within an hour of birth (WHO, 2015).

HIV-positive mothers are encouraged to exclusively breastfeed the infant for the first 6 months. When mothers known to be HIV-infected decide to stop breastfeeding at any time, infants should be provided with safe and adequate replacement feeds to enable normal growth and development (UNICEF, 2017).

2.3.2 Benefits of Exclusive breastfeeding

Exclusive breastfeeding (EBF) provides sufficient nutrients essential for the growth of the baby (Victoria et al., 2016).). Breast milk is safe and clean food for the baby and protects the baby against gastrointestinal infections which are major causes of infant mortality in developing countries. Continued breastfeeding up to 24 months protects the child by delaying maternal fertility postpartum (WHO, 2017). Furthermore breastfeeding in the second year of life provides about 75% of daily vitamin A needs for the baby (ZDHS, 2015).

Breastfeeding provides short and long-term benefits to both the child and mother. A myriad of benefits of exclusive breastfeeding (EBF) is well documented in the literature (Victoria et al., 2016, UNICEF, 2015, PAHO, 2013). It has been found to reduce the risk of pneumonia-related infant deaths and morbidity in comparison to children that are artificially fed (Kuhn et al., 2007). Horta et al. (2015), in their study, confirm that children aged 4 months and under who had been weaned were more susceptible to developing diarrhoea compared to their counterparts who were still being breastfed. Also, breastfeeding has been associated with lowering blood pressure, total cholesterol, overweight and obesity during adolescence and adulthood (WHO, 2013).

Furthermore, elements of breast milk which include immunoglobulins, long-chain polyunsaturated fatty acids, cytokines, nucleotides, hormones, and bioactive peptides play a vital role in aiding the immune system of the newborn (Spatz & Lessen, 2011). Maternal colostrum contains high concentrations of Immunoglobulin A (IgA) which acts as the first line of defence in the newborn's

intestines and help reduce the risk of gastrointestinal infections (Thapa, 2005). Oligosaccharides inhibit the growth of enteric pathogens by producing organic acids that cause cell wall lysis (Niers et al., 2007). Breast milk is effective against such bacteria as *Escherichia coli, Vibrio cholerae, Campylobacter, Shigella,* and *Giardia lamblia* as well as in the viral defence of rotavirus, cytomegalovirus, influenza virus, respiratory syncytial virus (RSV), and *pneumococcus* (Hosea & Blewett et al., 2008).

Randomized trials provide evidence that there is a causal effect of breastfeeding on intelligence quotient (IQ) although the magnitude of this effect seems modest (Victoria et al., 2016). Other benefits of EBF include the reduced risk of acute and chronic disorders such as sudden otitis media, lower respiratory infections, diarrhoea and bacterial meningitis hence in turn reduction in neonatal mortality (WHO, 2012). Other benefits of breastfeeding include reduced risk of post-partum haemorrhage, cancers (breast and ovarian) (WHO, 2012).

2.3.3 Consequences of non-exclusive breastfeeding

A vast body of literature has shown that suboptimal breastfeeding increases the risk of poor nutritional status, compromised growth, and development of the child (Quansah et al., 2016; Ogbo et al., 2015; Bhutta et al., 2013). Suboptimal breastfeeding is defined as breastfeeding that is inconsistent with the WHO/UNICEF recommended guidelines (initiation of breastfeeding in the first hour of birth, exclusive breastfeeding for the first six months and continued breastfeeding throughout the second year of life) (Zakarija-Grković et al., 2016). Non -exclusive breastfeeding practices alone result in 12% of all deaths among children under the age of 5 (UNICEF, 2015).

A German study found an increased risk of sudden infant death syndrome (SIDS) in non-breast-fed infants, and a 50% reduction in risk for SIDS in infants who were exclusively breastfed for the first month of life (Spatz & Lessen, 2014). Furthermore, not exclusively breastfeeding has shown to significantly increase infant mortality especially in developed countries where suboptimal breastfeeding is associated with diarrhoea and respiratory diseases which are determinants of infant death (Vennemann et al., 2009). In the same vein, a cohort study done in Ghana proved that delaying the initiation of breastfeeding within the first hour after birth increases the risk of neonatal mortality (Quansah et al., 2016). Non-exclusive breastfeeding has also been associated with poor cognitive and brain development, increased risk of type-1 and type-2 diabetes, and the risk of the

baby being overweight and obese (Isaacs et al., 2009; Stettler et al.,2005). Research evidence has shown that breast milk and breastfeeding is pain-relieving; pain scores were shown to be high in infants who were not breastfeeding (Niers et al., 2007). Non-exclusive breastfeeding also increases the risk of maternal health outcomes, which include increased risk of postpartum depression, blood pressure, ovarian and breast cancer, reduced bone health, lack of amenorrhea, diabetes, increased maternal weight and cardiovascular diseases (WHO, 2017).

2.3.4 Complementary feeding

Complementary feeding refers to the timeous introduction of solid food which is nutritionally rich in addition to breast milk from 6 months to 24 months (WHO, 2002). After 6 months the breast milk is no longer sufficient to meet the nutrients demand by the growing child (PAHO, 2013). Optimal complementary feeding involves several factors such as the quantity and quality of food, frequency and timeliness of feeding, food hygiene and feeding during and after illnesses. (WHO, 2017). Also, dietary diversity of complementary foods is recommended such as meat, fish, and eggs to be eaten often. Foods such as fruits and vegetables which are rich in micronutrients should be eaten daily as well as food with adequate fat content (WHO, 2017).

However care should be taken that the energy density of the foods is adequate and not too high such that it decreases the consumption of breast milk (PAHO, 2013). If the need arises, a child can be given vitamin-mineral supplements and fed fortified complementary foods. (WHO, 2017). There is an increase in the recognition that optimal complementary feeding (CF) depends on how and who feeds the child (Pelto et al., 2002). The findings of Bentley et al., (2011) encourages caregivers to practice responsive feeding by applying the principles of psychosocial care which include "*a) feed infants directly and assist older children when they feed themselves, being sensitive to their hunger and satiety cues; b) feed slowly and patiently, and encourage children to eat, but do not force them; c) if children refuse many foods, experiment with different food combinations, tastes, textures and methods of encouragements) minimize distractions during meals if the child loses interest easily; f) remember that feeding times are periods of learning and love - talk to children during feeding, with eye to eye contact.* "(UNICEF, 2015).

According to WHO (2010), weaning is referred to as a transitional period from breastfeeding to adult diet and is associated with some concerns such as what food should be given to the child,

and how and when it should be given. It is during this period that wasting happens in the first two years of life when children have high nutritional needs and their diets which are poor in terms of quality and quantity do not meet their nutritional needs (WHO, 2017). At this stage of weaning the diet does not meet the requirements of *minimum dietary diversity*: feeding a child of four and above food groups and *minimum meal frequency*: feeding a child aged 6-8 months two times per day; three times per day for 9-23 months when a child is breastfeeding (PAHO, 2013). Food groups are a method of classification of various foods that humans consume, these include grains, fruits and vegetables, legumes and nuts, meat and poultry and milk and milk products. If a child is not breastfed, he/she should be fed four times per day. The energy needs from complementary foods for infants with "average" breast milk intake in developing countries are approximately 200 kcal per day at 6-8 months of age, 300 kcal per day at 9-11 months of age, and 550 kcal per day at 12-23 months of age (WHO, 2017).

2.3.5 Consequences of suboptimum complementary feeding

Suboptimum complementary feeding (CF) is a determinant of stunting according to a study done in rural Bangladesh (Shrimpton et al., 2016). Suboptimal complementary feeding is defined as feeding that falls short of the WHO/UNICEF recommended CF guidelines as articulated above (Wondu et al., 2017). Determinants of suboptimal feeding such as poor quality food, early initiation of solids, infrequent feeding and poor water and food hygiene have been linked to stunting (Bhutta et al., 2013). Several studies have established that early initiation of (CF) was due to a mother's perception that the child was not getting enough from breast milk only; hence she was compelled to initiate CF (Gonah & Mutambara, 2016; Paul et al., 2015; Sibeko et al., 2005). This, however, can be hazardous and has a negative impact on the child's growth because early initiation of sub-optimal complementary feeding can lead to weight loss, increased risks of infection, malnutrition and death among infants (WHO, 2010). Growth is not improved with early initiation of CF because it tends to replace breast milk according to (WHO, 2017). In essence, therefore, it is recommended to wait until six months to initiate CF because the benefits of the timeous introduction of solids outweigh any potential risks resulting from early initiation of C.F. Findings from a descriptive cross-sectional study done in Zimbabwe, showed that the majority of mothers were non-compliant with the WHO recommendations of complementary feeding (Gonah & Mutambara, 2016). The majority (85%) of mothers introduced solids earlier and fed foods high

in carbohydrates and starchy staples. This was also observed in other communities in Benin according to a study by Nousiainen (2014), which noted that the common complementary food introduced was liquid maize gruel or thick porridge which is high in carbohydrates served with green leafy vegetables and was inconsistent with the recommended minimum dietary diversity.

However, it is important to note that besides the age of 6 months, other factors should be considered to maintain the child's nutritional status. These include hygiene and sanitation, food preparation skills, mother's beliefs and practices, household economic status and food choices (Muchacha & Mtetwa, 2015). Therefore WHO infant feeding guidelines need to be followed holistically to achieve and maintain a healthy nutritional status of children (WHO, 2011).

2.4 Malnutrition in the South African context

The prevalence of malnutrition in South Africa varies across different socioeconomic groups and geographical areas (Vorster et al., 2013). A wide inter-provincial variation of the prevalence of severe acute malnutrition (SAM) among children under five was observed (Vorster et al., 2013). According to Statistics South Africa (StatsSA, 2016), the Free State and North-west provinces had the highest prevalence of (SAM) at 6%, with the lowest prevalence at 2%, seen in the Gauteng Province. The highest case-fatality rate of SAM was 8.8% and 11.6% in the Free State and North-West provinces respectively. The acute malnutrition mortality rates were similarly high in the Eastern Cape, Mpumalanga and Limpopo Provinces at 9.4%, 9.6% and 8.7% respectively (StatsSA, 2016). According to UNICEF (2019), South Africa has a malnutrition burden among children under five years of age. Its national prevalence of wasting prevalence is 2.5% and the stunting as of 2016 among under-five, stands at 27.4%, which is greater than the average of 25% expected for developing countries (StatsSA, 2016). Stunting is associated with an increase in morbidity and mortality of children under five and is also an indicator of chronic under nutrition (Van Stuijvenberg et al., 2015).

2.4.1 Causes of malnutrition in the South African context

South Africa is plagued with high levels of poverty as posited by Vorster et al., (2013). Their study noted an association of poverty with wellbeing, with poverty being the cause and consequence of malnutrition. Statistics South Africa (2014), released a poverty trend among people in South

Africa, the report revealed that 45.5% of the population lived below the upper-bound poverty line (UBPL). People living below UBPL cannot afford to buy quality and adequate food and other basic commodities. A similar study done by the South African National Health and Nutrition Examination Survey (SANHANES) (2012), showed similar results that 26% of the population experienced hunger and 28.3% were at risk of hunger. Demissie & Worku (2013), posits that acute malnutrition is significantly associated with household food insecurity and that it affects the nutritional status of children under five years of age. A study conducted by Zere & McIntyre (2003), showed that the rate of stunting was observed to be the highest in the Eastern Cape and the Northern Provinces because the highest concentration of poverty is in these areas. The same study noted that the population groups susceptible to poor nutrition outcomes were coloureds and blacks who historically have been disadvantaged. This showed income disparities among population groups and geographical areas exist.

Additional factors that contribute to poor nutrition outcomes of children under five include low access to clean water and inadequate sanitation, and a high burden of disease (Vorster, 2010). This is similar to the results from the study by Koetaan et al., (2018), which noted that the prevalence of underweight in children under-five who attended primary health care clinics in Mangaung, was linked to low birth weight and a history of undetected malnutrition. Scientific evidence supports the role of breastfeeding in the growth and development of a child (UNICEF, 2013). However, data analysis shows that there is a low rate of EBF at 14 weeks with only one district out of 13 districts meeting the national target of 55% (Du Plessis et al., 2016). According to Statistics South Africa (2017), 25.2% of children between 0-5 months were not breastfed at all, while 11.4% were at least being breastfed and 17.6% were reported to be given complementary feeds with breast milk.

2.4.2 Strategies to address malnutrition in the South African context

WHO, (2017), reports that 45% of deaths among children under five is a result of nutrition-related diseases. In an attempt to address the burden of malnutrition in South Africa, the government has come up with many initiatives aimed at improving the nutritional status of children under -five In 1995 the South African Department of Health (DOH) implemented the Integrated Nutrition Programme (INP) to target vulnerable individuals which include children under-five and pregnant

and lactating women. This programme aimed to reduce the prevalence of malnutrition among children aged under –five with the South African Vitamin A Consultative Group (SAVACG) status as a baseline. The programme has 7 focus areas: (1) "disease-specific nutrition support, treatment and counselling; (2) growth monitoring and promotion (GMP); (3) nutrition promotion, education and advocacy; (4) micronutrient malnutrition control; (5) food service management; (6) the promotion, protection and support of breastfeeding; and (7) contribution to household food security (Iversen, 2012). Although the INP is a comprehensive intervention it is not fully achieving its mandate which is to reduce the prevalence of malnutrition. Various reasons have been linked to their limited successes which include lack of resources, lack of skilled personnel and lack of adequate knowledge among the stakeholders involved (DOH, 2013). Other nutrition strategies that were implemented include the Integrated Management of Childhood Illness (IMCI), and the Nutrition Therapeutic Programme (NTP) (DOH, 2013).

Poverty has been identified as being one of the causes of malnutrition as posited by (UNICEF, 2013). In another attempt to curb this problem, the government of South Africa developed a poverty alleviating strategy called the Child Support Grant (CSG). The programme aims to provide cash grants to disadvantaged families with children under 17 years to meet their basic needs (Department of Social Development, 2011). A similar programme was assessed by Hall et al., (2012), and the findings suggested that the provision of grants reduced poverty and improved the nutritional status of children. Other interventions include Food-Based Dietary Guidelines (FBDG), School Health Services policy and Health Promoting School's initiative whose aim is to promote healthy eating habits among school children, caregivers and their families. This is achieved through health education and information relating to healthy eating practices and risks that arise through poor diets (Vorster et al., 2013).

To address micronutrient deficiencies a mandatory fortification of maize meal and wheat flour with vitamin A, vitamin B6, thiamine, riboflavin, niacin, iron, zinc and folic acid was established in 2003, with success stories being achieved with the eradication of folate deficiencies and a reduction in the incidence of iodine deficiencies. However, the programme has limited success due to supply, bioavailability, and compliance of some of the products and hence cannot provide all the deficient micronutrients to those in need of them (Swart et al., 2008).

2.5 Malnutrition in the Zimbabwean context

Zimbabwe has faced challenges with malnutrition for the past 20 years. According to the results of the Zimbabwe Multiple indicator cluster surveys in 2019, stunting remains high at (26.8%) and the leading form of malnutrition, affecting 1 in 3 children less than 5 years in Zimbabwe. The prevalence of both wasting and underweight in children under-five increased between 2018 and 2019 in both males and female children (Zimvac, 2019). Global malnutrition has increased from 2.5% in 2018 to 3.6% nationally in 60 districts in 2019 (Zimvac, 2019). The highest prevalence is seen in Mashonaland East with 4.4%. The severe acute malnutrition cases increased from 0.2% to 1.4% at the national level between 2018 and 2019 (NNS, 2018). The same trend was observed across provinces, with Mashonaland East and Manicaland showing an increased prevalence of 2%. The national Global acute malnutrition (GAM) has remained the same in 2020 however, the SAM prevalence is 1.45 % higher which is of concern according to the prevalence cut off values (Zimvac, 2020).

2.5.1 Causes of malnutrition in the Zimbabwean context

Zimbabwe is a country in the southern region of Africa with approximately 14.8 million people and has an agro-based economy (ZIMSTAT, 2015). Zimbabwe is a low-income country, ranked 154 out of 188 on the 2016 United Nations Development Programme (UNDP) Human Development Index (UNDP, 2016). Currently, Zimbabwe is facing the worst drought in decades which has been heightened by climate change. In addition, crop failure, floods and cyclones experienced during the 2018/2019 agricultural season has resulted in over 7.7 million people being food insecure world food programme (WFP, 2019). This food insecurity translates to 5.5% million rural people and 2.2 million urban dwellers. The majority of the population live in rural areas which make up approximately 60% of the overall population. The hardest hit is the rural folks since their primary source of livelihood and income is agriculture (Zimvac, 2017). Furthermore, with the continuous rise in inflation the purchasing power is continually being eroded, making the affordability of food a challenge. In the same vein, the COVID 19 pandemic mitigation measures such as lockdowns have further socio-economic consequences, with a lot of people losing their livelihoods, therefore increasing food insecurity even further (WFP, 2020). According to Zimvac (2020), most households in the country requires food assistance to obtain adequate dietary intake

and decrease the chances of developing the poor nutritional status of children and women. The world food programme WFP (2019), indicates that 63% of the population lives below the poverty datum line which increases food insecurity even further. In the urban areas, most foods in the markets are imported, rendering the population susceptible to external food shocks and the inability to afford to buy basic food commodities because of the ever-rising food prices **(**Zimbabwe Situation Report, 2020).

In essence the erratic availability of safe water, sanitation and hygiene have heightened the risk of communicable diseases with only 61% of the rural population accessing improved sanitation (Zimvac, 2017). Poor sanitation and hygiene have been linked to child malnutrition, according to studies carried out in Ethiopia and Tanzania, the availability of unprotected water sources increased the risk of moderate malnutrition (Alemayehu, 2014; Abubakar, 2012).

Poor infant and young child feeding practices (lack of awareness at the household and community level on the importance of nutrition) have been shown to contribute to stunting in Zimbabwe (ICF, 2016). Poor IYCF practices include not exclusively breastfeeding, the untimely introduction of solids, and inadequate quantity and quality of diets provided to children. (ICF, 2016). The benefits of optimal infant feeding have been outlined earlier, but current data shows there is low adherence to the WHO recommendations by caregivers. Although breastfeeding is nearly universal in Zimbabwe (98%), only 58% of infants were breastfed within the first hour of birth (ZIMSTAT, 2016). Moreover, only 41% were exclusively breastfed for the first six months according to the Zimbabwe Multiple Indicator Cluster Survey (2014) with 11% being breastfed for up to one year (Zimbabwe National Nutrition Survey, 2018). These findings are worrisome as this predisposes children to infections and causes faltering in their growth and development (Black, et al., 2013).In Zimbabwe, only 10-13% of children aged 6-23 months, met the minimum dietary diversity, which remained generally low across the country (ZIMSTAT, ICF and Zimvac, 2016). According to the National Nutrition Survey (NNS, 2018), a *minimum acceptable diet* is 4% and the *minimum meal frequency* is 19%, feeding a child aged 6-8 months two times per day and three times per day for 9-23 months when a child is breastfeeding. If a child is not breastfeeding he/she should be fed four times per day.

A timely introduction to complementary feeds according to WHO (2013), is from 6 months is high at 71% however, the quantity and quality of foods were suboptimal for children under five (NNS,

2018). Furthermore about 29.1% of children aged 6-59 months consumed iron-rich and vitamin A foods which are low and further expose children to poor health and nutrition outcomes (Zimvac, 2019). Additional factors that contribute to poor nutrition outcomes include the child-bearing age. According to ZIMSTAT (2016), childbearing in Zimbabwe begins early, with approximately 48% of adolescent girls have had a child by the age of 19 years. Fink et al (2014), posits that early motherhood is a key driver of malnutrition, a teenage mother is more likely to be malnourished and has a low birth weight baby compared to older mothers.

2.5.2 Strategies to address malnutrition in the Zimbabwean context

The government of Zimbabwe in conjunction with various international organizations have launched several initiatives which have been implemented to mitigate the impact of child malnutrition in the country. In 1988 the Government of Zimbabwe introduced the Community Food and Nutrition Programme (CFNP), its main aim was to improve food production and feeding children under five years in vulnerable areas at both community and household levels. The programme was later replaced with another programme called the Supplementary Food Production Programme (SFPP) its main objective was to enhance the growing and use of local foods (Munro, 2002). The national Food and Nutrition Security Policy (FNSP) was introduced in 2013 which later became part of the National Nutrition Strategy (NNS) 2014-2018 which aimed to ensure nutritional security for everyone in the country. They have been a little positive impact on the initiatives that have been launched since 1988. The reasons attributed to the limited success of the programmes were lack of monitoring system and staff turnover (Agri-Optima, 2000).

As alluded to before, poor infant feeding practices is one of the causes of malnutrition in Zimbabwe, with statistical data showing low adherence to the IYCF recommendations (Zimbabwe Multiple Indicator Cluster Survey, 2014). Several strategies have been implemented to achieve optimum feeding practices. One of the strategies was the capacity building and training in IYCF of health workers using the WHO 40 hour training manual since 1991. However, despite this initiative, there is low adherence to IYCF recommendations as alluded to by different statistical data (EU, 2015; ICF, 2016). In 2011, the United Nations Children's Fund (UNICEF) community IYCF counselling package was introduced and this was a need already identified to strengthen and scale up IYCF counselling at the community level. (Dube et al., 2012). The initiative aimed to

improve the IYCF practices particularly the rate of EBF, timeously introduction of complementary feeding and the provision of quality and appropriate complementary foods. A total of 12 districts underwent the training by mid-2011 with 2000 voluntary health workers being trained to support an initial 20 000 women who were pregnant with breastfeeding for up to 24 months. Furthermore, the village health workers (VHWs) created a mothers support group and facilitated discussions on their IYCF experiences and referred any complications such as bilateral pitting oedema, hypothermia and severe vomiting to the local health centre (Dube et al., 2012). The weaknesses of the programme was a lack of monitoring structure and a lack of follow up training to evaluate the changes in practices in the community and the quality of service they were providing (MoHCW, 2012). In 2013, the *National Policy on Infant and Young Child Feeding* (which has existed as a draft for a long period) was established to address malnutrition in children under five by improving optimal feeding practices and to improve the health status of the mother (MoHCW, 2013). The policy has 9 objectives which are:

I. To increase the coverage of Optimal Breastfeeding practices
II. Strengthen appropriate Complementary feeding practices.
III. Guide nutritional feeding for Children in difficult circumstances
IV. Promote Safe Motherhood and Friendly Environment
V. Strengthen Health System Capacity Building and Training for IYCF
VI. Promote Inclusive Participation and Support for IYCF
VII. Guide advocacy and behaviour change communication for IYCF
VIII. Harmonize and strengthen research monitoring and evaluation for IYCF
IX. Strengthen the legal and regulatory environment for IYCF. (MOHCW: 2012; 6)

The policy has components and guidelines for other sectors which are involved with the ministry of health. A multi-sectoral approach is essential in the implementation of IYCF policy to achieve its goals. This is important so that the Ministry of Health is not overburdened since its mandate is to provide health care and services and not food security. An inter-sectoral committee on IYCF was also put in place, which is going to advice on policy concerns across sectors (MoHCW, 2013). A main challenge regarding the policy is that funding is dependant mainly on donors such as FAO, WHO and UNICEF among others. The integration of IYCF practices with other maternal and child

health services is still a challenge and the monitoring and evaluation structures are still weak (MoHCW, 2013).

Zimbabwe has been active in promoting EBF through The Baby-Friendly Initiative which was set to be one of the strategies that will promote exclusive breastfeeding for the first 6 months. This was implemented in the year 2002 (MoHCW, 2002). The policy guidelines ensure that all health facilities implement the Baby-friendly hospital initiative (BFHI).

The Code of marketing of breast milk substitutes was implemented in Zimbabwe through the enactment of Statutory Instrument 46 in 1998 as a public health (Breast Milk Substitutes and Infant Nutrition) regulation (MoHCW, 2013). Other interventions to improve mortality and morbidity of children under 5 include Immunization (Expanded Programme on Immunization), Integrated Management of Neonatal and Childhood Illness (IMNCI, Early Infant HIV Diagnosis, Paediatric HIV Care and Antiretroviral Treatment, Water and Sanitation and Hygiene Emergency Triage Assessment and Treatment of sick children (ETAT) (MoHCW, 2013).

2.6 Culture as a contributor to malnutrition

Culture is defined as the "cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, religion, roles, and spatial relations, concepts of the universe, and material objects and possessions acquired by a group of people". (https://www.merriam-webster.com/dictionary/culture). Food plays many roles in society; it can symbolize the social status of the family. It can also be used to identify the differences between cultures, for example, what they perceive as food or not and the rules and norms which govern its preparation and serving (Fekadu et al., 2015). The study by Fekadu et al (2015), further highlighted the fact that families of high social standing serve rare and expensive dishes and that prestigious food such as protein often obtained from animals, is more accessible to rich people than low-income families. From this point of view, it can be argued that cultural patterns largely determine what, where, when and how to eat within the community at large. Furthermore, Mengesha & Ayele (2015), points out that culture can have a negative impact on the dietary intake of a household, in that it prohibits the consumption of vital and much-needed nutrients from the diet by deeming the food as a nonfood, taboo, not fit for children or pregnant women. On the other hand, it also encourages food and drinks as medicine that could be harmful to the body. This will affect the nutritional status of

vulnerable groups such as children and women and lead to malnutrition. A study carried out by Chenge et al. (2015), on the influence of culture on dietary practices in the Maasai ethnic group, revealed that fathers are given preferential treatment over women and children. They are served large portions and are also served first. This results in poor intra-household food distribution. They eat raw meat, milk and blood; this practice can be detrimental to health in that it makes the children susceptible to infections, food poisoning and worm infestation which in turn cause malnutrition in children (Bhutta et al., 2013).

2.6.1 Influence of culture on infant and young child feeding

Besides breastfeeding being a biological process, its execution is fraught with a lot of misinformation, contradictions and socio-beliefs (UNICEF, 2014). An assessment was done in culturally heterogeneous Mozambique on infant and young child feeding showed that there are a large gap in mothers' infant and young child feeding practices (IYCF) due to cultural beliefs and habits (Picolo et al., 2017). Also, a cross-sectional study done in Kenya concluded that the late initiation of breastfeeding was associated with the cultural beliefs that colostrum was "dirty milk and "waste" and therefore not suitable to be fed to the baby (Karigi et al, 2016). This prevents the child from getting the rich antibodies found in colostrum which provides passive immunity. In the same light the introduction of pre-lacteal feeds which are deemed to "open the intestines" of the baby results in suboptimal feeding (Karigi et al., 2016:569). In the same vein a study by Velma & Dixit (2016), pointed out that in many of the traditional societies in India, colostrum was viewed to be harmful and was discarded. Furthermore, in the same study, cultural beliefs were seen to be one of the most dominant factors for the practice of giving pre-lacteal feeds to the infant which was seen in 78 percent of the total cases (Velma & Dixit, 2016).

It is reported that 42% of children under six months are exclusively breastfed globally. The reasons provided are complex and include many factors which range from the promotion of breast milk substitutes (BMS) to social and cultural taboos against breastfeeding (UNICEF, 2019). The rise in the promotion of BMS and infant formulas is of great concern as some products are marketed using misleading claims (UNICEF, 2019). Guta (2009), presents arguments to emphasize the effects of early mixed feeding which include growth faltering and a high mortality rate among children under- two in developing countries. A study by Khattak, Iqbal & Ghazanfar (2017), noted that the

main barriers to EBF among mothers were the perception that they did not produce enough milk, pain during breastfeeding and the inconvenience of breastfeeding. In a qualitative study done in Kenyan urban slums, it was discovered that teenage mothers ceased breastfeeding due to the belief that breastfeeding causes breasts to 'sag' rendering them unattractive. This study also highlighted sex differences in breastfeeding, the belief that boys were not satisfied by breastfeeding only and their breastfeeding demands were higher compared to their female counterparts (Wanjohi et al, 2017). According to a qualitative study by Mengesha & Ayele (2015), breastfeeding whilst pregnant was deemed a culturally constructed taboo, therefore mothers terminated breastfeeding the moment they discover they are pregnant. A high birth frequency thus had an indirect effect on the nutritional status of children. A study done in Cameroon confirms the same perception that breastfeeding whilst pregnant was against the norm and that the milk was considered to be harmful to the child (Kakute et al., 2005). This concurs will various studies that have been cited earlier on how cultural beliefs and practices is a major determinant in breastfeeding practices (Verma & Dixit, 2016; Karigi et al., 2016; Mengesha & Ayele, 2015).

2.7 Conceptual framework

The conceptual framework of malnutrition was developed by the United Nations International Children's Emergency Fund (UNICEF) nutrition strategy in the 1990s. The basis of the framework was to provide assessment, analysis and designing programmes at different levels to help improve the child's nutritional status. In 2004, UNICEF concluded that multiple and intermediate determinants are involved in the development of malnutrition. To appreciate the scale and depth of the malnutrition problem, a good understanding of these determinants of malnutrition is required (UNICEF, 1998). According to the framework, the determinants of malnutrition are interlinked e.g. the immediate causes are caused by underlying factors and these underlying factors are a result of basic factors.

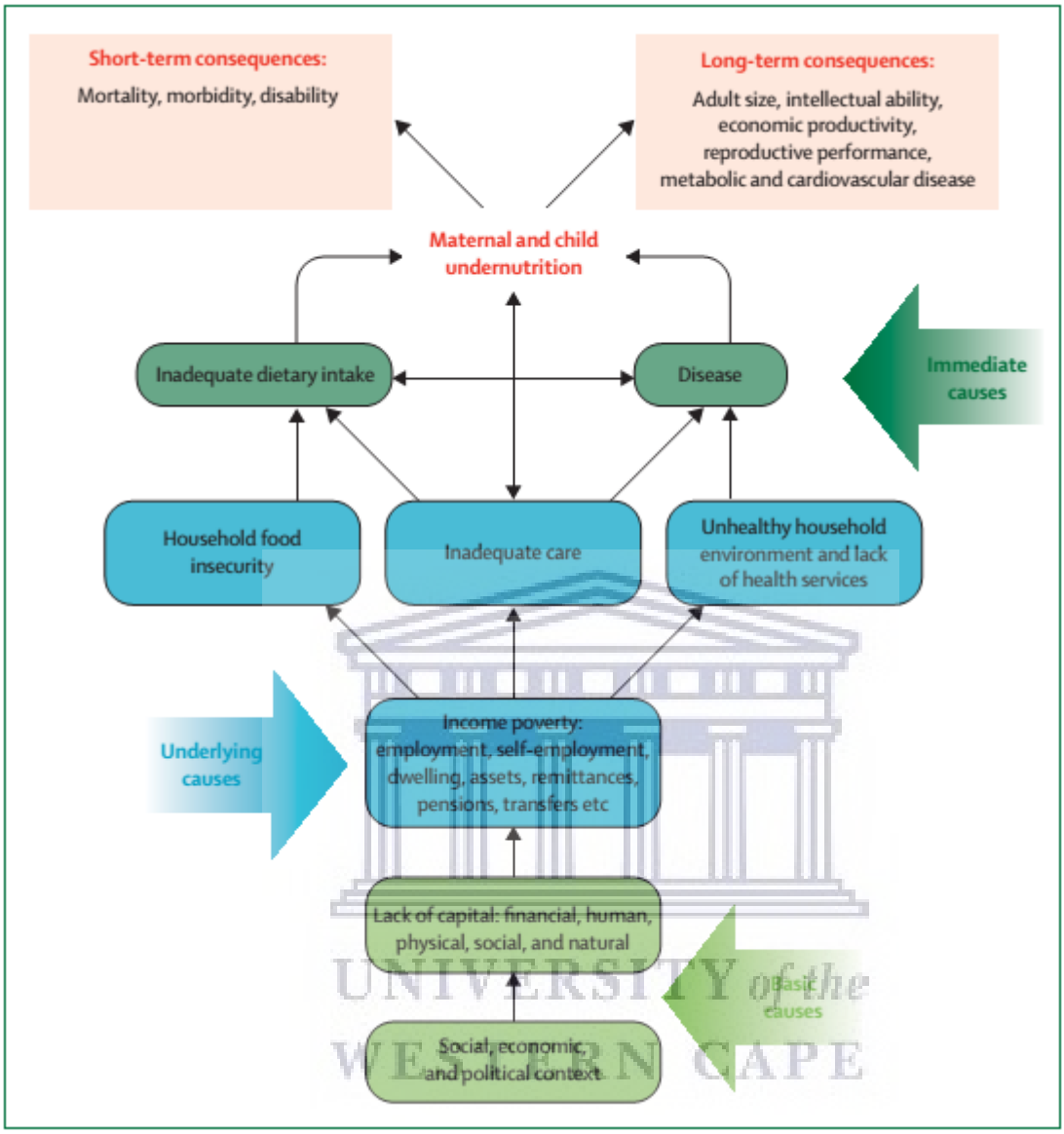

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Figure 1: A conceptual frameworks showing the basic, immediate and underlying determinants that influence malnutrition directly or indirectly. Adapted from (Bhutta et al., 2013)

2.7.1 Basic determinants

2.7.2 Poverty

Poverty has been identified as the key determinant of all underlying causes of malnutrition which stem from a lack of financial, human, physical, social, and natural resources which ultimately result from social, economic and political issues (Black et al., 2013). According to Ijarotimi (2013),

a person is deemed to be in abject poverty when he or she is unable to meet his/her basic needs such as food, shelter, primary health care, basic education and water. A study done by Bhutta (2013), showed that there were disparities between wealth strata and stunting prevalence, children from the poor quintile were 2.5 times more likely to be stunted than those in the wealthy quintile. A study carried out by Yeleswarapu et al., (2012), has shown that a mother's socio-economic and demographic position influences the children's nutritional status. However, a report by UNICEF (2013), argues that whilst poverty and malnutrition may indeed go hand in hand, it may not be entirely true. The report further states that a clear explanation lies in the understanding of the different types of resources necessary to attain good nutrition, factors that affect the families' access and control of these resources. The cost of food is a major determinant of what people perceive as available to them therefore poverty prevents them from accessing quality nutritious food (Stewart et al., 2013).

Basic causes of malnutrition are often related to political, legal and cultural factors which impede access to resources. A study done in the Volta Region in Ghana showed evidence that maternal nutritional knowledge and socioeconomic status influence the nutritional status of their children (Appoh & Kremlin, 2005). The study which enrolled a sample of 110 mothers, showed that there was a strong association between the marital status of mothers and the nutritional status of their children. In addition, maternal knowledge and practices of breastfeeding was a significant indicator of the nutritional status of the child (Appoh & Kremlin, 2005). Poverty does not only limit the access to adequate nutritious food but hinders access to health care services thereby increasing chances of disease and infections manifestation (Stewart et al., 2013).

2.7.3. Underlying determinants

Three clusters of underlying determinants have been linked to the causal chain of inadequate and frequent infections. The three clusters are (1) household food insecurity, (2) poor water and sanitation, and (3) inadequate maternal care practices.

2.7.4 Inadequate childcare practices

Childcare is usually the responsibility of mothers, therefore, the mother's knowledge of childcare influences the calibre and quality of care that's given to the child. However, a study carried out in Kenya by Dinga et al (2018), proved that the support of fathers resulted in better nutritional

outcomes. Similarly, Jones et al (2012), findings that a lack of support from spouses had negative outcomes on the feeding practices and diet of children. The lack of involvement of spouses in childcare was associated with the belief that it is the responsibility of the mother (Bilal et al., 2016). Findings from a qualitative study done by Moyo & Schayy (2019), in Zimbabwe showed that fathers were involved in the caring of the child only when the mother was absent.

Sanders et al., (2008), highlighted that the caring capacity is limited by various constraints that include the poor economic status of women, inadequate childcare knowledge and limited time for caring. Low education limits the mother's access to educational material on good childcare practices with the result that the care given to the child will be suboptimal. Low education is defined as the minimum education attained by an individual (Amsalu et al., 2008). In essence, the mother's level of education has a positive impact on her childcare knowledge and the way she deals with major care issues. Similar studies have shown that the higher the formal maternal education the greater the chances of the mother breastfeeding longer and exclusively (Onah et al., 2014). Similarly, maternal education has been associated with better access to the quality and quantity of children's diet (Wachs, 2008). Inversely, some studies in developing countries have proven that educated mothers breastfeed for a shorter period (Balogun, et al., 2015; Malhotra et al., 2008). This was attributed to the fact that most educated mothers were employed and the lack of balance between family and work constrained exclusive breastfeeding (Abekah-Nkrumah et al., 2020).

Inadequate care practices have been proven to play a vital role in the nutritional status of a child. It reflects the individual, family and domestic cultural values that guide them (UNICEF, 1998). A study carried out in Bangladesh to ascertain the role played by Infant and young child feeding (IYCF) practices of working mothers compared to housewives, discovered that the children belonging to the working mothers were less likely to be exclusively breastfed and were more stunted and wasted compared to their counterparts (Sharmia et al., 2011).

2.7.5 Poor water and sanitation

Inequalities in the access of water and ablution facilities have been linked to inequalities in nutrition, a high risk of moderate malnutrition was linked to poor water and sanitation (Medhin et al., 2010). WHO (2013), highlights that 50% of the malnutrition cases in under five were caused

by poor water supply and inadequate sanitation. In turn, this resulted in repeated infections such as diarrhoea and intestinal worms. Frequent bouts of diarrhoea result in nutrient losses and is a risk factor for malnutrition (Black et al., 2008).

2.7. 6 Household food insecurity

Household food insecurity has been recognized as playing a role in the outcome of children's nutritional status, low income was a risk factor of severe acute malnutrition according to a study conducted in Ethiopia (Amsalu et al., 2008). A family is considered food secure when its members can have sustained access to adequate quality and quantity of food, to live a healthy life (Frayne *et al*., 2010). Various studies have shown a causal link between household food security and the nutritional status of the children (Black et al., 2013; Allen et al., 2000). The availability of food in the household has been linked to a positive household income. Observation made by Lankester (2009), showed that even though women might have adequate information on the infant's needs they are not empowered to make appropriate decisions because they do not control resources in the household. On the other hand, the men who are empowered to take action, have little information on the raising and feeding of children.

2.8 Immediate determinants

2.8.1 Inadequate dietary intake

The two significant immediate determinants of malnutrition are inadequate dietary intake over a long period, and recurrent disease episodes, which tend to create a vicious cycle (UNICEF, 1998). The immediate determinants are influenced by underlying determinants which manifest themselves at household levels. Breastfeeding, complementary feeding and dietary diversity are the factors explored as immediate causes related to dietary intake. Muchacha & Mtetwa (2015), showed that traditional practices played a crucial role in the feeding of a child. The analysis of their study findings showed that some of the practices act as barriers to optimal feeding, newborn babies were administered with traditional medicines to treat conditions such as (nhova) sunken fontanels caused by severe dehydration. In this study, seventy percent of the respondents identified mothers-in-law as their source of information concerning infant feeding. However, the mother-in-laws discouraged EBF in favour of mixed feeding on account of cultural beliefs and practices.

Furthermore, the introduction of prelacteals has been reported to affect the nutritional status of a child (Amele et al., 2019). A study conducted in India showed that a delay in the initiation of breastfeeding was found to be a risk factor for malnutrition (Verma & Dixit P, 2016). In the same study, colostrum was viewed as harmful and was discarded. Sub-optimum feeding and frequency of complementary feeding is a risk factor for severe wasting as posited by (Dereje, 2014). These findings were consistent with various studies carried out on a similar subject as noted before (Gonah & Mutambara, 2016, Nousiainen, 2014).

2.8.2 Disease

Underlying causes are often interlinked, for example, infectious disease is a result of food insecurity, poor maternal care, poor water supply and environmental sanitation (UNICEF, 2012). Various studies have shown that the current disease status of a child affects their risk of malnutrition **(**Dereje, 2014; WHO, 2013; Black et al., 2008). In these studies, it was revealed that a history of diarrhoea, exposure to TB, and acute respiratory infection was associated with malnutrition. The HIV and AIDS pandemic has become a leading cause of acute malnutrition in developing countries and a child who is infected with HIV is more vulnerable to acute malnutrition than a healthy child (MOHCC, 2016).

2.8.3 Conclusion

The literature review highlighted a broad understanding of the determinants of child malnutrition and the efforts being made by the government to address the burden of the disease. Consequences of suboptimal infant feeding were highlighted. The influence of culture is highlighted throughout the literature. The studies cited in the review identified elderly women as the key source of influence in the feeding of children and their involvement has been established sometimes to act as a barrier to optimal feeding of children. Cultural beliefs about the appropriate time of introduction of complementary foods vary across cultures, some due to pain when breastfeeding, some believing they are not producing enough milk and some choosing the convenience of formulas among other reasons to introduce complementary feeding before the recommended time.

Cultural beliefs and practices have been found to have a greater influence on the nutritional status of humans. Therefore, a primary step toward understanding malnutrition and infant health in a

particular community could be achieved through in-depth knowledge of the beliefs and practices related to infant feeding in that community. The next chapter discusses the research methodology adopted in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Aim

The study aimed to explore cultural practices and beliefs of caregivers of malnourished children, aged 6-24 months, regarding feeding and dietary intake in Gweru, Zimbabwe

3.2 Specific Objectives

1. To explore the feeding and dietary practices of caregivers malnourished children aged 6-24 months4.
2. To explore the cultural beliefs of caregivers regarding feeding and dietary intake of malnourished children aged 6-24 months
3. To establish the cultural practices that influence poor or inadequate feeding and dietary intake among malnourished children aged 6-24 months
4. To identify the influence and role of other family members in the feeding of malnourished children aged 6-24 months

3.3 Study design

An exploratory study using a qualitative approach was used. An exploratory research design was opted for because it provides a deeper understanding of the underlying reasons, opinions, views and insight into the cultural beliefs and practices regarding infant feeding (Snapsurveyscom, 2011). A qualitative study is advantageous over a quantitative study because it allows the researcher to gain more in-depth information of participants' experiences and their opinions from a small sample size can be obtained (Darwin, 2007). The researcher adopted this approach because cultural beliefs and practices of individuals vary and are complex therefore, it provided a platform whereby the researcher could elicit insight on the participants' perceptions and experiences

regarding infant feeding. Furthermore, a qualitative approach captures the context in its entirety and it does not attempt to control the context of the study (Brink et al., 2018).

3.4 Study population

The study population were caregivers aged between 18-40 years, of children between the age of 6-24 months who are malnourished, who accessed health care services (both inpatients and outpatients) at Gweru provincial hospital during the study period (Jan–Sept 2020). Two key informants were identified from the hospital, who had experience and knowledge in the management of malnutrition, these include a registered nurse and a nutritionist.

3.5 Sampling Approach

Sampling refers to the process of selecting a representative part of a population to determine the characteristics of the whole population (Brink et al., 2012). The purposive sampling approach was employed because it is considered less costly, less time consuming and prevents irrelevant subjects into the sample by chance. The district was chosen as it is a central point of Zimbabwe with a blend of ethnic groups this provided a platform in which different cultural beliefs and practices among caregivers could be explored. Twenty-one participants were recruited through purposive sampling for the study. The researcher identified the participants through the hospital records during the time they sought IMAM services. The nutritional status of the child was ascertained through the hospital records. Each caregiver that met the inclusion criteria was informed about the study. Once the caregiver agreed to participate in the study, she signed a consent form. The small number of participants allows for a broader study and generalization of results (Babbie & Earl, 2010).

Inclusion criteria

Caregivers of all children aged 6-24 months and presenting with WHO Weight for Height scores (WHZ) of ≤ -3SD, who accessed health care services at Gweru Provincial Hospital.
All children presenting with Mid-upper Arm Circumference (MUAC) of <115mm
Caregivers of both female and male children aged 6-24 months that reside in

Exclusion criteria

All malnourished children who are presenting with other chronic medical complications such as HIV, TB and all malnourished children who accessed health services at Gweru Provincial Hospital but are not residents of Gweru.

3.6 Data Collection Methods

Data collection is defined as the gathering of information needed to address a research problem (Burns & Grove, 2005). Individual in-depth interviews using a semi-structured interview guide was used to collect data for the study. The interviews were facilitated by the researcher and trained research assistants. The interview guide was divided into three categories: i) Breastfeeding practices ii) complementary feeding iii) Cultural practices and beliefs of infant feeding practices (Appendix 1). The conclusion of the 21st interview signified that the data saturation point was reached as there were no new emerging themes.

3.6.1 One-on-one interviews with participants

Each interview took about 30 minutes to an hour and these were carried out at the hospital compound. Two participants who stayed near the hospital agreed to be interviewed in the comfort of their homes. Consent was obtained from each participant before the beginning of the interview. The interviews were carried out by the researcher in the language the participant's preferred language (either Shona or isiNdebele). During the interview, notes were also taken to avoid missing important facts.

3.6.2 An in-depth interview with key informants

Key informants are those whose social positions in a research setting give them specialist knowledge about other people, processes or happenings that is more extensive, detailed or privileged than ordinary people, and who are therefore particularly valuable sources of information to a researcher, not least in the early stages of a project (Payne & Payne, 2004). In-depth interviews were conducted with two key informants one was a resident nutritionist in the hospital and the other a nurse in charge of the

IMAM programme in the pediatric ward who have worked in the hospital for more than five years. The interviews were conducted in a unit in the hospital facility. The selected personnel were considered key informants because they had firsthand knowledge of the community, the patients and the topic of interest. The interviews with the key informant were done to complement the information collected from the caregivers since they are directly involved in the counselling and treatment of the children. Therefore they are considered a rich source of information on the subject matter. The audio-recorded in-depth interviews enabled the interviewer to establish rapport with the participants and allowed the opportunity to ask follow-up questions and to probe for additional information (Colson, 2019). The interview questions focused on nutritional education, management of malnourished patients, In addition, information on the frequency of follow-up visits of discharged patients, and cultural beliefs and practices experienced in the community regarding infant feeding was collected. The interviews were all done in English.

3.7 Data Analysis

Qualitative data collected from in-depth interviews were audio-recorded. The data were then transcribed verbatim from the local languages i.e. (isiNdebele and Shona) and translated to English by a professional linguist working with the researcher. During the transcription process, conformability was ensured by member checking. This ensured reliability and comprehensibility during the coding process. A theme is a pattern that captures something significant or interesting about the data and/or research question. Identification of the themes was done by going through the descriptive responses of the participants. Identification of the themes from the same question continued until a saturation point was reached. Thematic content analysis was done manually and involved five steps, (Braun & Clarke, 2006) which included becoming familiar with the data, generating codes, identifying themes, reviewing themes and then defining themes

First step: Familiarization with data

The researcher familiarized herself with the data by listening to the audio recordings a few times and by reading the transcripts.

Second step: generating codes

Involved in generating initial codes. Open coding was used meaning no preset codes were used but that the codes were developed and modified as the data was being processed. Colour coding

was used to identify similar comments, phrases and descriptions made. The notes made during familiarization were used as a guide during the coding process.

Third step: identifying themes

Data collected were categorized under different codes and then developed into subthemes and major themes. The codes focused on relevant points such as infant feeding practices, dietary intake cultural practices and beliefs.

Fourth and fifth steps: identifying themes

A list of codes was established which were grouped then grouped into larger themes. During the final stage, the research assistants helped with vetting the themes referring to raw data so that they could determine whether the themes form a coherent pattern and link to the raw data.

3.7.1 Trustworthiness of data

The trustworthiness of data is defined as a way in which researchers can persuade themselves and readers that their research findings are worthy of attention (Babbie, 2010). The researcher worked with research assistants (specialists in qualitative research) during the analysis and interpretation of themes to reduce bias and misinterpretation of some quotes. The triangulation of study methods used was in-depth interviews with key informants (nutritionist and nurse in charge) and participants, to ensure rich diverse data was collected and reduce bias. According to Altrichter et al (2008), it gives a more detailed and balanced outlook of the study. The trustworthiness of the study was confirmed through credibility, dependability, transferability and confirmability.

3.7.2 Credibility

Tobin & Begley (2004), states that credibility 'addresses the "fit" between respondents' views and the researcher's representation of them". The researcher achieved this through peer debriefing during the data collection procedure. This aided in discussing new emerging themes that were different from the ones that were already coded. Audiotaping the interviews assisted in preventing any loss of crucial information.

3.7.3 Dependability

Creswell & Poth (2017), states that dependability ensures that the research process is logical, traceable and documented. The researcher demonstrated this by providing an audit trail. This was achieved by keeping records of raw data, transcripts and field notes during the interviews that were assessed and cross-checked whenever the need arose.

3.7.4 Transferability

Transferability refers to the generalizability of inquiry, the ability to transfer the findings of the study to other cases (Tobin & Begley, 2004). This was achieved by providing a detailed description of the findings.

3.7.5 Confirmability

According to Tobin & Begley (2004), conformability is achieved when credibility, dependability and transferability have been achieved. It aims to establish how the researcher's interpretations and findings have been derived from the raw data. The researcher used an interview guide for all the interviews provided and hence uniformity was maintained. In this way, it was ensured that the study adhered to confirmability. (Brink et al., 2018).

3.7.6 Rigour

Rigour is defined as the criteria of trustworthiness of data collection, analysis, interpretation and dissatisfaction (Prion et al., 2014). To ensure that rigour was achieved the researcher made sure that the participants who met the inclusion criteria were recruited through the purposive sampling of the children admitted to the IMAM program. The researcher established rapport and trust with the participants and encouraged them to air their views openly.

3.8 Ethical Considerations

Ethics approval was obtained from the Biomedical Research Ethics Committee of the University of Western Cape (Ethics Reference Number**: BM19/10/12**). Ethics clearance was also granted by the Medical Research Council of Zimbabwe and The Permanent Secretary for Health and Child

Care in Zimbabwe to conduct the study. Subsequently, written permission was obtained from the management of Gweru provincial hospital where the study was conducted.

The four principles of ethics were adhered to namely:

Autonomy

The principle of autonomy was observed by informing the participants of the exact nature and purpose of the study, and that their participation was voluntary and that they had the right to withdraw from the study at any point without any repercussions. The purpose and procedure of the study were highlighted to the participants (Appendix: 3 Information sheet). The participants were required to sign a consent form before the study (Appendix: 4 Consent form).

Non-maleficence

To address the principle of non-maleficence, the participants' responses were treated with the strictest of confidence. The participants' identity was protected by using pseudo names. The data collected were protected by password to prevent any access by unauthorized personnel.

Beneficence

Due to the nature of the study, there was no harm nor risks anticipated in the study. Therefore, no participant withdrew or felt uncomfortable sharing their experiences. No incentives were offered to the participants.

Justice

The participants gave consent before being audio-taped and pseudo names were used. Therefore participants' right to privacy, confidentiality and anonymity were upheld throughout the stud

CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of the sample

The socio-demographic characteristics of the participants are outlined in Table 1. A total of 21 caregivers who met the inclusion criteria were enrolled for the study. The participants were in the age range of 18-40 year, and the average age was 29 years. All the participants were female, the majority (85%) being biological mothers with (10%) who were the child's aunty and (5%) were the grandmother. Fourteen participants had more than one child with the remaining seven having more than three children. Half (n=11; 52.4%) of the participants were married. Most of the caregivers (n=14; 66.7%) had attained secondary school education, with one exception who did not receive any formal education. More than half (57%) of the participants were not employed whilst (43%) were involved in income-generating activities (self-employed) or formally employed. The summary of the socio-demographic characteristics of the participants is shown in Table 1 below:

Table 1: The socio-demographic characteristics of participants (n=21)

Demographic Variables	Frequency	Percentages %
AGE		
18-30	10	47.6
31-35	8	38
36-40	3	14.3
MARITAL STATUS		
Married	11	52.4
Divorced	2	9.5
Single	7	33.3
Widow	1	4.7
ACADEMIC STATUS		
Certificate/diploma	1	4.7
High school	14	66.7
Primary school	5	24
No education	1	4.7
NUMBER OF CHILDREN		
1-2	14	66.7
3+	7	33.3
EMPLOYMENT STATUS		
Yes	9	43
No	12	57

4.2 Breastfeeding Practices

Four main themes were derived from caregivers' practices and beliefs regarding infant feeding. These themes are (1) breastfeeding practices, (2) complementary feeding, (3) cultural perceptions and practices, and (4) management of malnutrition. The sub-themes derived include exclusive breastfeeding, frequency of feeding, the importance of breastfeeding, challenges experienced during exclusive breastfeeding, reasons for late and late complementary feeding, types of solids and semi-solids introduced, foods regarded as taboo and role of family members, follow-ups, reasons for relapse and health education

Table 2: Summary of main themes and sub-themes

Main themes	Sub-themes
1.Breastfeeding practices	• Exclusive breastfeeding • Frequency of feeding • Importance of breastfeeding • Challenges experienced during exclusive breastfeeding
2.Initiation of complementary feeding	• Reasons for early and late complementary feeding complementary feed • Types of solids and semi-solids introduced
3a. Cultural beliefs regarding infant feeding practices	• Foods regarded as taboo • Mothers belief that breast milk can go sour • Belief that colostrum is harmful • Male child is not satisfied by breast milk only
3b. Cultural practices	• Prelacteal feeding • Performing rituals on infants • Role of family members
4.Management of malnutrition	• Follow-ups • Reasons for relapse • Nutrition education

4.2.1 Exclusive breastfeeding

Almost (95%) of the participants agreed that breastfeeding was important and considered it a natural food that is best for children under two years. The caregivers had a general knowledge of breastfeeding but could not provide a proper definition for EBF.

> *Feeding a baby with milk from the breast: P1*
>
> *It means giving a baby breast milk only; no other fluids such as water or solids are given: P20*
>
> *Breastfeeding the baby without introducing formula milk or solids: P2*
>
> *Besides nutrition, my children found breastfeeding to be soothing. It helped me lose my baby weight very quickly despite it giving me hunger pangs: P3*

However, from the discussions, it was clear that the participants misunderstood the concept of "Exclusivity". After further probing the caregivers admitted to giving their children some form of liquid a few days after birth and that they have continued to do so. The liquid most commonly given was water due to the belief that the baby was thirsty. First-time mothers mentioned that they trusted elderly women's advice on infant feeding.

> *I was told by my mother to give the baby a bit of water after boiling it of course to kill germs. She said the baby also gets thirsty and the breast milk does not quench it .P3*
>
> *I gave breast milk only and my baby fell sick when he was 3 months his grandmother prepared some medicine for him and I used to give him daily and it helped greatly.P5*

When one of the Key informant (KI) was asked about the participants' compliance with breastfeeding he said:

> *The prevalence of HIV strengthened EBF because people for a long time believed if you are not breastfeeding then you must be HIV positive, this forced mothers to breastfeed, to avoid being labelled and stigmatized. However, although EBF is now prevalent it is rarely up to the recommended 24 months. The majority of the mothers breastfeed up to 18 months and the working mothers are the ''culprits'': KI1*

4.2.2 Frequency of feeding

The duration and frequency of breastfeeding varied among the participants with some claiming to be fed after every 3 hours. Others stated that they breastfed whenever the baby was crying which was considered as one of the signs that the baby was hungry. The working mothers reported that they often left the child with its older siblings or relatives and that the feeding of the baby solely depended on the convenience of the one taking care of the baby. One caregiver confirmed that the frequency depends on the availability of milk. If the breast is full, the baby is made to suck at one breast until it was empty and then moved to the other one. Night feeding although not pleasant, was preferred because it helped the baby to sleep and diminished the crying.

> *I breastfeed my baby more than five times a day and was my mother encouraged me to feed him one breast at a time: P10*
>
> *Crying is a cue for me that my baby is hungry and I feed by demand: P2*
>
> *Night nursing helps my baby to sleep better and avoids disturbing people in the house who will be sleeping: P5*

4.2.3 Importance of breastfeeding

Several mothers were able to articulate the benefits of breastfeeding, although they were not able to explain them in detail. The most common response was: *"breast milk is important because it helps my baby to grow well".* Other responses included the following:

> *Giving my child the right nutrients to help him in his development... also means connection: P1*
>
> *Providing the child with all the necessary nutrients: P20*
>
> *Added nutrition for baby and it's an enjoyable experience that bonds baby to mother: P14*

4.2.4 Challenges experienced during EBF

Most caregivers alluded to the fact that the swelling of breasts presented them with great pain and sometimes hindered them from breastfeeding. "*It is very painful when he suckles on a swollen breast*" stated one mother of a 9-month-old baby boy. The major challenges caregivers faced was

time constraints, sore and cracked nipples, and work commitments, making it difficult to practice EBF. There was also the perception that they did not produce sufficient milk.

The need to supplement or being away from home for other commitments like working: P2

Birth weight at 5kg and breast milk not filling. The baby cried a lot and started sleeping better with formula introduction, I stopped the formula because of cash and then substituted it with maheu: P6

Shortage of breast milk as the child grew older. I had to eat more to improve milk production, which resulted in weight gain.P19

My working hours made it difficult at times, Return to work after maternity leave meant less breastfeeding time: P18

The first weeks of breastfeeding were dreadful with recurrent episodes of breast engorgement, at first, it was okay until it started being painful, my nipples got sore to a point that I thought they would fall off: P4

Most caregivers had strategies to increase milk production whilst it worked for others it seemed not to improve for some. Caregivers reported that these strategies were information that they received from elderly mothers, relatives and friends. Examples of strategies to increase breast milk production included: drinking a lot of tea with milk in it, and roasted peanuts with a lot of salt. The latter seemed to be a well-known strategy among caregivers. Traditionally this is recommended from the time of birth until the baby is weaned.

Researcher: when breastfeeding what foods are encouraged for a lactating mother to eat?

Fruits, vegetables and a balanced diet. Lots of carbohydrates and water: P1

A balanced diet and foods that encourage mum to drink lots of fluids: P13

Eggs, variety of salted nuts, fruits and vegetables along with balanced meals as well as drinking more beverages, water, juice and tea: P5

A balanced diet, tea with milk, roasted nuts, water: P6

4.3 Initiation of Complementary feeding

4.3.1 Reasons for early and late Complementary feeding

About eleven (50%) of the caregivers reported that they initiated complementary feeding (C.F) at the recommended time (i.e. 6 months). The main reason for following this prescribed period was attributed to nutrition counselling received from community health workers and nutrition education during their postnatal visits. However, the other half stated that they introduced solids earlier due to the perception that they were not producing sufficient milk and breast milk refusal. Other reasons given for challenges with EBF that led to the early introduction of solids were:

> *I started giving my baby cereal porridge at 4 months, she kept on crying, and I felt that she wasn't getting full enough from breast milk. The crying subsided, and she sleeps longer now: P4*

> *At 6 months I was encouraged to do so by my elder sister as it meant my child might fall sick if I introduce solids earlier: P12*

> *At 7 months I knew the baby was ready and milk alone was no longer sufficient.P1*

Interestingly one participant (21 years old) claimed that the baby refused to breastfeed from the onset and this created a lot of tension in her family. She expressed a lot of emotion when she was explaining her ordeal. Traditionally when a baby refuses to breastfeed it is believed he/she is not of that family.

> *As a new mother, you are excited about the thought of breastfeeding your first child, but I was denied that chance. I don't know why she refused to breastfeed at all. I fed the baby on fresh milk and sometimes cow's milk: P15*

Also, most caregivers were overwhelmed with the demands of chores at home, those who were self-employed complained that they had less time to breastfeed their children because they are gone for long hours during the day and hence felt the need to introduce C.F early. The need for nursing mothers to work to augment the family income has resulted in shortened breastfeeding period.

I sell wares for a living, therefore I was forced to give my baby solids as early as 3 months because I was not home during the day to feed her. I give her milk when I get back from my work in the evening: P2

Another concern expressed by the caregiver of a 7-month baby was "*he refuses to eat anything besides the breast milk, oftentimes I have to force him to eat which result in more wailing and vomiting".* The caregiver was even thinking about stopping breastfeeding altogether to make him eat and eventually gain weight.

4.3.2 Types of solids and semi-solids introduced

From the in-depth interviews, it was revealed that the first popular food given to babies was "watery porridge''. This is a porridge made from maize meal to a thin consistency, with a bit of salt and sometimes sugar added to it. Nearly all the caregivers reported having given porridge as their first preference, mashed potatoes and introducing family foods gradually such as sadza (thick porridge made of maize meal or millet) and soup, beans and vegetables. There was an overreliance on starches, which was often accompanied by leafy vegetables and sometimes vegetable proteins. Animal-based proteins and fruits were rarely consumed and this was attributed to the cost of living. Many cited financial constraints as a reason to provide variety in the diet. With the current looming drought even backyard gardens were not thriving. Children between the ages of 12-24 months were already eating family foods. This is because often the children are fed from the same plate as the caregiver. The caregivers confirmed that they rarely cooked separate meals for the baby. The argument was that the task was laborious and expensive. Food like porridge "*you remove a bit before thickening it* '' stated one single mother.

Porridge, usually the first food. Light and watery: P21

Cereal porridge, because it is very simple to prepare, even when you are out with the baby: P3

Mashed potato, soup, mashed butternut, yoghurt: P4

I started with single-grain cereals in form of a porridge: P5

Pureed fruits, and pureed vegetables: P16

Very smooth porridge, to allow the intestines to adjust slowly to the introduction of solids: P18

4.4 Cultural beliefs regarding infant feeding practices

4.4.1 Food regarded as taboo

The reason for regarding food as taboo or not suitable for children, depended on the effects of that food on the health of the baby, and some cultural beliefs. A 32-year-old caregiver mentioned "sweet foods" because they made the baby to teeth late, eggs were claimed to make the baby "bald". The most common reason was eating one's "totem" prohibited (people do not eat their totem animals as they believe they are their relatives). Therefore one would not eat the heart of any animal if their totem was "Moyo" which translates to heart.

None but depends on the age

Cow milk, candy and other junk foods

Sweets and oily foods

Fizzy drinks, alcohol, carbonated drinks

4.4.2. Mothers' belief that breast milk can go sour

Some caregivers shared their experience regarding breastfeeding:

I was told by my mother that once a child burps (bhodlela) on your breast the milk is believed to go "sour" and you had to express it and throw it away it wasn't good for the baby: P10

It has happened to me a couple of times resulting in the baby refusing to breastfeed. I had to express the milk before breastfeeding: P4

I do not have experience of this: P2

Granny explained to me that the milk should be expressed to take it out of the particular breast on which the baby burped: P11

I don't believe in all these traditional myths, so l never paid attention to such. I just ignored and took everything as natural: P7

Have heard that before but not experienced it even though elders advised he would refuse the breast he burps on: P5

I'm not sure of the actual reason, but when a baby burps on your breast, you may experience pain and swelling of the particular breast: P3

4.4.3 Belief that colostrum is dirty

Regarding colostrum, the majority of the caregivers stated that they were encouraged to feed their children "first milk" as they called it because it protected their babies from diseases. About 15% of the participants admitted that they had discarded the colostrum with the belief it was not useful to the baby because of its appearance "watery". The participants were not familiar with the term "colostrum", the interviewer had to explain what it was for them to understand.

I gave birth at home and was attended to by an old lady from church. My mother in law advised me to discard the first milk because it will make my baby have a stomach problem: P11

4.4.4. Male child is not satisfied with breast milk alone

Caregivers echoed the same sentiments that the boy child breastfed more than the girl child and is fed more frequently. In some cases, there was a tendency of introducing complementary feeding earlier.

My mother in law told me he won't gain any meaningful weight from being breastfed only and advised me to give him porridge and thin sadza (thick porridge made of maize meal or millet) with soup at 2 months: P7

My baby had an insatiable appetite I would stay up all night feeding, hence I started giving him thin porridge and mashed potatoes at 3 and half months: P19

4.5 Cultural practices regarding infant feeding practices

4.5.1 Pre lacteal feeding

There are some cultural practices within the family and society regarding infant feeding that act as barriers to optimal feeding. The caregivers confirmed that the advice they get at home and from the health care practitioners were contradictory. The giving of water was a common practice among the caregivers and elderly women such as mothers, mothers-in-law and grandmothers were influential in encouraging that practice.

Although the benefits of EBF are well known, the interviewer noted with concern some cultural practices that were enablers of pre lacteal feeding. These include actions such: as when bathing a baby the caregivers were encouraged to give the baby a sip of that water and to treat flatulence "ruzoka" the child is given cooking oil which has been heated.

> *I was told to give my son cooking oil when he couldn't sleep and started producing green poo, this was when he was 2 months. I was told it helped to "cleanses the intestines" from the food he ate as a baby.P12*

> *The grannies want babies to be fed with porridge as early as 3 days because they are viewed as the source of great wisdom their counsel is rarely shunned upon (KI2)*

4.5.2 Performing rituals on infants

One of the key informants (KI) acknowledged that the mothers faced many challenges regarding infant feeding as they are caught between what they are taught by health personnel and the cultural beliefs and practices followed in one's family. Babies are often given traditional medicines to treat problems such as sunken fontanel (inkanda) in Ndebele and (nhova) in Shona.

> *My daughter's fontanel (nhova) had depression and wouldn't stop crying, my mother law advised me on how to treat (rapira) the illness which consists of herbal tea and certain ritual to be performed by the father My mother encouraged me to give her lots of fluids.P14*

4.5.3 Role of family members

It was evident that elderly women from both the paternal and maternal sides played a huge role in infant feeding. Their opinions were respected as they have experience in that area. Married caregivers indicated that the presence of their husbands helped ease the burden of child care. The partners although not directly involved in the day to day care of the child, helped through emotional and financial support as the head of the household. On inquiring who buys food in the house, those who were not employed confirmed that their partners did the buying and in a way played a major role in food choices. Nine out of the twenty-one caregivers mentioned that they had a say in the purchasing of food because they worked. However, the single mothers had to play both roles and it was proving to be strenuous and mentally challenging explained one 24-year-old mother of one

> *It is difficult when you are raising the child on your own, especially when you are not employed. The father is not bothered about the welfare of his child*: P2

4.6 Management of malnutrition

During the in-depth interviews with the key informants, the main themes that emerged were: management of malnutrition and procedure of managing in-and out-patients. Some of the sub-themes were: follow-ups, reasons for relapse and health education

4.6.1 Outpatient and inpatient therapeutic care

Patients with severe acute malnutrition (SAM) without complications are enrolled in the outpatient therapeutic care program. Patients with severe or moderate acute malnutrition and complications are admitted for inpatient care

> *Criteria for deciding to treat as an inpatient is done after checking for complications of IMNCI, choice of care, appetite, oedema, skin and medical complications (KI1)*

> *Provision of the therapeutic product depends on the age group for 6-24 months in this instance inpatients are given F75 for 2-7 days, F100 is given after the patient has stabilized to rebuild wasted tissue. RUTF is provided to support recovery in patients without complications, outpatients are given RUTF (ready to use therapeutic food) : (KI2)*

4.6.2 Follow-ups on discharged

Following the discussion on the management of malnutrition, it was evident that as a referral hospital, they could not make follows ups on discharged patients.

> *As a referral hospital we act as a stabilizing center only we never do any follow-ups, this is done by community health workers at community levels: (K12)*

> *Not usually feasible so, No. Patients are referred back to their district health centers, this is where follow-ups are made: (KI1)*

4.6.3 Reasons for relapse

The research findings showed that most referred patients came from rural and peri-urban communities which are characterized by low-income families. It becomes difficult to manage the disease successfully because there are underlying causes that the hospital has no means of intervening. The reason for the recurrence of cases includes feeding problems, neglect of children especially by working mothers, most children not staying with their biological mothers and challenges with the availability of food.

The health key informants expressed their concern over the recurring cases of malnutrition and attributed the cause to the fact that:

> *Most caregivers have difficulties affording a proper nutritional diet for their children. Socio-economic problems taking a toll on child care efforts: (KI2)*

> *Upon discharge, caregivers are given rations of RUTF commonly known as "plumpy nut'' to administer accordingly home. Unfortunately because of food insecurity the whole family consume it and finish the entire allocation before the stipulated time. People usually add it into porridge because of its sweet nutty flavour: (KI1)*

4.6.4 Nutrition education

The health workers indicated that they provide counselling on infant and young child feeding (IYCF) to caregivers when they come for their postnatal care (PNC) visits either for immunization or growth monitoring. Group discussions and one-on-one sessions were the preferred types of

counselling. Upon being probed about the rationale behind the type of counselling done, the key informants had this to say:

> *Group discussions save time when there is a staff shortage, one on one session deals with specific individual problems however this is rarely done because of lack of human resources. (KI2)*

> *One on one sessions gives room to address individual problems and understanding. Group discussions are done whilst the patient is admitted and promotes the sharing of ideas among caregivers and doesn't require a lot of resources (KI1)*

4.7 Conclusions

The results of the study showed that caregivers appreciated and understood the myriad benefits of exclusively breastfeeding but faced various challenges complying with the recommended six months of exclusively breastfeeding. The frequency of feeding was determined by 'hunger cries 'and the quantity of milk produced by the mother. Perception regarding colostrum was positive, only a few caregivers discarded colostrum due to the belief that it was dirty and made the child sick. Characteristics of the breast such as engorgement, sore cracked nipples were some of the determinants of the duration of breastfeeding. Beliefs of insufficient milk and disparities in gender feeding were some of the reasons for the early initiation of complementary feeding. Low adherence to the recommended complementary feeding principles was noted. Some illness were treated traditionally which contributed to prelacteal feeding. Key influencers in the family were identified and these individuals played a huge role in the infant feeding practices. Due to a lack of capacity and shortage of human resources referral hospitals were incapable of making follow-ups on discharged patients and this task was carried out by community workers and in essence, could not provide comprehensive nutrition education.

CHAPTER 5

DISCUSSION

This chapter provides a discussion of the main findings from the study in comparison with other studies. The findings will be discussed under the following key themes - breastfeeding practices, initiation of complementary feeding and cultural beliefs regarding infant feeding practices and cultural practices regarding infant feeding practices. The chapter concludes with a summary.

5.1 Breastfeeding practices

Through the discussion with participants, the various cultural beliefs and practices regarding infant feeding were noted. Reflections of the results obtained from the study showed that the participants appreciated breastfeeding as a natural process that is suitable for babies. According to (WHO, 2017) exclusive breastfeeding is a natural process that involves giving the baby no other food other than breast milk for the first six months followed by the initiation of adequate and appropriate for age complementary foods and continued breastfeeding throughout the second year of life and beyond. However, the findings showed that the participants did not understand the exclusivity'' concept regarding breastfeeding. This was revealed when the participants confirmed having given some form of other liquids besides breast milk to their children a few days after birth, some before the recommended age of six months. These findings were not peculiar to this study only, they are consistent with various studies carried out in Kenya (Karigi et al., 2016), Zimbabwe (Muchacha & Mtetwa, 2015*),* and in Kenyan urban slums (Wanjohi et al., 2017) which showed that prelacteal feeding is common and that their provision is influenced by elderly women who are regarded as cultural custodians.

According to a study done in Cameroon, mothers acknowledged that they were pressurized to supplement breast milk by elders and family members because it was the common traditional practice (Kakute et al., 2005). The commonly given form liquids were sugary water, water, and cooking oil, which is believed to cleanse the intestines of the baby. These practices contradict the WHO recommendations for infant feeding, promotes late initiation of EBF, and in some cases is a predisposing factor for diarrhoea among newborns (Victoria et al., 2016).

It was clear from the findings that the participants deemed any form of breastfeeding whether partial, predominant to be suitable as long as the baby was being breastfed. The common practice noted from the narratives was mixed feeding. Enabling factors that influenced mixed feeding included the perception that the mother is producing insufficient milk, the idea that the boy child feeds more hence the breast milk is not sufficient, time constraints, and burden of household chores on the mother limiting time for infant feeding. Similar findings were reported in various studies (Mgongo et al., 2018; Karigi et al., 2016; Paul et al., 2015). A descriptive cross-sectional study done in Masvingo, Zimbabwe highlights the perception of insufficient breast milk and that the size of the child influenced breast milk supplementation (Gonah & Mutambara, 2016). Although caregivers expressed the desire to breastfeed their child some experienced lactation challenges such as breast engorgement, sore, and cracked nipples that made the process unbearable and negatively impacted the breastfeeding process. This is in line with a study conducted in India in which one of the reasons for early cessation was attributed to breastfeeding being painful (Verma & Dixit, 2016).

Although there is vast evidence of the benefits of breastfeeding for both the mother and child, the majority of the participants failed to mention most of them. Their knowledge was limited to the growth of the baby and the creation of a bond between mother and child. This showed a knowledge gap in infant feeding practices. It is essential that health providers counsel and educate caregivers on the recommended guidelines whilst taking into consideration their cultural beliefs and the environment they live in.

5.2 Initiation of complementary feeding

WHO and UNICEF recommendations advocate for the timeous introduction of complementary feeding from 6 to 24 months (WHO, 2015). The results of the study showed that the participants initiated complementary feeding as early as two months. These findings are similar to a qualitative study done in Tanzania which found that the mean age of initiation was between 2-3 months of age. In Bangladesh (Paul et al., 2015) reported that early initiation of complementary feeding was still high (49.2 %). The main reason for this being the perception that the mother was not producing sufficient milk which compelled the mothers to start C.F.

Furthermore, the late initiation of complementary feeding was due to the refusal of complementary foods by the child. These findings were similar to those found in the study by the researcher where caregivers'' main reason for early initiation of CF were complaints of sore, cracked nipples; breast engorgement, the gender of the child, and breast refusal. Early initiation of complementary feeding has dire consequences according to a study done in Kenya which found that it was a determinant of stunting and reduced amount of breast milk given to the child (Murage et al., 2011).

To ensure optimal complementary feeding, it is recommended that the quantity of food must be adequate and that the food offered must be diverse and of high quality (WHO, 2017). Analysis of the results showed that the children were being fed a low diversity diet, which resulted in low nutrient intakes. An overreliance on starchy food was noted, with thin maize meal porridge being the most common first food being introduced. The maize meal porridge is often given without enrichment and prepared with a little salt and sometimes sugar is added. This correlates with various studies that showed a similar trend of starchy foods being the main complementary foods given to infants (Paul et al., 2015; Nousiainen, 2014; Gonah & Mutambara; 2016). The intake of animal food sources such as meat, eggs, poultry, and fish, which are rich in high biological value proteins, iron, zinc, and calcium was low. The rationale behind this was the exorbitant prices of animal food sources and the perception that children cannot digest the animal proteins as yet.

The minimum acceptable diet (MAD), which is a measure of 6.9% nationally has shown a decline to 2.1% in 2019. This MAD measure is of importance since it ensures appropriate growth and development for feeding in children aged 6–23 months (Zimvac, 2020). This concurs with findings from a recent study which revealed that the consumption of animal food source was low among children age 6-23 months because the foods were deemed too "luxurious" to be fed to children and that livestock was a source of income for the family (Haileselassie et al., 2020). Abebe et al (2016), highlighted that a lack of knowledge of CF and dietary diversity by caregivers was the main reason for the low consumption of animal products in children's diets. It has been stated that suboptimal complementary feeding can lead to weight loss and it increases the risk of infections and malnutrition WHO, 2015).

During the study, it was apparent that mothers who seek employment to augment the family income faced many challenges when it came to feeding their children. Time constraints negatively affected their infant feeding practices and some of the caregivers were forced to initiate C.F early,

whilst others stopped breastfeeding their children. Those who had proxy caregivers complained of the child not being taken care of properly. A study conducted in the urban slums of Dhaka showed that mothers who were employed and worked outside of their homes failed to adequately care for their children. In addition, poverty and the nuclear family structure were cited as barriers to optimal infant feeding (Kabir & Maitrot, (2017). A study done in Mali found that children aged two who had no proper care whilst their mothers were at work had a low height for age z scores (HAZ<2) (Pierre-Louis et al 2007).

5.3 Cultural beliefs regarding infant feeding practices

The majority of caregivers appreciated the benefits of colostrum as taught by health workers. However, a few individuals had beliefs that the first milk was dirty and not good for a baby and therefore discarded the colostrum. Various studies done across Africa have proven that the rationale behind discarding colostrum was linked to cultural beliefs and practices of the caregivers (Mgongo et al., 2018; Gonah & Mutambara, 2016; Paul et al., 2015). In Cameroon colostrum is believed to have no nutrients (Kakute, 2005), in Southern Ethiopia it is believed to cause abdominal discomfort and diarrhoea (Amele et al., 2019). Contrary findings were noted in Tanzania where all the participants in a study revealed that they did not discard colostrum (Mgongo et al., 2018). These disparities show different levels of knowledge of infant feeding practices among caregivers and the existence of diverse cultural beliefs among different populations.

In addition, the results of the study showed that boys were believed to feed more compared to their counterparts and was the main reason the caregivers initiated complementary feeding early. These findings are not unique to the current study but have been observed in other ethnic groups such as Kikuyu, Luhya, Kamba, and Luo found in Nairobi, which confirms that the practice of prelacteal feeding was high among boys because of the perception that breast milk was not sufficient to satisfy them (Wanjohi et al., 2017).

5.4 Cultural practices regarding infant feeding practices

Traditional treatment of ailments such as sunken fontanelle (inkanda /nhova) was found to be a common practice to which children who were younger than one year old was subjected to. Cultural beliefs that sunken fontanelle is a sign of some form of illness which is caused by evil spirits (Muchacha & Mtetwa, 2015). Traditional medicines such as herbal concoctions are administered to the baby to combat the problem. It was interesting to note that the participants were oblivious of the impact of these practices on exclusive breastfeeding. This aligns with findings that "inyoni" in Zulu as it is known in South Africa is a traditional illness that makes a child susceptible to evil spirits and can only be treated by traditional medicines because it was beyond the scope of modern medical treatment. Also, the evil spirits were believed to enter through the sunken fontanelle (Lekgothoane & Ross, 2020).

It is of paramount importance that awareness is created of the adverse effects on the health of infants as a result of some of these practices. Clinically, a sunken fontanelle is due to severe dehydration and rehydration of the baby is recommended, through continued breastfeeding (Kliegman et al., 2020). What is also concerning is that the participants indicated that they treated colic with cooking oil in their infants until they reached the age of six months. A study in Tanzania noted that colic (change) was a major problem that interfered with EBF since participants gave traditional herbs or gave gripe water to their infants, usually within the first six months of life (Mgongo et al., 2019).

5.5 Conclusion

In conclusion, the findings of the study showed cultural beliefs and practices that act as barriers to optimal infant feeding practices. Caregivers were applying both traditional and modern principles regarding infant feeding. To address these contrasting practices it was recommended that health interventions and programmes be cultural-specific to address some of these challenges. It was noted that family members were the key influencers in infant feeding practices and they were identified as the source of information regarding infant feeding, especially for first-time mothers. As discussed above, some of the advice such as encouragement of prelacteal feeding, early initiation of complementary feeding, and treatment of some culturally defined illness such as

colic and sunken fontanelle, impedes optimal breastfeeding and timeous introduction of complementary feeding. The high cost of living was cited by numerous participants as a determinant of food insecurity in the household. Therefore investment in the empowerment of women financially is highly recommended.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

This qualitative study aimed to explore the relationship between cultural practices and beliefs regarding dietary intake and feeding practices among caregivers of malnourished children, aged 6-24 months.

Results from the analysis of the findings showed that cultural beliefs and practices have a strong influence on infant feeding practices and can act as a barrier to optimal feeding practices. These practices are socially acceptable and not unique to the current study, but also common to various ethnic groups in Africa, and globally. The findings reflected that knowledge of infant and young child feeding practices is not sufficient to translate to practice. This is highlighted by how the cultural beliefs and practices override the contemporary guidelines given by health care providers. These findings have implications for the policymakers who must take into account the cultural context and environment in which infant feeding practices occur. Nutrition interventions should include context-specific messages to address cultural barriers to optimal infant feeding practices. Other determinants that were poor infant feeding revealed in the study were poverty, workload and financial status of women. Policymakers should invest in programs that develop the socio-economic status of women as it is an important factor in tackling child malnutrition.

The data analysis also showed that there was still a knowledge gap regarding infant feeding and that caregivers were not fully adhering to the WHO recommended infant feeding practices. Overreliance on starchy food was observed with little to no animal proteins being provided, fruits and vegetables were limited, thus translating to low dietary diversity. The diet did not meet the nutrient requirements for the children as recommended by WHO. The main reason for the monotonous diet was household food insecurity.

Early to late initiation of complementary feeding was attributed to various challenges faced by caregivers such as engorgement of breasts, sores and cracked nipples, refusal of the child to breastfeed, perception by caregivers regarding milk production, and some reasons attributed to cultural beliefs and practices. It was noted that some cultural beliefs and practices placed

restrictions on what foods were suitable for children. Elderly women i.e. mothers, mothers-in-law, and grandmothers were considered to be the best source of information regarding infant feeding practices and they encouraged pre-lacteal feeding. Societal demands on caregivers such as household chores, caring for other children and family members pose a great burden on a nursing mother, resulting in less time dedicated to child care.

6.2 Limitations

Information on the cultural views, norms, values, and practices collected from interviews could be biased in the sense that people might not be truthful in their responses and some might likely be reluctant to share their experiences. Another limitation of the study was that some of the information was not directly from the primary source (grandmothers and mothers/in-laws) but a hand down from the secondary source which were the caregivers. The study was conducted among ethnic groups in the Gweru community; therefore, the findings will limit transferability to other settings with different beliefs and practices. Misinterpretations of the raw data during transcribing from the local language to English could result in some of the key facts being missed in the process, even during the translation of the interview guide to local languages.

6.3 Recommendations

The following recommendations are made based on the findings of the study:

Improving infant and child feeding practices

The study findings showed that the recommended infant and child feeding practice was not being adhered to. Therefore it is of paramount importance that interventions concerning these feeding practices be implemented.

- Increase awareness of the importance of the 1000 days among caregivers of preventing malnutrition by communicating through various social media platforms such as WhatsApp Facebook and Twitter and marketing.
- The promotion, support and, protection of optimal infant feeding practices should be taught at antenatal clinics
- Promote exclusive breastfeeding among caregivers and key influencers in the family

- Infant feeding messages should be designed to address specific local and cultural barriers to exclusive breastfeeding.
- Caregivers should be educated on the complementary feeding principles to prevent early initiation of complementary feeding
- The consequences of mixed and pre lacteal feeding on health should be communicated effectively.
- Ministry of Health and Child Care should collaborate with other stakeholders such as Non-governmental organizations to implement sustainable community-based programmes such as community kitchens that provide appropriate nutritious food to children under two who come from low- income families.

Optimizing the quality of health education in health care centres

Health service providers are of paramount importance in the dissemination of information regarding health and nutrition. It is therefore essential that they proffer correct, current and consistent recommendations regarding IYCF.

- The Ministry of Health and Child Care should continue capacitating all the health service providers (doctors, nurses and nutritionists) including community health workers and traditional birth attendants by training them on the updated infant feeding practices guidelines for the sustainability of adequate health and nutrition education.
- Paediatricians, obstetricians and, gynaecologists should be capacitated to educate caregivers on optimal infant feeding practices during prenatal and postnatal visits

Empowerment of caregivers

- The effect of workload on the caregiver was one of the determinants of suboptimal feeding from the study findings. It left the caregivers emotionally and physically strained with little or no time for breastfeeding.
- Reliable support of the caregiver from family members is essential to promote EBF. This will ensure that household chores will be shared with father and children helping out. The caregiver in turn has time to rest, breastfeed and prepare nutritious food for the family.

- Engage family members who are involved in, and influence infant feeding practices such as fathers, mothers/in-laws, and grandmothers in nutrition education, nutrition-sensitive programmes and hospital visits through participatory approaches.
- Advocating for women to take up a position of power in community nutrition committees so that their voices can be heard regarding nutrition issues.

Addressing cultural barriers to optimum infant feeding

- Community-based health education programme such as cooking demonstrations, promotion of locally available foods, and disseminating recipes is another strategy that can be used to promote behaviour change.
- Behaviour change interventions should be tailor-made to address the cultural barriers of exclusive breastfeeding and complementary feeding of children under two.
- Regular community campaigns to address misconceptions and myths regarding infant feeding practices such as discarding colostrum, food taboos and traditional treatment of ailments such as sunken fontanelle (nhova/ inkanda)

Effective monitoring and evaluation system

- Implement a tracking system of the IMAM programme on discharged patients by creating an effective community follow up system to prevent relapse.
- The Ministry of Health and Child Care and relevant stakeholders should regularly monitor and evaluate existing policies and programmes aimed at combating malnutrition for effectiveness and make necessary changes as the need arises

6.4 Recommendations for further research

A more comprehensive exploratory study should be conducted with other ethnic groups in the country since the cultural beliefs and practices regarding infant feeding practices are context-related. This is of importance to develop appropriate intervention programmes for optimal infant feeding.

The study noted that some of the cultural beliefs and practices impeded optimal feeding practices. Further research could be done to explore the possibility of the existence of other socio-cultural norms that might align with the WHO recommendations and guidelines of infant feeding practices

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APPENDIX 1

INTERVIEW GUIDE (CAREGIVERS)

The interview will begin with the introduction of the facilitator to the participant and stating the purpose of the research and what it entails. Participants will be presented with the information sheet and reminded to have completed the consent form before the interview indicating their permission. Brief notes will be taken during the discussion and audio recorded

Emphasis will be made on strict confidentiality of what will be discussed and participants are free to refrain from participating anytime during the discussion

These questions will serve as a guide to the facilitator during the one on one interviews. The interview will take at most 45-60 minutes.

PART ONE

Begin with background information on the participant (age, education, marital status, employment status, number of children)

Breastfeeding practices

Do you know what colostrum is and what are its benefits?

What are some of your personal experience of breastfeeding from birth to six months?

Breast milk is regarded as sufficient for a child for the first 6 months, what could be the reasons for this?

Probe: what challenges have you experienced that hinders you from exclusively breastfeeding for those that have failed to do so.

As a caregiver /wet nurse to what extent do other family members intervene in the feeding of the baby?

How best do you address these interventions if they are proving not to be doing any good to the baby?

How often do you feed the baby and why?

PART TWO

Complementary feeding

What foods do you introduce when you start complementary feeding and why?

At what age did you introduce solids in the diet of your baby and why

With the current looming drought and foodstuff being very expensive how are you making sure the baby receives adequate nutritious food?

Do you think the diet is diversified?

Probe: if yes explain why

Do you think they are some food that?

What could be the cue that indicates a baby is hungry

Most caregivers introduce watery porridge when they feel the baby is not getting satisfied through breastfeeding only. Do you think this is a wise decision?

Probe: what could be added to porridge to make it more nutritious?

What foods are regarded as taboo and not suitable for babies? Give a brief description of these foods and their supposed effects on babies

What other alternative ways do you use when your child has feeding problems?

PART THREE

Cultural practices, beliefs of delivery practices and breastfeeding

Describe the cultural beliefs concerning breastfeeding and pregnant women in your family setup.

When breastfeeding what foods are encouraged for a lactating mother to eat.

Probe: describe your experience upon eating these foods

: What kind of food does she need to eat differently?

: Does she need to eat more or less?

If a baby is chubby, she/he considered getting fed properly is that always the case.

Probe: what are your views on that perception?

What could cause a child to refuse to be breastfed and what perception does it bring in your culture?

When a child burps on a breast the milk is discarded, can someone explain their experiences on this

Probe; what are the reasons for discarding the milk from the breast

They are certain rituals done using breast milk on the boy/girl child regarding their future character

If yes please describe the process and the reasons it is done

If a child who is under two is sick, how do you usually feed the baby?

Probe; what special food is she /he given, how often is the baby breastfed

Close the discussion and thank the participants

APPENDIX 2

INTERVIEW GUIDE (KEY INFORMANT)

The interview will begin with the introduction of the facilitator to the key informant and stating the purpose of the research and what it entails. The participant will be presented with the information sheet and reminded to have completed the consent form before the meeting indicating their permission. Brief notes will be taken during the discussion and audio recorded if the need arises.

Emphasis will be made on strict confidentiality of what will be discussed and the participant is free to refrain from participating anytime during the interview

These questions will serve as a guide to the facilitator during group discussions. The discussion will take at most 30 minutes of your time.

Questions

Ask the key informant to give a brief history of their career

What do you think about the current feeding practices of caregivers/wet nurse who come and seek services at the hospital?

What type of counselling do you give caregivers on ways to prepare complementary foods? (E.g. use brochures, one on one, group discussions etc.)

Follow up question: ask the informant to give reasons why they chose that particular type of counselling

What are the possible risks of starting complementary feeding late?

Can you describe the cultural practices you have observed or experienced concerning infant feeding practices?

How often do you assess the nutritional status of patients?

Do you give any nutritional education to caregivers/wet nurse?

Describe the difference between inpatient and outpatient therapeutic care regarding malnutrition

Do you do any follow-ups on discharged patients?

If No give details

Has the prevalence of acute malnutrition in children under two changed compared to the previous years?

If yes give a brief explanation.

Close the discussion and thank the participants

APPENDIX 3

INFORMATION SHEET: ENGLISH

UNIVERSITY OF WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: fionachikerema@gmail.com

INFORMATION SHEET

Project Title: Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 Months, regarding feeding and dietary intake in Gweru, Zimbabwe

Principal Investigator: Fiona Chikerema (*MPH* Nutrition)

Phone number(s): 0773872489

What is the study about?

This is a research conducted by Fiona Chikerema at the University of the Western Cape. We are inviting you to participate in this research because you and your child aged 6-24 months meet the requirements of the study. The purpose of the research project is to develop an in-depth understanding of cultural practices and beliefs regarding dietary intake and feeding practices among caregivers. With your participation, I can explore the extent to which culture influences the nutritional status of children aged 6-24 months.

What will I be asked to do if I agree to participate?

You will be asked to take part in focus group discussions were you be asked to share your experiences of feeding practises and the barriers that lead to suboptimal feeding and the role of cultural beliefs and practices. The discussions will take an hour and a half minutes. You are asked

to share information on the socio-economic status of the family and the socio-demographic profile of the caregiver and child.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution.

To ensure your anonymity whenever there is a need to use the name(s) in the findings codes or pseudo names will be used that is known to the researcher only. To ensure your confidentiality the focus group discussions and questionnaires information will not be disclosed for any other purposes or revealed in the resulting documentation beyond data collection. Data collected will be locked in filing cabinets and using only data codes only on data forms. Computer files will be password protected. Following legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will inform you that we have to break confidentiality to fulfil our legal responsibility to report to the designated authorities.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may have helped the investigator learn more about how the cultural context of households in regards to dietary intake and feeding practices having a great impact on the nutritional status of children. We hope that, in future, other people might benefit from this study through improved understanding of determinants of malnutrition cannot be linked to food security only but to the social and cultural beliefs and practices as well. The findings might be useful to policymakers and governments in coming up with interventions that address the cultural aspect of the causes of malnutrition.

Do I have to be in this research and may I stop participating anytime?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Fiona Chikerema at the University of the Western Cape. If you have any questions about the research study itself, please contact Fiona Chikerema on phone no. +263773872489or e-mail: fionachikerema@gmail.com. Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

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This research has been approved by the University of the Western Cape's Research Ethics Committee. (REFERENCE NUMBER: BM19/10/12)

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APPENDIX 4

CONSENT FORM: ENGLISH

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E-mail:fionachikerema@gmail.com

CONSENT FORM

Title of Research Project: **Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 months, regarding feeding and dietary intake in Gweru, Zimbabwe**

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate in my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

___ I agree to be **[**videotaped/audiotaped/photographed**]** during my participation in this study.

___ I do not agree to be **[**videotaped/audiotaped/photographed**]** during my participation in this study.

Participant's name……

Participant's signature…….

Date……

Biomedical Research Ethics Committee

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APPENDIX 5

INFORMED SHEET: NDEBELE

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Ulwazi Ngocwaningo

Isihloko socwaningo**: Ukuqhutshwa kwamasiko lenkolo yalabo abondla abantwana abangatholi ukudla okwaneleyo abaphakathi kwenyanga eziyisithupha kusiya eminyakeni emibili maqodana lokudla abakudlayo lendlela abakuphiwa ngayo esabelweni seNkabazwe kweleZimbabwe.**

Inhloso yalolucwaningo.

Lolucwaningo luqhutshwa nguNkosazana Fiona Chikerema oyisifundiswa eYunivesithi yeaseNtshonalanga Kapa (University of the Western Cape). Siyakunxusa ukuba uphatheke njalo uphathise ngoba ulomntwana osezingeni lenyanga eziyisithupha kusiya eminyakeni emibili (6-24 months) okuyibo lolucwaningo olumayelana labo. Inhloso yalolucwaningo yikwandisa ulwazi ngesiko lokondla abantana ikakhulu kweziphathelane lokudla lokumunyisa abantwana. Ngokuphathiswa nguwe labanye abanjengawe, ngilakho ukuthi ngihlolisise ukuthi amasiko lemikhuba yabantu kulomthelela bani kumpilakahle kwezokudla ebantwaneni abalenyanga eziyisthupha kusiya kwabaleminyaka imibili (6-24 months).

Engizacela ungiphathise ngakho nxa uvuma ukungisiza.

Ngizacela ukuba ube yingxenye yeqembu ilincane, ilingaba labantu abahlanu. Kulawo maqembu, ngizacela ukuba uxoxisane labanye labelane ngokwaziyo losukewahlangana lakho okuqondane lokudla kwabantwana abancane kunye lokumunyiswa kwabo. Lapha lizaxoxa njalo labelane langobunzima elihlangane labo ikakhulu njengabomama abamunyisayo obenqabela ukuthi abantwana bangotholi ukudla okwanelyo abakudingayo. Kukho konke lokhu lizakukhangela lokuthi isiko leikhuba yesintu ithini ngokumunyiswa kwabantwana labomama abamunyisayo. Ingxoxo yeqembu ingathatha ihola elilengxenye. Okunye ozacelwa ukuba ukwabelane labanye eqenjini yimininingwane eqondane lemuli; ubukhulu bayo, ukuthi izuza noma iswela okunganani, umama yena ungumuntu onganani ngokokuzalwa, uyasebenza noma cha, lokunye okunjalo.

Ubumfihlakalo bokuphathisa lokubamba iqhaza kulolucwaningo.

Kungumlandu womchwayisisi uNkosazana Fiona Chikerema ukuthi ivikela njalo agcine kuyimfihlo konke okuzaxoxwa emaqenjini ukuze kungaziwa muntu. Uzaphinda njalo aqinisekise ukuthi kakho ozaziqamba kumbe azise loba ngubani amabizo alabo abayingxenye yeqembu njengendlela yokulondoloza lokuvikela izithunzi zabantu. Kakho njalo ozakwazi ukuthi kulokho okuphume eqenjini ubani nguye otheni lobani wathini, konke lokho kuzakuba yimfihlo engazukuchazwa noma sekutheni. Ukuqinisekisa ubumfihlakalo, imibuzo lezimpendulo akuzukusetshenziswa noma kuzagcinwa kuvalelwe emakhabathini lakumakhompiyutha azavulwa ngumchwayisisi yedwa. Ngokuqondane lomthetho lokusebenza kwemithetho yezingcwethi labochwephetshe ngendlela eqondileyo, sizakwazisa amagosa Amandla afaneleyo ngokungaphathwa kuhle, ukuhlukunyezwa impilo ezisengozini lokunganazwa kwamalungelo abantwana labomama okungavela ngesikhathi sokuqhutshwa kwengxoxo zamaqembu. Nxa kungenzeka ukuthi kubekhona isidingo zalokhu, sizakwazisa ukuthi, yize lingxoxo iyimfihlo, sokudingeka ukuba sephule umthetho wobumfihlakalo ukuze kubikelwe abamahofisi afaneleyo.

Ubungozi obungabakhona kulolucwaningo.

Ngazo zonke izikhathi lapho okuhlangana khona abantu bexoxa ngabo kumbe abanye abantu, kukhona ubungozi obutholakalayo, yize kulo umsebenzi, kungumlandu womchwayisisi ukukhusela lokuvikela abapathekayo engozini ezingabehlela. Ngokunjalo sizaqinisekisa ukuthi ingozi ezivelayo sizaphanga sixazulule ukuze lingabi lokungahlaliseka ngenxa yokuphatheka

kwenu kulumsebenzi. Nxa kudingeka, sizakudingela usizo kwabanye abangacedisa ukugwema lokuxazulula ingozi.

Iyini inzuzo yalolucwaningo?

Lolucwaningo kalukhandwanga ukuze lusize labo abaphathisayo njengawe kodwa lwenzelwe ukuthi umchwayisisi athole ulwazi oluzikileyo ngemithelela yemasikolemikhuba yabantu kumpilakahle yezokudla kwabantwana lokuqutshwa kwesiko lokumunyisa. Siyathembe ukuthi kwelizayo, abanye abantu bangathola ukusizakala ngolwazi oluzavela kulolucwaningo ngokwengeza ulwazi lokuzwisisa kwabo ngezempilakahle yabantwana abancane, ukumunyisa lokudla kwabo. Impumela yocwaningo ingabalusizo olukhulu kuzingatsha zikahulumende lezinye inhlanganiso ikakhulu ekwenzeni imizamo yokulwisana lokungatholi kuhle ukudla okwaneleyo kwabantwana abancane.

Kuyimpoqo na ukuba ngiphatheke kulolucwaningo? Kuyenza na ukuthi ngizikhiphe kulumsebenzi noma nini?

Kawukho umthetho okubamba ngamandla kumbe okuphoqayo ukuba ubeyingxenye yaloluchwayisiso. Nxa uthanda usungakhetha ukuba yingxenye kumbe ungabiyingxenye yalo. Lanxa uvuma ukuba yingxenye yalolucwaningo, ulakho ukuthi uzikhiphe kulo noma nini, ungezwa ungasafisi kuqhubeka. Lokhu kumele ukwazi ukuthi ukwenza ukhululekile njalo kakho ongakujezisa kumbe akuhlawulisele ukuthi kawusafuni kuqubeka uyingxenye yalolucwaningo.

Nxa kukhona engilemibuzo ngakho kumbe engifisa ukukwazi?

Lolucwaningo luqhutshwa nguNkosazana Fiona Chikerema oyisifundiswa eYunivesithi yeaseNtshonalanga Kapa (University of the Western Cape). Nxa kukhona ongakuzwisisiyo kumbe uleminye imibuzo mayelana locwaningo lolu, ukhululekile ukuxhumana loNkasazana Fiona Chikerema kunombolo zocingo ezithi +263773872489 or ku-e-mail yakhe ethi: fionachikerema@gmail.com. Eminye imibuzo, izinsolo, izikhalazo mhlawumbe zokungaphathwakahle kulolucwaningo nxa uthe wabayingxenye yalo, ukhululekile ukuthintana lalaba abalandelayo:

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lolucwaningo luvunyezwe lwagunyazwa ngabe University of the Western Cape's Research Ethics Committee**. (REFERENCE NUMBER: BM19/10/12)**
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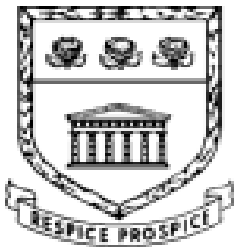
APPENDIX 6

CONSENT FORM: NDEBELE



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E-mail: fionachikerema@gmail.com

ISIVUMELWANO ESIYISIBOPHO NGENGXOXO

Project title: Ukuqhutshwa kwamasiko lenkolo yalabo abondla abantwana abangatholi ukudla okwaneleyoabaphakathi kwenyanga eziyisithupha kusiya eminyakeni emibili maqodana lokudla abakudlayo lendlela abakuphiwa ngayo esabelweni seNkabazwe kweleZimbabwe.

Lolu cwaningo luchaziwe kimi ngolimi engiluzwisisayo lemibizo ebengulayo ngalolucawningo iphendulwe. Ngiyayizwisisa indima engizayidlala kulumsebenzi njalo ngiyavuma ukuthi ekuphathekeni kwami kulumsebenzi kangikhanhelelanga ukuthola inzuzo ethile kodwa kungenxa yokuthanda kwami. Ngiyazi njalo ukuthi akukho muntu ozokwazi ngemininingwane yami loba aziswe ngayo. Sokungenzeka njalo ukuthi ngilakho ukuzikhupha kulo umsebenzi noma nini kungadingeki ukuthi ngazise abawuqubayo kumbe ngibaphe izizatho. Ngiyazi ukuthi lokhu sengingakwenza ngisabi ukuthi sengingehlelwa yibubi loba isijeziso kumbe ukulahlekelwa yinzuzo ngesenzo sami. Ngiyakuzwisisa njalo ukuthi ubumfihlo balumsebenzi beyame kulabao abaphatheka kuwo lasekuthembekeni lekuzithibeni kwabo.

Ngokunjalo ngiyavuma njalo ngiyathembisa ukuthi ngizagcina okuzaxoxwa lapha kuyimfihlo njalo engizasebenza labo kulumzebenzi lendima abazayidlala akuyiikwaziwa muntu.

Ibizo lalowo ophathekayo engxoxweni……..

Isayinetsha ……..

Usuku ……

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APPENDIX 7

INFORMATION SHEET FORM: SHONA

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Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail:fionachikerema@gmail.com

PROJECT TITLE: Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 Months, regarding feeding and dietary intake in Gweru, Zimbabwe

Chii chaunofanira kuziva nezvekutsvakurudza uku

Tinokupa mvumo iyi kuitira kuti iwe uverenge nezvechinangwa, njodzi, uye zvakanaka zvezvidzidzo izvi zvekutsvaga. Chinangwa chikuru chekudzidza kwekutsvakurudza ndechekuvandudza kunzwisisa kwakadzama kwetsika nemagariro maererano nezvekudya pakati pevanochengeta vana. Nekutora kwako mukana ndinogona kuongorora kuti ndeipi tsika inokonzeresa hutano hwevana vane makore matanhatu kusvika pamwedzi gumi nemaviri nemana. Tsvagiridzo iyi haina kugadzirwa kuti ikubatsire iwe pachako, asi mhedzisiro yacho inogona kubatsira muongorori kudzidza zvakawanda nezve tsika nemagariro edzimba maererano nezvekudya nekudya zvine maitiro akakosha pahutano hwevana. Tinovimba kuti, mune ramangwana, vamwe vanhu vanogona kubatsirwa kubva muchidzidzo ichi kuburikidza nekuvandudzwa kwekunzwisisa kweanokonzeresa hutano hakugone kubatana nekuchengetedza chikafu chete asi kune zvemagariro uye tsika nezvitendero nemiitiro zvakare. Izvo zviwanikwa zvinogona kubatsira kune vanogadzira mitemo uye hurumende mukuuya nekupindira kunogadzirisa tsika mamiriro ezvinhu zvinokonzeresa kushaya chikafu. Hatigone kuvimbisa kuti kutsvagiridza uku kunokubatsira, asi mhedzisiro yacho inogona kubatsira vamwe vanoongorora

kuti vazive zvakawanda nezve izvo vashandi vehutano varikufamba kana vachiedza kuenderera mberi nekudzidza. Une kodzero yekuramba kutora chikamu, kana kubvuma kutora chikamu ikozvino uye kushandura pfungwa dzako gare gare. Chero chipi chaunofunga, hauzobhadharwe kana ukabvuma kupinda mutsvagiridzo iyi. Ndokumbira kuti uongorore iyi fomu yekubvuma nokungwarira. Bvunza chero mibvunzo usati waita sarudzo. Kupindirana kwako kuri kwekuzvidira.

Chinangwa

Iwe uri kukumbirwa kutora chikamu muchirongwa chekutsvagisisa che **"Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 Months, regarding feeding and dietary intake in Gweru, Zimbabwe''.**Chinangwa chechidzidzo ichi ndechekuongorora kuti ndedzipi tsika dzinopa hutano hwevana vane makore matanhatu kusvika pamwedzi makumi maviri nemina . Iwe wakasarudzwa semumwe anogona kutora chikamu mune chino chidzidzo nekuti uri mumwe wevachengeti vevana vanorwara nekushaya hutano nemaka yekushomeka kwechikafu.

Njodzi dzingakasanganwa nadzo

Panogona kunge paine njodzi kubva mukutora chikamu mune ino tsvagurudzo. Kubata kwese kwevanhu uye kutaura pachedu panogona kuitika njodzi.Asi tinovimbisa kuti pasave nechiitiko ichi. Pakazoitika njodzi tinokutsvagirayi anokubatsirayi nekukurumidza, kana iwe ukasangana nekusagadzikana, kwepfungwa kana neimwe nzira panguva yekutora chikamu kwako muchidzidzo ichi. Pazvinenge zvakakodzera, chinongedzo chakakodzera chichaitwa kune nyanzvi yakakodzera kuti iwedzere kubatsirwa.

Batsiro kana mari ingapiwe

Hatigone uye hativimbise kuti muchagamuchira mari kubva muchidzidzo ichi.

Kuvimbika

Kana ukaratidza kuda kwako kutora chikamu muchidzidzo ichi nekusaina gwaro iri, isu tinoronga kuburitsa ruzivo kuChikoro cheHurumende hwehutano paYunivhesiti yeWestern Cape muSouth Africa mukuzadzika kwakati kwaTenzi weHurumende yehutano (MPH Nutrition) degree kubva kuYunivhesiti yeWestern Cape. Chero ruzivo rwunowanikwa maringe nechidzidzo ichi chinogona kuzivikanwa newe rucharamba rwakavanzika uye rwunongoburitswa nemvumo yako chete.

Medical Research Council of Zimbabwe (MRCZ) uye Ministry of Health uye Kurapwa kwevana, Gwara uye Dhipatimendi Rezvekuronga vachawana mukana wekudzidza data. Izvi zvinorehwa kuti vamiriri vane mvumo yemasangano aya uye / kana vatsigiri vawane ruzivo rwekuti vapindire muchiitiko iwe uine mibvunzo ine chekuita neichi kudzidza kana fomu yemvumo, kodzero dzako kana kukuvara-kwakanangana nekukuvara uye warwara akagadziriswa kana kana kutaura chero ani zvake kunze kwekutsvagurudza. Zvakare ruzivo rwunogona kushandiswa nevanogadzira mutemo vari mukati meBazi rezvehutano kuti uve nesarudzo dzakapihwa ruzivo.

Kusarudza kuva muchidzidzo

Kutora chikamu mune ino chidzidzo kuri kwekuzvidira. Kana iwe ukasarudza kusatora chikamu mune chino chidzidzo, sarudzo yako hainga kukanganisa hukama hwako hwamangwana ne Chipatara nevashandi vayo. Kana iwe ukafunga kutora chikamu, wakasununguka kubvisa mvumo yako uye kurega kutora chikamu chero nguva pasina chirango.

Kana unemibvunzo

Usati wasaina fomu iri, ndokumbirawo ubvunze chero mibvunzo pane chero chikamu chekudzidza ichi chisina kujeka kwauri. Iwe unogona kutora nguva yakawanda kuti ufunge nezvazvo, usati watora gwara kuvanhengo yetsvakiridzo.

Chibvumirano

Uri kuita chisarudzo chekuti utore chikamu mune chino kudzidza kana kwete. Signature yako inoratidza kuti wakaverenga uye wanzwisisa ruzivo rwapihwa pamusoro, uine mibvunzo yako yose kupindurwa, uye wafunga kutora chikamu.

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University of the Western Cape's Research Ethics Committee. **(REFERENCE NUMBER: BM19/10/12)**

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APPENDIX 8

CONSENT FORM: SHONA

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Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail:fionachikerema@gmail.com

CONSENT FORM

Title of Research: Cultural practices and beliefs of caregivers of malnourished children, aged 6-24 months, regarding feeding and dietary intake in Gweru, Zimbabwe

Ndatsanangurirwa zvizere pamusoro petsvakurudzo ino. Mibvunzo yandanga ndinayo ikapindurwa zvakakwana. Ndave kunzwisisa zvandinofanira kuita muhurongwa uyu naizvozvo ndabvuma kubatsira mutsvakurudzo iyi nenzira dzakafanira. Mudzidzi avimbisa kuchengetedza chimiro change mubasa iri, ndikazofunga kusaita basa iri ndinobvumirwa kusiya pasina zvakaipa zvinozoitika kwandiri.

Participant's name……..

Participant's signature…….

Date……

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