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A STRATEGY TO FACILITATE THE IMPLEMENTATION OF EDUCATIONAL NUTRITIONAL GUIDELINES FOR CAREGIVERS OF CHILDREN IN SELECTED RURAL COMMUNITIES OF THE VHEMBE DISTRICT

by

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A thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy in Nursing at the University of Venda

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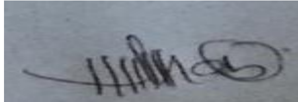
DECLARATION

I, **Takalani Eldah Thabathi,** hereby declare that this thesis submitted for a Doctor of Philosophy in Nursing Degree at the University of Venda has not been previously submitted for a degree at this or any other institution and that this is my own work. All reference materials contained therein have been duly acknowledged.



31/ 01/ 2023

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Thabathi T E Date

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DEDICATION

This thesis is dedicated to:

- My three children, Lethabo, Lesego and Lebogang, and my husband, Mr Thabathi Hlamalani, for their understanding and moral support throughout the completion of this study.
- My beloved mother, Mokibelo Sarinah Makhubele, for being the best mother and for her encouragement during my study.
- My two brothers, Bethuel and Mpho, for being supportive.

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- Finally, the participants who took part in the study during the global pandemic.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BOEM	Building of strength, Overcoming the weakness, Exploring the Opportunities and Minimising the threats
CCT	Conditional Cash Transfer
CHC	Community Health Centres
CMAM	Community Based Management of Acute Malnutrition
CSG	Child Support Grant
DHIS	District Health Information System
ECD	Early Childhood Development
FAO	Food and Agricultural Organisation
FBDG	Food-Based Dietary Guidelines
HCBC	Home Community-Based Care
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illness
IYCF	Young and Infant Child Feeding
MCH	Maternal Child Health
MMP	Mentor Mother Programme
MRC	Medical Research Council
MUAC	Mid Upper Arm Circumference
NFSA	National Food Security Act
NSSA	Nutrition Society of South Africa
OSCT	Orem Self-Care Theory
PCR	Polymerase Chain Reaction

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PHC	Primary Health Care
RtHB	Road to Health Booklet
RtHC	Road to Health Chart
SWOT	Strength, Weakness, Opportunities and Threat
UCT	Unconditional Cash Transfer
UNICEF	United Nations Children's Fund
VCDC	Village Child Development Centre
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

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ABSTRACT

Despite several developed strategies, policies and guidelines, malnutrition is still an ongoing challenge. According to the District Health Information System (DHIS), 24 of 141 (17%) children in the Kutama Clinic of the Vhembe District were reported to have malnutrition between April 2018 and March 2019. Although there are several interventions in place to promote nutritional feeding practices for growth and development, there are no policies on how to implement these interventions. This study aimed to develop a strategy to implement educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District in the Limpopo Province. A qualitative, exploratory and descriptive design was used in the study. The study population was caregivers of children with malnutrition under the age of five years and nurses working with child growth monitoring in two local municipalities in the Vhembe District of Limpopo Province. Non-probability purposive sampling was used to select the Vhembe District as it has a high fatality rate of severe acute malnutrition in children under five years. Non-probability convenient sampling was used to sample 38 caregivers of children with malnutrition and 13 nurses monitoring children's growth. In conducting this research, ethical principles were considered. In-depth interviews were used to collect data from nurses, and focus group interviews were used to collect data from caregivers. Data were analysed using Tesch's eight steps. During phase one, caregivers indicated the kind of food they give children and its contributing factors. They also revealed the type of information they provide regarding nutritional feeding practices. In addition, participants indicated the actions to be taken to facilitate the nutritional feeding practices leading to phase two of developing the strategy. The six elements of practice theory outlined by Dickoff et al., SWOT and BOEM action plan informed the development of the strategy.The study was limited to clinics in the Makhado and Musina Municipalities. The study was contextual as the focus was only on caregivers of children with malnutrition. Most of the participants were mothers; thus, minimal information was obtained from grandmothers or aunts. The study recommends that the district office reinforce the strategy in primary health facilities.

Keywords: Caregivers, Children, Education, Nutrition, Strategy

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CHAPTER 1

ORIENTATION OF THE STUDY

1.1 INTRODUCTION OF THE STUDY

The World Health Organization (WHO) recommends introducing solids at six months of age; however, most children are introduced to solids earlier (Safari, Kimambo & Lwelamira, 2013). In addition, 48.2% of mothers in Ethiopia add cow's milk, tea or formula to breast milk (Arage & Gedamu, 2016). Globally, malnutrition is estimated to contribute to more than one-third of children's deaths (WHO, 2015b). Approximately 800 million people across the globe are undernourished, while 156 million children are stunted; 50 million are wasted, 16 million are severely and acutely malnourished, and 42 million children are overweight (United Nations Children's Fund [UNICEF], WHO and World Bank [WB], 2016). Malnutrition develops when an individual does not get enough food or different types of food. In addition, malnutrition prevents normal growth as children are more susceptible to diseases such as diarrhoea and malaria and the inability to resist infections (World Food Programme [WFP], 2015).

1.2 BACKGROUND OF THE STUDY

Inadequate nutrition is when an individual is not getting adequate essential micronutrients (vitamins and minerals) and macronutrients (carbohydrates, protein and lipids) in the diet, resulting in malnutrition or disease (WFP, 2015). Malnutrition is another broad term for nutrition that refers to both undernourishment (kwashiorkor, marasmus, stunting, wasting, and underweight) and over nourishment (overweight) (Mandal, 2012).

In 2016 alone, 155 million children under five years of age were estimated to be stunted, while 52 million children were estimated to be wasted (WHO, 2018). Therefore, children's growth monitoring is vital to assess their nutritional status. Several measures exist to assess a child's growth, namely *weight-for-age*, which is used to assess whether the child is underweight or severely underweight, *weight-for-height*, which is useful when the child's age is unknown to assess whether the child is

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wasted, and *height-for-age,* which is useful to assess whether the child is tall or stunted (WHO, 2018).

Nutrition in children younger than two years is essential for growth, psychosocial functioning and productivity (Worthman, Tomlinson & Rotheram-Borus, 2016). Therefore, the U.S. Government initiated the Golden 1000 Days campaign in 2010 to improve nutrition for women and young children worldwide (UNICEF, 2011). Following the first 1000 Golden rules is simple for both developed and developing countries. This includes encouraging exclusive breastfeeding for six months and introducing complementary feeding while breastfeeding to promote growth, development and health (Wen, Simpson, Rissel & Baur, 2012).

In Nigeria, 2,300 children under the age of five are dying daily, and 40,000 children under five have some form of disability due to inappropriate infant and young child feeding (IYCF) practices (Ogbo, 2016). IYCF is one of the WHO's strategies to ensure adequate feeding practices to reduce malnutrition in children (Demilew, Tafere & Abitew, 2017). Nutrition plays an essential role in children's growth, development and health. Poor child feeding practices severely impact health and growth during the first two years of a child's life (Cumber, Bongkiynuy, Jaila & Tsoka-Gwegweni, 2017).

Breastfeeding is one of the determinants of child growth and development (Safari et al., 2013). Therefore, breastfeeding exclusively is recommended for the first six months of age. Thereafter, infants should receive complementary nutritional foods while breastfeeding for up to 2 years or beyond since breastfeeding alone is not enough to meet the nutritional requirements of infants (Issaka, Agho, Burns, Page & Dibley, 2014; WHO, 2015a). Similarly, 48.3% of mothers in Ethiopia commenced complementary feeding early at five to six months, while 18.3% started complementary food at six months (Ayana, 2017). In Nigeria, 28.9% of children were introduced to appropriate complementary food late, thus, affecting the infant's nutritional status (Omotoye & Adesanmi, 2019).

The prevalence of stunting in South Africa is very high; 27.4 % (1,58 million) of children under the age of five are stunted (Department of Health, Statistics South Africa, 2017). According to Kyei, Netshikweta and Spio (2014), 70.6% of women in the Vhembe District, Limpopo Province, South Africa, breastfed their children for less than 24

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months while 45.9% supplemented breastfeeding with tea. A similar trend was observed in Dzimauli, South Africa, where infants were given soft porridge, water and tea before six months (Mushaphi, Dannhauser, Walsh, Mbhenyane & van Rooyen, 2017;). Factors that lead to not exclusively breastfeeding on demand and the introduction of complementary food early were insufficient breast milk, going back to school/work, health reasons such as HIV, and the influence of elderly women and church members (Mushaphi, et al., 2017; Motadi, Malise & Mushaphi, 2019). Malnutrition in pre-school children of the Vhembe District is still a challenge; 18.6% were underweight, 1.4% wasted, 0.3% stunted, whereas 20.9% were overweight (Motadi, Mbhenyane, Mbhatsani, Mabapa & Mamabolo, 2015).

Therefore, this study explored the kind of food caregivers give to children under the age of five years in the Vhembe District and its contributing factors. It further explored the type of information nurses provide regarding nutritional feeding practices to caregivers of children under the age of five in the Vhembe District. Based on the study's findings, the researcher developed a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

1.3 PROBLEM STATEMENT

A researcher is currently working at Kutama clinic, one of Tshilwavhusiku local area clinics, and observed that children are still malnourished. According to District Health Information System (DHIS) together with the list of children with malnutrition in the clinic, 24 of 141 (17%) children in Kutama clinic were reported to be with malnutrition between April 2018 and March 2019. This is supported by a previous study by Thabathi, Maluleke and Netshisaulu (2019, unpublished) in the very same village, revealed that caregivers feed children non nutritious food.

Apart from nutritional education that nurses provide, guided by Infant and Young Child Feeding Policy, (2013), the government promotes the right to adequate food and nutrition in National Integrated Early Childhood Development Policy, (2015) to prevent any form of malnutrition, and promotes growth and development; still children are not exclusively breastfed. In Vhembe District, they are various interventions to address malnutrition namely: Integrated management of childhood illness, Food based dietary

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guidelines and mentor mother programme Furthermore, the government even provided the road to health booklets with health promotion feeding messages to capacitate caregiver's nutritional knowledge. Mudau, (2017) revealed that nurses at selected clinics of Makhado Municipality incorrectly record the RtHC resulting in them failing to advice the caregivers accordingly regarding the child development and nutrition. RtHC also provide direction of health promotion messages but Jonker, & Stellenberg, (2014); Blaauw, (2017) indicates that those messages are of no use since there are no strategy in place to ensure the implementation of RtHC by nurses. The South African Department of Social Development, (2004) introduced Child Support Grant (CSG) aiming to eradicate malnutrition in South African children. Khosa, (2017) found that CSG is not used at the best interest of the children nutritional needs instead caregivers are using it for their personal gains. Furthermore, the introduced Child Support Grant lacks the strategy to ensure that the grant is used for nutritional needs of the child. Therefore, this study seeks to develop the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children.

Moon and Josy, (2016); Matlala, (2016) recommended educational nutritional programmes, as a strategy to reduce malnutrition in children under 5 years of age. In Vhembe District, Mushaphi, (2017) evaluated the impact of Food based dietary guideline (FBDG) and found that majority of caregivers focused on 3 out of 10 topics in the guideline i.e. starchy food, protein and vegetables. Based on this, malnutrition in Vhembe District in children under the age of 5 is still a challenge. The way in which this programmes, policies and guidelines are implemented is not clear, so this study seeks to develop the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of Vhembe District.

1.4 RATIONALE OF THE STUDY

Child undernutrition and poor feeding practices remain a challenge globally. Children are particularly susceptible to poor growth development leading to malnutrition during the first two years. There are several interventions in place to address nutritional feeding practices in order to promote growth and development of a child, but the way in which these programmes, policies and guidelines are implemented is not clear. It is therefore justifiable to explore alternatives strategies for caregiver to address the nutritional needs of children in the Vhembe District.

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1.5 STUDY PURPOSE AND OBJECTIVES

1.5.1 Purpose

This study aimed to develop a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

1.5.2 Objectives

The study objectives were in two phases.

Phase one aimed to:

- Explore and describe the kind of food caregivers in the Vhembe District give children under five years.
- Determine the contributory factors to the kind of food they give.
- Explore and describe the kind of information nurses give regarding nutritional feeding practices to caregivers of children under the age of five years in the Vhembe District.

Phase two aims to:

- Develop a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of-five years in selected rural communities of the Vhembe District.
- Validate a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

1.6 SIGNIFICANCE OF THE STUDY

Creating an educational strategy could help parents and other caregivers improve the nutritional condition of children under five and prevent malnutrition. Nurses may increase their knowledge of conditional nutritional procedures for children under five. The research adds to understanding eating patterns and influences how health education about nutrition is delivered at the primary health care level.

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1.7 DEFINITION OF KEY CONCEPTS

Caregiver: The Children's Act 38 of 2005 defines a caregiver as a person who is 16 years old and above, other than a parent or guardian, who can take care of their siblings. In this study, the concept of a caregiver refers to a person 18 years and above who takes care of the day-to-day basics of a child under the age of five years at home.

Children: Children are defined as people under the age of 18 years (The Children's Act 38 of 2005). In this study, children are between zero to 59 months old.

Education: The WHO (1998) defines education as constructed opportunities for learning involving some form of communication designed to improve knowledge and develop life skills. In this study, education means providing information regarding nutritional feeding practices to caregivers of children under the age of five years.

Nutrition: McIntosh (2016) defines nutrition as the sum of the processes involved with the intake of nutrients and assimilating and using them to maintain body tissue and provide energy, a foundation for life and health. In this study, nutrition refers to adequate amounts of carbohydrates, proteins, and other nutrients the body of a child under the age of five needs to maintain health.

Strategy: Barad (2018) defines a strategy as a high-level plan to achieve one or more goals under conditions of uncertainty. In this study, a strategy is a plan to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years.

1.8 PARADIGMATIC PERSPECTIVE

A paradigm is a worldview or ideology. A paradigm implies the standards or criteria for assigning value or worth to the processes and procedures of the discipline and the methods of knowledge development within a discipline (Chinn & Kramer, 2011). This study aimed to develop a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

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This proposed study draws from three paradigms, namely meta-theoretical assumptions, theoretical assumptions, and methodological assumptions. These paradigms influenced the assumptions fundamental to this study's theoretical reasoning. Each paradigm is briefly described below.

1.8.1 Meta-theoretical assumptions

Meta-theory is defined as assumptions about reality, or a theory behind a theory (Brink, 2017). This study assumes that caregivers are the primary provider of nutritious food to prevent malnutrition in children and promote growth. Secondly, malnutrition greatly contributes to the mortality rates of children under five years of age.

Health education regarding nutritional food would depend on the caregiver's internal and external environment. The internal environment involves the kind of food caregivers believe is regarded as nutritious. Conversely, the external environment involves how the implementation of educational nutritional guidelines should be facilitated. There are several interventions in place to promote nutritional feeding practices. Thus, this study suggests that a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years is necessary. Therefore, this study aim to explore and describe the kind of food caregivers give to children under the age of five years.

1.8.2 Theoretical assumptions

This study was conceptualised within Orem's Self-Care Theory (OSCT) (2006), the grounded theory for programme development outlined by Dickoff, James and Wiedenbach (1968), and the approaches outlined in Chinn and Kramer (2011) and Walker and Avant (2011). Each theoretical assumption is briefly described below:

- **Orem Self-Care Theory**

Self-care deficit exists when the self-care demand of a person exceeds their self-care agency. Self-care deficit refers to a relationship between self-care agency and the therapeutic self-care demand in which self-care agency is not equal to therapeutic self-care demand. A person may have a partial or complete self-care deficit, indicating whether a partially or wholly compensatory nursing system is needed to accomplish self-care demands (Fitzpatrick & Whall, 1996). In this study, self-care agency refers to

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caregivers who are responsible for providing day-to-day basics to their children, including food.

- **Self-Care Agency**

Self-care agency refers to the capacity of the person to voluntarily and deliberately engage in goal-achieving activities. It also includes the capacity to engage in actions directed towards one's health and well-being to perform self-care activities. For the performance of these activities to occur, there should be attention, physical energy, mobility, reasoning, motivation, decision-making, and utilisation of technical knowledge, the repertoire of skills, organisation and coordination, integration of self-care with other aspects of life. In addition, persons should have attributes to assess their self-care needs. Furthermore, the person should decide on a course of action as a transitional process and be able to prepare for performing and monitoring one's self-care activities in order to be productive (Fitzpatrick & Whall, 1996). Caregivers are adults above the age of 18 years and are primarily responsible for their under-five-year-old children's day-to-day needs, including food. Therefore, this study aimed to explore and describe the kind of food caregivers give to children under the age of five years.

- **Nursing system**

If there is a potential self-care deficit, then a supportive educative nursing system would be appropriate. A nursing system has three components, namely a totally compensatory nursing system, a partially compensatory nursing system, and an educative-supportive nursing system, (Orem's Self-Care Theory, 2006). In this study, the focus is on two components: a partially compensatory nursing system and an educative-supportive nursing system, which are described below:

➢ **Partially Compensatory Nursing System**

In a partially compensatory nursing system, the nurse is needed to carry out some activities which contribute towards meeting self-care needs. However, the patient is able to meet some of the needs (Horan, Doran & Timmins, 2004). In this study, the caregiver's potential would be complemented by the kind of information nurses give regarding nutritional feeding practices of children under the age of five years.

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- **Educative-Supportive Nursing System**

In an educative-supportive nursing system, patients are capable of meeting self-care needs. Therefore, the nurse's activities relate to teaching and supporting the patients so that they would eventually be able to meet their self-care needs. Research identified that support and information provision are closely linked and that patients require information to help prevent stress and improve their coping with hospital events (Timmins & Horan, 2007). This is relevant as this study aimed to develop a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

- **Grounded Theory for strategy development**

Phase 1 of this study would provide information regarding the kind of food caregivers give to children under the age of five years, the contributory factors to the kind of food they give, the type of information nurses provide regarding nutritional feeding practices to caregivers of children under the age of five years, and the strategy to implement educational nutritional guidelines. This would be followed by the framework for the development of the strategy, which would be informed by the six elements of practice theory outlined by Dickoff et al., (1968), namely agents, recipients, context, process, dynamics, and outcomes. SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five.BOEM action plan was used to develop the strategy The strategy was validated conforming to guidelines in Chinn and Kramer (2011) and Walker and Avant (2005), namely analysing, derivation and synthesising. Through deductive analysis, synthesis and derivation, the related statements about each element of practice theory would be made to ensure a meaningful affirmation about the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years.

1.8.3 Methodological assumptions

A methodology is "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of the methods to the desired outcomes" (Crotty, 2003). A qualitative approach following descriptive,

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exploratory and contextual approaches using in-depth individual and focus group interviews was adopted. Through this approach, the kind of food caregivers give to children and the type of information nurses provide to caregivers regarding nutritional feeding practices were described. Moreover, the recommendations to facilitate nutritional feeding practices were also provided.

1.9 RESEARCH METHODOLOGY

The study methods used in this study will be discussed in detail in chapter 3. The study was conducted in two phases. Phase one was situational analysis where qualitative research approach using explorative, descriptive and contextual design. This chapter also outlined study setting, research objectives; population; sampling of districts, clinics, nurses and caregivers; data collection methods; data analysis ,measures to ensure trustworthiness; and Ethical considerations. Phase two was the development of a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

1.9.1 Research approach

A qualitative approach is a form of social action that focuses on how people interpret and make sense of their experiences to understand the social reality of individuals (Zohrabi, 2013). In other words, the qualitative approach is inductive, and the researcher generally explores meanings and insights in a given situation (Levitt, Motulsky, Morrow & Ponterotto, 2017). A qualitative approach using exploratory, descriptive and contextual design was adopted to answer the objective of this study. The study was conducted in two phases. Phase one was a situational analysis. Phase two included the development of a strategy, as indicated by the nurses and caregivers, to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five.

1.10 PHASE ONE: SITUATIONAL ANALYSIS

A qualitative approach using an explorative, descriptive and contextual design was used for this study. The study setting, population, sampling method, ethical considerations and measures to ensure trustworthiness were discussed. Focus group interviews were conducted with caregivers of children under the age of five years with

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malnutrition to explore and describe the kind of food they give children and the contributory factors thereof.

- **Qualitative**

The essence of qualitative research is to make sense of and recognise patterns among words to build up a meaningful picture without compromising its richness and dimensionality (Leung, 2015). Therefore, a qualitative approach was adopted because it enabled the caregivers to narrate the type of food they give as well as the factors contributing to the kind of food they give to their children daily. Moreover, the nurses could narrate the information they provide to caregivers regarding nutritional feeding practices, which could not be done through questionnaires. In addition, the qualitative approach gave the researcher an opportunity to probe and make follow-up questions.

This approach was used because it allows the caregivers to narrate the kind of food they give to children under the age of five years and the contributory factors to the kind of food they give. Furthermore the nurses where able to describe the kind of information they give regarding nutritional feeding practices to caregivers as well as to narrate actions needed to facilitate the implementation of educational nutritional guidelines.

- **Exploratory**

Exploratory research seeks to ask “why?” and “how?” questions. It is conducted to discover and report some relationships among different aspects of the phenomenon under study, as indicated by Grey (2014). This design explored the kind of food caregivers give to children, the contributory factors to the kind of food they give, and the type of information nurses provide to caregivers regarding nutritional feeding practices. Furthermore, the necessary actions to facilitate the implementation of educational nutritional guidelines were explored.

- **Descriptive**

A descriptive design, as defined by Offredy and Vickers (2010), describes a situation by looking at it from different angles and analysing why certain events occur in a particular manner. Data about the study were gained through in-depth individual interviews and focus group interviews where caregivers gave detailed descriptions

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about the kind of food caregivers give children; the contributory factors to the kind of food they give; and nurses described the type of information they provide to caregivers regarding nutritional feeding practices. Furthermore, the actions needed to facilitate the implementation of educational nutritional guidelines were described by both nurses and caregivers.

- **Contextual**

Contextual studies focus on specific events in a naturalistic setting, meaning that the interview will be conducted in a setting free from manipulation (Burns & Grove, 2013). This study was contextualised according to the topic, purpose, population, and setting. This research study was conducted in a naturalistic context in the clinics where nurses were working with children under five. Caregivers of children with malnutrition conducted group interviews in the clinics where the growth monitoring of their children was conducted. The focus was only on caregivers of children under five with malnutrition, and nurses working with child growth monitoring (immunisation) in the Vhembe District, Limpopo Province.

1.10.1 Study setting

This study was conducted in the Vhembe District of the Limpopo Province. The Limpopo Province consists of five districts, of which the Vhembe District covers 18,569 square kilometres and has a population of 1,3 million people. In addition, the Vhembe District comprises four local municipalities, namely Makhado, Thulamela, Mutale and Musina. The study was conducted with caregivers of children under the age of five with malnutrition and nurses working with caregivers of children under the age of five in the Makhado and Musina municipalities. The study setting will be described in detail in Chapter 3.

1.10.2 Population and sampling

- **Population**

Brink (2016) described a population as the entire group of persons that meet the criteria that the researcher is interested in studying. The study population included 38 caregivers of children with malnutrition under the age of five years and 13 nurses

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working with child growth monitoring in the Makhado and Musina local municipalities in the Vhembe District of the Limpopo Province.

- **Sampling**

Sampling is described as the process of selecting a sample from a population to obtain information regarding a phenomenon in a way that represents the population (Brink, 2016). In this study, sampling was done in three phases, namely district sampling, clinic sampling, and participant sampling. The detailed sampling method is discussed in Chapter 3.

1.10.3 Ethical considerations

In this study, ethical considerations were observed, and permission to conduct this study was sought from the relevant parties, as detailed in Chapter 3.

1.10.4 Measures to ensure trustworthiness

According to Pilot and Beck (2014), trustworthiness refers to the degree of confidence in data, interpretation and methods used to ensure the quality of a study. Credibility, dependability, conformability and transferability were followed as the criteria outlined by Guba and Lincoln (1994). This was discussed in detail in Chapter 3.

1.10.5 Plan for data collection

Data collection is the process of gathering and measuring information on variables of interest in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes (Kabir, 2016). The preparation of participants, data collection instruments, and plans for data management were discussed in detail in Chapter 3.

1.10.6 Data analysis

According to Flick (2014), data analysis is the classification and interpretation of data. Data analysis in the qualitative study involves an examination of text rather than numbers; it is significantly time-consuming as the researcher spends hours reflecting on the possible meaning and relationship of the data (Brink, 2017). In this study, data

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were analysed after data saturation had been reached. Individual interviews were analysed first, followed by focus group interviews. This involved transcribing the interviews word for word and arranging the data into different themes and sub-themes depending on the participants' responses. Data were analysed following a step-wise format as proposed by Tesch (in Creswell, 2014), as indicated in Chapter 3.

1.10.7 Literature control

After data analysis, the kind of food caregivers give to their children, the contributory factors to the kind of food they give, and the type of information nurses provide to caregivers will be identified. Thereafter, relevant literature will be cited as a control in Chapter 3.

1.11 PHASE TWO: STRATEGY DEVELOPMENT

The strategy development was discussed in Chapter 5.

1.12 CHAPTER OUTLINE

Chapter 1: Orientation of the study

This chapter outlined the orientation of the study which covered the introduction, background of the study, problem statement, rationale of the study, study purpose and objectives, significance of the study, definition of key concept and paradigmatic perspective

Chapter 2: Literature review

This chapter covered the following aspects, definition of what child health entails, policies in relation to children s health which are Infant and young child feeding policy; National Integrated Early childhood development policy.

Chapter 3: Research methodology

This chapter outlines the qualitative research approach using explorative, descriptive and contextual design. This chapter also outlined study setting, research objectives; population; sampling of districts, clinics, nurses and caregivers; data collection methods; data analysis ,measures to ensure trustworthiness; and Ethical considerations.

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Chapter 4: Discussion of findings

This chapter presented the findings from both caregivers and nurses separately and were also discussed separately. Five themes with its sub-themes emerged.

Chapter 5: development of a strategy

This chapter focused on the development of the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe district. The six elements of practice theory outlined by Dickoff et al. (1968) was used to integrate the results of phase one of the study(the situational analysis) and gave the structure for the theoretical foundation. These are agents, recipients, context, process, dynamics and outcomes. SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five.BOEM action plan was used to develop the strategy.

Chapter 6: Validation of a strategy

This chapter focused on the validation of the strategy conforming to guidelines in Chinn and Kramer (2011). The criteria for strategy validation by Chinn and Kramer (2011) were selected because the strategy is based on empirical evidence. The validation of the strategy was based on the following five critical questions: How clear is the strategy? How simple is the strategy? How general is the strategy? How accessible is the strategy? How important is the strategy?

Chapter 7: Evaluation, conclusion, limitations and recommendations of the study

This chapter focus on the evaluation, limitation, conclusion and recommendation. The evaluation of this study was based on the purpose and the objectives as indicated in chapter 1 of this study. The strategy was evaluated by experts in research as described in chapter 7 of this study. Measures applied to ensure trustworthiness was evaluated. Nurses and caregivers recommended to be health educated about nutrition by different health care professionals, visits the clinic for growth monitoring, reach out to the community through home visits as an actions to be taken to facilitate the nutritional feeding practices.

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1.13 CHAPTER SUMMARY

This chapter outlined the introduction and background of the study, problem statement, research questions and objectives, and theories that guided the study. The impact of inappropriate feeding practices was indicated. Various researchers outlined when mothers introduce complementary foods and period of breastfeeding. Highlighted the brief description of research approach, population and sampling, ethical considerations, measures to ensure trustworthiness, plan for data collection, data analysis and outlined the chapters included in this study. The next chapter discussed the literature review.

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CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

De Vos (2005) and Grove, Burns and Gray (2013) define a literature review as a method that involves scrutiny and separation of research sources to get a picture of what was already researched regarding a certain phenomenon in order to identify gaps that exist in that situation. In addition, the results from preceding studies assist researchers in making studies acceptable, especially with regard to the problem statement, design, and data analysis process. Brink (2019) adds that the literature review should be structured around the key concepts of the research problem and posed questions. Thus, in the context of this study, the literature review included the following:

- Definition of what child health entails
- Policies relating to children's health

2.2 DEFINITION OF CHILD HEALTH

Child health is a state of physical, mental, intellectual, social and emotional well-being and not merely the absence of disease or infirmity. Healthy children live in families, environments, and communities that provide them with the opportunity to reach their fullest developmental potential (Health Workgroup, First Things First, 2007).

2.3 POLICIES CONCERNING CHILDREN'S HEALTH

2.3.1 Infant and young child feeding policy

The South African (IYCFP) (focusing on infants and children 0-60 months) was signed by the Minister of Health in February 2008 for primary health care clinics (PHC) aiming to provide infant feeding information to guide health care providers on how to address threats and challenges to infant feeding, and to promote optimal infant feeding practices (Bourne, Marais & Love, 2007). IYCFP recommends exclusive breastfeeding for six months and the introduction of nutritious complementary feeding from six

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months of age while continuing with breastfeeding for up to 2 years of age and above (PAHO/WHO, 2002; WHO, 2008; WHO/UNICEF/USAID, 2008). According to White et al., (2017) and Jordan, Siskind, Green, Whiteman and Webb (2009), breastfeeding and complementary food are proven to be nutritious in children since antibodies in breast milk protect children from illnesses. Although the IYCFP promotes breastfeeding for up to 2 years and beyond, White et al., (2017) revealed that the breastfeeding rate at 12 months dropped from 74% to 46% at 24 months, and one in three children between four to five months are already on complementary feeding. Factors that influenced the implementation of IYCFP in Rwanda were perceived lack of breast milk, exhaustion, and poverty (Ahishakiye et al., 2019).

2.3.2 National Integrated Early Childhood Development Policy

The National Integrated Early Childhood Development Policy (NIECDP) is child-centred and highlights the important role of parents and primary caregivers in providing care, support and upbringing of their children. In this context, there are several interventions under NIECDP to improve the nutritional status of children. These include food and nutritional support, access to health care, parenting support and capacity development, and child-centred social security (NIECDP, 2015).

2.3.2.1 Food and nutritional support

The government initiated Food-Based Dietary Guidelines (FBDGs) and the Integrated Nutrition Programme (INP) ensure that daily nutritional needs in children between zero to 59 months are met (NIECDP, 2015).

2.3.2.1.1 Food-Based Dietary Guidelines

FBDGs are currently available in 90 countries globally, seven in Africa, 17 in Asia and the Pacific, 33 in Europe, 27 in Latin America and the Caribbean, four in the Near East, and two in North America (Herforth, Arimond, Álvarez-Sánchez, Coates, Christianson & Muehlhoff, 2019). Erve et al., (2017) further add that 87% of these countries provide dietary guidelines with examples of food in each group. Although the food is grouped differently per country, all countries include starchy staple food in their guides (which differs per country), fruits and vegetables, dairy, and protein (also differs per country) (Herforth, 2019; WHO, FAO, 1996). Food groups were also recommended considering

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each country's economic, cultural, social and environmental condition (European Food Safety Authority, 2010; FAO/WHO, 2019). Benin, Kenya, Nigeria, Seychelles, and South Africa, with the exception of Namibia and Sierra Leone, recommend 1-2 servings of dairy per day, unlike in other countries where dairy is classified as its own food group (Erve et al., 2017; Herforth et al., 2019).

FBDGs were initiated by the Nutrition Society of South Africa (NSSA) for the general South African population in 1997 in association with the Department of Health, Directorate Nutrition, the Medical Research Council (MRC), and several other stakeholders from different United Nations agencies and food producer organisations in South Africa (Love et al., 2001). FBDGs aim to promote a diet that meets nutrient requirements. Furthermore, the South African National Health and Nutrition Examination Survey (NHANES) recommends this as the most appropriate tool to meet nutritional needs, taking our traditions and eating patterns into consideration, and educating the population to adopt healthier eating and activity patterns (Shisana et al., 2013). The Department of Health formally adopted the set of FBDGs in 2003; however, the guidelines were aimed at individuals older than seven years of age. Therefore, the Paediatric Food-Based Dietary Guidelines (PFBDGs) were initiated by the NSSA for children below the age of seven, and were published in maternal and child nutrition in 2007 as illustrated in Table 2.1 (Norman, Bradshaw, Schneider, Joubert, Groenewald, Lewin, ... South African Comparative Risk Assessment Collaborating Group 2007; Vorster, Badham & Venter, 2013).

In the Vhembe District, Mushaphi et al., (2017) evaluated the impact of FBDGs and found that most caregivers focused on three of 10 topics in the guideline, i.e. starchy food, protein and vegetables. This is contrary to the South African Food Guide developed in 2012 (Vorster, Badham & Venter, 2013), which displays seven food groups to be eaten regularly irrespective of age, starchy foods, beans, peas, lentils and soya foods Fish, chicken, meat, milk, maas, yoghurt, eggs and drink six to eight glasses of clean, safe water. Figure 2.1 represents the South African Food Guide (Department of Health (2012).

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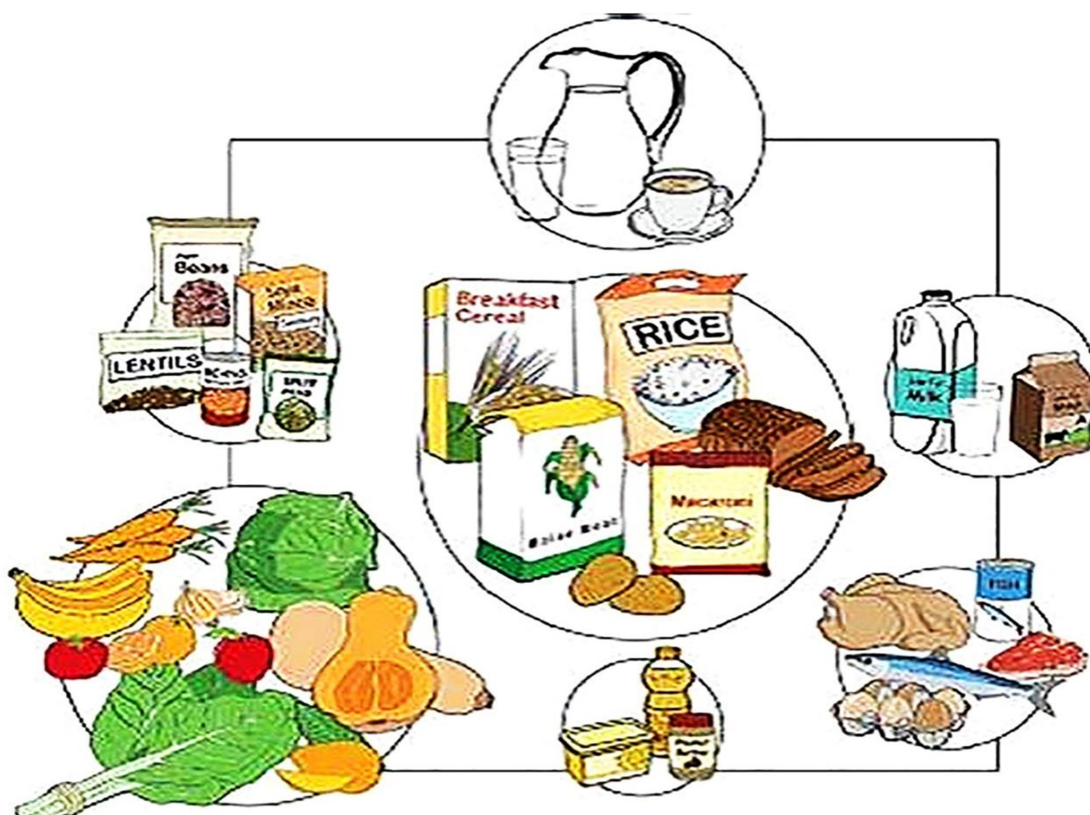

Figure 2.1: The South African Food Guide

The food list in PFBDGs is derived from FBDGs and the South African Food Guide to meet the nutritional needs of children under seven years of age, as indicated in Table 2.1 (The Food-Based Dietary Guidelines for South Africa, 2013).

Table 2.1: Paediatric Food-Based Dietary Guidelines

0-6 months
Give only breast milk, and no other foods or liquids, to your baby for six months of life
6- 12 months
• At six months, start giving your baby small amounts of complementary foods, while continuing to breastfeed for two years and beyond. • Gradually increase the amount of food, the number of feeds and variety as your baby gets older. • Feed slowly and patiently and encourage your baby to eat, but do not force him or her. • From six months of age, give your baby meat, chicken, fish or egg every day, or as often as possible.

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<table>
<tr><td>

- Give your baby dark green leafy vegetables and orange-coloured vegetables and fruit every day.
- Start spoon-feeding your baby with thick foods, and gradually increase the consistency of family food.
- Hands should be washed with soap and clean water before preparing or eating food.
- Avoid giving tea, coffee and sugary drinks and high-sugar, high-fat salty snacks to your baby

</td></tr>
<tr><td>12-36 months</td></tr>
<tr><td>

- Continue to breastfeed for two years and beyond.
- Gradually increase the amount of food, the number of feedings and variety as your child gets older.
- Give your child meat, chicken, fish or egg every day, or as often as possible.
- Give your child dark green leafy vegetables and orange-coloured vegetables and fruit every day.
- Avoid giving tea, coffee and sugary drinks and high-sugar, high-fat salty snacks to your child.
- Hands should be washed with soap and clean water before preparing or eating food.
- Encourage your child to be active.
- Feed your child five small meals during the day
- Make starchy foods part of most meals.
- Give your child milk, maas or yoghurt every day

</td></tr>
<tr><td>3-5 years</td></tr>
<tr><td>

- Enjoy a variety of foods.
- Make starchy foods part of most meals.
- Lean chicken or lean meat or fish or eggs can be eaten every day.
- Eat plenty of vegetables and fruit every day.
- Eat dry beans, split peas, lentils and soya regularly.
- Consume milk, maas or yoghurt every day.
- Feed your child regular small meals and healthy snacks.
- Use salt and foods high in salt sparingly.
- Use fats sparingly. Choose vegetable oils rather than hard fats.

</td></tr>
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- Use sugar, food and drinks high in sugar sparingly.
- Drink lots of clean, safe water and make it your beverage of choice.
- Be active!
- Hands should be washed with soap and clean water before preparing or eating food.

2.3.2.1.2 Integrated nutritional programmes

In 2013, the Food and Agricultural Organisation (FAO) in India introduced the National Food Security Act (NFSA) as a poverty alleviation programme to ensure that quality food was accessible at affordable prices. As a result, both eligible rural and urban populations received food grains (rice, wheat, coarse grains) at subsidised prices (Sengupta & Mukhopadhyay, 2016). However, Sengupta and Mukhopadhyay (2016) reveal that the act was not satisfactorily implemented because not even half of the eligible population received the food grains. The same applied to other interventions such as the Village Child Development Centres (VCDC), which was supposed to provide the centres with medical care and nutritious food, but failed due to lack of funds (Simcox & McClain, 2013).

In 1994, South Africa introduced the Integrated Nutrition Programme (INP) as a way to address malnutrition. In 2010, INP was renamed the Nutritional Therapeutic Programme (NTP) as it is also a measure to address malnutrition (Iversen, Marais, Du Plessis & Herselman, 2012). There are many feeding schemes under this programme, such as Primary School Nutrition Programme (PSNP), community programmes and food parcels (Iversen et al., 2012). Moreover, Michaelsen et al., (2009) indicated that most children in South Africa are fed food richly in starch as maize because of its affordability.

The aim of the INP is to provide children with nutritious food at an early stage in life to promote growth and development, such as ready-to-use therapeutic food (RUTF), Philani (soft porridge) (Department of Health, Republic of South Africa, 2012). Maternal nutrition and infant and young child feeding are two of the eight INP key performance areas (Behr, 2008). In a study in Mangaung Free State, only 9.2% of the malnourished children who started with the INP exited the programme at a normal weight-for-age, and 3.6% improved from severe malnutrition to underweight-for-age

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(Brits et al., (2017). Furthermore, clinics at Mangaung did not follow INP guidelines strictly as not even one of the children measured MUAC.

2.3.3 Health care

The NIECDP includes providing young children and pregnant women with basic health care. For example, pregnant women should be able to access antenatal care and the ability to prevent and treat common illnesses in children (National Integrated Early Childhood Development Policy, 2015).

2.3.3.1 Mother Child Health booklet

The Mother, Child Health and Nutrition booklet (2014) has important information to improve the health of pregnant mothers, children and the family. The book is given to pregnant and breastfeeding mothers during antenatal and child health clinics. It includes information about the care of the mother and child after delivery as well as feeding practices. It aims to teach mothers about the importance of breastfeeding within an hour after birth, good attachments, and the dangers of giving food to babies below six months. In 2006, Kenya combined HIV services into Maternal Child Health (MCH) services.

The services provided at six weeks include family planning, breastfeeding information, and counselling for the mother and child growth monitoring and immunisation schedule (Central Bureau of Statistics, Ministry of Health, Kenya Medical Research Institute, National Council for Population and Development, ORC Macro, Centers for Disease Control and Prevention, 2004). Before the MCH booklet was developed, PCR testing was low; however, after 2006, PCR testing increased dramatically (Mudany et al., 2015). It has been scientifically proven that MCH booklets in Asian countries reduce maternal and child mortality (Nakamura, 2010).

The Minister of Health and Wellness, Dr Hon Jagutpal (2021), launched the Maternal Child Health (MCH) handbook on 24 February 2021 at the Caudan Arts Centre, Port Louis, in Mauritius to monitor and record important data during pregnancy and for child care to reduce morbidity and mortality in children under five years as well as to reduce perinatal and maternal morbidity rate. The MCH handbook also includes information regarding the foods to eat during pregnancy and breastfeeding. The foods should

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include: starchy foods, beans, peas, lentils and soya foods, fish, chicken, meat, milk, maas, yoghurt, eggs, and drink six to eight glasses of clean, safe water as indicated in Figure 2.2 (The Mother, Child Health and Nutrition booklets, 2014) Women use the MCH handbook as a guideline to prepare food supplement, Rukminto, (2016).

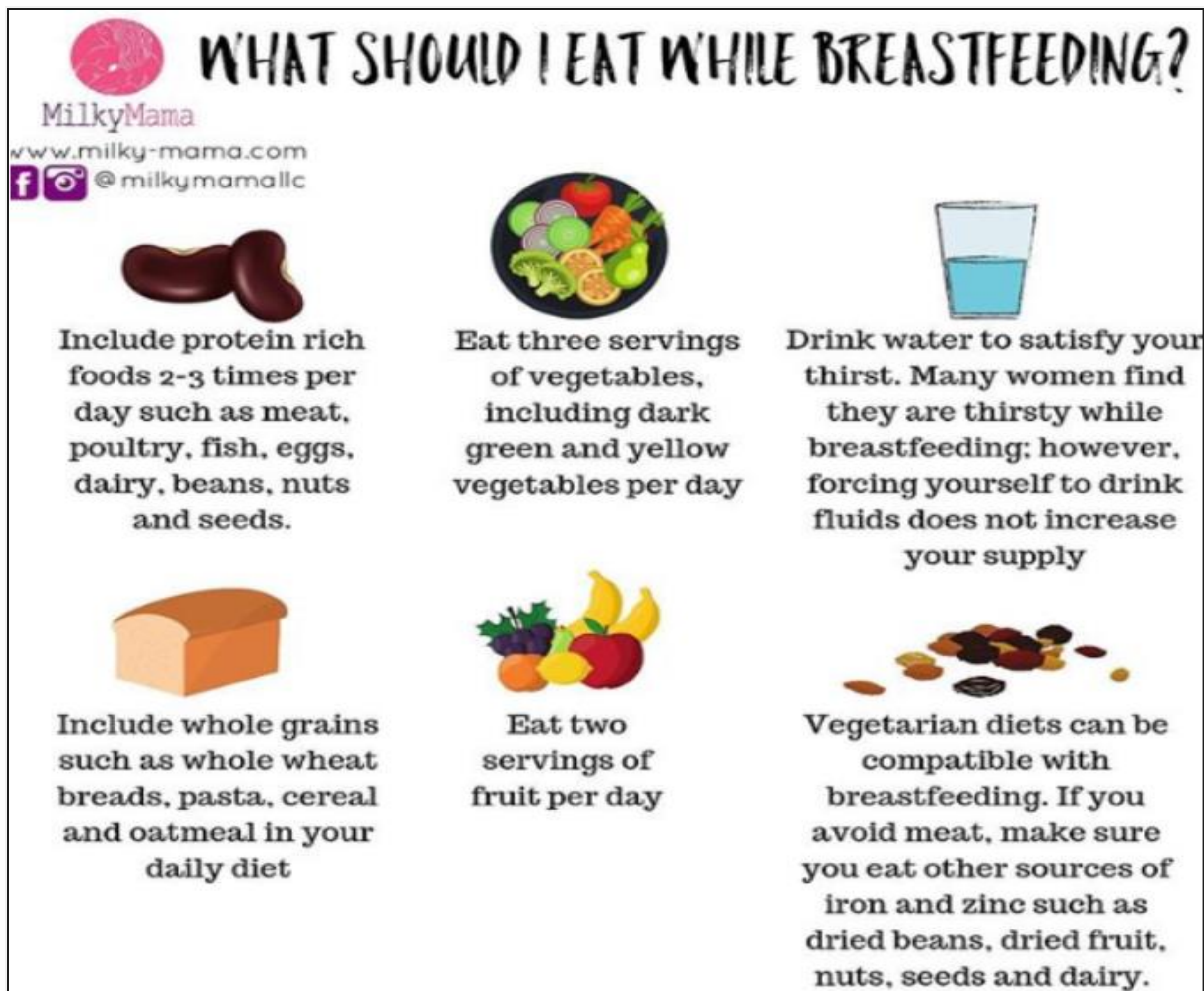

Figure 2.2: What should I eat when pregnant

2.3.3.2 Integrated Management of Childhood Illness

Globally, over 80% of children under the age of five die due to conditions such as malnutrition (UNICEF & WHO, 2015). The Integrated Management of Childhood Illness (IMCI) was invented in the mid-1990s for children between zero and 59 months for growth, monitoring, promotion and control of micronutrient deficiencies such as vitamin A, iron, iodine and zinc deficiencies that are considered effective in stopping malnutrition at the primary health care level. (UNICEF & WHO, 2015). The IMCI also promotes proper care, improves nutrition, and prevents illnesses in the home setting

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(IMCI, 2014). The Department of Social Development (2008) shows that the appropriate management of severe acute malnutrition and complementary feeding of vitamin A and zinc reduce the child mortality rate by a quarter and stunting by a third when implemented at a larger scale.

The Philippines was among the first countries in the WHO-Western Pacific Region to adopt the IMCI programme in 1996 (World Health Organization, 2005). However, health care workers in the Philippines highlighted that the programme is time-consuming. On the other hand, patients prefer antibiotics to non-medical solutions (Reñosa et al., 2021). This is contrary to Kruger, Heinzel-Gutenbrunner and Ali (2017), who indicate that it takes only seven to 12 minutes for nurses to assess, treat and classify children under the age of five using IMCI. In a study conducted in central Asia and Europe, Carai et al., (2019) found that IMCI is not fully used because parents believe the quality of care at primary health care level is compromised.

Nigeria also adopted IMCI in 1996; however, the under-five mortality rate escalated from 128 per 1000 births to 132 per 1000 births between 2013 and 2018, [National Population Commission (Nigeria) & ICF, 2018]. According to Amachree and Eleke (2022), the justification for this rate was that health care workers in Port Harcourt, Nigeria were not motivated enough to implement IMCI guidelines. Similarly, the Ethiopian study indicates that IMCI training updates motivate health care workers to adhere to IMCI guidelines 2.7 times more than those not updated (Rahman, 2021). On the contrary, study findings in South Sudanese revealed that adherence to IMCI guidelines is not associated with training updates but with health care workers' level of education (Lange & Mwisongo, 2014). Meanwhile, in Tanzania, nurses indicate that increased workload inhibits the implementation of IMCI as it is time-consuming (Kiplagat, Musto, Mwizamholya & Morona, 2014).

In South Africa, Pandya, Slemming and Saloojee (2018) revealed that the effectiveness of the use of the IMCI programme is affected by the rotation of IMCI-trained nurses to other services, such as chronic maternity than focusing on child growth monitoring and promotion. In addition, Mupara and Lubbe (2016) pointed out that the lack of a specific budget allocation for IMCI training in South Africa is linked to limited service provided. Similarly, in South Africa, Pandya et al., (2018) reported that most service inadequacies were linked to the lack of a specific budget allocation for

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IMCI. According to Meno, Makhado and Matsipane (2019), factors that prevent nurses from Mafikeng PHC clinics include shortage of staff (which makes it difficult to implement IMCI as it is time-consuming) and a lack of IMCI booklets. According to Tshivhase, Madumo and Govender (2020), in Limpopo, nurses find the implementation of IMCI to be time-consuming than a traditional consultation.

2.3.3.3 Parenting support and capacity development

Parents are the primary promoters of children's development and wellbeing, these can be done by providing maternal and child support through mentor mothers and regular visits to the clinic for weight monitoring and development (National Integrated Early Childhood Development Policy, 2015).

2.3.3.4 Mentor Mother Programme

The Mentor Mother Programme (MMP) is a primary health care approach introduced by the government to improve families' lives by prioritising mothers and children. Mentor mothers guide mothers to improve their nutritional status and prevent low birth weight (Limpopo MMP, 2014). Kenya introduced MMP in 2012, aiming at HIV and acquired immune deficiency syndrome (AIDS) in paediatrics (National AIDS and STI Control Programme, 2014). In 2014, the focus was no longer on HIV and AIDS only, but on ensuring that holistic care of maternal and child well-being and nutrition are met (Schmitz, Scheepers, Okonji & Kawooya, 2015).

Although the programme was effective, served its purpose, and ensured viral load suppression, mothers in Kenya did not want mentor mothers to wear their identifying cards or HIV attire (DiCarlo et al., 2018; Wanga et al., 2019). Introducing mentor mothers in health care facilities improved the health condition and nutritional status of both mothers and children. HIV-exposed children were tested PCR (Polymerase chain reaction) per the schedule and reinforced adherence to treating HIV-positive mothers (Gaitho et al., 2021). HIV-positive mothers and their exposed children in the Ugandan MMP continued with their HIV care and treatment more than those who were not (Igumbor et al., 2019).

Okusanya et al., (2022) state no intervention; thus, including the MMP was effective in increasing HIV-infected infants' identification. On the contrary, a study by Carlucci

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et al., (2022) in Mozambique revealed that mentor mother services increased the number of HIV testing, increased the number of suppressed viral load, and minimised the number of PCR positive results in exposed children. Similarly, Odiachi et al., (2021) posit that mentor mothers in Nigeria played an essential role in providing pregnant women with relevant health nutritional information, HIV treatment, adherence and continuity of care.

In the Eastern Cape Province of South Africa, MMP was found to be effective as they reduce mother-to-child transmission by encouraging HIV testing during pregnancy and early exclusive breastfeeding (Hamilton, le Roux, Young & Södergård, 2020). Similarly, South Africa is one of the countries that improved ART adherence and reduced workload on health professionals through MMP (McCarthy et al., 2017; Mothers2Mothers, 2015).

2.3.3.5 Child growth monitoring (Road to Health Booklet)

The Road to Health Card (RtHC) has been an essential tool for growth and monitoring in children under the age of five years in South Africa Since 1973. However, RtHC was since replaced by the Road to Health Booklet (RtHB) in 2011. The RtHB added several measures to assess a child's growth, including weight-for-age, which is used to assess whether the child is underweight or severely underweight, and weight-for-height, which is useful when the child's age is unknown to assess whether the child is wasted or severely wasted, and height-for-age, which is useful to assess whether the child is tall or stunted (WHO, 2018; Win & Mlambo, 2020). Weight-for-age seems to be the most used measure in Africa to assess a child's growth (Sulley, Abizari, Ali, Peprah, Yakubu, Forfoe & Saaka, 2019; WHO, 2018).

According to Win and Mlambo (2020), nurses in the West Rand District of the Gauteng Province, South Africa, focused more on the weight-for-age growth chart. Apart from the child's weight, which is measured monthly and recorded in the RtHB, Mid-Upper Arm Circumference (MUAC) is one of the measures to determine the growth of children aged from six months to five years old during a visit to the clinic (WHO, 2018). A study by Koetaan, Smith, Liebenberg, Brits, Halkas, Van Lill and Joubert (2018) in Mangaung, Free State, South Africa, found that only 11.7 % of children were measured for MUAC. This is supported by Win and Mlambo (2020), who revealed

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that the number of children measured for MUAC was not good enough. The RtHB also provides the direction of health promotion messages (see Table 2.1). However, Jonker and Stellenberg (2014) and Blaauw (2017) indicate that those messages are of no use since there is no strategy in place to ensure the implementation of RtHC by nurses. Furthermore, Win and Mlambo (2020) found that only 22% of the well child visits section was completed.

The RtHB contains health promotion feeding messages to capacitate the caregiver's nutritional knowledge. A study by Kitenge and Govender (2013) in Makhado, Limpopo Province, found that nurses focused more on the immunisation section than any other section in the booklet. This is supported by Naidoo, Avenant and Goga (2018), who revealed that growth monitoring, immunisation and vitamin A were completed in RtHB than length-for-age, weight-for-length and head circumference. Mudau (2017) further reveals that nurses at selected clinics of the Makhado Municipality incorrectly record the RtHB, resulting in them failing to advise the caregivers accordingly regarding the child's development and nutrition.

2.3.3.6 Child-centred social security

Poverty is one of the contributing factors to malnutrition; therefore, different countries have developed programmes to secure children's nutritional needs through the Conditional Cash Transfer (CCT) Programme or the Unconditional Cash Transfer (UCT) to improve children's health (Lagarde, Haines & Palmer, 2009), and Child Social Grant (CSG) (The South African Department of Social Development, 2004). Cash transfers are still common to this date to secure nutritional needs in middle-income countries and the WHO regions of the Americas (especially Latin America) and South-East Asia, and recently introduced in low-income countries and the WHO in African, European, Eastern Mediterranean and Western Pacific regions (Garcia, 2012). The CCT provides assistance in the form of money to the population with low socio-economic status or poor households to meet their nutritional needs (Lagarde et al., 2009). In 2003, the Bolsa Familia Programme (BFP) in Brazil launched a CCT, which transfers cash to poor households depending on their monthly income. The under-5 mortality rate resulting from malnutrition decreased gradually due to CCT (Rasella, Aquino, Santos, Paes-Sousa & Barreto, 2013).

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Similarly, in Ecuador, the CCT programme, such as Bono de Desarrollo Humano (BDH) reduced hospitalisation in children under the age of five (Moncayo, Granizo, Grijalva & Rasella, 2019). While other CT programmes aim to reduce poverty and improve human finances, some aim to improve health and nutritional issues (Fernald, Kagawa, Knauer, Schnaas, Guerra & Neufeld, 2017). UCT is the financial assistance granted to reduce poverty without imposing pressure on the beneficiary. According to Pega, Liu, Walter, Pabayo, Saith & Lhachimi (2017), the effectiveness of these CCTs and UCTs remain ambiguous.

The South African Department of Social Development (2004) introduced the CSG to eradicate malnutrition in South African children. According to Agüero, Carter & Woolard (2007), CSG provides significant nutrition in children's early years. However, Khosa (2017) found that the CSG is not used in the best interest of the children's nutritional needs; instead, caregivers use it for their personal gains. Furthermore, the introduced Child Support Grant lacks the strategy to ensure that the grant is used for the nutritional needs of the child. Therefore, despite these programmes to address nutritional feeding practices and promote growth and development, a strategy to implement these nutritional guidelines for caregivers of children in select rural communities of the Vhembe District are needed.

2.4 CHAPTER SUMMARY

This chapter gave an overview of child health programmes and policies that are currently in place, namely nutritional education that nurses provide (guided by IYCFP); the right to adequate food and nutrition in NIECDP, which include food and nutritional support (integrated nutritional programmes and FBDGs); access to health care (mother-child health booklet and IMCI); parenting support and capacity development; [MMP, child growth monitoring and child-centred social security (cash transfer programme and CSG)] to prevent any form of malnutrition, and promote growth and development. The next chapter provides a detailed discussion of the study's research methodology.

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CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 2 of this study outlined the guidelines and interventions in place to combat malnutrition. This chapter address the study's research approach, population, sampling procedures, data collection methods, data analysis, ethical considerations, and measures to ensure trustworthiness that were adhered to in the study.

3.2 RESEARCH APPROACH

The qualitative approach is a form of social action that focuses on how people interpret, and make sense of their experiences to understand the social reality of individuals (Zohrabi, 2013). In other words, the qualitative approach is inductive in nature, and the researcher generally explores meanings and insights in a given situation (Levitt, Motulsky, Morrow & Ponterotto, 2017). A qualitative approach using exploratory, descriptive and contextual design was adopted to address the objectives of this study.

The study was conducted in two phases. Phase one was a situational analysis whereby data was collected through individual interviews with nurses regarding the type of information they give provide regarding nutritional feeding practices to caregivers, the kind of food caregivers, and the contributory factors to the kind of food they give to children under the age of five years. Phase two included the development of a strategy, as indicated by the nurses and caregivers, to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years. A summary of the research approach followed in this study is provided in Figure 3.1.

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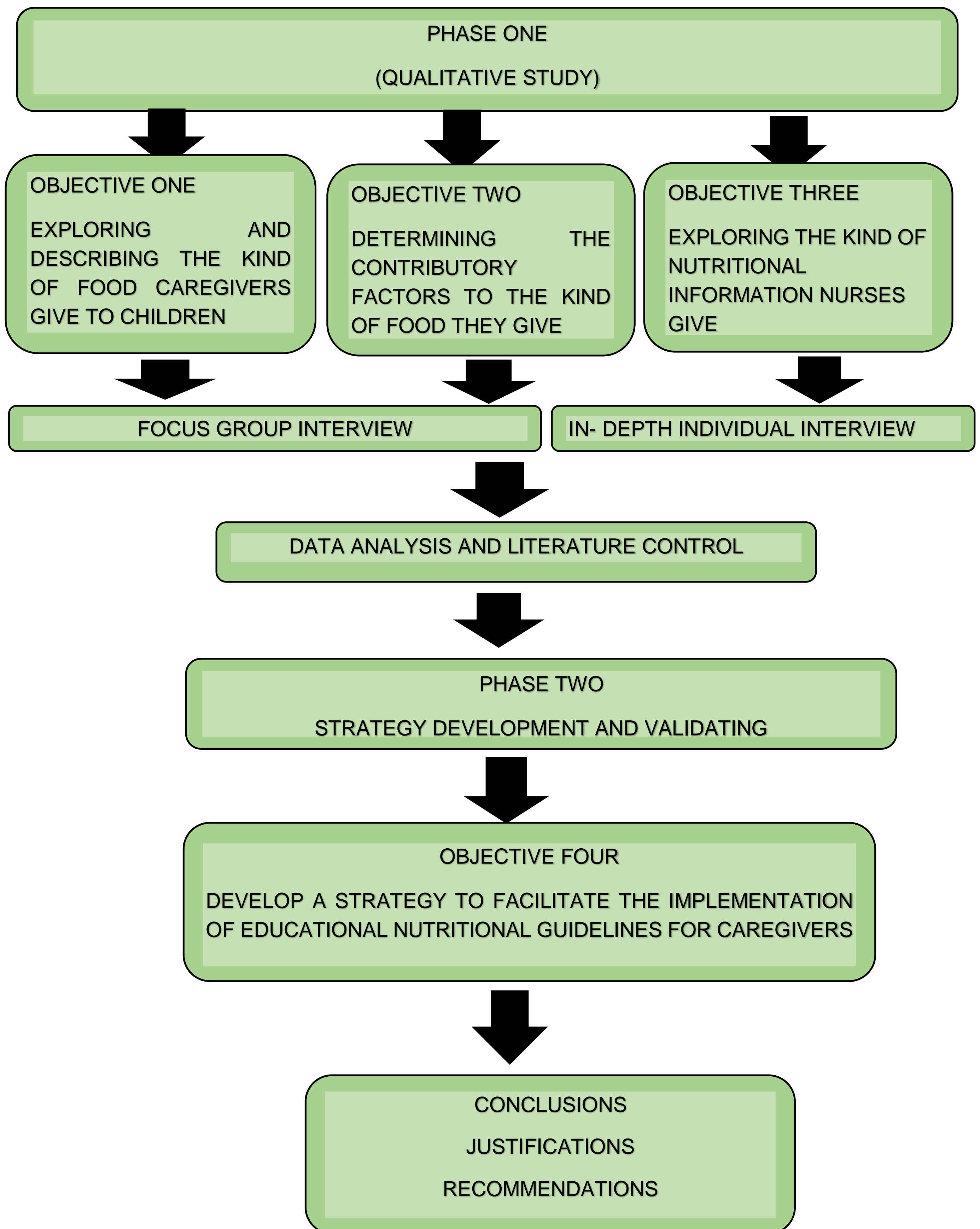

Figure 3.1: Research process

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Phase one: Situational analysis

A qualitative approach using an explorative, descriptive and contextual design was used for this study. The study setting, population, sampling method, ethical considerations and measures to ensure trustworthiness were discussed. Focus group interviews were conducted with caregivers of children under the age of five years with malnutrition to explore and describe the kind of food they give children and the contributory factors thereof.

Individual interviews were conducted with nurses focusing on child growth monitoring to explore and describe the information they provide to caregivers regarding nutritious feeding practices. Data collected during individual interviews were recorded using a voice recorder and analysed according to Tesch's eight steps of data analysis (Creswell, 2013). The results were also discussed against the relevant literature.

- **Qualitative approach**

Therefore, a qualitative approach was adopted because it enabled the caregivers to narrate the type of food they give as well as the factors contributing to the kind of food they give to their children daily. Moreover, the nurses could narrate the information they provide to caregivers regarding nutritional feeding practices, which could not be done through questionnaires. In addition, the qualitative approach gave the researcher an opportunity to probe and make follow-up questions.

- **Exploratory design**

Exploratory research seeks to ask" why?" and "how?" questions. It is conducted to discover and report some relationships among different aspects of the phenomenon under study, as indicated by (Grey, 2014)

The study objectives were only achieved through exploratory design. Firstly, rapport was established and more information explored, so the researcher gained a broad understanding regarding the kind of food they give to children under the age of five years as well as contributory factors to the kind of food they give. The kind of information nurses give to caregivers of children under the age of five years regarding nutritional feeding practices were explored. Literature relevant to nutritional feeding practices and theory guiding the study and programme was explored. This study was

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guided by three theories to explore the kind of food caregivers give to children under the age of five years, explore the factors contributing to the food they give and to explore the kind of information nurses give regarding nutritional feeding practices to caregivers of children under the age of five which were as follows: OSCT which guided the study.The six elements of practice theory outlined by Dickoff et al. (1968) gave the structure for the theoretical foundation. SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five.BOEM action plan was used to develop the strategy and Chinn and Krammer (2011), theory validated the strategy and literature control.

- **Descriptive design**

A descriptive design, as defined by Offredy and Vickers (2010), describes a situation by looking at it from different angles and analysing why certain events occur in a particular manner. Data about the study were gained through in-depth individual interviews and focus group interviews where caregivers gave detailed descriptions about the kind of food caregivers give children; the contributory factors to the kind of food they give; and nurses described the type of information they provide to caregivers regarding nutritional feeding practices. Furthermore, the actions needed to facilitate the implementation of educational nutritional guidelines were described by both nurses and caregivers.

- **Contextual design**

Contextual studies focus on specific events in a naturalistic setting, meaning that the interview will be cobducted in a setting free from manipulation (Burns & Grove, 2013). This study was contextualised according to the topic, purpose, population, and setting. This research study was conducted in a naturalistic context in the clinics where nurses were working with children under five. Caregivers of children with malnutrition conducted group interviews in the clinics where the growth monitoring of their children was conducted. The focus was only on caregivers of children under five with malnutrition, and nurses working with child growth monitoring (immunisation) in the Vhembe District, Limpopo Province. The strategy would be validated on beneficiaries of the strategy.

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3.3 STUDY SETTING

This study was conducted in the Vhembe District of the Limpopo Province. The Limpopo Province consists of five districts, of which the Vhembe District covers 18,569 square kilometres and has a population of 1,3 million people. In addition, the Vhembe District comprises four local municipalities, namely Makhado, Thulamela, Mutale and Musina. The study was conducted with caregivers of children under the age of five with malnutrition and nurses working with caregivers of children under the age of five in the Makhado and Musina municipalities. The Vhembe District has 115 fixed primary health care facilities (PHCF), eight community health centres (CHC) and 18 mobile clinics. Fixed primary health care facilities and community health centres (CHC) render comprehensive health services, whereas mobile clinics render primary health care in areas more than five kilometres from the clinic. Diarrhoea, malnutrition and lower respiratory infection remain the top three causes of death in children under five years of age in the Musina and Makhado local municipality clinics. This community's health belief system is a mixture of traditional medicine, spiritual healing, western medicine and indigenous knowledge (Vhembe District Health Plan 2018/19 – 2020/21).

3.4 STUDY POPULATION

Population refers to the set or group of all the units on which the findings of the research are to be applied. In other words, population is a set of all the units which possess variable characteristic under study and for which findings of research can be generalised, (Shukla & Satishprakash, 2020).In this study population was all caregivers of children with malnutrition at Vhembe district in Limpopo province.

3.4.1 Target population

The target population is the group of individuals that the intervention intends to conduct research in and draw conclusions from. The target population is the total group of individuals from which the sample might be drawn, (McLeod, 2019).

Target population was all children with malnutrition under the age of five years and nurses working with child growth monitoring in selected clinics at Makhado and Musina local municipalities in the Vhembe district of the Limpopo Province.

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3.4.2 Sampling

The process of selecting sample from population is called sampling. A method used to select a sample is called sampling method, (Shukla & Satishprakash, 2020). Sampling is described as the process of selecting a sample from a population to obtain information regarding a phenomenon in a way that represents the population (Brink et al., 2016). In this study, sampling was done in three phases, namely; sampling of the district, sampling of the clinics, and sampling of the participants.

- **Sampling of the district**

The Vhembe District was purposively sampled because of its high fatality rate of children under five years with severe acute malnutrition.

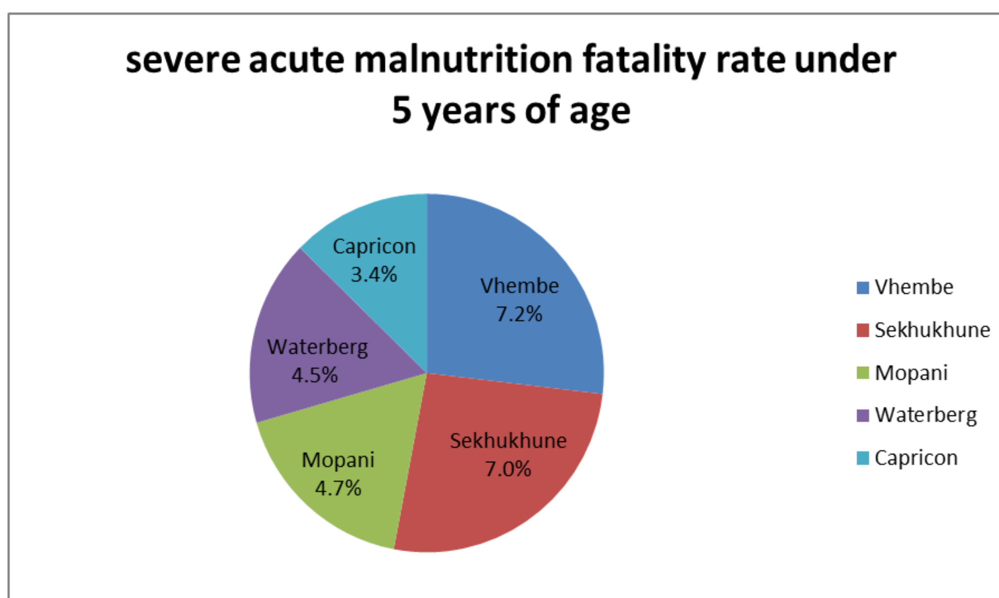

Figure 3.2: Fatality rate of children under five years with severe acute malnutrition (DHB, 2017/18)

- **Sampling of clinics**

Makhado and Musina local municipalities have 10 fixed clinics and one health centre; for this study, three clinics with a high malnutrition rate in children under the age of five years from each municipality were purposefully sampled. The District Health Information System (DHIS) was the source of the top six clinics.

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The sampling of the participants was done in two phases: sampling of the caregivers and sampling of the nurses.

- **Sampling of the caregivers**

Non-probability convenience sampling was used to select caregivers of children under the age of five with malnutrition. Convenience sampling is the sampling method that is used because participants are easily accessible and readily available (Polit & Beck, 2014). In each clinics, children with malnutrition are scheduled for dietician, on this date while waiting for dietician, researcher recruited the caregivers and the aim of this study was informed to the caregivers. Caregivers consented to participate to the study verbally. Sample consisted of 38 caregivers of children with malnutrition.

- **Sampling of the nurses**

Convenience sampling was used to select nurses working with child growth monitoring.The researcher visited the clinics and nurses who were on duty and allocated for immunisation or child growth monitoring were conveniently selected and recruited to participate in the study. The aim of the study was explained. The sample consisted of 13 nurses.

The inclusion criteria

- ➢ Only caregivers of children under five years with malnutrition (aged 18 and above) consented to participate in the study.
- ➢ Only nurses allocated for child growth monitoring and immunisation daily to children under the age of five who consented to participate in the study
- ➢ Only clinics in Makhado and Musina municipalities in the Vhembe District with a high malnutrition rate.

- **The exclusion criteria**

- ➢ Caregivers with the following details were excluded from the study: those under the age of 18, those not caring for children with malnutrition, and those not willing to participate.

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- Nurses who are permanently allocated in maternity, chronic and minor ailments were excluded.
- Other municipalities in the Vhembe District were excluded.

3.4.3 Sampling size

The sample size for this study was 38 caregivers of children under the age of five years with malnutrition and 13 nurses focusing on child growth monitoring which was determined by data saturation.

3.5 Pre testing

Prior to data collection, the researcher selected one focus group of caregivers of children with malnutrition (consisting of five caregivers) and one nurse working with child growth monitoring who did not form part of the study. They were interviewed to check the researcher's probing skills and to ascertain whether the research questions were adequately phrased. The focus group interview of five was recorded and transcribed (see APPENDIX G). The promoters checked the alignment of the questions and the topic and found that one of the questions was irrelevant and that the probing was inadequate. Moreover, she did not comply with measures to prevent Covid-19, and the questions did not move to phase two of the objective. Individual interview number one of the nurses was recorded and transcribed (see APPENDIX G3), and the promoters identified that compliance with Covid-19 measures was not included, and probing was poor. The second interview for caregivers and nurses was done, and the promoters noted an improvement in the probing. The Covid-19 measures complied and the objectives were included.

3.6 ETHICAL CONSIDERATIONS

In this study, the following ethical considerations were observed, and permission to conduct this study was sought from the relevant parties.

Permission to conduct the study

- *The University of Venda Research Ethics Committee.* A proposal was presented to the Higher Degree Committee of the School of Health Sciences (UHDC) (see APPENDIX A).

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- The University of Venda provided an ethical clearance certificate and permission to conduct the study (see APPENDIX B).
- The Limpopo Province Department of Health Research Ethics Committee (see APPENDIX C).
- The Department of Health in the Vhembe District (see APPENDIX D).
- Participant's information and consent (see APPENDICES 1E & 2E).

The right of the participants was protected by the following:

- **Principle of beneficence**

The researcher secured the well-being of the participants, who have the right to protection from discomfort and harm, whether physical, emotional, or spiritual (Brink, 2017). In this study, no sensitive words were used, and the participants were not forced to participate or answer any questions they were uncomfortable with.

- **Principle of justice**

Brink (2017) refers to the principle of justice as the participant's right to fair selection and treatment. Participants were selected fairly and conveniently. The purpose of the study was briefly explained to the participants. Participants gave their verbal consent freely without coercion or harassment and were not manipulated. Participation was voluntary.

- **Right of anonymity and confidentiality**

Data collected was never shared with anyone outside the research team, and the research records were kept away and could not be accessed by unauthorised persons. The names or identities of nurses were not revealed; instead, codes were used to protect the names of the participants.

To maintain anonymity and confidentiality in focus group interviews, caregivers were requested not to share names, identities, or data provided with any person outside the group but to keep the information to themselves.

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- **Compliance with Covid-19 measures**

Each participant was screened for any signs of Covid-19 through temperature monitoring before the interview. Both the researcher and all participants wore clean masks to cover both their noses and mouths for protection. Social distancing was maintained throughout the interview. Moreover, it was ensured that the room was well-ventilated by opening the window.

3.7 MEASURES TO ENSURE TRUSTWORTHINESS

According to Pilot and Beck (2014), trustworthiness refers to the degree of confidence in data, interpretation and methods used to ensure the quality of a study. In addition, credibility, dependability, conformability and transferability were followed as the criteria outlined by (Guba & Lincoln, 1994).

- **Credibility**

Credibility refers to confidence in the truth of the data and findings (Polit & Beck, 2014). Credibility establishes whether or not the research findings represent plausible information drawn from the participant's original data and is a correct interpretation of the participants (Lincoln & Guba, 1985).

In this study, credibility was achieved by ensuring that the population was accurately identified and knowledgeable about the phenomenon being studied. Credibility was ensured through prolonged engagement and member checking, as discussed below:

- Prolonged engagement

Prolonged engagement means staying in the field until data saturation has been reached to gain an in-depth understanding of the phenomenon and building trust and rapport between the researcher's views, culture and experiences (Brink, 2017). Bitsch (2005) indicates that the researcher needs to immerse him or herself in the participants' world in order to gain an insight into the context of the study.

Prolonged engagement participants allow identifying recurring patterns, themes, and values to validate perspectives. The participants were telephonically engaged during the process of making initial and follow-up appointments. Furthermore, the initiation phase was conducted during which the participants introduced themselves to one

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another in order to establish rapport. The participants were then briefed about the research questions, their purpose and their significance.

- Member checking

Member checking means the researcher provides feedback to study participants about emerging interpretations and obtains their realities (Polit & Beck, 2014). In this study, member checking was done throughout the interview by deliberate probing and paraphrasing. At the end of each interview, the researcher summarised what the participants said during interviews. The voice recorder was played back to the participant to validate what they had said. The preliminary findings were discussed with the participants. After the data were fully analysed, the researcher returned to the participants for a final member check to determine if what was transcribed was what they meant during the interviews.

- **Dependability**

The concept of dependability refers to the stability of the data over time and over the conditions of the study (Polit & Beck, 2014). According to Tobin and Begley (2004), dependability involves participants evaluating the findings and the interpretation and recommendations of the study to ensure they are all supported by the data received from the study's informants.

In this study, data was co-coded by the promoter and co-promoter, who are research experts in nursing.

- **Confirmability**

Confirmability is the neutrality or the degree findings are consistent and could be repeated (Polit & Beck, 2014). It is concerned with establishing whether the data represent the information provided by the participants, and the interpretations of the data must be solely what the participants have said, and not fuelled by the researcher's imagination (Brink, 2017).

Confirmability was ensured by playing the tape-recorded interview to the participants to check if what they said is what they meant. The study's findings solely come from the data provided by the participants.

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- **Transferability**

Transferability refers to the ability to apply the findings in other contexts and setting to other participants (Brink, 2017). For example, the findings of the study will only be transferable if a similar study is done in a population whose geographical background and characteristics are the same as the population studied. The researcher cannot specify the transferability of the findings; she can only provide sufficient information and description that the reader can use to determine whether the findings are applicable to the new situation (Lincoln & Guba, 1985). The study setting and context information of participants were described in detail. The research methodology and theories guiding the study were also described.

3.8 PLAN FOR DATA COLLECTION

Data collection is the process of gathering and measuring information on variables of interest in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes (Kabir, 2016).

- **Preparation**

Caregivers were visited on the day they were scheduled to visit a dietician. The researcher explained the study to them, requested their consent to participate, and set a date and time suitable for them at the clinic.

Nurses were visited at their clinics and recruited to participate in the study as their focus was on growth monitoring in children under the age of five. The researcher requested their consent and set a date and time suitable for them at the clinic.

Participants were reminded about the precautions to be taken during Covid-19. They were informed that they were not forced to participate in this study but did so of their own free will and that they had the right to withdraw at any stage of the study, and that if they did so, this would not affect their services provided in their respective clinics or their working relationship in case of nurses. The participants were informed that they would not be paid for their participation. It was explained that an audio recorder would be used to gather all the information provided and that the recorder could stop the recorder at any time until they were comfortable for the researcher to continue with the recording.

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- **Data collection instrument**

Data were collected through in-depth individual interviews with nurses and focus group interviews with caregivers using audio tape to gather all the information during the interview.

- **Caregivers**

Data were collected through focus group interviews between the researcher and the caregivers of children under the age of five years with malnutrition. A focus group interview is a qualitative technique for data collection. A focus group is "a group comprised of individuals with certain characteristics who focus discussions on a given issue or topic" (Anderson, 1990). This data collection method encouraged the caregivers to open up and speak more about the kind of food they give to their children and what caused them to give such food. A focus group consists of at least five to seven caregivers. Measures to prevent Covid-19 were adhered to throughout the interview by monitoring temperatures and sanitising before sitting in chairs arranged 1.5m apart. All the caregivers wore clean masks, which the researcher provided. Each caregiver was labelled with a number. The researcher were the main instrument to collect data.The interview was audio recorded as permitted by the caregivers. The interview was directed by the following questions, which were then followed by probing:

- *What kind of food do you give your children on a daily basis?*
- *Can you kindly share what causes you to give the child the kind of food you feed them on a daily basis?*

The interview was transcribed verbatim and then translated into English (see APPENDICES G, G1, and G2).

- **Nurse**

An in-depth interview was used to collect data from nurses in this study. An interview as a method of data collection in which an interviewer obtains information from the participants in a face-to-face encounter (Brink, Van der Walt & Van Rensburg, 2012). An interview is mostly used in descriptive and exploratory studies. In this method, information or data are collected directly from the participants. Experiences, beliefs,

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attitudes and interests are ascertained through the use of an interview as a data collection method (Brink et al., 2012).

The researcher introduced the study topic and its aims. Data were collected through in-depth individual interviews between the researcher and the nurse working with child growth monitoring of children under the age of five years. Using the in-depth interview was appropriate for this study as it allowed the researcher to explore the type of information they provide to caregivers regarding nutritious feeding practices. Data were collected at the nurse's workplace (the clinic) during their lunchtime. Measures to prevent Covid-19 were adhered to. The nurse was wearing a mask, sanitised her hands, and had her temperature taken as part of the screening procedure. Sitting arrangements were 1,5m apart. The researcher were the main instrument to collect data.The interview was audio recorded as permitted by the nurses. The interview was directed by the following question, which was followed by probing:

- *As a nurse working with child growth monitoring, could you please share the type of information you provide to caregivers regarding nutritious feeding practices?*

The interview was transcribed verbatim and then translated into English (see APPENDIX G3, G4, and G5).

3.9 PLAN FOR DATA MANAGEMENT

Rapport was established, and empathy, honesty and openness were shown to the participants. The participants were reassured that there was no right or wrong answer, but different perceptions. The researcher appeared comfortable and natural and ensured that non-verbal responses were consistent throughout the interview, which encouraged the participants to talk more. Effective communication skills to facilitate the interviews were used as a data collection instrument (Brink, 2017).

The following was considered throughout the interviews:

Listening: The researcher maintained eye contact and nodded her head throughout the interview process.

Probing: Probing questions like Mhh! Ok! Ohoo! were used, and that encouraged the participants to share more.

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Clarifying: The researcher asked for clarity on statements that were not well understood to avoid assumptions and jumping into conclusions.

Reflection: Participants' own statements were asked in a question form, and encouraged them to expand more on the specified points.

Paraphrasing: Participants' own words were rephrased but with the same meaning before asking the following question, and it encouraged the participant to give more information.

Summarising: Throughout the interview, the researcher summarised the important aspects that were mentioned by the participant. This assisted the participants in recalling some of the things they had forgotten to mention.

3.10 DATA ANALYSIS

According to Flick (2014), data analysis is the classification and interpretation of data. Data analysis in the qualitative study involves an examination of text rather than numbers; it is significantly time-consuming as the researcher spends hours reflecting on the possible meaning and relationship of the data (Brink, 2017). In this study, data were analysed after data saturation had been reached. Individual interviews were analysed first, followed by the focus group interview. This involved transcribing the interviews word for word and arranging the data into different themes and sub-themes depending on the participants' responses. Data were analysed following a step-wise format proposed by Tesch (in Creswell, 2014).

Step 1: Organise and prepare

After data collection from the participants, the researcher listened to the voice recorder repeatedly and wrote down everything that had been said. Data were then transcribed into English exactly as the participants had expressed.

Step 2: Reading through data

Once the data had been organised and prepared for analysis, transcripts were read several times to understand the caregivers' and nurses' responses.

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Step 3: Analysis of data

After reading the transcripts, information was arranged into sub-categories that aligned with the study objectives.

Step 4: Coding of sub-categories

Sub-categories of the same meaning were grouped together with different colours, which helped in developing themes and sub-themes.

Step 5: Presentation of themes

The themes and sub-themes were arranged in table form.

Step 6: Data analysis, interpretation and literature control

Each theme was interpreted separately based on the researcher's understanding which was supported by the literature to confirm the results of the kind of food caregivers give to the children, the contributory factors for the type of food they give, and the information nurses provide to the caregivers regarding nutritious feeding.

Step 8: Record Data

The data were then recorded to ensure that no data was missing. Finally, themes and sub-themes were tabulated.

3.11 CHAPTER SUMMARY

Chapter 3 presented the research methodology of the study. Phase one was situational analysis, which provided the study setting, population and sampling procedures, data collection methods, measures to ensure trustworthiness, and ethical considerations adhered to in the study. Chapter 4 will discuss the findings of the study.

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CHAPTER 4

ANALYSIS, PRESENTATION AND DISCUSSION OF THE RESEARCH RESULTS

4.1 INTRODUCTION

This chapter indicates the information of the findings from collected and analysed data. The sample description, presentation of findings, identified themes, and sub-themes that emerged during the interviews are presented in this chapter in detail.

4.2 SAMPLE DESCRIPTION

The sample of this study consisted of 38 caregivers; 10 (26.3%) were from Kutama Clinic (A), five (13.1%) from the Tshilwavhusiku Health Centre (B), six (15.78%) from Madombidzha Clinic (C), seven (18.4%) from Madimbo Clinic (D), five (13.1%) from Nancefield Clinic (E), and five (13.1%) from Mulala Clinic (F). In addition, 13 nurses also comprised this study's sample; two (15.4%) were from Kutama Clinic (A), three (23%) from Tshilwavhusiku Health Centre (B), two (15.4%) from Madombidzha Clinic (C), two (15.4%) from Madimbo Clinic (D), two (15.4%) from Nancefield Clinic (E), and two (15.4%) from Mulala Clinic (F). The demographic information of participants is described in detail below.

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4.2.1 Demographic information of participants

Figure 4.1 illustrates the number of caregivers per clinic ranging between five and 10. The number per clinic resulted from the caregiver's availability for the dietician.

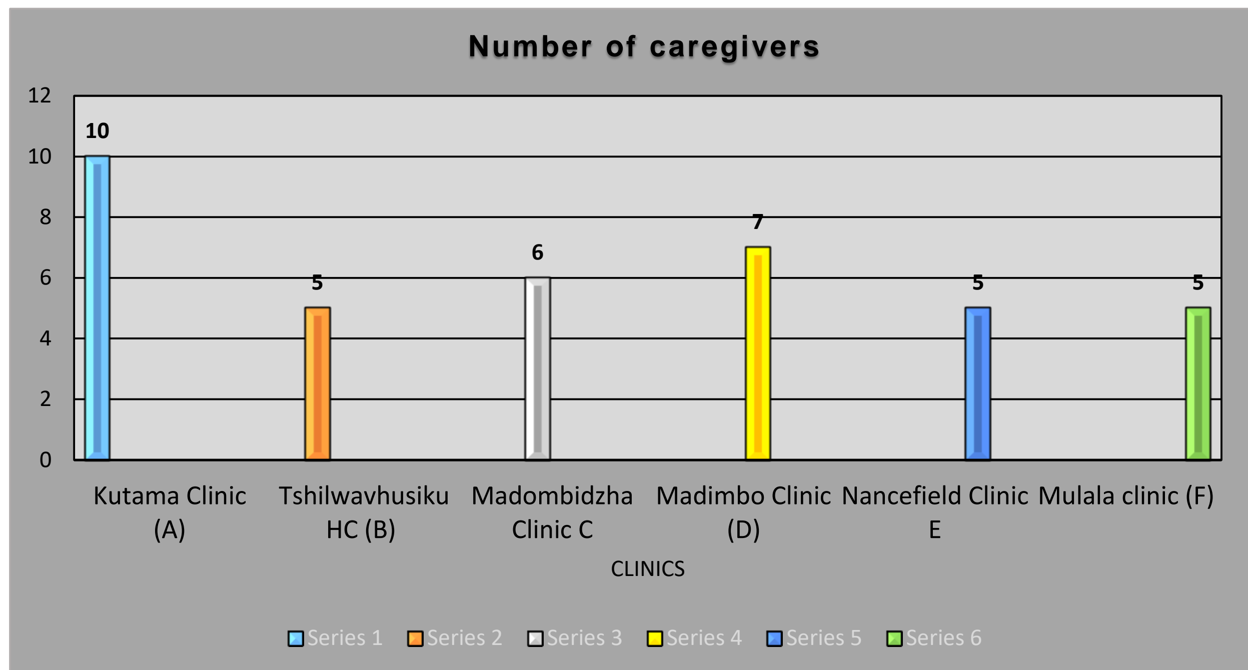

Figure 4.1: Number of caregivers per clinic

4.2.2 Relationship of the caregivers to children

The results show that the majority (36) of participants were mothers (94.8%) because they did not attend school or work during the lockdown, while one (2.6%) was a grandmother, and one (2.6%) was an aunt. This is illustrated in Figure 4.2.

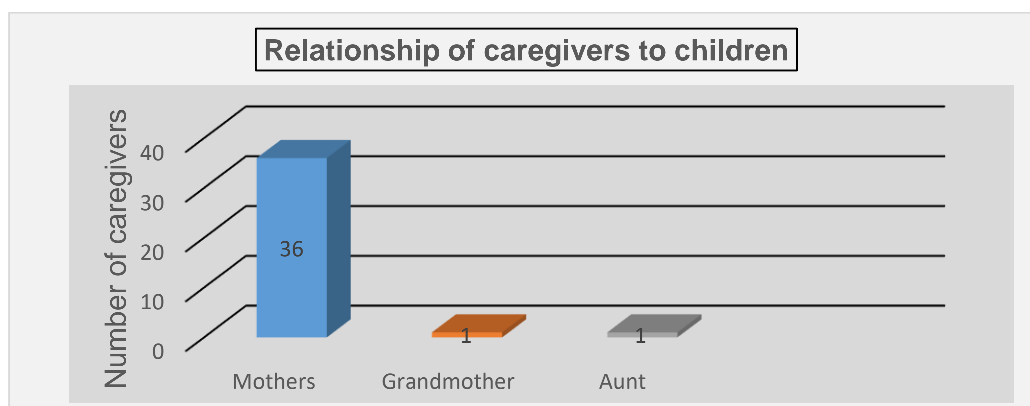

Figure 4.2: Relationship of caregivers to children

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4.2.3 Number of nurses per clinic

Nurses who participated in this study were from different clinics. Two (15.4%) were from Kutama Clinic, three (23%) from Tshilwavhusiku Health Centre, two (15.4%) from Madombidzha Clinic, two (15.4%) from Madimbo Clinic, two (15.4%) from Nancefield Clinic, and two (15.4%) from Mulala Clinic. This is illustrated in Figure 4.3.

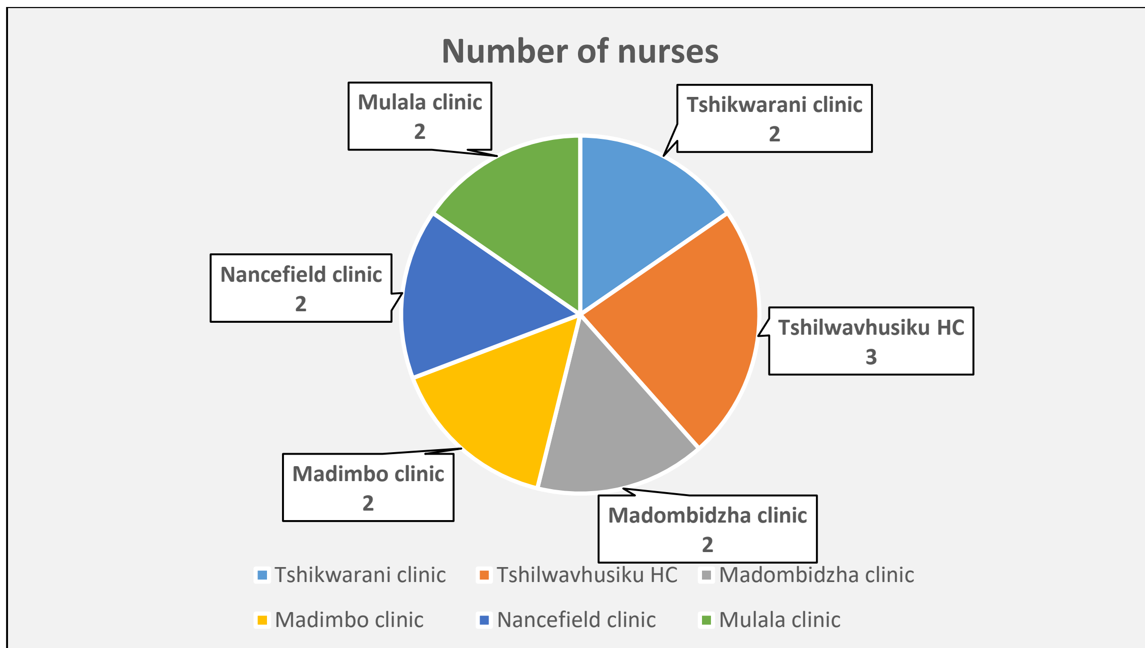

Figure 4.3: Number of nurses per clinic

4.2.4 Category of nurses

In terms of the category of participants in this study, four (30.8%) were enrolled nurses, and nine (69.2%) were registered nurses. This is reflected in Figure 4.4.

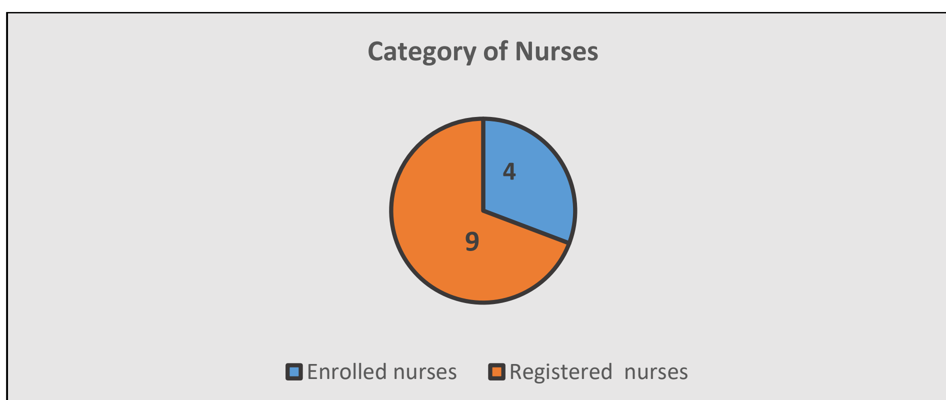

Figure 4.4: Category of nurses

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4.2.5 Nurses' working experience with children

The majority (nine) (69.2%) of the registered nurses had seven or more years of experience, while two (15.4%) had between 4-6 years of experience. One (7.7%) enrolled nurse had 1-3 years of experience, two (15.4%) had 4-6 years, while another one (7.7%) had less than three years of experience focusing on child health. The registered nurses were more informative than the enrolled nurses regarding the recommended feeding practices. This is indicated in Figure 4.5.

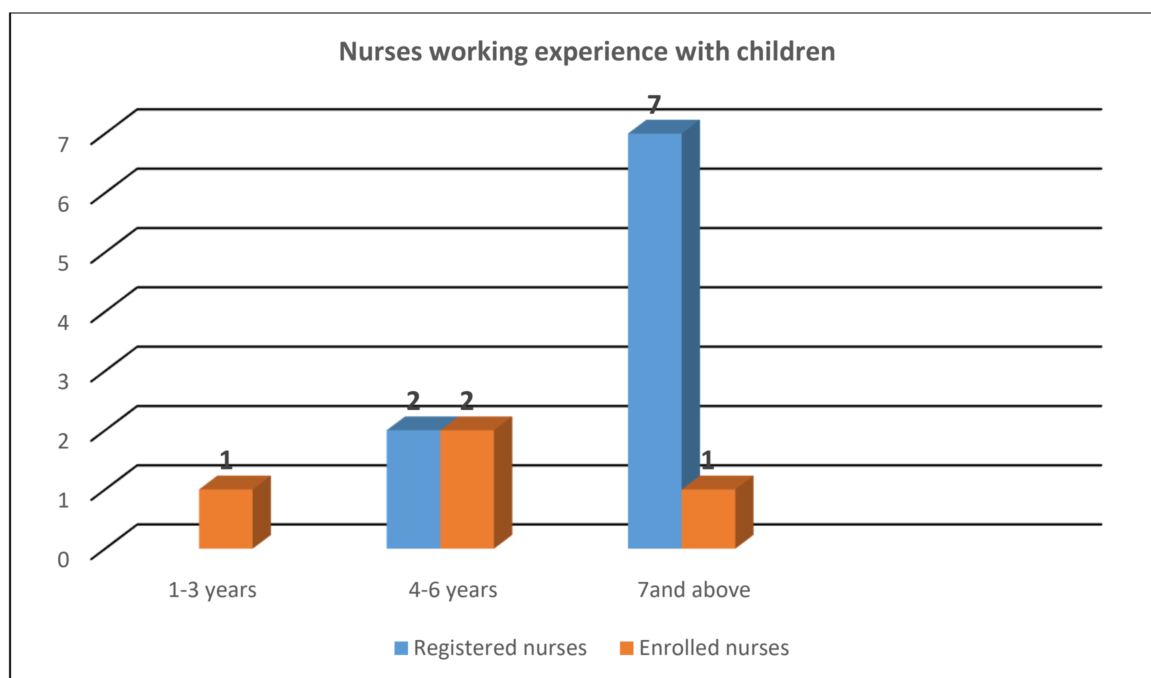

Figure 4.5: Nurses' years of experience working with children

4.3 PRESENTATION OF FINDINGS

Data were analysed using Tesch's eight steps of data analysis in Creswell (2014). Five themes emerged during data analysis, namely types of food given to children daily, contributory factors to the kind of food they give, advice nurses provide to caregivers regarding feeding practices, contributory factors to malnutrition as perceived by nurses, and recommendations to facilitate the nutritional feeding practices. The themes and the sub-themes are discussed in detail, with relevant quotations extracted from the transcripts and supported by relevant literature. Table 4.1 outlines the themes and sub-themes that emerged during data analysis.

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Table 4.1: Themes and sub-themes

THEMES	SUB-THEMES
1. Types of food given to children on a daily basis	• Starchy food • Processed food
2. Contributory factors to the kind of food they give	• Financial constraints • Elderly influences • Common practices • Child preferences • Breastfeeding challenges
3. Advices nurses give to caregivers regarding feeding practices	• Recommended feeding practices before six months • Recommended feeding practices after six months
4. Contributory factors to malnutrition as perceived by nurses	• Lifestyle-related factors • Non-nutritional feeding practices • Knowledge deficit related to feeding practices
5. Recommendations to facilitate nutritional feeding practices	• Actions to be taken to facilitate the nutritional feeding practices as indicated by caregivers • Actions to be taken to facilitate nutritional feeding practices as indicated by nurses

4.4 DISCUSSION OF FINDINGS

Types of food given to children on a daily basis, contributing factors to the kind of food they give, advice nurses provide to caregivers regarding feeding practices, and contributory factors to malnutrition as perceived by nurses were the four themes that emerged from the analysed data. Each themes is discussed separately below.

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4.4.1 Theme1: Types of food given to children on a daily basis

Table 4.2: Types of food given to children on a daily basis

THEME	SUB-THEMES
1. Types of food given to children on a daily basis	• Starchy food • Processed food

Theme 1: Types of food given to children on a daily basis

The findings of this study reveal that participants' types of food given to children on a daily basis were influenced by what they have at home. Two sub-themes emerged from the theme, namely starchy and processed food.

- **Starchy food**

In this study, the majority of the caregivers only fed their children white maize meal soft porridge or with Inkomazi. The following quotes show the types of food caregivers fed their children on a daily basis:

*"…Mhh, I give my grandchild soft porridge in the morning, then in the afternoon I give her Mageu and at night soft porridge again…The white maize meal soft porridge, not mabela, and I don't cook everyday but after one day, I cook enough to last for 1 to 2 days, I put a little bit of vinegar to prevent it from rotting, this days we no longer use (mutuku) fermented maize meal…" (*P6, FG 3).

Another one said:

"… I give white maize meal only, I don't add anything, I give her as it is. She is over one year now I no longer add formula milk since she is no longer bottle feeding…" (P4, FG3).

Another one said:

*"…I give my child soft porridge with little bit of sugar, especially when added vinegar. I add vinegar once in a while, because in most days the baby eat soft porridge that I take out from the big pot that I am cooking porridge for everyone , I don't prepare the soft porridge separately for the baby…" (*P4, FG 4).

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"… I give him porridge and Inkomazi, I buy 4l of it (Inkomazi) every month and I try by all means to give him every day but because there are other kids at home it does not last long and I cannot give my child only is not right…" (P7, FG 3).

It was revealed that the majority of participants only fed their children soft porridge, while a few added sugar or Inkomazi. This is in line with the study by Tette, Sifah, Tefe-Donkor, Nuroameyaw and Nartey (2016), who found that 2.4% and 1.8% of malnourished children were fed fermented cooked maize meal with water and added sugar. Similarly, Ahishakiye et al., (2019) supported the study's findings and revealed that most participants in Rwanda fed their children maize porridge mixed with sugar and/or cow's milk. Moreover, Amukugongo and Shilunga (2018); Mulenga et al., (2020) and Udoh and Amodu (2016) found out that children in Nigeria, Namibia and Maldives were only fed one food type (carbohydrates or grains). On the contrary, Tadesse (2018) found that 65.6% of children consumed less than four food groups; however, they prepared the porridge from sorghum, moringa leaves and cow's milk, and considered maize indigestible for infants because it causes abdominal cramps.

- **Processed foods**

Most participants in this study indicated that they give their children processed food like glucose, tea, Danone and cold drink. The following quotes depict other foods offered other than soft porridge:

*"…like if I am lazy to cook soft porridge I'll just buy mayo and give her then she will not eat much later, so on my busy days and when I don't feel like cooking I buy mayo for the child and we eat bread and refresher (cool drink)…" (*P 3, FG 6).

Another one said:

"…Nothing else, but sometimes I give her danone and also Rooibos tea for kids…" (P4, FG 4).

Another one said:

*"…I was giving my child glucose to drink..." (*P2, FG6).

*"...I mean I was giving my child that Simba (chips), sweets before eating soft porridge or tea and bread just to distract the child from disturbing me or when I am busy with something..." (*P3, FG2).

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Then another one said:

"...late when we drink our tea she will also eat, Yoo she can eat this child, I dip (thothedza) bread into the tea and feed her, she enjoys it..." (P4, FG3).

The study's findings revealed that most children were fed Danone, Rooibos tea for kids, Mayo, glucose and cold drink. This is supported by a study by Berde and Ozcebe (2017) and Kinabo et al., (2017) in Sub- Saharan Africa and Unguja Island in Zanzibar, Tanzania, respectively, who found that glucose solution, sugar salt solution, and honey were believed to be the pre-lacteal feeds given to children although not knowing the real reason behind it. Similarly, in Netherlands, Wang et al., (2019) found that sweet beverages and snack food were introduced to infants before six months.

Conclusion of theme 1: Types of food given to children on a daily basis

The majority of caregivers indicated that they only feed their children soft porridge (i.e. they do not add anything to it). Others indicated that they sometimes add sugar or Inkomazi to the soft porridge, but it does not last a month. In addition, they further gave children non-nutritional food like glucose, tea, Danone and cold drink.

4.4.2 Theme 2: Contributory factors to the kind of food they give

Table 4.3: Contributory factors to the kind of food they give

THEME	SUB-THEME
2. Contributory factors to the kind of food they give	• Financial constraints • Elderly influences • Common practices • Child preferences • Breastfeeding challenges

Theme 2: Contributory factors to the kind of food they give

The study findings revealed various factors contributed to the kind of food caregivers give their children. Five sub-themes were identified from the theme: financial constraints, elderly influences, common practices, child preferences, and breastfeeding challenges. Each sub-theme was discussed in detail below:

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- **Financial constraints**

The majority of caregivers indicated that one of the factors contributing to the kind of food they give is insufficient money or financial constraints. The following quotes indicate the types of food they fed their children due to the financial constraints they experienced:

"... I feed her white maize meal soft porridge three times per day I don't add anything, things are difficult at home, you see, her mother of this child is not dead is alive, but she lives like a child without a mother...I don't have money to buy Rama, peanut butter they talk about..." (P2, FG4).

Another one said:

"...Soft porridge, there's nothing else...... because I don't have money to buy milk..." (P2, FG5).

Another one indicated:

"…I mix the soft porridge with warm water only, I don't have to add anything to it because the packet should have said so, and the packet says that I can either mix with warm water or warm milk, but I chose warm water since I don't have to buy it, milk is expensive, I cannot afford it…" (P2, FG3).

Then another one said:

*"...I don't add anything to the soft porridge because the little money I have I buy other things like napkins and milk..." (*P3, FG5).

The majority of caregivers in this study could not afford to buy formula milk, Rama or peanut butter to add to soft porridge, which led them to only give their children soft porridge and tea, instead of formula milk. Ruel (2013) concurs with the study's findings by stating that if the house is experiencing financial challenges, then the nutritional status of children will be negatively affected. Ruel (2013) further states that poverty is the primary cause of lack of access to affordable and nutritious food. Families with limited income consume foods to fill their stomachs; therefore, people do not consider nutrients (Kennedy, 2014).

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A study conducted in Kenya found that some caregivers only feed their children tea or milk due to severe household food insecurity, resulting in the development of stunting (Shinsugi et al., 2015). Similarly, Darmon and Drewnowski (2015) add that a low income is more likely to result in poor feeding habits and the food security of individuals. Lieffers, Ekwaru, Ohinmaa and Veugelers (2018) found that the population groups with the highest poverty rates in Canada are reported to experience some nutritional health problems and the development of chronic diseases. The findings of this study also indicated that some mothers sought jobs to buy other basic needs in the house. This is supported by Mgongo et al., (2018), who revealed that most women in Tanzania are the bread earners and are responsible for everything in the household, including food. Furthermore, they indicated that if the mother does not return to work other children in the family may suffer from hunger.

- **Elderly influences**

The majority of caregivers narrated that grandmothers or elders greatly influenced the nutritional practices of infants and young children related to breastfeeding and complementary feeding. The quotes below indicate how elders influenced the children's daily feeding practices.

"... I fed her soft porridge early because my aunt said that for the child to grow fast the child needs to eat ..." (P5, FG4).

Another one said:

"…my aunt from Moletji introduced glucose to me and I saw that my child was enjoying it and becoming fat …" (P2, FG6).

Another one said:

"...My grandmother said it is how she do it, she start giving the children under her care soft porridge only at 3 months to a year and she is been practicing this even to us her grandchildren.." (P4, FG5).

Another one revealed:

"...I breastfeed her in the morning before going to school and when I come back, due to corona I was home in some days but she did not change the breastfeeding time, I tried breastfeeding more often my grandmother said that when I go back to school the

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*child will give her problem so I must not start something that I won't manage and if I do so I will take my child to school with me..." (*P1, FG6).

"... I gave soft porridge before 6 months *because the lady who was supposed to take care of the child said that she does not want a child who will cry of hunger just because im practising this modern "tshimanzhemanzhe" (English) thing which even the nurses fail to practice..."* (P1, FG 4).

Another one revealed:

"…I am a student so, my mother said that I must not breastfeed the child but give Nan because children are difficult to switch from breast milk to formula, I only breastfed for few days before the baby is started on formula..." (P3, FG5).

The study's findings revealed that elderly people highly influenced mothers to introduce complementary food before six months and Rooibos tea and glucose. This is supported by Sipsma et al. (2013), who indicate that grandmothers have a great influence when it comes to feeding choices. Similarly, several studies done in various areas in South Africa found that women are highly influenced by family members to give solids, water-based formulas, and complementary and traditional medicines from an early age (Du Plessis, Peer, Honikman & English, 2016; Goosen, McLachlan & Schübl, 2014; Mphego, Madiba & Ntuli, 2014). Negin, Coffman, Vizintin and Raynes-Greenow (2016) added that senior women play a central role in determining the initiation and duration of exclusive breastfeeding. Their involvement can influence feeding practices positively or negatively depending on their knowledge and experience. The elderly's input and decisions are recognised in African countries in many things, including feeding practices. For example, in a study conducted in rural Tajikistan, relationships between mothers-in-law and daughters-in-law were important in decision-making around food and strongly influenced household nutrition (Wood, McNamara, Rademacher, Kowaleska & Ludgate, 2018). Similarly, MacDonald, Aubel, Aidam and Girard (2019) found that grandmothers in Sierra Leone are responsible for preparing meals for and feeding young children, including giving water from birth onwards, introducing rice water at two months, and thin porridge between three to five months. Angelo, Pontes, Sette and Leal (2020) add that grandmothers believe that giving tea and water mixed with herbs soothes the crying child.

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- **Common practices**

Most caregivers only fed their children soft porridge because it is commonly practised. The following quotes depict the food caregivers introduced to their children, reflecting the common feeding they have been practising:

"...Eish! I only knew that the child must have soft porridge only, I only heard it by the Dr that I should give different food. ..." (P1, FG6).

*"...Child eat soft porridge, No I didn't know that you can put something like peanut butter or Rama to the soft porridge but I knew about putting milk which I was saving it to last for a month..." (*P3, FG6).

"...Sometimes one do things because we saw other people doing it, nothing else..." (P4, FG3).

"…When I grew up, I grew up knowing that a child eats soft porridge , that is what I know and that is what I am giving to my child, I also know that sugar reduce the child appetite that is why I don't add sugar to the soft porridge…" (P5, FG3).

"...Yes she started eating soft porridge at the age of 3 months, this is how it is done at home, we are used to that..."(P4, FG5).

This study's findings revealed that soft porridge was a common food introduced to children at three months of age. This is in line with a study by Mgongo et al., (2018) in Tanzania, who found that mothers included solids from three to four months, compared to other studies reporting mothers introducing solid foods to their infants as early as one month. Furthermore, it is common to give water to a baby within the first week after delivery and introduce thin porridge at one month of age for the baby to drink. Similarly, Katepa-Bwalya et al., (2015) revealed that the most common food introduced at six months in Zambia was maize meal soft porridge as they believed milk was liquid, not food, and liquid cannot satisfy hunger but thirst. On the contrary, according to Polish infant feeding guidelines, solid foods should be introduced by the fourth month, but not later than the sixth month of life. Vegetables, mostly carrot puree, were the first solid foods to be introduced in infant diets (Kostecka, Jackowskal & Kostecka, 2021).

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- **Child's preference**

A few caregivers indicated that their children developed malnutrition because they resist trying new foods, have a habit of eating specific favourite foods, consume a limited variety of foods, demonstrate strong food preferences and/or show little interest in food. This is indicated by the quotes below:

*"... I give my child soft porridge in the morning, afternoon and in the evening, i.e. three times per day, I tried to give other things but she does not eat, the only thing that she prefers is when I mixed the soft porridge with milk (Cremora), I know that I should give different foods but the child does not want to eat other food. I tried things like gravy of onion and tomatoes, I think she does not want it..." (*P5, FG6).

Another participant said:

"...One day the uncle brought Mageu and the child cried for it, then give it to him, after that I noticed that the child enjoyed it and slept with ease without crying for the first time than when fed soft porridge, so I decided to continue giving the child Mageu because he likes and enjoys them than soft porridge. Because I force feed her soft porridge but Mageu drinks on his own..." (P6, FG3).

Then another one said:

"…I think is because he does not like eating other food but prefers eating pap and Inkomazi. When Inkomazi is finished and I don't have money to buy another one I just give him gravy which he will just eat for the sake of eating, you will even see that he is not enjoying it…" (P7, FG 3).

The findings of this study indicate that children preferred certain food over others, such as Mageu over soft porridge or Inkomazi and porridge over gravy. This is supported by Li et al., (2017); Ong, Phuah and Salazar (2014); Taylor, Wernimont, Northstone and Emmett (2015) and Wolstenholme, Kelly, Hennessy and Heary (2020), who found that picky eaters are unwilling to eat familiar foods or try new food. They mostly refuse fruit and vegetable, while accepting drinks over food which contributes to a lack of certain nutrients. On the contrary, in a study done in New Zealand, Haszard, Skidmore, Williams and Tayler (2014) found that picky eaters ate a few fruits and vegetables than non-picky eaters. In Tohoku, Japan, Asano, Hong and Matsuyam (2016) found that it

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is common for children to reject food when introduced to it for the first time but gradually accept it if exposed to it continuously.

Picky eating is a common behaviour, also known as fussy eating, selective eating, faddy eating, and choosy eating (Samuel, Musa-Veloso, Ho, Venditti & Shahkhalili-Dulloo, 2018; Walton, Kuczynski, Haycraft, Breen & Haines, 2017; Wolstenholme et al., 2020). According to the WHA (2018), inadequate infant and young child feeding practices contribute to stunted growth and development because of picky eating. This is supported by Hermawati, Handayani, Umma and Seftiani (2020) and Nurmalasari, Utami and Perkasa (2020), who found that 77% – 89% of stunted children under five years old in Indonesia were picky eaters.

- **Breastfeeding challenges**

Apart from not giving various food as recommended, few caregivers had to stop breastfeeding due to problems with their breasts or beliefs, resulting in their children developing malnutrition. The following quotes indicate the reason why mothers stopped breastfeeding their children:

"...*I had abscess after delivery at my left breast and that made me to breastfeed with one breast and after few months the right breast also developed abscess and my aunt advised me to stop breastfeeding because the milk will not be good for the child.* (P5, FG 6).

Another participant said:

*"…I stopped breastfeeding the child because the child's father left me when the child was young and after few months, I got myself a boyfriend I think somebody told the father of my child that I have a new boyfriend and he sent me a message telling me to stop breastfeeding because he doesn't want the child to get sick…" (*P3, FG 6).

Then another one said:

"…I don't breastfeed because of (Tshikangala) and I tried so many types of formula milk but it does not suit her well? She will start by feeding it well after 2 3 weeks she will start vomiting and passing loose stools then become week. I have tried formula milk like Nan, S26, Infarcare and the other one that is only found in clicks but with no different, after taking it for some time she will start vomiting and then passing loose

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stools. Others even suggested that I buy goat milk, they even said the name, but I didn't because I know I will be wasting my money again, but Rooibos does not give her problem…" (P 4, FG 4).

The results of this study indicated that mothers stopped breastfeeding due to "Tshikangala" and breast abscess. This is in line with Katepa-Bwalya et al. (2015), who revealed that in Zambia, infection, breast abscess and sore nipples are the common problems they experience during breastfeeding; however, it does not stop them from breastfeeding their children unless it is severe diseases such as malaria, tuberculosis and AIDS. A study conducted by Itaka and Omole (2020) in South Africa found that 31.1% of mothers stopped breastfeeding due to sickness of the mother or the baby, while 26.2% blamed it on breast problems.

On the contrary, several studies by Ahishakiye et al., (2019) and Kinabo et al., (2017) blamed work and household chores for not breastfeeding exclusively on demand, and depended on grandmothers and older siblings to look after and feed their children while they were at work. One of the caregivers in this study indicated that she was forced to stop breastfeeding because she had a new boyfriend while still breastfeeding. This is supported by Mgongo et al. (2018), who indicate that it is prohibited to have extramarital relationships while breastfeeding. They believed that having an extramarital affair while pregnant makes breast milk unclean; thus, causing delays in child development.

Furthermore, in this study, some caregivers blamed insufficient milk production for stopping breastfeeding and adding other things like glucose to supplement the milk. The following quotes outline the challenges mothers experienced regarding breastfeeding:

"...No, my breast milk is not coming out well so that why I'm not breastfeeding. People said I should try drinking tea maybe it will come out but nothing. That's one reason I stopped breastfeeding her because nothing came out and I was feeling pain and she will refuse eating soft porridge for breast that is not having milk..." (P1, FG3).

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Another one said:

"...I still breastfeed and now, but my breast milk is not much that's why I added glucose. (P2, FG6).

Then another one revealed:

"…they notice that my breast milk is not much to can satisfy the child they told me to give the child water to drink and for the child to grow well was mixed with some things I don't know what is it, the black staff…" (P4, FG6).

Some of the caregivers in this study experienced insufficient breast milk production leading to early cessation of exclusive breastfeeding. This is supported by Martinez, Wallenborn, Mäusezahl, Hartinger and Ribera (2021); Mgongo et al., (2018) and Rust (2019), who reveal that insufficient breast milk production is the common challenge mothers have and that it only can lead to early cessation of exclusive breastfeeding. Similarly, Swigart et al., (2017) indicated that Mexican mothers believe that infants will not be satisfied with breast milk only; thus, feeding infants formula and food to supplement breast milk. They also go as far as giving water in addition to breast milk to quench their thirst and introduce teas soon after birth. On the contrary, Cox and Carney (2017); Mgongo et al., (2018) and WHO (2009a) reveal that while the common concern is about insufficient breast milk, younger women's concerns were about their body, for example, saggy breasts.

Conclusion of theme 2: Contributory factors to the kind of food they give

The majority of participants indicate that they give soft porridge because they believe it has been practised for ages. Most of them only fed their children soft porridge because they did not have money to buy formula or other nutritious food. Common feeding practices introduced contain one type of nutrient, whereas some children preferred certain foods over others, and breastfeeding was also not practised due to breast problems and particular beliefs. Most feeding practices were influenced by the elders.

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4.4.3 Theme 3: Advice nurses give to caregivers regarding feeding practices

Table 4.4: Advice nurses give the caregivers regarding feeding practices

THEMES	SUB-THEMES
3. Advices nurses give to caregivers regarding feeding practices	• Recommended feeding practices before six months • Recommended feeding practices after six months

Discussion of findings of theme 3: Theme 3 emerged during data analysis. Nurses revealed the advice they provide to caregivers regarding nutritional feeding practices. Two sub-themes were identified, namely recommended feeding practices before six months and recommended feeding practices after six months. These are discussed in detail below:

- **Recommended feeding practices before six months**

Most of the nurses indicated that newborns to six months of age children should be exclusively breastfed. Many further indicated the benefits of exclusive breastfeeding and encouraged breast pumping in case the mother is to go to work or school. The quotes below indicate the recommended feeding practices for children below six months of age:

*"…These women we teach them according to the child age, like now I teach them that you don't give anything to a newborn until 6 months of age. The baby should be breastfead only and one other thing while still at young babies, if the mother is going out, just need to express or pump the milk to can feed them when the mother is not around for the child to grow well and healthy…"(*C B, P 2).

Then another one indicated:

"...Ok, lets me start with 0-6 months, with these age group, I advise them not to give anything but breast milk or formula feeding, I encourage caregivers to breastfeed whether through sucking of cup because breastfeeding is cheap, always available and readymade and, it strengthen the immune system of the baby and prevent many

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diseases like ear infection, diarrhoea which can lead to loss of important nutrients in the body that prevent the baby to grow well, so basically breast milk have everything the baby needs, caregivers don't need to give anything like water to supplement it, but caregivers being caregivers they always have their ideas as far as feeding is concerned. Then those that have to work but want to continue with breastfeeding, we usually encourage them to express the breast milk and feed using the cup..." (CF, P1).

Another one concurred and said:

"...I tell them to breastfeed only at the age of 0- 6 months, they must not add even water, the child at this age needs breastfeeding only and nothing else..." (CD, P1).

"…We teach them about food the children need to eat on daily basis, when the child is born, is breastfed only for 6 months without giving anything else.so for those that opt to formula feed are , also encouraged to give formula milk only…" (CB, P1).

Another one also concurred and indicated:

"…0- 6 months I advise them to breastfeed only on demand, meaning the child is not supposed to drink or eat anything but breast milk, and a child should breastfeed at least 8- 12 times per 24 hours. Also tell them that breast milk is consist of three things, the foremilk for thirsty, second milk for metabolism and the third one to satisfy hunger, that's why I tell them not to change the breast before it is empty for the child to get all three milk I talked about, because the breast have water there's no need to give water before 6 months…" (C C, P 2).

The majority of nurses indicated that newborns to six months of age children should be exclusively breastfed. This is supported by Fewtrell et al., (2017). The nutrition and eating behaviour guideline (2013, adaptation 2017) encourages nutritional feeding practices and agrees that complementary feeding practices should not be introduced before six months. According to WHO (2016), newborns should start breastfeeding within the first hour of life and be exclusively breastfed for the first six months. Similarly, Trafford et al., (2020) added that exclusive breastfeeding at six months is the health workers' favourite song. The findings of this study further revealed that many nurses included the benefits of breastfeeding exclusively on demand (Centre's for Disease Control and Prevention, 2019; Health Resources and Services Administration, 2019;

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Victora, Bahl & Barros 2016; WHO, 2018). Moreover, breast milk contains antibodies that protect the child from infections like diarrhoea, respiratory tract infections, and chronic diseases, including overweight and diabetes. Palmeira and Carneiro-Sampaio (2016), specifically indicated that colostrum is the first stage of breast milk produced during the first few days after birth and is a natural immune booster. Berstein and McMahon (2018) and Palmeira and Carneiro-Sampaio (2016) indicate that breast milk is easier to digest than infant formula, and reduces infants' risk of infant death syndrome.

- **Recommended feeding practices after six months**

The Majority of nurses advised caregivers to give different kinds of food (not only soft porridge) daily. The quotes below indicate the advice nurses gave to caregivers of children from six months and above with regard to feeding practices:

*"…So after this we will move to the child from 6 months to a year. we teach them to continue breastfeeding and start by introducing 2- 3 teaspoon of soft porridge, and any other food that are available at home e.g. egg yolk, fish, mincemeat, livers and Mopani worms, when it comes to Mopani worms they don't give it like that, they grind if first then give bit by bit. and this child can be given milk as well as clean water to drink and the milk should not be formula, but you give full cream milk…"(*C A, P 1).

Another one indicated:

"…I teach them to breastfeed this children up to the age of 18 months, then the very same children at 6 months we tell them to give fruit but mashed, things like mashed potatoes, grinded Mopani or its gravy then put in the soft porridge, give them beans as well as eggs but in small portion for the child to get used to eating. Even when they are growing up as from 18 months and above depending on the background because you will just see that these people are poor and advise them to give a tin fish without chillies the child will eat. That's it, and for those that can afford milk they can give them to drink…" (C B, P2).

Then one nurse said:

"...From 6 months and above, they must give the child soft porridge and add water of cooked spinach or any other vegetable that is there depending on the season. They

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can add formula milk if they can afford, add Rama or peanut butter if they have but mostly what they have at home, mashed beans put a poon full in soft porridge, grinded Mopani worms, they can also give mashed potatoes, sweat potatoes as well as pumpkin, I mean it is something that is available at home and people use it frequently. Also tell them to avoid giving children Simba chips, sweets, diluted juice, tea and glucose, glucose and tea are the number one thing they give to their children and I don't know who told them about it. …" (C C, P 2).

"…Yes from 6 months, this child now can eat food, cook butternut, potatoes, and carrots and mash them and also give the child fruits, mashed banana, squeeze water from oranges and give to the child. Sweet potatoes also is good for the child. Don't forget that now the baby can drink water, before 6 months no water, but after 6 months the child must have water, with these child the food must be increased bit by bit…"(C B, P 3).

*"…Between 6- 59 months I tell them to start introducing soft porridge, they must start by giving it once daily then move to 2 to 3 times a day depending on the child's need, during this time the child now can be given anything you eat at home without omitting breast milk, you give things like soft porridge with Rama, peanut butter, egg yolk, mashed potatoes, butternut, sweet potatoes, banana , chicken livers, grinded mincemeat, tined fish (the tomato one), also tell them that they must check if the child love the food you are giving, the fact that I told them to give mashed butternut does not mean that all the children will eat it some may vomit or have diarrhoea. Food that are available at home like when cooking spinach you sieve the water and put to the soft porridge…" (*C C, P 2).

The findings of this study revealed that nurses advised caregivers to introduce solids once daily, then two to three times daily. This is supported by Vorster, Badham and Venter (2013) and WHO (2005). They indicated that at six months, small amounts of complementary foods are introduced gradually and increased as the baby gets older. WHO (2008) also recommend seven groups of food which include grains, roots, and tubers; legumes and nuts; dairy products (milk, yoghurt, cheese); flesh foods (meat, fish, poultry and liver/ organ meats); eggs; vitamin-A rich fruit and vegetables. Although, Drewnowski (2010) reveals that beans are among the top five foods that are high in nutrients and are cheap. In their recommended feeding practices, some of the

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nurses included food such as beans and Mopani worms as affordable food. Although the FBDG (2013) advises that children "eat plenty of vegetables and fruit every day", the nurses spoke about giving fruits to children at least once a day.

Conclusion of findings of theme 3: Advice nurses give to caregivers regarding feeding practices

The findings indicate that majority of nurses outlined the kind of food caregivers should give to children under the age of five. They advised giving various food, including fruits, to children six months and older. Exclusive breastfeeding before the age of 6 months was encouraged by the majority of nurses, and mothers were even advised on breast milk storage and its preparation before use.

4.4.4 Theme 4: Contributory factors to malnutrition as perceived by nurses

Table 4.5: Contributory factors to malnutrition as perceived by nurses

THEMES	SUB-THEMES
4. Contributory factors to malnutrition as perceived by nurses	• Lifestyle-related factors • Non-nutritional feeding practices • Knowledge deficit related to feeding practices

Discussion of findings of theme 4: Contributory factors to malnutrition as perceived by nurses

After data were analysed, nurses revealed contributory factors to malnutrition in children. Three sub-themes were identified from the theme: Lifestyle-related factors, non-nutritional feeding practices, and knowledge deficit related to feeding practices. Each sub-theme was discussed in detail below:

- **Lifestyle-related factors**

Some nurses revealed that mothers use the money to satisfy their own needs, such as playing cards and entertaining themselves. This is supported by the quotes below:

"…for malnutrition to increase is due to mothers of these children, most of them get social grant, they don't do the right thing for this children, they play cards, buy jeans

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with social grants money, they are busy entertaining themselves not the children, they will buy Danone on the pay day for the child, something that is not even nutritious and it ends there. She will go and play cards and muchaina…" (C A, P 1).

One nurse said:

"…They don't have time to bond with the child they are always in a hurry, especially those young ones, they have time to enjoy themselves, going to the tavern, playing cards and leave their children under the care of person younger than herself (the mother) that's the challenge we come across in the village, but I think is child grant that is making them to behave like this…" (C, P 1).

Another one indicated:

"The other thing is that this younger ones are troublesome they leave their children with their grannies without milk to enjoy themselves... I think the root of all this is because of child grant..." (CD, P2).

The study's findings reveal that child grant money is not used for the children's benefit, but for the mothers. This is supported by Khosa and Kaseka (2017), who reveal that although most women used child grant money for food, clothing, crèche payment, medical treatment, and paying for burial societies, a few used the money to buy themselves clothes, alcohol and for gambling. Zembe-Mkabile et al., (2018) agree that the child support grant is used to buy chips, yoghurt, and chocolate to make their children happy, while the majority are struggling to meet their children's daily needs with it.

Furthermore, some nurses indicated that mothers don't have time to prepare food for their children as they are busy with work or are lazy to cook. This is illustrated by the quotes below:

"…The other thing is they don't have time with their kids, they don't understand them, they are so busy with work and money, they depend on crèches to take care of their children and they even take their children to a cheaper one…" (C B, P1).

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Another nurse said:

"...The other reason they are not giving other foods is because they force feed the children instead of spoon feeding, because they lack patience and force feeding is fast..." (CD, P2).

Another one indicated:

"…I think it is because they are lazy to cook instead, they give their children Simba, and most of them buy Purity and give to the children instead of cooking the same vegetables in Purity and give them being fresh…" (C B, P 3).

A few of the participants indicated that caregivers don't have time to cook and care for their children. This is in line with Geberselassie, Abebe, Melsew, Mutuku and Wassie (2018), who found that parents with more children generally lack adequate time to pay attention to the nutritional need of each child. Similarly, Geleta, Tesfaye and Zara (2021) outlined that stunting is 3.8 times likely to occur in children whose mothers are too busy to prepare meals for them compared to children of mothers that have time to prepare meals.

Furthermore, one of the participants indicated poor hygiene and using dirty utensils as one of the factors contributing to malnutrition. This is supported by a quote below:

"…Malnutrition is also caused by uncleanliness, children are given food in dirty dishes, and they don't clean were they keep their food, they don't cover their food and they are exposed to flies that could lead to diarrhoea…" (C B, P 3).

The findings of this study indicated that giving food in dirty dishes and uncleanliness contribute to malnutrition. This is supported by Marshak, Young, Bontrager and Boyd (2017), who found that families not using clean eating utensils were almost twice as likely to have a malnourished child. A study by Polaki (2018) did not find a relationship between poor hygiene and child growth; most of the caregivers believed they were practicing good hygiene, and they indicated that they wash their hands before preparing children's foods.

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- **Non-nutritional feeding practices**

The majority of nurses indicated that caregivers gave one type of food (i.e. soft porridge) before the age of 6 months. They gave them Inkomazi with porridge every day or fed "Tshiunza" (soft porridge) mixed with roots. The following quotes indicate the types of food caregivers fed their children, which contributed to poor child growth. This led to malnutrition as perceived by nurses:

*"…Like I indicated before mothers of children give soft porridge before the age of 6 months and they give soft porridge only without adding anything else…" (*C D, P1).

Another one concurred and said:

*"…MHH! I think the problem is they give soft porridge early and only soft porridge without anything else…" (*C, P 2).

Another participant said:

*"...when trying to find out about the cause nothing will come out, but when you go out you will find that the child is given soft porridge and when looking at the child is less than 2 or 3 months..." (*CA, P1).

Another one revealed:

"…You may find that the child is having porridge with Inkomazi but the problem is eating with Inkomazi every day and not having various foods that is the cause because Inkomazi is what they afford…" (CB, P2).

Another one said:

"…They give their children Simba chips, most of them buy Purity and give to the children instead of cooking the same vegetables in Purity and give them being fresh… *I mean Purity is good if one can afford it, the reason why children are not growing well is because, they are not giving it (Purity) everyday but sometimes, only for a day or two to be specific after getting SASSA...*" (CB, P3).

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Another one said:

"*Tshiunza" have the same effect as glucose to the child, the child will look big but the weight will tell you a different story, the child's growth will be affected because one type of food is given* ..." (CB, P2).

Another one elaborated further about "Tshiunza" and said:

*"…There's this thing called "Tshiunza" whereby they mix roots into the soft porridge and they feed the child, Eish it is the cause of the problem. We don't even know the use of that roots to the child's body and that's what our grandmothers believe in…" (*CA, P2).

Most of the caregivers fed their children soft porridge only. This is supported by Nordang, Shoo, Holmboe-Ottesen, Kinabo, and Wandel (2015), who indicated that 38.9% of mothers introduced maize at two months of age. Similarly, Wyatt, Yount, Null, Ramakrishnan, and Girard (2015) also found that pre-lacteal feeds were introduced to children as early as three months. Matlala (2016) and Mushaphi et al., (2017) also indicated that 95.2% of children were introduced to complementary foods before six months. The most common food fed was water and soft porridge. A few nurses also indicated that "Tshiunza'' roots mixed in soft porridge are among the food caregivers feed their children. This is supported by Boulom, Essink, Kang, Kounnavong and Broerse (2020), who revealed that in the Nong District, mothers collected roots and tubers as alternative carbohydrates sources; however, the practice did not improve the nutritional status of their children.

Most nurses indicated that caregivers are not measuring the formula correctly, and it is not given according to body weight. They further indicated that caregivers substitute formula milk with tea or Oros juice. The following quotes indicate how incorrect measurement of formula and not breastfeeding on demand lead to malnutrition in children:

"…when the child is growing and the demand is high they tend to reduce the measurements for the milk to last long or do minimal feeding than required, the child gets milk twice per day, in the morning and before bed only…" (CE, P1).

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Another one added:

"…They don't even measure the formula milk correctly as the instructions says, some they know the correct measurement to do but they reduce the measurements for the milk to last for at least a month. You'll even see the bottle that the milk is little in water. They don't have a problem, and by so doing they are not giving enough nutrients to this child…" (C B, P1).

Another one revealed:

"...Most of the mothers are working and are going to school, so they don't breastfeed their children on demand because they are at work. But they don't express breast milk for the child to feed during the day when they are not around since they don't afford to buy formula for the child..." (CC, P2).

Another one said:

"...Another thing is giving the child tea, they bottle feed them and that tea doesn't have any nutrients in it. They even give children sweet aid, no man what do you call it, Oros juice, they also put it in the bottle for the child to feed the whole day of which I don't know who told them about it because it does not have nutrients at all…" (C A, P 2).

The study's findings revealed that children were given formula twice a day, and caregivers reduced the measurements to ensure it lasted the month. This contradicts the WHO (2007), which outlined that the measure of infant formula feeding or replacement feeding should be according to the baby's body weight in order to meet their daily recommended nutrients. The study's findings also revealed that caregivers feed their children tea and juice; this is supported by Siziba, Jerling, Hanekom and Wentzel-Viljoen (2015) and Tariku, Biks, Wassie, Gebeyehu and Getie (2016), who concurred that majority of mothers give their infants other liquids (water, tea or juice) in addition to breast milk because they believed that their breast milk alone was insufficient and some mothers were returning to work. Contrary to Kubeka's (2017) findings, most women in Ghana practice exclusive breastfeeding on demand before six months, but don't give adequate complementary foods at six months although they continue to breastfeed the infant on demand.

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- **Knowledge deficit related to feeding practices**

Most nurses revealed that children are malnourished because caregivers don't know the nutritious foods to give their children. This was supported by the quotes below:

"...I think they don't know that the food they have are the food to give, because the very same potato as well as butternut they have can be mashed with oil and give to the child, it is very nutritious, but the caregivers and mothers don't consider the children but themselves..." (CA, P1).

Another one said:

"...Also lack of knowledge or ignorance and not following the information we give them can be the cause. They will now consider it later when the child is having a problem...I don't know, others will also buy Danone thinking it is having nutrients in the true sense it doesn't, you even find that it was better to give the child beans than Danone but hey, people don't understand..." (CB, P2).

Another one indicated:

"...I think it is because they don't follow the correct feeding practices, and some don't have knowledge... They can even do so in Mopani worms, you pound them and that powder you put it in the soft porridge, but they don't do it they think giving a child nutritious food you have to spend a lot of money. That's why their children are not growing well and developing malnutrition because they don't know that what they have at home is actually the best they can give to the child... " (CB, P3).

"... Umm! The caregivers don't have knowledge about the right food to give, let me say they are very much ignorant..." (CE, P2).

Another one said:

"...To be honest those that don't have this kind of information about expressing breast milk is those types that don't come to the clinic for growth monitoring and, vaccinations , you will only find the child when is already sick , so they don't even know that breast milk can be expressed for the child to drink..." (CC, P2).

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The study’s findings revealed that most caregivers’ are not familiar with recommended feeding practices, which contribute to malnutrition in children. The study conducted by Nzefa, Monebenimp and Ang (2019) concurred with the findings and revealed that a lack of knowledge regarding adequate feeding to children explains why children are malnourished. This is also supported by Kekana (2018) and Mabweazara, Rivalani, Tsolekile, Leach and Puoane (2018), who found that poor caregiver nutritional knowledge is one of the contributing factors to stunting, underweight, wasting, and obesity in rural and peri-urban areas. Furthermore, the nurses revealed that caregivers are unaware that most of the food they have at home is nutritious for their children. The study's findings are similar to what Matlala (2016) found, that caregivers believe adequate feeding is all about buying.

Conclusion of theme 4: Contributory factors to malnutrition as perceived by nurses

The majority of nurses revealed that most of the factors contributing to malnutrition are giving non-nutritional food like juice (Oros), chips, and tea. Soft porridge was mentioned as a carbohydrate they gave basis, suggesting that they did not include various types of food in children’s diet. Caregivers acknowledge the importance of children having milk in their diet, but they reduce the formula measurement to ensure it lasts the month. Moreover, caregivers are not familiar with the nutritious food that should be given to children.

4.4.5 Theme 5: Recommended actions to facilitate nutritional feeding practices

Table 4.6: Recommended actions to be taken to facilitate the nutritional feeding practices

THEME	SUB-THEMES
5.Recommendations to facilitate the nutritional feeding practices	• Actions to be taken to facilitate the nutritional feeding practices as indicated by caregivers • Actions to be taken to facilitate nutritional feeding practices as indicated by nurses

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Discussion of theme 5 findings: Recommendations to facilitate the nutritional feeding practices

The majority of caregivers narrated what needs to be done to facilitate the nutritional feeding practices for their children. Two sub-themes were identified from the theme: actions to be taken to facilitate the nutritional feeding practices as indicated by caregivers and actions to be taken to facilitate nutritional feeding practices as indicated by nurses. This is discussed in detail below:

- **Actions to be taken to facilitate the nutritional feeding practices as indicated by caregivers**

The majority of caregivers indicated that they fed their children what they thought was right; thus, they need to be educated about correct feeding practices. This is supported by the following quotes:

"... *I think a nurse and a Dr must have time to teach us about correct food to give to our children. If they continue telling us about it then I think we will even see its importance…" (*P6, FG 2).

Another one indicated:

"…I think nurses should continue to teach us about correct feeding …" (P 2, FG 3).

Another one said:

*"…Through teaching by nurses at the clinic, they must have time to tell us about this feeding, maybe it will help…" (*P5, FG3).

Another one indicated:

*"…I think they should teach us; they should keep on giving this information especially to give different food …" (*P7, FG 3).

"…I think what is already said that people who take care of children should be given this kind of information about feeding, …" (P1, FG 4).

According to Janmohamed, Sohani, Lassi and Bhutta (2020), giving health education is effective in providing a nutritious diet to children. Similarly, several researchers (Gerritsen, 2016; Tilles-Tirkkonen, Nuutinen, Sinikallio, Poutanen & Karhunen, 2018)

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concurred that giving young children nutritional education has been considered effective in western countries to date. It was also indicated that after giving health education more children included vegetables in their diet and reduced the intake of ice cream, sweets and sugar-sweetened drinks. Zahid-Khan, Rafique, Qureshi and Badruddin (2013) also revealed that 36% of children in Tando Jam and 32% of children in Quetta progressed to normal nutritional status after a teaching programme which encouraged the use of the food they had at hand.

Caregivers in this study revealed that mothers do not visits the clinic as scheduled; the quotes below indicate how visiting the clinic for child growth monitoring will not only promote growth, but also help caregivers to gain knowledge regarding feeding practices.

"...and mothers should also visit the clinic on the date given this will help us to get more information from others as well as nurses ..." (P3, FG5).

Another one said:

"...I believe at the clinic nurses give this kind of information, so it is better to go to the clinic to get such information..." (P4, FG5).

Another one said:

"...I think visiting the clinic more often or on the date given will help, because we only visits for vaccinations only..."(P1, FG6).

The study's findings indicated that visiting the clinic for child growth monitoring will help one acquire correct information about feeding practices. This is in line with Daelmans et al. (2015), who revealed that growth monitoring promotes early child development and is associated with long-term health, economic, and social benefits. Griffiths and Del Rosso (2008) indicated that the intervention involves monthly weight measurement and charting, and using the information to counsel caregivers. Furthermore, it creates awareness about child growth and care practices to increase demand for other health services. Similarly, Nyavani, Xikombiso and Fhumudzani (2016) found that adequate participation in the growth monitoring programme raises caregivers' awareness on the importance of growth charts and their interpretation.

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Apart from the need to provide adequate nutritional food to their children, caregivers mentioned that social workers should be part of the intervention and ensure that a child's social grant is allocated to a person who is taking care of the child day. This is supported by the quotes below:

*"...so I think social worker should at least if possible visits all the children that are not growing well to find out why..." (*P4, FG5).

Another one said:

*"Okay she must take the matter to the social worker, who will then help her to get SASSA for her sister children, it happens, there are people who are getting the SASSA because they spend most of the times with the children... (*P1, FG5).

"...*to be precise social worker must deal will all mothers who don't use child grant money for the children , they must change the card to be on caregivers who are responsible for children on daily basis..*." (P2, FG4).

The findings of the study are supported by Loots, Yan and Vember (2021), who are of the view that social workers are there to play their part with regard to the safety and wellness of the children. Furthermore, they support households with a low income with food parcels to prevent malnutrition in children under the age of five.

Caregivers felt that home visiting and community programmes could bridge the gap between health facilities and households, and improve access to nutrition services for children. This is illustrated below:

"...I also think that information should be given to caregivers by home based care, they should at least visit all the houses having small children and give this information about correct eating..." (P4, FG1).

"...also we should involve mobile clinics (thendeleki), it is very difficult for some of us to come to the clinic is too far and I heard you saying that people came to the clinic for measles injections, and I didn't know about it. If they are planning to do something like that, they must make sure that the invitations reaches all of us..." (P5, FG2).

"I think nurses should continue to give health education about correct feeding, especially in places like farms, those people are visited once per month and if you fail

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to go on the date given you will wait for another month to get help... I am talking about nurses from (thendeleki) mobile clinic, they should have time to teach those people about this things it will work..." (P2, FG3).

"...When mobile clinic visit us on site, they should try to talk about feeding to all the mothers who are there, I mean they only come once per months to us and most of us working at the farm attend the clinic and the owner does not have problem with us going there or if is going to take a long time, the nurses can also teach the baby sitters since they are the ones that take care of our children..." (P1, FG6).

The study's findings found that visiting homes of caregivers with children under 5 years for nutritional interventions could promote adequate feeding practices. This is supported by Gwele and Ebrahim (2019), who found that home-visiting programmes are important for advancing early childhood development (ECD) in South Africa. This is further supported by Azzi-Lessing and Schmidt (2019), who indicated that all of the ECD home visitors found their work rewarding and worthwhile, particularly their intervention with parents and their efforts towards community development. They found gratification in providing information and education to parents regarding their children's development and well-being, as well as in linking families to whatever resources were available in the community.

- **Actions to be taken to facilitate nutritional feeding practices as indicated by nurses**

After data analysis, nurses indicated what needs to be done to facilitate nutritional feeding practices. Majority of the nurses indicated that caregivers need to be educated about the correct nutritional feeding to promote growth and development of their children. This is supported by following quotes:

"...The dieticians will help in giving health education as they are expects when it comes to what to give and they will understand it and it will prevent conditions like malnutrition and kwashiorkor, because this conditions were common previously but when they come back in times when social grant is available I am afraid, instead of buying food for children they play cards..." (CA, P1).

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Another one said:

*"…I think we nurses must not get tired, we must continue teaching the community, and the few people that get the message will be able to teach others…" (*CB, P1).

Another one said:

*"…Giving them information about child social grant and the fact that the money is meant for food only nothing else for the child to grow healthy…" (*CC, P1).

"…We should also continue to give information about nutritious feeding to the mothers…" (CA, P2).

Another one indicated:

"... we need a campaign to teach them about the importance of giving recommended food and rather give traditional foods like, peanut (pounded), mashed beans, watermelon and giving the child water of boiled spinach, Swiss chard etc..." (CE, P2).

"…should give health education every day at the clinic before they start with their daily work, nurses should stop giving health education after the case of malnutrition is reported or following the health calendar whereby certain topics is covered because is the month to focus on it, with feeding practices it is something that need to be done frequently…" (CF, P2).

The study's findings indicate that nurses should give health education to caregivers to provide nutritious food to their children. Arikpo, Edet, Chibuzor, Odey and Caldwell (2018) concur with the results as it was found that giving information about feeding reduced the number of caregivers that introduced complementary foods to their infants before six months by 12%. Similarly, an educational programme introduced in Bangladesh improved the quality of infant's diets (Owais et al., 2017). Moreover, a study conducted in Southern Ethiopia revealed that good knowledge regarding feeding practices is of paramount importance, as the proportion of mothers practicing appropriate complementary feeding improved from 54 to 70% at the end of the study (Muluye, Lemma & Diddana, 2020).

Nurses indicated that the need to reach out to community gatherings, such as churches, pay points, and stokvels to provide nutritional feeding practices were necessary. This is indicated by the quotes below:

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"...I think in places like societies, women here together with community workers will give information to each other it will help... another thing is giving information in gatherings like traditional dances (zwigombelani), traditional steps (zwitepeni), because you may find that this women do have children at home that are not growing well, so she must be given this kind of feeding information..." (CA, P1).

"... I think they should go out on the pay day to give that feeding information..." (CA, P1).

"...to go to stokvels and give them information... any kind of stokvels where we can find mostly women gathered..." (CB, P3).

"...Place like (mundendeni) pay points, we must try by all means to go there, while thy are busy getting the money will be busy giving health talk, people will get the information, two or three people will have the information... There's something that is entertaining people these days, what is it, will I ever say it, zwitepe (traditional steps) women loves it, so even us nurses should visit them, after dancing, while eating we give them health education about correct food to give to the children" (C B, P 1).

"...I've being thinking about this for quite some time now that if we could visit the chief kraal (tribal office) to give this information besides this grandmothers and grandmothers are our target when it comes to making a decision on what to give and what not to give to these children..." (CB, P2).

The study findings highlight that they need to give health education in churches and other community gatherings. This is supported by McGinnis and Zoske (2008), who posit that churches offer a variety of health services in a convenient, comfortable location for the community. Furthermore, health education is one important service that can be offered to members of a church community to prevent and manage many chronic diseases. According to Abell (2016), nutrition was one of the top three health topics that members of the church were interested in. Moreover, the study's results further indicated that nurses should try to give health-related information through the radio to promote nutritional feeding practices. This is supported by the quotes below:

"...I don't know if these will work, we can try to take this message to the radio, mothers love to listen to the radio especially now that we have this covid 19 and they want to

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know what's happening. Just to have a slot per month for our doctor or a nurse to give health talk. The grannies will also have information since they love listening to the radio..." (CB, P1).

"Another thing is through radio, I think through media it will work for us... to give us go ahead and allocate a person who will give this feeding information..." (CB, P2).

A few participants indicated that another way to facilitate the implementation of nutritional feeding practices is through the radio. This is in line with the study done by Rupert et al., (2014), who found that social media can serve as an aid to patients. According to Muyanga (2015), in Malawi, majority of patients indicated that most of the information regarding their health issues were heard on radio as radio reaches more people than newspapers, since it is cheap. Furthermore, it can improve the standards of health in the community as people learn better skills to care for the sick and elderly people. Similarly, Nyawasha and Chipunza (2015) revealed that apart from students being empowered in matters relating to health, the radio makes it much easier to understand as the presenters also translate important things into an indigenous South African language.

A few nurses revealed that there are family issues that require intervention from social workers. In addition, some caregivers are unable to afford food (because they don't have birth a certificate to access a child social grant), grandmothers are failing to provide their grandchildren with nutritious food, while their mothers are misusing the child grants money. The following quotes highlight the need to promote a healthy living style:

*"…We are so lucky because the social worker we have here in the clinic so anything that need their attention we can contact them then they will do follow up and end up providing them with food if it is really difficult…" (*C B, P 2).

"…problems are so many some they don't even have birth certificates we intervene and refer to social workers, get birth certificate then be able to get child grant support(SASSA) and even get food parcel…" (C C, P 2).

"…every person who is struggling to take care of the children while their mothers are busy enjoying themselves out there need to be the ones getting child grant instead of

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*their mothers, social workers have their ways to control the money and they do home visit…"(*C D,P 1).

The findings revealed that social workers attend to patient's needs, such as food types, helping children without birth certificates, and motivating the social grant reallocation to beneficiaries that spent most of their time with the child. In 2000, the South African government started the provision of cash grants as poverty alleviation mechanism. The child support grant is payable per month to all children under 18 years of age whose primary care giver passes a means test (Department of Social Development, 2005). Zastrow (2004) indicated that social workers should be knowledgeable and skilful in a variety of roles, including giving information and attending to social problems. Many participants indicated the need to involve the social workers as some children have challenges in accessing social grants due to a lack of proper documents like birth certificate (Ntshuntshe*, 2012). Similarly*, Mushaphi, Dannhauser, Walsh, Mbhenyane and van Rooyen (2015) concur that the majority of caregivers (78.3%) depended on child social grants.

Conclusion of theme 5: Recommendations to facilitate the nutritional feeding practices

Caregivers indicated that they need to be educated about the correct feeding practices. In addition, elderly people must be involved in this teaching programme because they have a significant influence on day-to-day feeding practices. Home visiting and community programmes could bridge the gap between health facilities and households, and improve access to nutrition services for children. They also visit the clinic for child growth monitoring as scheduled to promote growth and gain information regarding feeding practices. Social workers should ensure that a child's social grant is allocated to a person who is taking care of the child basis. Although the majority of nurses indicated that health education about feeding practices to caregivers would promote growth and development of children under the age of 5 years, a few nurses felt that other social problems caregivers had needed to be attended to by social workers as they influence children's diets. Nurses should also provide health information through radio and reach out to community gatherings such as churches, pay points, and in stokvels to promote nutritional feeding practices.

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4.5 CHAPTER SUMMARY

This chapter discussed the results of the study. The themes that emerged from the data were analysed and supported by the literature. Findings revealed the types of food given to children daily and factors that contributed to the kind of food they give (i.e. financial constraints, elderly influences, common practices, child preferences, and breastfeeding challenges despite the nurse's advice about recommended feeding practices). Nurses perceived that factors that contributed to malnutrition were lifestyle-related, such as non-nutritional feeding practices and knowledge deficit related to feeding practices. Nurses' activities to facilitate the implementation of nutritional feeding practices included giving health education in community gatherings and through radio. Common activities that nurses and caregivers revealed include social workers' intervention and providing health education in community gatherings or at home. Caregivers also indicated that they should take their children to the clinic for growth monitoring. Chapter 5 will discuss development of a strategy.

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CHAPTER 5

DEVELOPMENT OF A STRATEGY

5.1 INTRODUCTION

Chapter 4 presented the analysis, presentation and discussion of the research results.This chapter will be on the development of the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

5.2 CONTEXTUALISING THE RESULTS INTO A CONCEPTUAL FRAMEWORK

The six elements of practice theory outlined by Dickoff et al., (1968) were used to integrate the results of phase one of the study (the situational analysis) and gave the structure for the theoretical foundation. These are context, agent, recipient, process, dynamics and outcomes, which are discussed below:

5.2.1 Context

Dickoff et al. (1968) reveal that the context is viewed from the aspect of the matrix of activity; it is seen in relation to other things, including persons and other activities, and to see the interrelation of these other factors constituting an organism, unity, or total context of the activity. In this study, the context in which the strategy should be implemented is the clinics. For the community context, this entailed guidance, support, advise, and giving health education regarding nutritious feeding practices.

- **Clinic context**

The participants indicated that to facilitate the implementation of educational nutritional guidelines, caregivers should be educated about nutritional feeding practices at the clinic. According to the Nursing Act (2005), a clinic is the Primary Health Care (PHC) facility that prevents disease, and promotes health and maintenance of the nutrition of a patient, including that of the children through teaching. Mobile health clinics reach out to people that are unable to access the fixed clinic for growth monitoring and

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immunisation in children under the age of five as well as their nutritional well-being (Yu, Hill, Ricks, Bennet & Oriol, 2017).

Nurses indicated that to facilitate the implementation of educational nutritional guidelines, caregivers should be educated about nutritional feeding practices at the clinic. In agreement, caregivers acknowledged that they need to be educated about nutritious feeding practices and also showed that mobile or fixed clinics are an easy place to reach.

- **Community context**

The study participants indicated that there are several community contexts that health care providers can use to disseminate information regarding nutritional feeding practices. These include home, traditional council meetings, crèche/daycare centres, and school and community hall contexts. All health events taking place in the community context are usually approved by the traditional council. The use of each context depends on the type of event and space thereof. Reaching out to the community for nutritional health promotion messages improves the child's development (Lachman, Wamoyi, Spreckelsen, Wight, Maganga & Gardner, 2020).

5.2.2 Agent

An agent is any person whose activity leads to the realisation of the goal (Dickoff et al., 1968). The study's findings revealed that health care professionals are the agents' to facilitate the implementation of educational nutritional guidelines. These health care professionals are community home-based carers, dieticians, medical practitioners, nurses and social workers.

- **Community Home-Based Carers**

Home Community-Based Care (HCBC) are health professionals introduced to the PHC level to give health education to families that lack nutritional feeding information and have difficulty accessing the clinic. HCBCs are involved in facilitating nutritional feeding practices through community outreach. This is supported by Austin-Evelyn, Rabkin, Macheka, Mutiti, Mwansa-Kambafwile, Dlamini and El-Sadr (2017), who found that HCBC was introduced in PHC as a strategy to support, prevent and promote the health of the community including that of the children.

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The participants concur that during home visits, community home-based carers should also consider children under the age of five years, and give health education to families that lack nutritional feeding information and have difficulty accessing the clinic.

- **Dieticians**

In this study, participants alluded that dieticians are the appropriate and relevant experts since they are well informed in correct feeding practices to be followed by caregivers to promote the growth and development of children. This is in line with Eat Right PRO (2016); dieticians promote health and provide children with suitable diet plans.

- **Nurses**

The role of a clinic nurse is to provide nutritional screening to all children visiting the clinic by monitoring growth and giving appropriate nutritional advice to caregivers to prevent disease and promote health. This is supported by Agustin (2018), who reports that nutrition screening by nurses is crucial to identify patients who are already malnourished or at risk of becoming so and further develop nutritional care strategies to prevent severe malnutrition.

- **Other health care providers**

The nurses also revealed that other health care providers like peer educators and social workers should be involved in facilitating the implementation of educational nutritional guidelines.

5.2.3 Recipient

Recipients are all those persons who receive action from agents and benefit from the activity (Dickoff et al., 1968). The findings of this study revealed that caregivers are recipients who benefit from the activities of the agents when the educational nutritional guidelines are implemented.

- **Caregivers**

One of the caregiver's roles is to provide their children with a healthy environment and ensure adequate nutrient intake. In many African cultures, a caregiver is the preferred

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person who looks after infants' and young children's needs, including caring for and providing their children with food (Parke, 1978).

5.2.4 Process

What is the guiding procedure? The process involves the steps to be taken towards the accomplishment of the goal. The process aims at providing sufficient information to enable the activity to be carried out. It safeguards the agent, recipient and the institution in providing knowledge and lessens liability to criticism (Dickoff et al., 1968). The participants in this study indicated how they want their activities to be carried out through clinical teaching programmes, campaigns, and community outreach. Through this process, caregivers will be able to provide nutritional feeding practices. This is in line with Sánchez-Encalada, Talavera-Torres and Wong-Chew (2019), who showed that teaching programmes provide primary caregivers with dietary information that also positively affects the nutritional status of their children. This would be achieved through reaching out to the community by using the traditional council meetings conducted by each village to provide feeding information and visiting churches. Attract more people by conducting campaigns. USAID (2014) supports this, which introduced Community Based Management of Acute Malnutrition (CMAM). One of the components of CMAM is community outreach and mobilisation. Each process is discussed below:

- **Clinical programmes**

Nurses indicated how they wanted nutritional feeding information to be included in clinic programmes; most nurses encouraged grouping of children according to their age to give relevant feeding information.

- **Conducting campaigns**

Caregivers also agreed that conducting campaigns will also attract many children under five. This is indicated by quotes below by caregivers as they explain the process that needs to be followed.

- **Community outreach**

Nurses revealed how reaching out to the community will help in the realisation of the aim of this study; the following quotes indicate how nurses will use the Sunday

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gatherings conducted by each village to provide feeding information and visit churches. In agreement, caregivers also explained how they would want health care providers to reach out to them in the community, including visiting them in a place where they are playing cards, and giving health talks during home visits.

5.2.5 Dynamics

Dynamics involve the power sources for that activity. These energy sources motivate agents to pursue their activities without getting discouraged (Dickoff et al., 1968). The dynamics of this study are active listening and understanding, respect, non-judgement, humanity and knowledge. These dynamics should occur between the agents and the recipient in order for the facilitation of nutritional feeding practices to be implemented.

- **Active listening and understanding**

Active listening is one of the effective communication skills needed to achieve our goal. In order to facilitate the nutritional feeding practices, agents should have active listening skills to recipients to provide relevant nutritional information. Practising active listening will also build respect between health care professionals and caregivers, which will increase understanding of the activities they are performing. Jahromi, Tabatabaee, Abdar and Rajabi (2016) found that active listening signifies to another person that what they say is important because active listening is about hearing more than what is being said. This is indicated by the following, as indicated by the participants.

- **Respect**

The study findings included elderly people and mothers as recipients of the activities that need to be implemented. All health care professionals should respect caregivers for the activities that are to be carried out, regardless of age. Receiving respect makes people feel important, cared for, and worthwhile. According to Gulshan and Chanda (2019), respect is when one is treated with concern, is sensitive to cultural differences and allows individuals to make choices.

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- **Non-judgemental and humanity**

Both the participants showed that being non-judgemental and kind will result in a positive response towards all the activities provided. Non-judgmental listening isn't about avoiding those judgments – it's about making sure you don't express those negative judgments because that can get in the way of helping someone in need.

5.3 APPROACH USED TO DEVELOP THE STRATEGY

This section focuses on the development of the strategy that will be used to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District in Limpopo Province. For the purpose of strategy development, SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five. SWOT analysis is described by Bezuidenhout (2014) as a structured process of analysis that identifies the strengths, weaknesses, opportunities and threats, and evaluates them. Bunn and Conlin (2013) indicated that strengths and opportunities are resources that can be utilised to overcome weaknesses and threats, apart from seeing them as sufficient. Secondly, during the SWOT analysis, the six elements practice outlined in Dickoff (1968) were applied, namely, context, agents, recipients, dynamics, process and outcomes.

5.4 FACTORS INVOLVED IN SWOT ANALYSIS

Internal and external factors within the SWOT need attention because they can negatively or positively influence child health care services (Bunn & Conlin, 2013).

5.4.1 Internal factors

Internal factors are found within child health care services that help the institution achieve or fail in achieving its objectives. These factors can influence how services are rendered (Bezuidenhout, 2014). They include the strengths and weaknesses of the facility. Internal factors can be manipulated in order to achieve the objectives of the institution. Strength is the characteristic that gives an organisation advantages over other entities; weakness is seen as a characteristic that puts an organisation at

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a disadvantage (Bezuidenhout, 2014). The internal factors include human resources, competencies, financial costs and services. Human resources are personnel needed to carry out certain duties or jobs (Booyens & Bezuidenhout, 2013). In this study, the health professionals (agents) who facilitate the implementation of educational nutritional guidelines by caregivers (recipients) are available to all clinics (context).

Competence is defined as the capabilities and potentials that include the knowledge and skills an individual has to perform their duties or job (Booyens et al., 2013). Therefore, if health professionals (agents) support caregivers (recipients) through education (process), the implementation of educational nutritional guidelines will be a success, resulting in a low rate of malnutrition (outcome).

Financial costs pertain to adding value to a product or service; it has to do with the availability of funds and equipment, and maintenance for day-to-day functions (Booyens et al., 2013). Financial costs have to do with the availability of resources. For example, resources such as nutritional guidelines, materials supplies, etc., so that agents (health professionals) can render or implement educational care guidelines with ease.

Services are defined as essential health care, proven scientifically and socially acceptable by society, and accessible to all people in the country (DoH, 2015). These services are rendered by health professionals (agents) to caregivers (recipients) of children under-five in child health clinics.

5.4.1.1 Internal factors: Strengths and weaknesses

The strength and weaknesses as internal factors focusing on human resources, competence, financial costs and services emerged from the study results.

5.4.1.2 Human resources

The study results indicated that each clinic has nurses, health care workers, social workers and dieticians. These are agents to carry out the activities to ensure the implementation of nutritional guidelines. Secondly, human resources also include recipients. The study further revealed that all children under five had a caregiver who is regarded as the recipient of educational nutritional guidelines.

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5.4.1.3 Competencies

Competencies are processes in the form of the knowledge and skills identified by (agents) health professionals and the caregivers in this study. The study revealed that the nurses had varied experience in rendering child health care services as follows: nine (69.2%) of registered nurses had seven or more years of experience, while two (15.4%) had between 4-6 years of experience. Furthermore, one (7.7%) enrolled nurse had 1-3 years of experience, two (15.4) had 4-6 years of experience, while another one (7.7%) had less than three years of experience. This experience of nurses rendering child health care fosters the nurses' (agents) knowledge and skills.

The data revealed that nurses provide caregivers with advice on exclusive breastfeeding, preparation and storage of breast milk for children under six months. In addition, they also provide advice on giving fruit to children older than six months. The competencies possessed by nurses (agents) were seen as process activities carried out during child health care services. Moreover, despite the advice and education provided to caregivers by nurses, children are malnourished because caregivers don't have knowledge and skills regarding the type of nutritious foods to give to their children. The knowledge deficit was mostly influenced by defaulting and not taking the child to a clinic where advice is given regarding the correct feeding practices.

5.4.1.4 Financial costs

The study discovered clinic services were rendered for free in all the clinics. Moreover, nurses utilise educational nutritional guidelines during child health care and growth monitoring services. Secondly, each clinic had nurses rendering services. This indicated that value for money was considered through the effective implementation of the guidelines as it will lead to a reduction of child malnutrition; hence, improved child health care service delivery. However, it was discovered that there were no clinics in some of the communities or villages. Thus, caregivers used transport to the nearby clinic for childcare services. Moreover, due to a lack of money, some caregivers failed to take the child to the clinic as scheduled, resulting in a knowledge deficit regarding child nutrition.

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Secondly, the study revealed that the majority of caregivers do not have money to buy nutritious food for their children; as a result, they give children whatever is available irrespective of the child's age.

5.4.1.5 Services

5.4.1.5.1 Availability

According to Dickoff et al. (1968), the availability of services involves the activities (process) that were needed to achieve the goals of the institution and the outcomes. From the study results, the researcher discovered that nurses at the clinics were offering child health services. In addition, nurses alluded that during the child visit, they educate and advise the caregiver regarding the feeding practices. However, only the caregivers who visited the child health services are educated and advised accordingly. This lead to those who default child health care visits with a knowledge deficit. Secondly, not all villages have a clinic; the community uses mobile clinics for child health care services. In addition, the mobile clinic visits the community once a month, resulting in delayed knowledge capacitation.

5.4.1.5.2 Affordability and accessibility

Actions that were performed within an affordability framework were seen as the activities performed by nurses as a process that resulted in an outcome. Child health care services are rendered for free in all public PHC facilities by nurses as a process (Dickoff et al., 1968). This allows all caregivers to visit the clinic for child health care services and receive education and advice regarding nutrition. However, although the services were free, some of the PHC facilities were situated far from the community. This made it challenging for them to access the clinic as often as they wished. Caregivers who lived far from the PHC facilities had poor access to the services, hence, poor utilisation of the services, which led to non-adherence to the implementation of educational nutritional guidelines.

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5.4.1.5.3 Acceptability

Acceptability of the service involves Agents, processes, dynamics and outcomes, as indicated by Dickoff et al., (1968). For example, child health care services were accepted and utilised by the community represented by child caregivers. To indicate that services were accepted, the caregivers visited the clinic for child health care services, though some were defaulting due to a lack of money for transport.

Although other caregivers visit child health care when the child is malnourished, they want the nurses at the clinics to advise them regarding feeding practises. Therefore, accepting the service will result in a successful implementation of child nutritional guidelines by caregivers as process and dynamics; hence, the low rate of child malnutrition outcomes (Dickoff et al., 1968).

5.4.2 External factors

External factors are forces outside the provision of maternal health care services. External factors include opportunities and threats that affect the service which is being provided in the facility (Bezuidenhout, 2014). Conversely, opportunities are characteristics that can be used to the organisation's advantage and are helpful in the implementation of educational nutritional guidelines However, threats are aspects that can negatively affect the organisation and are harmful in the implementation of educational nutritional health guidelines (Bezuidenhout, 2014). External factors included political, economic, socio-cultural, environmental and laws.

Political factors are the authority and the powers provided by the constitution of the country or government policies (Booyens et al., 2013). The government created the posts for PHC health care professionals (medical practitioners, dieticians, community home-based care workers and social workers) to ensure the implementation of educational nutritional guidelines.

Economic factors influence health care services. They entail finances where, if a person is poor, it will determine the quality and quantity of the services offered (Booyens et al., 2013). Child health care services are free to all public health care institutions so that all the citizens of the country can utilise the services.

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Socio-economic factors influence a person's health through his/her lifestyle, attitude, education and effects of culture. Child health care services encourage caregivers to participate in the care given to the child by educating and advising the feeding practices.

Technology has to do with the indications of advances in medicine with the provision of newly designed equipment (Bezuidenhout, 2014). In addition, technology plays an important role in child care services where nutritional education, advice and support can be given through various media platforms in order to ensure that caregivers have access to information.

Laws are the regulations relevant to the conditions of the services, such as patient care (Bezuidenhout, 2014). Regulations from the SANC enforce laws that nurses must abide by when executing their duties.

Environmental factors are factors that affect the organisation, e.g., changes in the climate (Bush, 2016). Environmental factors such as the state and the condition of infrastructure play a role in the implementation of child nutritional guidelines.

5.4.2.1 External Factors: Opportunities and threats

A PESTLE* helps to identify how factors such as the opportunities and threats will influence and affect health care professionals' activities (process) and caregivers (agents) implementing educational nutritional guidelines. It is often used with the last two letters of SWOT analysis so that a person clearly understands the situation related to internal and external factors (Bush, 2016). A **PESTLE** is a mnemonic that, in its expanded form, denotes P for Political, E for Economic, S for Social, T for Technological, L for Legal and E for Environmental Factors that give a bird's eye view of the whole environment from many different angles that one wants to keep track of while contemplating on a certain idea/plan (http://pestleanalysis.com/what-is-pestle-analysis).

5.4.2.1.1 Political

Politics exert a negative and positive impact on the health care system, which also influences or affects child health care service delivery. The national government

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declared that all should have access to health care services. Though the government has declared accessible health care services, some clinics are not accessible to caregivers. Hence, they had to travel a long distance to the clinic. As a result, child health care services were inaccessible, resulting in a lack of knowledge and skills regarding feeding practices. In some communities, caregivers rely on a mobile clinic for child health care services (the mobile clinic visits once a month). As a result, they wait for a long time without advice and education regarding feeding practices.

5.4.2.1.2 Economic factors

Economic factors can result in a negative or positive outcome, depending on their availability and use. Currently, South Africa is faced with financial challenges and a high rate of unemployment, resulting in poverty. This information, coupled with high food prices and knowledge deficit, negatively affects the child's health. The study results show that due to a lack of money, caregivers buy what they can afford or give the child what they have.

Not all communities have a stationary clinic; thus, caregivers must use money they do not have for transport to the clinic for child health care services. Furthermore, the caregiver's financial status also contributed to the poor implementation of the guideline because some caregivers did not honour their follow-up visits when given dates by nurses at the clinic due to a lack of money. All this resulted in the disruption of education and advice regarding child feeding practices by nurses, which compromised the child's health since the clinic is the only place for health education.

5.4.2.1.3 Social factors

Social factors involve six elements, as indicated by Dickoff et al., (1968). Most of the caregivers indicated that grandmothers and elders greatly influence child feeding choices and practices. These family members suggested that caregivers should give children complementary food from an early age.

Some caregivers' values, beliefs and culture negatively impacted the child health care service delivery. Most caregivers believed in common practice over advice and education from nurses. They reported that they introduced solids to their infants as early as one month since it is how it is done in the community. In addition, some

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caregivers further indicated that apart from following recommended feeding practices, they had breastfeeding challenges and beliefs, resulting in them stopping to breastfeed exclusively. This was when they experienced insufficient breast milk production, which forced them to add glucose or tea as breast milk supplements. Some caregivers indicated that they had to stop exclusively breastfeeding due to work and household demands, resulting in them depending on other family members to take care of the infant and feeding practices.

5.5 SWOT ANALYSIS MATRIX

From the results of the study, a SWOT analysis matrix was developed. The matrix was identified from the strength, weaknesses, opportunities, and threats from the results that indicated the implementation of child nutritional guidelines by the health care professionals (agents) and caregivers (recipients). Table 5.1 summarises the SWOT analysis matrix identified in the above discussion.

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Table 5.1: SWOT analysis matrix

<table>
<tr><th rowspan="2">INTERNAL FACTORS</th><th>STRENGTHS</th><th>WEAKNESSES</th></tr>
<tr><td>

Availability of health professionals (nurses, doctors, dieticians and social workers)
Availability of caregivers
Knowledge about feeding practices
Adherence to educational nutritional guidelines
Ability to identify a child with malnutrition
Availability of educational guidelines
Services are free
All clinics render child health care services
Nutritional education advises of services available
Child health care services free
Able to use own transport to clinic
Clinic located within 5 kilometre radius
Services utilised by the community

</td><td>

Caregivers' knowledge deficit about feeding practices
Poor adherence to nutritional guidelines by caregivers
Advising when the child is malnourished
Lack of money for transport to the clinic
Unavailability of clinics in some communities
Failure to access services & follow-up because of lack of money
Long distance travelled by caregiver to access clinic
Failure to honour follow-up visits due to a lack of money
Some caregivers use values, culture and beliefs regarding feeding practices

</td></tr>
</table>

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EXTERNAL FACTORS	OPPORTUNITIES	THREATS
	• Availability of clinic • Availability of nurses • Child health care services daily • Availability of child health care services • Educational nutritional guidelines • Health education and advice on feeding practices • Some implement the advice given by nurses • Unavailability of technology • Only physical contact method of health education for caregivers • Paediatric Food-Based Dietary Guidelines (PFBDGs) • Integrated Management of Childhood Illness (IMCI) • Children's Act 38 of 2005 • Clinics do render child health care services	• Only nurses render child health care • Advice and education only found at the clinic • Child health care rendered daily • Due to a lack of money, caregivers buy what they can afford or give the child what they have. • High food prices • Money is used for transport to the clinic for child health care services. • Value of money not considered due to defaulting visits • Believed in common practice • Mother's lifestyle • Culture and values • Grandmothers and elders have a great influence regarding child feeding choices and practices.

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	• Some clinics are accessible to caregivers • Mobile clinics visit and render child care services	• Had breastfeeding challenges and beliefs resulting in them stopping to breastfeed exclusively. • Stop exclusive breastfeeding due to work and household demands • Need for media platforms use • Failure to reach out to all children and render child health care services • Some communities do not have clinics

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The information from SWOT matrix was used in the action plan of the Build, Overcome, Explore and Minimize (BOEM) strategy.This is indicated in Table 5.2 below:

Table 5.2: BOEM matrix

	STRENGTHS	**BUILDING ON STRENGTHS**
INTERNAL FACTORS	**Human resources** Availability of health professionals (nurses, doctors, dieticians, social workers, and community home-based care) Availability of caregivers	**PROCESS:** • Work with community home-based care for home visits to all the homes with children under five children to continue with the guidance on nutritional feeding practices • Social workers to closely monitor and assist children who are from poverty-stricken families • Appreciate and acknowledge the presence of caregivers on board for adherence to the nutritional feeding practices • Determine the kind of support caregivers need regarding the implementation of nutritional guidelines
	Competences Knowledge about feeding practices	**PROCESS**: Work with District MCWH to do the following: • Arrange for a symposium or a workshop and for all PHC health care professionals to attend • Arrange a yearly award-giving ceremony for a clinic that adhered to guidelines as a form of positive reinforcement

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	Adherence to educational nutritional guidelines	• Encourage all health professionals to keep up the good work and to continue identifying children who need urgent attention to receive early intervention.
	Affordability Availability of health professionals' educational guidelines and services are free	• The community should be made aware that all child health care services are rendered for free by qualified health care professionals

Continued/…

INTERNAL FACTORS	STRENGTHS	BUILDING ON STRENGTHS
	Able to use own transport to the clinic **Acceptability and accessibility** Services utilised by the community	• Continuous support and encouraging caregivers to use their own transport to the clinic for child growth and monitoring services • Community health-based care workers can also be utilised to give caregivers information regarding arranging their own transport to the clinic. **DYNAMICS**: Health care professionals (agents) should display the following towards caregivers (Recipients): • Respect all caregivers irrespective of age, educational status and social background

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		• Active listening and understanding • Non-judgemental and humanity
INTERNAL FACTORS: CLINIC CONTEXT	**WEAKNESSES**	**OVERCOMING WEAKNESSES**
	Human resources Lack of involvement of all health care professionals Only nurses	**DYNAMICS** • Maternal, Child and Women's Health (MCWH) at the district level should be involved as the resource support for the facilitation of nutritional feeding practices • Diverse health care professionals as agents to partake in facilitating the implementation of educational nutritional guidelines for caregivers. • Health care professionals are nurses, medical practitioners, social workers, dieticians and community home-based carers Each health care professional's role as an agent should be clear and known
	Competences Caregivers' knowledge deficit about feeding practices Poor adherence to nutritional guidelines by caregivers	**PROCESS** **Agents** (Health professionals, namely nurses, medical practitioners, social workers, dieticians, and community home-based care) should empower caregivers on nutritional feeding practices as follows: • Be knowledgeable about nutritional feeding practices • Be proactive by guiding caregivers about nutritional food before the child is malnourished

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		• Continue to educate and guide caregivers on feeding practices • During the child growth monitoring at the clinic, take 15 – 20 minutes daily to talk about nutritional feeding practices • Conduct a campaign to teach recipients about the importance of giving recommended food to children • Infuse feeding practice talk to other departmental health campaigns • Give education every day before the start of the daily tasks • Avoid giving health education based on the reported case of malnutrition or health calendar • Plan clinical programmes according to children's ages and on specific days **Recipients** (Caregivers, namely mothers, grandmothers, aunts, babysitters, and elders in the family) should do the following**:** • Recognise their knowledge is a deficit with regard to feeding practices • Visit the clinic more often or on the scheduled date • Have a responsibility to change their non-nutritional feeding practices • Ask agents for more information regarding recommended nutritional food for children **DYNAMICS** • The health care professional (agents) should listen to and respect the caregiver in order to understand the relevant information they need regarding feeding practices

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		• The caregivers (recipients) should listen to and trust the health care professionals to improve their feeding practices and knowledge
	WEAKNESSES	**OVERCOMING WEAKNESSES**
	SERVICES Unavailability of clinics in some communities and failure to access services and follow-up because of a lack of money	**PROCESSES** **Agents** should reach out to those who are unable to reach the health care facility and provide information about nutritional feeding through the following activities: • Awareness campaigns in the community • Visits to crèches and daycare centres to monitor child growth and provide guidance on nutritional food • Visits to daycare centres for the aged and guide them on the nutritional food and feeding practices for children under five • Visit all the houses with children under five to provide guidance
	OPPORTUNITIES	**EXPLORING THE OPPORTUNITIES**

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	Political Clinics (fixed /mobile) are available and render child health care services	**Process** **Agents**:Health care professionals should promote the health care services available at the clinic to the community • Agents must attend traditional council meeting to encourage the community to use the clinic • Advice the community about mobile clinics in case fixed clincs are unaccessible
	Social Some caregivers implement the advice given by nurses	**Dynamics:** Health care professionals should • Appreciate caregivers who use the nutritional feeding information provided by nurses • Encourage caregivers to transfer the very information within the families • Treat the caregivers with respect and build trust
	Law Availability of policies and guidelines	**Process** • Agents (Nurses, dietician, community home based care) should be able to give nutritional feeding practices information according to the guidelines and policies • Recipients (caregivers) to feed their children using the feeding information in their Road to Health Booklets

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	THREATS	MIGRATION OF THREATS
EXTERNAL FACTORS: CLINIC CONTEXT	**Political** Advice and education on nutritional feeding practices are only found at the clinic	**CONTEXT:** Health education, advice and guidance on feeding practice should be given at the following places: • The community, during child growth and monitoring campaigns • The workplaces like farms • The clinic, during child growth and monitoring service • Their homes during home visits • Mobile clinics during visits • Community-women traditional dances (*zwigombelani*) • Community traditional steps (*zwitepeni*) • Any stokvels where women are mostly gathered • Grant (*mundendeni*) pay points • The Chief's kraal (tribal office) • Churches during health talk sessions • At baby shower functions

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	Economical Caregivers buy what they can afford or give the child what they have **Social** Believed in common practice, culture and role of elders regarding child feeding choices and practices Mother's lifestyle	**PROCESS** • Support and encourage the caregivers during child and growth monitoring visits on the recommended feeding practices • Information about feeding should be given to everybody in the community • Home visits to households with children to advise them on the feeding practices • Health care professionals should appreciate and consider the role of elders regarding child feeding practices • Elders should be actively engaged, advised and guided on the recommended nutritional food during the day when a newborn and the mother are discharged from the health care facility, and throughout the monitoring and growth visits • Where possible, social workers should visit children who are not growing well to establish why and provide the necessary support • Social workers should ensure that a responsible person receives the child's grant • Social workers should conduct home visits to check how the child grant is spent • Social workers should guide and advise young mothers about the child grant purpose

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	Technology Only physical contact method of health education for caregivers	**PROCESS** Provide information to everyone in their comfortable space through the following media platforms: • Radio station's health talk slot monthly • WhatsApp @ Mentor Mother Programme • Facebook @ Nutritional groups • TV shows
	Legal/Law Health children's right not observed	**Agents should observe their scope of practice and ensure that every child receives the deserved health care services through the following actions:** • Conduct awareness campaigns proactively • Provide health guidance and advice to all involved in the child feeding choices and practices Reach out to communities through social platforms

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5.6 DEVELOPMENT OF THE STRATEGY AND ORIENTATION

The information discussed under the SWOT matrix indicated the strengths, weakness, opportunities and threats in the implementation of child nutritional guidelines in the Limpopo Province. Information from the SWOT matrix was used to develop the strategy. In order to improve the implementation of child nutritional guidelines by caregivers, the action plan of the Build, Overcome, Explore and Minimize (BOEM) strategy was used as outlined in Pearce (2010). Therefore, Table 5.3 indicate the developed strategy to facilitate the implementation of child nutritional guidelines by caregivers

Table 5.3: The developed strategy to facilitate the implementation of child nutritional guidelines by caregivers

KEY AREAS	FINDINGS FROM THE STUDY	ACTIONS
Contributory factors to malnutrition	Mothers lifestyle	Social workers must do the followings: • Visits children who are not growing well to find out why and provide the necessary support • Child grant to be received by the responsible person • Conduct home visits to check how the money is used and advice how the grant is used
	Caregivers knowledge deficit about feeding practices	Health care professionals at the clinic should do the following: • Provide nutritional feeding information at the clinic after prayer before they start with their daily tasks • Avoid giving health education based on the reported case of malnutrition • Be knowledgeable about nutritional feeding practices • During the child growth monitoring at the clinic, take 15 – 20 minutes daily to talk about nutritional feeding practices

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		• Conduct a campaign to teach recipients about the importance of giving recommended food to children • Infuse feeding practice talk to other departmental health campaigns • Plan clinical programmes according to children's ages and on specific days • The health care professional should listen to and respect the caregiver in order to understand the relevant information they need regarding feeding practices
	Believes and common practice influenced by elders	Health care professionals should do the following; • Appreciate the role of elders regarding feeding practices • Listen to and respect the elders in order to give relevant feeding practices • Actively engage the elders in child feeding practices
	Caregivers buy what they can afford or give the child what they need	Health care professionals should do the following: • Encourage caregivers on recommended feeding practices • Give information based on what is available and affordable
	Poor adherence to nutritional guidelines by caregivers	Caregivers should do the following: • Recognise their knowledge is adeficit with regard to feeding practices • Visit the clinic more often or on the scheduled date • Have a responsibility to change their non-nutritional feeding practices • Ask health care professionals for more information regarding recommended nutritional food for children • Should listen to and trust the health care professionals to improve their feeding practices and knowledge

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Limited platforms for child health care services	Child growth monitoring done at the clinic	Health care professionals should do the following: • Reach out to the community through awareness campaign in the community • At the farms • Their homes during home visits • Any stokvels where women are gathered • At churches during health talks • Visits day care centres to monitor growth and provide nutritional feeding guidance • Grant (mundendeni) pay points • The Chief's kraal (tribal office) • Community-women traditional dances (zwigombelani) • Community traditional steps (zwitepeni)

5.7 CHAPTER SUMMARY

This chapter dealt with the strategy development where SWOT analysis was used to identify internal factors such as strengths and weaknesses that might influence caregivers' implementation of educational nutritional guidelines. Likewise, the PESTLE analysis was used to identify external factors affecting the implementation of child nutritional guidelines through opportunities and threats. Dickoff's six elements principles were integrated into the results and strategy discussion. The action plan was formulated by building on the strengths, overcoming weakness, exploring opportunities and minimising the threats, i.e., BOEM, in order to develop the strategy that will facilitate the implementation of child nutritional guidelines by caregivers. The next chapter presents the validation of the developed strategy.

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CHAPTER 6

VALIDATION OF THE DEVELOPED STRATEGY

6.1 INTRODUCTION

Chapter 5 discussed strategy development. This chapter focused on validating the strategy conforming to guidelines by Chinn and Kramer (2011). The criteria for strategy validation by Chinn and Kramer (2011) was selected because it is based on empirical evidence. The validation of the strategy was based on the following five critical questions: How clear is the strategy? How simple is the strategy? How general is the strategy? How accessible is the strategy? How important is the strategy? The strategy was validated by a group of professionals enrolled for their PhD in Nursing and Public Health. These individuals were purposively selected and consented to take part in this exercise. Table 6.1 outlines the individuals who validated the strategy.

Table 6.1: Strategy validation group

PROFESSIONAL DESIGNATION	POST-GRADUATE STUDIES	AREA OF WORK
Professional Nurse	PhD nursing graduate (former acting CEO)	Specialised psychiatric hospital
Professional Nurse	PhD nursing graduate	District hospital psychiatric ward
Professional Nurse	PhD nursing student	District hospital psychiatric ward
Professional Nurse	PhD nursing student (Masters in Nursing and Public Health graduate)	Nursing management (specialised psychiatric hospital)
Professional Nurse	PhD nursing student	District hospital psychiatric ward
Professional Nurse	PhD nursing student	Regional hospital paediatric ward
Social Work	PhD public health student	Social work at Future Families, Vhembe District

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Chinn and Kramer (2011) support the selection of health professionals as they indicate that selecting health professionals to validate the strategy in practice promotes health-related goals. Based on this literature source, the researcher was prompted to select health professionals who are researchers or in the nursing department.

The meeting was held via Microsoft Teams at an agreed venue within the Vhembe District since it was during the Covid-19 pandemic. The meeting was organised by the promoter of the study. The researcher presented her strategy to the group of professionals on two occasions in the presence of the promoter. The first presentation's comments by the group are indicated in grey, while the second presentation's comments are in orange (**see APPENDICES H1 and H2)**. The group used the criteria for strategy validation as outlined by Chinn and Kramer (2011).

6.1.1 How clear is the strategy?

According to Dickoff et al. (1968), six elements of practice strategy: context, agents, recipients, dynamics, process and purpose were used to describe the strategy. The idea of the strategy is illustrated in figures 4.1 – 4.6. The relationship between concepts is indicated in figure 4.7. The following shows the comments made by the group to ensure the strategy achieves the element of clarity following the six elements of practice strategy (to Dickoff et al., 1968).

First presentation comments

In the first presentation, a group of validators felt that the strategy was not clear, the community and clinic context was not indicted; therefore, they suggested:

"The community and clinic context be indicated in the diagram, further indicated that everything happens inside the community, so the community be the outer context".

Second presentation comments:

"Get one concept that covers the nurses, dietician, and community home based cares and other health care. Also get one concept to cover the mothers and elderly people in recipients".

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6.1.2 How simple is the strategy?

In the first presentation comments:

The validators indicated that the strategy is not simple as one could not understand the relationship between the structures. The following indicates how complex the strategy was:

“”*There was no relationship between the dynamics, agents and recipients”.*

Second presentation comments

The group then noticed that the colour and structure of the agents and recipients were different, so they suggested:

“To make the strategy simple the validators indicated that the collective name for the agents should be health care professionals”.

“The structure and the colour of the agents and recipients should be the same”.

6.1.3 How general is the strategy?

The strategy was described based on the need to facilitate the implementation of educational nutritional guidelines for caregivers. The findings of this study indicate that most participants accept that they need help with nutritional feeding practices. The participants also indicated the support needed to provide the children with nutritional food. The developed strategy can be practised by all health facilities that offer child health services. The group of validators agreed with what the researcher presented.

6.1.4 How accessible is the strategy?

The Provincial Department of Health in Limpopo will have access to the strategy. Furthermore, the Department of Health in the Vhembe District will also have access to the strategy as data were collected in its two sub-districts.

6.1.5 How important is the strategy?

There are several guidelines and programmes in place to prevent malnutrition. The strategy will help to facilitate the nutritional guidelines at hand to caregivers and promote nutritional feeding practices. In October 2021, the Department of Social Development and SASSA introduced the Zero Hunger Program for malnourished and

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HIV-infected children, giving cash to caregivers for food. The findings of this study will help caregivers with the food they need to buy. The following represents what the group said:

"*Any health care facility in South Africa that offer child care services can be able to carry out the process indicated by the participants.*

"The strategy can be used as its outcome is low rate of malnutrition in children".

The strategy will encourage caregivers to give children a variety of meals, not only carbohydrates. The study findings reveal that caregivers acknowledge that they are giving non-nutritious food; therefore, they need to be educated about correct feeding practices. The strategy would close the gap in providing the caregivers with nutritional feeding practices when the facilitation of guidelines about nutrition is implemented. It aims to achieve the following:

- Health care professionals would be guided on the provision of nutritional feeding information to caregivers.
- Health care professionals would treat caregivers with respect and acknowledge that each individual is different.
- Caregivers would acquire knowledge on the correct feeding practices.
- Children's growth and development will be promoted.

6.2 THEORETICAL ASSUMPTIONS OF A STRATEGY

This study aimed to develop a strategy to implement educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

This proposed study draws from three paradigms, namely meta-theoretical assumptions, theoretical assumptions, and methodological assumptions. These paradigms influenced the assumptions fundamental to this study's theoretical reasoning. Each paradigm is briefly described as follows:

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6.2.1 Meta-theoretical assumptions

Meta-theory is defined as assumptions about reality, or a theory behind a theory (Brink, 2017). This study assumes that caregivers are the primary provider of nutritious food to prevent malnutrition in children and promote growth. Secondly, malnutrition greatly contributes to the mortality rates of children under five years of age. This implies that facilitating the implementation of educational nutritional guidelines is necessary.

Every caregiver has the ability to provide their children with nutritious food. Therefore, health promotion is vital to caregivers. However, the implementation of educational nutritional guidelines depends on the caregiver's internal and external environment. The internal environment involves the kind of food caregivers regarded as nutritious. The external environment involves how information regarding nutritional feeding practices for children under five years is provided. The participants revealed what needed to be done to ensure that caregivers have nutritional feeding information. Therefore it is believed that facilitating the implementation of educational nutritional guidelines for caregivers of children under the age of five years was necessary.

6.2.2 Theoretical assumption

This study was conceptualised within Orem's Self-Care Theory (OSCT) (2006), the grounded theory for programme development outlined by Dickoff et al., (1968) gave the structure for the theoretical foundation. and the approaches outlined in Chinn and Krammer (2011) and Walker and Avant (2011, theory validated the strategy and literature control. Each theoretical assumption is briefly described below.

Orem's Self-Care Theory (OSCT)

Self-care deficit exists when the self-care demand of a person exceeds their self-care agency. Self-care deficit refers to a relationship between self-care agency and the therapeutic self-care demand in which self-care agency is not equal to therapeutic self-care demand. A person may have a partial or complete self-care deficit, indicating whether a partially or wholly compensatory nursing system is needed to accomplish self-care demands (Fitzpatrick & Whall, 1996). In this study, self-care agency refers to

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caregivers who are responsible for providing day-to-day basics to their children, including food.

OSCT guided the study in discovering the kind of food caregivers give their children, and the type of information nurses provide to caregivers regarding nutritional feeding practices. The themes that emerged were: types of food given to children on a daily basis, contributory factors to the kind of food they give, advice nurses give to caregivers regarding feeding practices, contributory factors to malnutrition as perceived by nurses, and recommendations to facilitate the nutritional feeding practices. Through OSCT, the study was able to determine whether participants had partial or complete knowledge regarding nutritional feeding practices. The facilitation process of the implementation of educational nutritional guidelines depends on the caregiver's knowledge regarding nutritional feeding practices.

- **Self-Care Agency**

Self-care agency refers to the capacity of the person to voluntarily and deliberately engage in goal-achieving activities. It also includes the capacity to engage in actions directed towards one's health and well-being to perform self-care activities. For the performance of these activities to occur, there should be attention, physical energy, mobility, reasoning, motivation, decision-making, and utilisation of technical knowledge, the repertoire of skills, organisation and coordination, integration of self-care with other aspects of life. In addition, persons should have attributes to assess their self-care needs. Furthermore, the person should decide on a course of action as a transitional process and be able to prepare for performing and monitoring one's self-care activities in order to be productive (Fitzpatrick & Whall, 1996). Caregivers are adults above the age of 18 years and are primarily responsible for their under-five-year-old children's day-to-day needs, including food. Therefore, the study results revealed that caregivers are willing to change their poor feeding practices for their children's sake. Some caregivers indicated how visiting the clinic for child growth monitoring would not only promote growth, but also help them gain knowledge regarding feeding practices.

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- **Nursing System**

If there is a potential self-care deficit, then a supportive educative nursing system would be appropriate. A nursing system has three components, namely a totally compensatory nursing system, a partially compensatory nursing system, and an educative-supportive nursing system (Orem, 2006). In this study, the focus is on two components: a partially compensatory nursing system and an educative-supportive nursing system, which are described below:

  - Partially Compensatory Nursing System

In a partially compensatory nursing system, the nurse is needed to carry out some activities which contribute towards meeting self-care needs. However, the patient is able to meet some of the needs (Horan, Doran & Timmins, 2004). In this study, the caregiver's potential would be complemented by the kind of information nurses give regarding nutritional feeding practices of children under the age of five years.

  - Educative-Supportive Nursing System

In an educative-supportive nursing system, patients are capable of meeting self-care needs. Therefore, the nurse's activities relate to teaching and supporting the patients so that they would eventually be able to meet their self-care needs. Research identified that support and information provision are closely linked and that patients require information to help prevent stress and improve their coping with hospital events (Timmins & Horan, 2007). This is relevant as this study aimed to develop an educational programme for caregivers regarding nutritional feeding practices in children under the age of five years in rural communities in the Vhembe District, Limpopo. Furthermore, the study results revealed that the majority of caregivers indicated that they need to be educated about correct feeding practices.

- **Grounded Theory for Strategy Development**

Phase 1 of this study would provide information regarding the kind of food caregivers give to children under the age of five years, the contributory factors to the kind of food they give, the type of information nurses provide regarding nutritional feeding practices to caregivers of children under the age of five years, and the strategy to implement educational nutritional guidelines. This would be followed by the framework for the

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development of the strategy, which would be informed by the six elements of practice theory outlined by Dickoff et al., (1968), namely agents, recipients, context, process, dynamics, and outcomes. SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five.BOEM action plan was used to develop the strategy. The strategy was then validated in an interconnected manner using approaches outlined in Chinn and Kramer (2011) and Walker and Avant (2005), namely analysing, derivation and synthesising. Through deductive analysis, synthesis and derivation, the related statements about each element of practice theory would be made to ensure a meaningful affirmation about the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years.

6.2.3 Methodological assumptions

A methodology is “the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of the methods to the desired outcomes” (Crotty, 2003). A qualitative approach following descriptive, exploratory and contextual approaches using in-depth individual and focus group interviews was adopted. Through this approach, the kind of food caregivers give to children and the type of information nurses provide to caregivers regarding nutritional feeding practices were described. Moreover, recommendations to facilitate nutritional feeding practices were also provided.

Activities indicated by participants to facilitate the nutritional feeding practices would assist the caregivers in providing the nutritional food and promote growth and development for children under the age of five years. It is assumed that the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years may guide health care professionals on how to disseminate nutritional information to caregivers.

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6.3 CHAPTER SUMMARY

This chapter validated the developed strategy. The strategy was validated based on Chinn and Kramer's (2011) approaches. Moreover, the OSCT guided the study. Through OSCT, the study determined whether participants had partial or complete knowledge regarding nutritional feeding practices. The theoretical assumptions of the strategy were also validated, and revealed that activities indicated by participants to facilitate the nutritional feeding practices would assist the caregivers in providing nutritional food, and promote growth and development in children under the age of five years. Chapter 7 presents the evaluation, conclusion, limitations and recommendations of the study.

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CHAPTER 7

EVALUATION, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The previous chapter validated the strategy based on approaches outlined in Chinn and Kramer (2011). This chapter focuses on the study's evaluation, limitation, conclusion and recommendations.

7.2 EVALUATION OF THE STUDY

The evaluation of this study is based on the purpose and objectives of the study, as indicated in Chapter 1.

7.2.1 Purpose of the study

This study aimed to develop a strategy to implement educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

The researcher explored and described the views of the participants regarding the strategy to implement educational nutritional guidelines for caregivers leading to the development of the strategy.

7.2.2 Objectives of the study

The objectives of this study were to:

- Explore and describe the kind of food caregivers in the Vhembe District give children under five years.
- Determine the contributory factors to the kind of food they give.
- Explore and describe the kind of information nurses give regarding nutritional feeding practices to caregivers of children under the age of five years in the Vhembe District.

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- Develop a strategy to implement educational nutritional guidelines for caregivers of children under the age of-five years in selected rural communities of the Vhembe District.
- Validated a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children under the age of five years in selected rural communities of the Vhembe District.

The study was conducted in two phases. Phase one was a situational analysis, and phase two was strategy development. The study approach in phase one was qualitative, using exploratory, descriptive and contextual design. Data were collected through in-depth individual interviews for nurses and focus group interviews for caregivers. Moreover, data were analysed according to Tesch's method to address the study's objectives. The strategy was validated by research experts, as described in Chapter 6 of this study. The findings of this study were described and supported by the literature. The findings outlined the actions to implement educational nutritional guidelines for caregivers.

The study results in phase one yielded to phase two, which is the development and description of the strategy. The strategy development was informed by six elements of practice theory outlined by Dickoff et al., (1968), namely agents, recipients, context, process, dynamics, and outcomes. SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats influencing the implementation of educational nutritional guidelines for children under the age of five.BOEM action plan was used to develop the strategy.

The strategy was validated by a group of health professionals who are also PhD students using Chin and Kramer's (2011) questions, namely strategy clarity, simplicity, generalisability, accessibility and importance, as discussed in Chapter 6 of this study.

7.2.3 Measures to ensure trustworthiness

Credibility, transferability, dependability and confirmability were measures applied to ensure trustworthiness in this study. These measures are briefly described below:

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7.2.3.1 Credibility

This study ensured credibility through prolonged engagement, member checking, peer examination, strategy evaluation, structural coherence, and research authority.

- Prolonged engagement

The researcher spent 4-5 months in the field collecting data. An appointment was made to brief the participants about the study questions, it’s purpose and significance.

- Member checking

After each interview summary was made, the voice recorder was played back to the participants.

- Peer examination

The research proposal was presented to the department and school research committees. Data was co-coded by the independent coder.

- Strategy validation

A group of health professionals validated the developed strategy.

- Structural coherence

Data were analysed following a step-wise format proposed by Tesch, Dickoff et al’s., and SWOT analysis framework for strategy development. Chinn and Kramer validated the study while the OSCT guided the study.

- Research authority

The promoters are research experts, while the independent coders are experienced in research.

7.2.3.2 Transferability

The study approach, setting, sampling, and theories used in the study were densely described to ensure transferability.

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7.2.3.3 Dependability

- Dependability audit

The research proposal was presented to the department and school research committees. Data was co-coded by the independent coder, and a group of health professionals evaluated the developed strategy.

- Dense description

The study approach, setting, sampling, and used in the study were densely described to ensure transferability.

7.2.3.4 Confirmability

- Confirmability audit

A group of professionals evaluated the developed strategy. Data was co-coded by an independent coder. The proposal was presented to the department and school, and examined by UHDC.

7.3 CONCLUSION

The strategy developed was based on the data described by the participants. The study explored and described the kind of food caregivers give to their children, the contributory factors to the kind of food they give, and the type of information nurses provide regarding nutritional feeding practices to caregivers of children under the age of five years. The themes that emerged were types of food given to children daily, contributory factors to the kind of food, information the nurses provide to caregivers regarding feeding practices, contributory factors to malnutrition (as perceived by nurses), and recommendations to facilitate the nutritional feeding practices. Each theme resulted in sub-themes which were discussed in detail in Chapter 4.

7.3.1 Types of food given to children daily

Caregivers revealed the type of food they give to their children daily. Two sub-themes emerged from this theme: starchy and processed food. The findings further outlined that most children were only fed soft porridge.

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7.3.2 Contributory factors to the type of food caregivers give

The study's findings revealed various factors that contributed to the type of food caregivers give to their children. This theme identified five sub-themes: financial constraints, elderly influences, common practices, child preferences, and breastfeeding challenges. The findings revealed that a lack of money influenced the feeding practices of the children.

7.3.3 Advice nurses give to caregivers regarding feeding practices

Two sub-themes emerged under this theme: recommended feeding practices before six months and after six months. Nurses narrated the information they gave caregivers regarding nutritional feeding practices.

7.3.4 Contributory factors to malnutrition as perceived by nurses

Three sub-themes emerged under this theme during data analysis: lifestyle-related factors, non-nutritional feeding practices, and knowledge deficit related to feeding practices. These factors were believed to hinder children's growth and development, leading to malnutrition.

7.3.5 Recommendations to facilitate nutritional feeding practices

Under this theme, two sub-themes emerged: actions to facilitate the nutritional feeding practices as indicated by caregivers and actions to facilitate nutritional feeding practices as indicated by nurses. Nurses and caregivers narrated how nutritional feeding practices should be facilitated; these include being educated about nutrition by different health care professionals, visiting the clinic for growth monitoring, and reaching out to the community through home visits.

7.4 LIMITATIONS OF THE STUDY

The study was limited to clinics with a high rate of malnutrition. The researcher acknowledges that this study is contextual since only caregivers of children with malnutrition were interviewed. In addition, the researcher did not get to hear much from the grandmothers or aunts of the children, as the majority were mothers of

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children. However, the results provide adequate information that might facilitate the implementation of nutritional feeding guidelines.

7.5 RECOMMENDATIONS

The study's recommendations are based on nursing practice and education:

7.5.1 Recommendations for nursing practice

It is recommended that the district office reinforce the strategy to facilitate the implementation of nutritional feeding practices in primary health facilities.

7.5.2 Nursing education

It is recommended that nurses at the PHC level receive training regarding nutritional feeding practices to provide the caregivers with affordable yet nutritious feeding practices.

7.6 CHAPTER SUMMARY

The study was evaluated based on the study's aims and objectives. The conclusion of the study was based on the themes and sub-themes outlined in Chapter 4. Credibility, transferability, dependability and Confirmability were measures applied to ensure trustworthiness in this study. Five themes emerged in this study, the findings outlined that most children were fed soft porridge only; revealed how lack of money influenced caregivers feeding practices to the children; Nurses narrated the kind of information they give to caregivers regarding nutritional feeding practises. Lifestyle related factors, non-nutritional feeding practices and knowledge deficit related to feeding practices were believed to be the factors that hinders growth and development of children leading to malnutrition. Limitations and recommendations were also discussed.

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APPENDIX A: APPROVAL FROM UNIVERSITY HIGHER DEGREE COMMITTEE

University of Venda

School of Health Sciences

Research Office

Executive School Higher Degree Committee

To : Ms Takalani Eldah Thabathi

Department of Advanced Nursing Sciences (PhD Candidate)

From: Prof RT Lebese

Research Professor, School of Health Sciences

Date: 17 August 2020

The decision of the Executive School Higher Degree Committee on 04 August 2020

Application for approval of a thesis proposal report in Advanced Nursing Sciences: **Takalani Eldah Thabathi (11511174)**

Title: **Strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of Vhembe district**

Promoter : Dr M Maluleke

Co-promoter : Dr NS Raliphaswa

ESHDC recommended for approval by the UHDC

Prof RT Lebese
Research professor (Chairperson of ESHDC)
School of Health Sciences

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APPENDIX B: ETHICAL CLEARANCE FROM UNIVERSITY RESEARCH AND ETHICS COMMITTEE

ETHICS APPROVAL CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Mrs TE Thabathi

STUDENT NO:
11511174

PROJECT TITLE: Strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of Vhembe District

PROJECT NO: SHS/20/PDC/38/2209

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Dr M Maluleke	University of Venda	Promoter
Dr NS Raliphaswa	University of Venda	Co - Promoter
Mrs. TE Thabathi	University of Venda	Investigator – Student

Type: **Doctoral Research**
Risk: **Minimal risk to humans, animals or environment**
Approval Period: **September 2020 – September 2023**

The Human and Clinical Trails Research Ethics Committee (HCTREC) hereby approves your project as indicated above.

General Conditions
While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following.

- The project leader (principal investigator) must report in the prescribed format to the REC:
  - Annually (or as otherwise requested) on the progress of the project, and upon completion of the project
  - Within 48hrs in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
  - Annually a number of projects may be randomly selected for an external audit.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project,. the project leader must apply for approval of these changes at the REC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date; a new application must be made to the REC and new approval received before or on the expiry date.
- In the interest of ethical responsibility, the REC retains the right to:
  - Request access to any information or data at any time during the course or after completion of the project,
  - To ask further questions; Seek additional information; Require further modification or monitor the conduct of your research or the informed consent process.
  - withdraw or postpone approval if:
  - Any unethical principles or practices of the project are revealed or suspected.
  - It becomes apparent that any relevant information was withheld from the REC or that information has been false or misrepresented.
  - The required annual report and reporting of adverse events was not done timely and accurately,
  - New Institutional rules, national legislation or international conventions deem it necessary

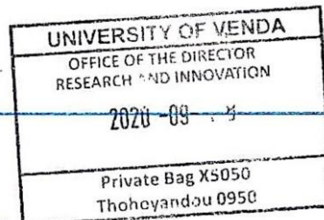
ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE
Date Considered: August 2020

Name of the HCTREC Chairperson of the Committee: Prof MS Maputle

Signature:

Director Research and Innovation

Signature: ....



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APPENDIX C: APPROVAL LETTER FROM LIMPOPO DEPARTMENT OF HEALTH TO CONDUCT THE RESEARCH

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

Department of Health

Ref : LP_2020_11_025
Enquires : Ms PN Motimele
Tel : 015-293 6028
Email : Phoebe.Mahlokwane@dhsd.limpopo.gov.za

Takalani Eldah Makhubele

PERMISSION TO CONDUCT RESEARCH IN DEPARTMENTAL FACILITIES

Your Study Topic as indicated below;

Strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of Vhembe district.

1. Permission to conduct research study as per your research proposal is hereby Granted.
2. Kindly note the following:
   a. Present this letter of permission to the institution supervisor/s a week before the study is conducted.
   b. In the course of your study, there should be no action that disrupts the routine services, or incur any cost on the Department.
   c. After completion of study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
   d. The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
   e. The approval is only valid for a 1-year period.
   f. If the proposal has been amended, a new approval should be sought from the Department of Health
   g. Kindly note that, the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated

08/02/2021
Date

A/ Director Research
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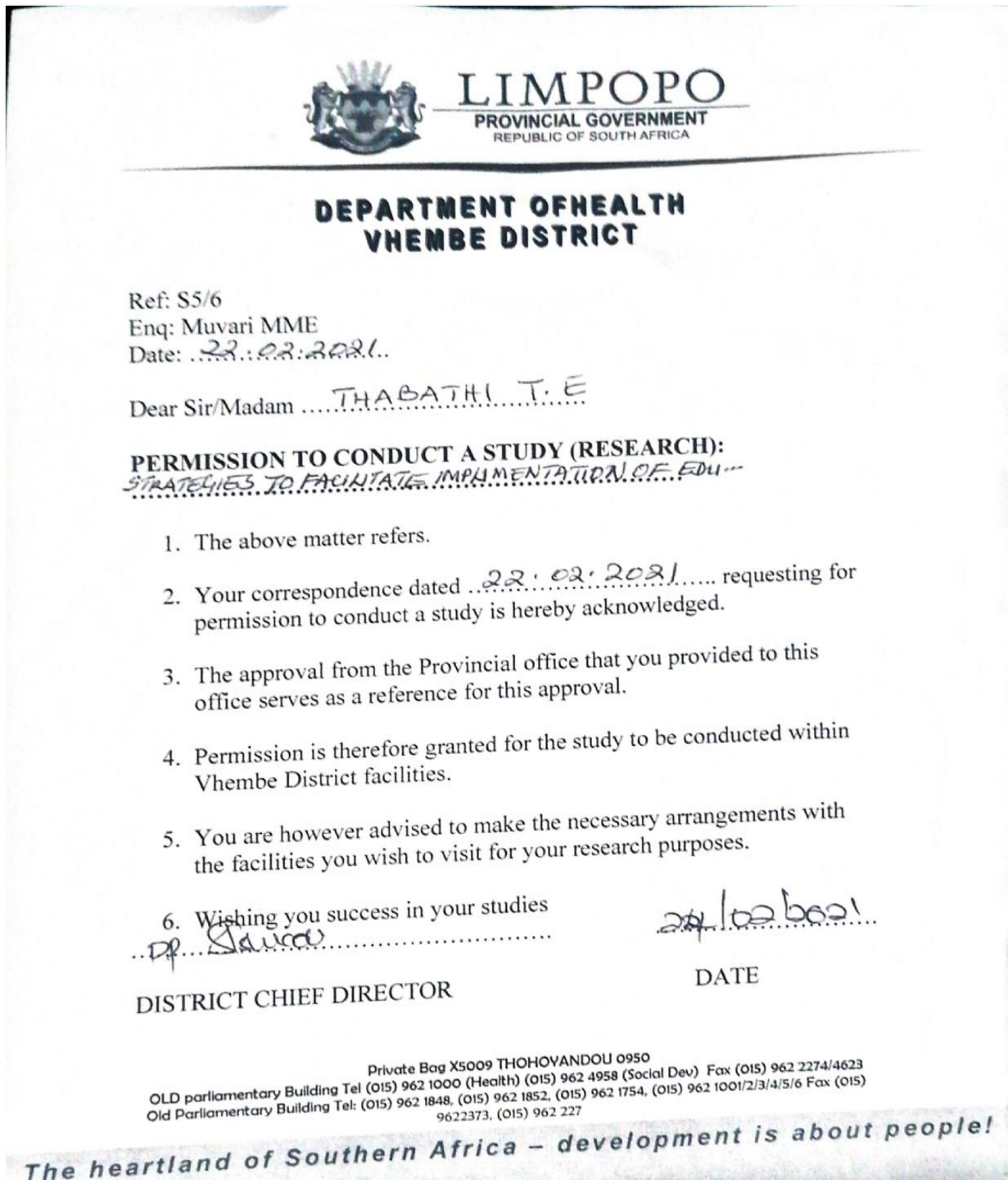
APPENDIX D: APPROVAL LETTER FROM DEPARTMENT OF HEALTH VHEMBE DISTRICT TO CONDUCT THE RESEARCH



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OFHEALTH
VHEMBE DISTRICT

Ref: S5/6
Enq: Muvari MME
Date: 22.02.2021

Dear Sir/Madam THABATHI T.E

PERMISSION TO CONDUCT A STUDY (RESEARCH): STRATEGIES TO FACILITATE IMPLEMENTATION OF EDU...

1. The above matter refers.
2. Your correspondence dated 22.02.2021 requesting for permission to conduct a study is hereby acknowledged.
3. The approval from the Provincial office that you provided to this office serves as a reference for this approval.
4. Permission is therefore granted for the study to be conducted within Vhembe District facilities.
5. You are however advised to make the necessary arrangements with the facilities you wish to visit for your research purposes.
6. Wishing you success in your studies

Dr [signature] 24/02/2021

DISTRICT CHIEF DIRECTOR DATE

Private Bag X5009 THOHOYANDOU 0950
OLD parliamentary Building Tel (015) 962 1000 (Health) (015) 962 4958 (Social Dev) Fax (015) 962 2274/4623
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APPENDIX 1E: PARTICIPANT INFORMATION SHEET AND CONSENT FORM (ENGLISH)

RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent

LETTER OF INFORMATION AND CONSENT FORM

Title of the Research Study: Strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

Principal Investigator/s/ researcher: Thabathi Takalani Eldah, Doctoral in Nursing Science

Co-Investigator/s/supervisor/s: Dr Maluleke Mary (Lecture), Dr Raliphaswa Ndidzulafhi, (Lecturer)

Brief Introduction and Purpose of the Study: According to World Health Organization [WHO], (2015b) globally, malnutrition is estimated to contribute more than one third of all child deaths. Approximately 800 million people are undernourished, of which 156 million children are stunted; 50 million are wasted, 16 million are severely and acutely malnourished while 42 million children are overweight (United Nations Children's Fund [UNICEF], World Health Organization [WHO] and World Bank [WB], 2016).

Nutrition plays an important role in the growth, development and health of children. Poor child feeding practices have a serious impact on health and growth during the first two years of children (Cumber, Bongkiynuy, Jaila, Tsoka- Gwegweni, 2017). Globally, infant and young child feeding (IYCF) was set by World Health Organization (WHO) as a strategy to ensure adequate feeding practices to reduce malnutrition in children (Demilew, Tafere, Abitew, 2017).

The purpose of this study is to develop strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

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Outline of the Procedures: Once the approval has been granted to conduct the study, An Appointment on date and time that will be convenience to them for interview will be made in a place where they will feel comfortable i.e.at the clinic they visit for their child growth monitoring for focus group interview.

Researcher will visit nurses at their clinic to recruit them to participate in the study as their focus is on growth monitoring in children under the age of five and that makes them the relevant participants for the study. Appointment on date and time that will be convenient to them for individual interview at their clinics. Measures to prevent Covid 19 will be adhered to.

Participants will give verbal or written consent before the interview. In-depth individual will be used to collect data from Nurses and focus group interviews will be used to collect data from caregivers. Data will be analysed using Tesch eight steps. The interviews will be conducted at the clinic at the participant's convenient time.

Risks or Discomforts to the Participant: No risk

Benefit: The findings will be presented to the Department of Health in Limpopo Province and in other workshops, national and international conferences. Findings will be published in the peer review accredited journals for possible publication.

Reason/s why the Participant May Be Withdrawn from the Study: Participants will be informed that they are not forced to participate in this study but to do so in their own free will they have the right to withdraw at any stage of the study with no penalties, and their withdrawal will not in anyhow affect their services provided in their respective clinics.

Remuneration: No remuneration

Costs of the Study: None

Confidentiality: the researcher will explain that they should feel free and that their names will not be mentioned during the interviews. The researcher will not use names or participant's identities, coding will be used. The researcher will also explain that there is no right or wrong answer but just different perceptions.

Research-related Injury: There will be no compensation in this study.

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Persons to Contact in the Event of Any Problems or Queries: Dr Maluleke (0763949752); Dr Raliphaswa N.S (0822627809.) Please contact the researcher (0820802111), my supervisor or the University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director: Research and Innovation, Prof GE Ekosse on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za.

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population

CONSENT

Statement of Agreement to Participate in the Research Study:

- I…………………………………….. hereby confirm that I have been informed by the researcher, **Thabathi Takalani Eldah**, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,
- I have also received, read and understood the above written information (*Participant Letter of Information*) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

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- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Date Time Signature

I……………………… …………… ………… ……………

Thabathi Takalani Eldah herewith confirm that the above participant has been fully

Informed about the nature, conduct and risks of the above study.

Full Name of Researcher

……………………… Date……………….

Signature…………………

Full Name of Witness (If applicable)

……………………… Date ……………….

Signature…………………..

Full Name of Legal Guardian (If applicable)

………………… Date………………

Signature…………………….

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counseling (Department of Health, 2004).

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling,

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friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

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ANNEXURE 2E: FOMO YA THENDELANO YA U DZHENELELA THODULUSO (INFORMATION LETTER AND CONSENT FORM IN TSHIVENDA)

LUNWALO LWA MULAEDZA NA THENDELANO

Thoho: Ndila yau shumisa sumbandila dza kulele kha vhaundi vha vhana kha zwinwe zwa zwisi zwa tshitiriki tsha Vhembe.

Vhalanguli: Dr Maluleke (Mugudisi). Dr Raliphaswa (Mugudisi).

Ndivho ya Thodulususo: Ndila yau shumisa sumbandila dza kulele kha vhaundi vha vhana vha fhasi ha minwaha mitanu kha zwinwe zwa zwisi zwa tshitiriki tsha Vhembe.

Kuitele kwa thoduluso: Musi thendelo ya thoduluso ro no iwana, duvha na tshikhathi tshine ra do tendelana khatsho li do teiwa, nyambedzano dza gute dzi do itwa kiliniki hune vhaundi vha vhana vha isa hone vhana vha tshi kaliwa.

Zwi dodombedzwa zwa u thivhela tshitjili tsha COVID 19 zwi do tevhedzwa. Vha do nea thendelo ya u dzhenelela nga u tenda nga mulomo kana u saina. Thoduluso I do itwa kha vhaundi vha vhana nga gute.

Khombo kha vhaundi vha vhana: Ahuna khombo ine ya do vha hone.

Mbuyelo: Mawanwa a heyi thoduluso a do ambiwa kha muhasho wa zwa mutakalo kha Vundu la Limpopo na kha manwe ma gute ro katela nama shango a nnda. Mawanwa ado dovha a andadziwa kha dzi journal zwi tshikonadzea.

Thendelo ya u di visa kha Thodulususo: vho tendelwa u dzhenelela kha heyi Thodulususo ngau funa na u litsha nahone a huna u lifha hune hado vha hone. U litsha havho a zwi nga kwami kufarele Kwa vho musi vha tshida kiliniki.

Mbadelo: A huna mbadelo ine ya do hone

Tshidzumbe: Nyambedzano vhukati hanga na vhone I do vha tshiiphiri vhukati hashu na vhane vhaundi vha vhana A huna phindulo ire yone kana isi yone zwi ya nga kuvhonele kwavho. Vha tea u vhofholowa sa izwi madzina avho a si nga buliwi fhethu, hudo shumiswa zwiga madzuloni a madzina.

Vhathu vhane vha nga vha kwama arali huna thaidzo kana mbilaelo: Dr Maluleke M (0763949752): Dr Raliphaswa N S (0822627809). Vha nga kwama mutodulususi kha (0820802111). Munwaleli wa zwa thodulususo kha Univesithi ya Venda kha

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0159629058. Mbilaelo dzi nga iswa kha muhulwane wa zwa thoduluso vho G E Ekose kha nomboro heyi 0159628313.

Thendelo

Tshitatamennde tsha thendelano ya u dzhenelela kha heyi thodulususo

- Nne ……………………………………ndi khou tenda uri ndo talutshezwa nga ha tshiimo, vhudifari, mbuyelo, khombo dza thoduluso heyi nga mutodulususi vho Thabathi Takalani Eldah.
- Ndo wana u vhala nau pfesesa mulaedza nga ha heyi thodulususo.
- Ndi a zwi divha uri mbuyelo dza thodulususo, madzina, minwaha zwanga a zwi andadziwi kha thoduluso heyi.
- Mafhungo ane nda do aamba a do vhewa kha comphuyutha nga mutodulususi sa thodea.
- Ndi dzhenelela ngau funa athi kombetshedziwi nahone ndi nga litsha tshifhinga tshinwe na tshinwe.
- Ndo newa tshifhinga tsho linganelaho u vhudzisa dzimbudziso, nga zwenezwo ndo di lugisela u dzhenelela kha thodulususo.
- Ndi khou tenda uri ndi do kwamiwa arali havha na zwithu zwine zwado wanwa malugana nau dzhenelela hanga kha heyi thodulususo.

Dzina la muundi wa nwana Datumu Tshifhinga Muano

…………………………….. …………… ………………….. ……………………..

Nne Thabathi Takalani Eldah ndi khou khwathisedza uri muundi wa nwana o talutshezwa zwothe malugana na nzulele, vhudifari na khombo dza thodulususo iyi.

Dzina la muvhudzisi Datumu Muano nga muvhudzisi

…………………… ………………………… …………………………..

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APPENDIX F: INTERVIEW GUIDE FOR CAREGIVERS AND NURSES

The interview **for caregivers** was directed by the following questions which was followed by probing questions:

- **What kind of food do you give to your children on day to day basis?**
- **Can you kindly share with me what causes you to give the child the kind of food you are feeding on day to day basis?**

AND

The interview **for nurses** was directed by the following question which was followed by probing questions:

- **As a nurse working with child growth monitoring can you please share with me, the kind of information you give to caregivers regarding nutritious feeding practices?**

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ANNEXURE G: PRE-TESTING TRANSCRIBED INTERVIEW FOR CAREGIVERS

Translated from Tshivenda to English on a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS **R-RESEARCHER**

R- How are you all today?

P- We are fine (in group)

R- Im fine too, how is the weather today

P- Very good (in group), it is just hot

R- Today is much better compared to some days, hey it was really hot. I really wish it could rain, really want vegetables

P- It rained a lot (in group)

R- Haaaa! We didn't even have that kind of rain; it was just drizzling.

P- It rained even at night (in group).

R- Ee! you people are really blessed. So, like I indicated before that I am going to give you temporarily names for the sake of this interview, your new names will be P1, P2, and P3 and so on. Let's first set the ground rules that will make tis interview run smoothly. For example, one should raise the hand and be pointed before she speak. P1 raised her hand, let's hear P1

P1- Phones should be off or on silence.

R- Phones be on silent. Is that all? No other rules? Yes P5

P5- Don't interrupt others while speaking

R- Yes don't interrupt others while speaking, it is more or less the same with that one of P2 wherein one should raise hands before speaking so which means no interruptions while one is speaking. Is that all? Ok, since we have already agreed that we will meet today, my name is Taki, I came to do an interview about the kind of food you give to your children, yes I've already indicated that you are not forced to

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participate and you're free to withdraw anytime you feel you no longer want to. No payments will be made. Ee, can you please keep this information or conversation within ourselves, we must not in any way share this information to anyone outside this group, only keep it to ourselves. Since I've already indicated that I will use tape record, if there's something that you don't want it to be recorded, just say it then will press this button (showing the participants the cancel button).Any questions up to so far?

P- No questions (in group).

R- OK, as a caregiver of children with malnutrition or child that is not growing well, **Can you please share with me the kind of food you give to your children on day to day basis?** Yes, P2.

P2- We give our children porridge.

R- P2 says they give them porridge, let's talk about porridge. Mhhh P4.

P4- I make sure that they start with soft porridge in the morning as soon as they wake up .

R- P4 start by giving soft porridge to the child, is there anyone who wants to talk about soft porridge.

R- P1

P1- Yes I want to add to what P4 has said.

R- Yes.

P1- That we give them soft porridge with sugar and eggs.

R- P1 added that she does not give soft porridge only but with sugar and eggs. P4 talked about giving soft porridge only, what do others say about soft porridge? P2 again.

P2- Yes, they eat soft porridge with peanut butter or margarine.

R- P2 added that she give soft porridge with peanut butter or margarine, we are still on soft porridge. P3 want to say something.

P3- With my child I only add sugar to soft porridge.

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R- P3 says she add Sugar to soft porridge just like P1, what other foods do we give our children in day to day basis? P5.

P5- I give the child tea and bread when im also drinking it.

R- P5 is coming up with something, she says she give the child tea and bread, tea is something else that is coming up now, let's talk about this tea. P2.

P2- We put sugar in tea.

R- P2 added that she give tea with sugar. Let's hear P4.

P4-When we are drinking tea, we give them tea with sugar and milk if we have.

R- I hear you people talking about tea, how do they drink this tea? Do you give tea once only when having it or as a substitute, so there's nothing that the child is drinking than tea only? P1 I can see you have raised your hand.

P1- To me just because milk is expensive and I can't afford them, I buy rooibos tea for children. I make it for the child to drink the whole day.

R- P1 indicate that the milk is expensive and she cannot afford them, what others say about giving children tea as a substitute of milk.

P2- My child drinks any tea that I and my grandmother drink.

R- Any tea?

P2 – Yes it does not substitute milk, when we drink tea in the morning the child also drink with us.

R- P2 is talking about giving tea to the child that they also drink in the morning. What are other foods that we give? Yes P4.

P4- I just make sure that they had one fruit.

R- P4 is talking about fruits, let's talk about this fruits we give to our children, P5.

P5- Yes they like fruits, now is time for mangoes, so I give them as well as litchis, and they prefer litchis to mangoes, Yoo they like this so much.

R- How do you give this fruits, is it one by one or in bulk where the child will just take one and it or what, can anyone explain? P5.

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P5- The ones who can walk they pick those mangoes that fell from the tree and eat.

R- Mhhh.

P5- The ones that like litchis I make sure they eat while sitting there to avoid them being choked by seeds. I pick them from the tree and put them in a bowl.

R- Alright, P2.

P2- We even give them banana.

R- Banana, is there any other food you give to these children? P2 want to add something.

P2- We give them even Simba (potato chips) and sweets.

R- How do you give them these Simba (potato chips) and sweets?

P2- Only when we have them.

R- Ok, others? P3

P3- Mine eat Danone a lot during the day.

R- Danone, I saw P1 raising hand.

P1 -Yes I wanted to say that wherever I have money I buy them Danone, they like it.

R- Ok, other foods if they are still there? P4

P4-When we are now eating food at night, porridge and meat (tshisevho), the child eats the same, we don’t have different food for the child.

R- Give an example.

P4- if there’s porridge and meat (tshisevho) It means we will all eat porridge and meat (tshisevho).

R- P4 talked about feeding the child what they eat, they don’t prepare separate food for the child. If they are eating porridge and meat then the child will also eat that. I.e. what do you say about that? P2.

P2- We eats porridge and vegetables (muroho).

R- Yes, we can pick up those vegetables or just buy it.

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R- Ok.

P2- We eat meat when we have.

P5- When it comes to porridge my children don't want it with vegetables.

R- Mhhh.

P5- You will find us cooking vegetables (muroho) and they'll cry for frying eggs, they don't like the vegetables that we eat

R- Ok.

P5- Yes.

P1- But my children like eating porridge and artchaar.

R- Porridge and artchaar.

P5- Yes they don't eat any other thing but porridge and artchaar.

R- Other things? If there's none, you people have indicated that your children eat soft porridge with peanut butter or with sugar or without anything. Sometimes you give them tea once when older people are drinking it, others indicated that they give tea as a substitute of milk since they can't afford it. You also give them fruits that are available at that time. Some children are given Simba (potato chips), sweets and Danone, give them porridge with whatever they are having that day i.e. Pap with vegetables, while others will prefer artchaar and eggs.

R- Ok as it is, our children are suffering from kwash or they continue to have kwash, what do you think can be done to prevent that kwash? P4.

P4- I think nurses should teach us on the kind of food we should give to our children since the once we are giving them are not good.

R- P4 says that nurses should teach us on the kind of food to give to our children.

R- What are you saying about being taught by nurses? P5 raised her hand.

P5- I support this idea of nurses teaching us because our children are not healthy, they are always sick.

R- Mhhh.

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P5- We really don't know what is good for them to eat, we just give whatever we come across or the childlike.

R- Mhhh.

P5- Not knowing whether they are healthy in children body or not, for as long as the child eat.

R- P5 is agreeing with P4 that nurses should teach us on feeding, we don't know the proper way to feed our children. Let's hear P2.

P2- I think a child should be fed until the stomach is full of porridge (thumbu I tshi tou rwe nga vhuswa).

R- Mhhh! Mhhh!

P2- So that she must remain full the whole day, nurses can teach us but we also have knowledge in our head that a child must be forcefully fed porridge until is full.

R- Mhhh, PB says that nurses can do teach them, but they have their own information that a child should be fed until is the stomach is full (thumbu I tshi tou rwe). Besides the nurses who do you think can provide you with this information?

P1- I think others who can help us on this thing are traditional healers (vho Maine) that helps the children, because they are the ones that encourages (khongodoli), prepares (zwiunza), midzi so that children can be strong and have strong bones.

R- Hoo. I just want to find out if I heard it correctly. You are saying these traditional healers must be taught about the correct food to give to their children.

P1- No, traditional healers should be the one teaching us what to give to the children.

R- Ok, P1 came up with the idea of traditional healers giving us information since we consult to them. If there's none who can provide us with this information, P5.

P5- I think since we are young parents, those older daughter in laws who have knowledge with children they must teach us.

R- Mhhh.

P5- (continue) that which food makes the child to grow well.

R- Mhhh.

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PB- There are those people that visits people in their homes to bath and give them medication.

R- Home based care.

P2- Yes, they can also give us information about the kind of food we should give to our children.

R- Yes, you talked about nurses being the ones to provide you with, you also indicated that traditional healers should also give information as they are consulted most of the time, older daughter in law as they have experience regarding taking care of children as well as home based care.

R- Soo how are this people going to do it, how should this information be provided and where?

P2- Those home based care while busy with their visits and find out that there are children that information should be given to older people available because they are the ones that will be taking care of those children.

R- Mhhh, P1.

P1- Traditional healers must give that information to parents or any other person who brought the child to them.

R- Ok, P4.

P4-I think when nurses are giving us information about food, they should also provide us with pamphlets, pictures so that we have a picture of what we should feed.

R- Ok, P3.

P3-I think also when taking our children for weight nurses must also teach us on what food children should eat.

R- Mhh.

P3- Even when they get the chance, they must also go to churches because is where most of the people are found and teach on what food should be provided.

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P5- I am thinking about baby shower gatherings we do this days, they talk about being a new mother, and I think those that have kids or have experience with children should inform those new mothers on caring of children including food.

Baby shower can be a platform where information about food can be provided. Mothers do support each other on this occasions.

R- P5 Talked about giving information in baby showers, and PC talked about teaching in churches. Is there something else, P2?

P2- In all gatherings that include women or traditional gathering, civic etc, nurses should come and teach us.

R- Ok, traditional gatherings and during meeting with the civic, nurses should go there and give information about healthy food to give to children. You also indicated that nurses, home based care, older daughter in law as well as traditional healers.

Home based care should teach the caregivers about recommended food during home visits and traditional healers also teach when the child is brought to them. Nurses should have pamphlets to show the caregivers on the type of food they should give to their children according to age. They should also teach them about the card when they come for weight. It was also indicated that during baby shower gathering is the right platform to give information about feeding.

R- Is there anything that I left that need to be added?

P- Silence.

R- I will come back for validity and get clarity where I didn’t understand. Otherwise thank you all.

P- Thank you.

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APPENDIX G1: INTERVIEW TRANSCRIPT FOR CAREGIVERS (FOCUS GROUP NO 3)

Translated from Tshivenda to English on a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS **R- RESEARCHER**

R- Hello everyone

P-Hello (in group)

R- How are you today?

P- We are fine (in group).

R- Since everyone seems like they are okay and I'm also okay, so I can see that you all wearing a mask, and our sitting arrangement is 1.5m apart to maintain social distance, we have all sanitized our hands. I also gave you all new names which are P1, P2, and P3 and so on, and to avoid confusion and to remind you of your new name I'll point to you and call you by your temporarily name, is that okay?

P –Okay (in group).

R- The group I had before had a problem remembering their new names, so I had to also point so that a person can know I am referring to her. P1 I can see you want to say something.

P1- I wanted to say it is true we can forget.

R- Yes, that's why I am going to also point at you. Mm! I measured your temperature to you all, the windows are open for fresh air and I have also screened for other signs of Corona and you all said you don't have. You people looks nervous, this is not a police station where you are interrogated but we are here to have discussions we will end up learning from it, do you understand? Please feel free to say anything. Alright.

P- Okay (in group).

R- We have to set our own rules for this interview to go well, I am talking about what we need to follow or to do for this interview to go well without disturbance. Ok for

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example, if one need to go toilet you just stand up and go quietly without disturbing others, do you understand?

P- Yes (in group).

R- I can see P1 nodding the head, what else can we add? Let's hear P4.

P4- Ringing phones will disturb us, so phones should be on silence.

R- P4 Is saying phones should be on silence, what are you all saying about that.

P- Ye, phones should be in silence (in group).

R- P3 want to say something?

P3- We should not laugh at each other.

R- Yes, we don't have to laugh to each other, there is something you are doing but you are not saying it as rules.

R- Yes p3 again.

P3- Raising our hands.

R- We should raise our hands when we want to say something because it help us not to talk in group. So it seems like we have said all the rules, so let me remind you of who I am and why I am here today as I have already indicated before. I am standing here in front of you today as a student of University of Venda named Takalani, a student that is doing research about the kind of food they give to tear children on daily basis. So lets me remind you of some of the things I said to you before about this research. No one is forced to participate in this interview and if you agree and later feel like you no longer need to be in this interview you are free to withdraw at any time even though you have signed the consent form and it will not affect our relationship between us as nurse and patients. No payments will be made to you. The tape I talked about is this thing (showing them the tape), I will be recording all our conversation, but if feel like there's something you don't it to be recorded you can press the stop button here. I have already talked about not using your real names but calling you P1, 2, 3 4, 5, 6 and 7.

Umm, as caregivers of children can you please share with me **the kind of food do you give to your children on day to day basis?**

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R- Yes, P6.

P6- Mhh, I give my child's child soft porridge in the morning, then in the afternoon I give her Mageu and at night soft porridge again.

R- Okay let's start with soft porridge, do you give soft porridge as it is or how?

P6- As it is, I sometimes add a little bit of sugar but after a long time.

R- Okay, what kind of soft porridge?

P6- The white maize meal soft porridge not mabela, and I don't cook everyday but after one day, I cook enough to last for 1 to 2 days, I put a little bit of vinegar to avoiding rotting, this days you no longer use (mutuku) fermented maize meal.

R- You also talked about Mageu, do you buy it or what?

P6- No, I don't buy, I make it myself.

R- How do you make it?

P- I take the left overs of pap and wash it with water and discard the water and pour another one, put bit by bit pap while mashing it until soft, then put a little bit of flour and sugar depending on how much is the Mageu then cover, when is hot it takes 2-3 days to be ready, we don't want it to be sour. We are so used to Mageu I make sure I have enough at home, even those coming from school like them cold from refrigerator.

R- So your child drink Mageu in the afternoon?

P6- Yes, after that she drink water and sleep, you won't even tell that there's a child.

R- If I may ask how old is the child?

P6- Iyoo! Will I even know? But if I am not mistaken she is around 8- 9 months, she is trying to stand by things.

R- Ok, P6 Indicate that she gives her child's child soft porridge in the morning and evening but in the afternoon she gives homemade Mageu. **Can you kindly share with me, what causes you to give the child the kind of food you are feeding on day to day basis?**

P6- Mageu? I was just trying when it start, the uncle brought Mageu one day and the child cried for it, then give to him, after that I noticed that the child enjoyed it and slept

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with ease without crying for the first time than when fed soft porridge, so I decided to continue giving the child Mageu because he likes and enjoys them than soft porridge because I force feed her soft porridge but Mageu drinks on his own.

R- Ok, P6 decided to give the child Mageu because the child seems to enjoy it than when fed soft porridge. P4 you have raised your hand?

P4- My child eats soft porridge in the morning and late when we drink our tea she will also eat, Yoo she can eat this child, I dip (thothedza) bread into the tea and feed her, and she enjoys it.

R-P4 Is saying she gives her child soft porridge, what kind of soft porridge do you give and what do you add to this soft porridge?

P4- White maize meal only, I don't add anything, I give her as it is.she is over one year now I no longer add her formula milk into it since she is no longer bottle feeding. She stopped bottle feeding at 1 year. Milk is expensive people, since now she can eat various food I don't see the need to have milk.

R- Ok, I hear you talk about various food, what are those various food you are talking about.

P4- Various food im talking about... I mean whatever we eat at home. Just like when we eat porridge and vegetables (Morogo) we give it to her, or when we eat pap and meat we give to her. She can eat anything we eat, she doesn't choose.

R-So if you are giving various food you are talking about, what do you think is the cause of your child not growing well?

P4- To be honest I don't know, I think it is because she stopped taking milk maybe that's why?

R- When did you start giving the different food you were talking about?

P4- Not long, I went to the clinic and they told me to give different kinds of foods, what we eat because the child is not growing well.

R-Before?

P4- I was giving soft porridge only everyday.

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R- So you gave soft porridge as it is without adding anything, why? **Can you kindly share with me, what causes you to give the child the kind of food you are feeding on day to day basis**? In your case soft porridge only?

P4- Sometimes one do things because other people are doing it, nothing else.

R- Ok, P4 does not have any reason for giving soft porridge only without adding something, but because it is the common thing that others do. We are still on the kind of food we give to our children on day to day basis, let's hear P1 then P2 will follow.

P1- To be honest soft porridge is the only food I give to my child, I am not working, so I don't have money to buy peanut butter, Rama every time. Even if I can buy them I don't want my child to get used to things that I cannot afford to give every day.

R- What kind of soft porridge.

P1- White maize meal soft porridge.

R- Is the child still breastfeeding?

P1- No, my breast milk is not coming out well so that why im not breastfeeding. People said I should try drinking tea maybe it will come out but nothing. That's one reason I stopped breastfeeding her because nothing came out and I was feeling pain and she will refuse eating soft porridge for breast that is not having milk.

R- Ok how old is the child.

P1- 7 months and 3 weeks.

R- OK, P2 you raised you hand.

P2- Yes, I give my child mabela soft porridge, the instant one.

R- Ok.

P2- The reason why I give my child instant soft porridge is because it is quick and simple to do.

R- How do you prepare this instant soft porridge?

P2- I mix the soft porridge with warm water only , I don't have to add anything to it because the packet should have said so, the packet says that I can either mix with

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warm water or warm milk, but I chose warm water since I don't have to buy water, milk is expensive, I cannot afford it.

R- Since you are giving your child this instant soft porridge what do you think is the cause of your child not growing well? By the way how old is your child?

P2- She will be 1 year old next week on the 27

R- Ok.

P2- Mhh! What I think is the cause of my child not growing well is because maybe the soft porridge is not good for her, I don't know because if the soft porridge is not good for her I think she would have running stomach or stomach pain to show that the soft porridge is not good, so I don't know really. The other thing is she does not have appetite, you see this child was with my mom in the farm since I struggled to find someone to look after her when I go to school and I think because my mother was force feeding her that's why maybe she is not used to be spoon fed. I am afraid she will die if I force feed her, I don't know how to do it.

R- You said something about your child not having appetite. Why are you saying that?

P2- I am saying that because she does not want to eat, again I think she is not eating because the child is used to be force fed (u nusa).

R- Ok, so what do you think can be done for other parents like your mother to know that force feeding is not right? And to know about the correct feeding practices?

P2- I think nurses should continue to give health education about correct feeding, especially in places like farms, those people are visited once per month and if you fail to go on the date given you will wait for another month to get help.it will help our children to grow well and be strong as the dietician also indicated that the child was suppo.

R- Who are you talking about when you say'' those people".

P2- I am talking about nurses from (thendeleki) mobile clinic, they should have time to teach those people about this things it will work.

R- You are still saying nurses should teach those" people", who are they? Please be specific.

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P2- Ok, sorry I am specific.

R- No need to apologise, I just want you to be clear on whom are you referring to exactly, I don't want to assume you are saying so and so mean while you are not.

P2- Ok I understand you, I mean all patients that are there in that day for medications.

R- All patients?

P2- Yes, all patients, mothers, aunts, grandmothers, all of them

R- Okay you are saying that nurses from mobile clinic on the date they are visiting must teach all the patients about the correct way of feeding.

P2- Yes.

R- Ok P5 want to say something.

P5- When I grew up, I grew up knowing that a child eats soft porridge , that what I know and that is what I am giving my child, I also know that sugar reduce the child appetite that is why I don't add sugar to the soft porridge.

R- How old is the child?

P5- 1 year 4 months.

R- Mhh- this that you grew up knowing, is it wrong or right?

P5- I also ask myself that, but I think is wrong because I am here because they say my child is not growing well, the weight is too low.

R- What do you think can be done for you to know the correct foods to give to the children?

P5- I think through teaching.

R- Ok.

P5- Through teaching by nurses at the clinic, nurses should get time to tell us about correct feeding, maybe it will help.

R- So you are saying nurses should give health education in the clinic right?

P5- Yes.

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R- To who?

P5- To the mothers of the children.

R-How should they do it?

P5- Like what they do on daily basis.

R- What do they do on daily basis?

P5- After prayer, one nurse teach us about something, I've heard them several times when teaching us about different things , but on this day they will be teaching us about feeding. I mean they should at least say they will teach about feeding on Monday and Friday I am just giving an example. At least it will work.

R- P7 Want to say something? Before P7, sorry I'll come back to you, recently P5 indicated that nurses need to give health education at the clinic and ummm! P2 said that mobile clinics also should be involved for people who can't reach the clinic. What is that one thing that will make the health education provided to you by nurses to be successful, for them to be heard? How do you want to be treated? Let's hear P4 then P5.

P4- P5 should start.

R- Ok, P5.

P5- Ummm, I think , im just thinking right, ummm, they need to talk with us well, do you know why im saying that? Is because when a person is talking to you nicely you listen, you understand that this person want to help. It is painful when nurses are swearing at you, you end up not hearing them because you are hurt.

R- P1 you raised your hand.

P1- I think they must respect us and we respect them.

R- P1 think respecting each other, what are you saying P4.

P4- I was saying they must not harass us (dzhia dzhia) and you end up like your stupid or something, after all we are also human, they must treat us well just like any other human beings.

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R- Ok, P4 is saying that they must treat you well and stop harassing you. Is there anyone who want to add before we continue with the kind of food you give to our children on daily basis? Ok, P7, **what kind of food do you give to your children on day to day basis?**

P7- I give my child instant soft porridge, ace sometimes, and again I give him porridge and Inkomazi, I buy 4l of it (Inkomazi) every month and I try by all means to give him every day but because there are other kids at home it does not last and I cannot give my child only is not right.

R- So what are saying?

P7- Ee, what im saying is Inkomazi does not last long because the kids are many, so I give him porridge and gravy.

R- Okay.

P7- Even porridge and gravy I'm just forcing him because he is used to eating Inkomazi, because he does not even like fresh milk, when I am giving him these other food he will not enjoy it like when eating pap and Inkomazi. And you know it is only my child who is not growing well at home others are fine because they can eat other things when the Inkomazi is finished so it is a problem.

R- **Can you kindly share with me, what causes you to give the child the kind of food you are feeding on day to day basis**? In your case elaborate more on what made you to give the child Inkomazi only.

P7- I think is because he does not like eating other food but prefers eating pap and Inkomazi. When Inkomazi is finished and I don't have money to buy another one I just give him gravy which he will just eat for the sake of eating, you will even see that he is not enjoying it.

R- You are saying your child eats or prefers pap and Inkomazi right?

P7- Yes.

R- Do you think if you had enough money for you to can afford buying another Inkomazi when is finished your child will be fine? I mean it would not have affected your child weight?

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P7- Eish, I don't know but the day that I was told that my child is not gaining weight, that Dr said that for the child to grow well must eat different foods like fish, eggs, vegetables and meat. She even said that we must not deny our children meat because it is also important in their body. I think sometimes we do things because we don't know or take it for granted or lack of patience to introduce these children to new things, like when I give him pap and gravy he takes longer than when I give him pap and Inkomazi.

R- So what do you think can be done to ensure that this kind of information is known to you?

P7- I think they should teach us , they should keep on giving this information especially to give different food, I did not know, to me I thought I was doing right by giving pap and Inkomazi, Inkomazi is milk and milk is important to the child.

R- Who should give you that information?

P7- The nurses of course, they know these things, they should also call the food Dr, that day she explained it to me very well that I understood.

R- How should they do it?

P7- I think every time the Dr come to the clinic must have time to teach us together with the nurses because this information is important.

R- This information you are talking about, should be given to who?

P7- To the mothers of children or anyone who brought the child to the clinic because other children are left under the care of their grannies. I think nurses also should have information regarding what to give and what not, the information I was given by the doctor I understood it very well. Looking at the fact that we are different some parents will afford this and some may not. You see.

R- Ok P7 thinks that food Dr and nurses should give them information at the clinic with knowledge or information regarding what to give or not. What are you people saying about this?

R- P3.

P3- I have not said anything about what I give to my child.

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R- (Laughing) ok P3 Im coming to you.

R- P4 you raised your hand.

P4- I think the idea of food Dr (Dietician) to be involved is a good idea, maybe people will take this thing seriously.

R- What do you mean?

P4- People respect Doctors than nurses. And these Doctors must come more often because I just heard one of us saying that she saw her but I never met her but I don't miss a date they give me for child weight.

R- How do you think can be done for this Dr to be heard but other people?

P4- I think they must set a date when the Doctor will be available so that we can also come, they must right a notice on the wall and at the security gate so that everybody can see, people will come.

R- This meeting should be directed to who exactly?

P4- Em……

R- I mean who should come for this meeting.

P4- Hoo! Mothers of children, mothers of the children are the roots of all this problem

R- Where can this meeting be held?

P4- At the clinic, it is easy to come here, our clinic is along the road so everyone will be able to come.

R-OK, P3.

P3- I think the idea of the meeting being at the clinic is right but I also think if we can have this meeting at the community hall will be better , people when they hear that they will be a Dr coming people takes it seriously they will come in numbers.

R- P3 is coming up with the idea of community hall, what do others say about this?

R- P1.

P1- Even that is fine, the most important thing here is for us to get information about feeding practices.

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R- P1 is saying whether is at the community hall or clinic it is fine for as long as the information is given. P3 let me come back to you now, **what kind of food do you give your children on daily basis?**

P3 – I give my child soft porridge three times a day and also breastfeed her.

R- How old is she?

P3- 5 months and weeks.

R-Yoo! Ok.

P- Yes, we give (in group).

R- Ok, I can hear other agreeing with P3 when she says she give her child soft porridge three times a day. So P3, **Can you kindly share with me, what causes you to give the child the kind of food you are feeding on day to day basis**? Why did you give your child soft porridge at 5 months?

P3- The child was crying and not satisfied with breast milk, normally I don't have that much milk and all my children I was doing like that.

R- What do you add to this soft porridge and what kind of soft porridge?

P3-I give her white maize meal soft porridge only, sometimes I mix with milk when I have.

R- What do you think is the cause of your child not growing well?

P3 – I think the problem might be because I don't have enough breast milk, I don't know because lack of breast milk I had it even with the other children and they were okay, I think maybe it has something to do with not treated well (goni). The traditional healer said that her (goni) is very difficult and strong. I don't want to talk much.

R- Ok, you think the problem is because you don't have enough breast milk. Didn't you know that we only give the child soft porridge at 6 months?

P3- who follow that? People have been doing that and even some of them here it is just that they don't want to say it to you. People are giving their children soft porridge as soon as the child comes back home at least I started after 1 month when seeing that my child is not satisfied with breast milk only.

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R- So you knew?

P3- What? Mh! Yes I don't think people do follow that.

R- What do you think can be done for people to know and follow the correct feeding practices?

P3- I think the idea of teaching us will be good, they must never get tired of us, they must continue giving us this information about feeding. We need to be reminded frequently.

R- Yes I heard you supported P7 about the idea of food Doctors to be the ones to give this information about feeding. What else can be done?

P3- Um, I think Dr are the ones who should give this information, people respect Doctors than nurses.

R- And who should this information you are talking about be given to?

P3- We mothers of children.

R- How will giving your children education about feeding help your children?

P5- Mhhh... Our children, Mhhh it will help them a lot because the will gain weight and they will be able to do things according to their age. Like for example my child is 1 year 5 months at this stage I expect the child to be running around but she is not, she was standing by things but now I don't know any more at first I thought is because she is teething. Some people even suspected that she was picked by someone who is pregnant.

R- P5 indicate that giving education will help children to grow well and improve their milestone. What do you say about this? Yes P1.

P1- Yes I agree with P5, we are all here because our children are not growing well , so giving health education about correct feeding practices will promote growth to our children and healthy.

R- I can see P4 raised her hand. Let's hear P4.

P4- the information given from the clinic was that I should give my child different kind of food because food play an important role in our children body , they said that food

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gives energy, helps the children to grow well and will also help them to do well at school when their time comes.

R- P1 agreed with P5 that giving health education will help children to grow, P4 added that food does not promote growth only but also helps children at school. Anyone with different thing to say? Ok, is there anyone who wants to add something or have any questions regarding everything we talked about?

Ok in the absence of the questions or additions, you all talked about the food you give and what causes you to give the kind of food you are feeding on day to day basis. For example, you said you give children, soft porridge with milk sometimes, some said they give soft porridge only because they don't have money to buy Rama, penut butter, other reasons were insufficient milk that caused you to introduce soft porridge early before 6 months, one of you also indicated that she feed her child soft porridge with Inkomazi, because the child enjoys it more than when fed other food, and the reason feeding Inkomazi only is because the child enjoys it, one of you also added giving the child Mageu in the afternoon. Most of you indicated that caregivers which include, grandmothers, mothers etc need to be educated about feeding practices at the clinic or community hall by Doctors and nurses. Who wants to add something?

Ok, in the absence of questions, I told you that the information provided will be known by me, my supervisors and you all. I also said that no payments will be made. And I recorded our conversation in order to get all the information you provided. I will come back for validity. I will now play the recorded tape to you.

P- Ok.

The researcher played back the recorded interview to the participants.

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APPENDIX G2: INTERVIEW TRANSCRIPT FOR CAREGIVERS (FOCUS GROUP NO 5)

Translated from Tshivenda to English on the strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS **R- RESEARCHER**

R- Morning once more

P- Morning (in group)

R- How are you all doing in this rainy day?

P- Fine (in group)

R- This rain is seems as if is not going to stop anytime soon, so let's start with our interview so we can go early.ohoo, because of covid, we are expected to follow all the precautions needed, first of all we are all wearing masks, we are sitting at 1.5m apart to maintain social distance, I have measured your temperature all of you and we all sanitized. In case one decide to go to the restroom please use the sanitizer there (pointing at it) at the corner. I have given you all temporarily new names, I'll be calling you P1, 2, 3, and 4. In this interview no names will be used so no need to worry about your names being known, the interview will be known by you, me and supervisors only, no payments will be made for you to participate, you are not at all forced to participate in this interview but each participant is to do so voluntarily and each one of you have signed the concern form. For the sake of me to get all the information you give, tape recorder will be used. Are we all clear?

P- Yes (in group).

R- Can I continue?

P- Yes (in group).

R- Before we continue I would like to set few rules that we will need to follow for our interview to go well. Since you have new temporarily names, I'll call your names like, P1, P3, P4 just like that and point at you so that you know I'm talking to you, no laughing at each other, there's no right or wrong answer, when you want to go to the

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toilet you just stand up and go without disturbing others, is there anything you are thinking about that maybe we can include.

P- No (in group).

R- Good, like I have said before, I am Thabathi Takalani a student at the university of Venda doing investigations about feeding especially in children under the age the of five and I am quiet very happy today that you agreed to be part of this research. Just for verifications, I believe you are all having children under the age of five who are not growing well or have malnutrition.

P- Yes (participants agreed in group).

R- Good.

R- I just want to find out from you as caregivers of children with malnutrition or who are not growing well, **can you please share with me the kind of food do you give to your children on day to day basis**, remember we have to raise our hands to avoid talking being many at the same time. Let's hear eeh P4.

P4- Umm! I give this child a very thin soft white maize meal porridge, my granny is the one that advised me to give soft porridge at young age.

R- How old was the child?

P4- 3 months.

R- Ok, how often did you give this soft porridge?

P4- Three times a day, in the morning, at lunch and in the evening.

R- P4 says she was giving the child soft porridge three times a day. Ok, **Can you share with me what causes you to give the child the kind of food you are feeding on day to day basis?** What was the reason to give the child soft porridge at 3 months not at six months?

P4- My grandmother said it is how she do it, she start giving the children under her care soft porridge only at 3 months to a year and she is been practicing this even to us her grandchildren, so I didn't see anything wrong with that and I also followed it because even other children at home was fed like that.

.R- Is the child on breastfeeding?

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P4- Umm! Yes

R- Breastfeeding is very good for the child and is nutritious, you're here today because your child is one of those children that are not growing well, so if you are breastfeeding and the child is eating soft porridge what do you think is the cause for your child not to grow well?

P4- I don't know

R- But you agree that your child is not growing well? P4.

P4- Yes

R- Then according to you what do you think might be a problem?

P4- I used to run away from home a lot when the child was young

R- Ohk.

P4- umm, I used the child grant money to play cards and muchaina.i did not buy anything at all at home, so when I see that I've finished all the money I'll come back home.

R- So for how long will go from home?

R- It depends on the money, if people still have money to play it will last for 4-5 days but if the there's no money then we will lasts for 2 days.

R- How did this affect your child growth? I mean running away from home and playing cards using the child grant money.

P4- Umm! It affected my child because I left my child under the care of my grandmother and without money to buy something good for the child or even milk, which means she will not be breastfed for the days that I will be gone.

R- So in other words you are saying that for those days your child will be eating soft porridge only without breast milk?

P4- Yes.

R- Based on what you said what do you think caused your child not to grow well?

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P4- The child was not breastfed well and I gave only soft porridge according to the social worker I was supposed to give the child different food.

R- When you give your child soft porridge only and not breastfeeding on demand, where you not aware that you need to give the child different kind of food or to breastfeed every day and on demand?

P4- No.

R- But I heard you talking about giving different kind of food to children.

P4- Before I did not know , until my grandmother take me to social worker to report me , who then sent me to see a food doctor (Dietician), I was referred to come here to the clinic, then the Dr told me about correct feeding. And SASSA card is given to my grandmother.

R- For you to have this information regarding correct feeding, what do you think can be done?

P4- I think the other problem that caused not to have information is because I never took my child for injections or weight monitoring and one other thing I loved money and I was not satisfied with the little I had. I believe at the clinic nurses give this kind of information so it is better to go to the clinic to get such information.

R- You are saying that Nurses need to give information about correct feeding at the clinic?

P4-Yes.

R- P1 You have raised your hand.

P1- I wanted to say that for the sake of our grandmothers at home, that nurses that visits the homes (CHBC) of patients should give information about feeding practices to the elderly that will be found at home during the visits for as long as the home have children under the age of five.

R- P1 think that home based care will be of use, when they do home visits if ever they find children under the age of five they should give information regarding feeding.P4 again.

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P4- Mothers of children are not using the child grant money for the children instead they use it to buy jeans, Brazilian hair play cards, so I think social worker should at least if possible visits all the children that are not growing well to find out why. Nurses have this kind of information I think it might help. Most of the children are not growing well because SASSA money is not used correctly and people at home are not saying anything about it. P3 want to say something.

P3- P4 is speaking the truth, SASSA money is spent recklessly, we buy unnecessary things like Danone, sweets, chips and Purity I was so embarrassed when the Dr tell me that Purity is made of common vegetables and fruit that we have at home and Purity is expensive than the vegetables, she said that the baby get enough with home cooked mashed potatoes than one small bottle of Purity that contains sugar.

R- P3 You are saying that mothers are using SASSA money incorrectly, they buy things like Danone, sweets, chips, is this the kind of food you give to your child?

P3- To be honest yes, things like Danone since my child does not like eating soft porridge although I force him my child is on S26 milk which I only give twice per day because is expensive, in the morning after eating soft porridge and in the evening after food before sleeping. I don't add anything to the soft porridge because the little money I have I buy other things like napkins and milk.

R- What caused you to give the child the kind of food you are giving? Why did you choose S26 instead of breast milk?

P3- I am a student so, my mother said that I must not breastfeed the child because children are difficult to switch from breast milk to formula, I only breastfead for few days before the baby is started on formula. And I only give the child formula twice per day, yooh! It is expensive.

R- In your case what do you think caused your child not to grow well?

P3- I think it is caused by not breastfeeding and not giving enough S26 milk.

R- So were you aware in the first place that what you are giving your child is not enough?

P3- I can say yes and no, I know that I was not giving enough S26 because I wanted it to last for a month until I get money to buy another one and no I didn't know that you

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can put something like peanut butter or rama to the soft porridge but I knew about putting milk which I was saving it to last for a month.

R- Since you didn't have this kind of information about correct feeding what do you think could have been done for you to end up having the correct feeding.

P3- I think the Dr that gave me this kind of information should also have time to do that to all mothers of children, she does not have to wait for a child to have problem them give us information a person like me was not even aware that there's a Dr who visits us here in the clinic, meaning im not the first one, so Doctors must come to the clinic on specific days to teach us about correct way of feeding.

R- P3 thinks that Doctors must find time to come to clinic and give health education regarding feeding and they must not wait for the child not to grow well and then give information about feeding. Yes P1.

P1- I wanted to say that grandmothers at home play an important role at what to give to the children, they don't want to hear anything from us young mothers. My child started eating soft porridge before 6 months and the child will breastfeed when I come back from school and it is not something that you can argue with her about, you will not get support because even my elder sisters have been doing the same thing with their children.

R- Mhh!

P1- I am speaking the truth, they believe that the child should eat soft porridge and also know the importance of breastfeeding because she will even tell you to breastfeed up to 2 years of age but not doing it correctly. And even those children that are between 1-3 years they still eating pap with milk, so it is difficult to change that.

R- You talked about breastfeeding after school, please tell me more about it.

P1- I breastfeed her in the morning before going to school and when I come back, due to corona I was home in some days but she did not change the breastfeeding time, I tried breastfeeding more often my grandmother said that when I go back to school the child will give her problem so I must not start something that I won't manage and if I do so I will take my child to school with me. I think my child is not growing well because of not getting enough breast milk and eating only soft porridge.

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R- What do you think can be done in this case?

P1- Like I said before those nurses who during homes visit they must ensure that they give health education about feeding so that they know, maybe if she knew the importance of the child having enough milk she could have made a plan and bought milk when im not around , I don’t know.

R- P1 thinks that CHBC should be the ones to give information regarding feeding at home during home visit. What else can we do to help our grandmothers? P4.

P4- The mobile nurses can also give this kind of information to our grandmother when they visit their villages it can help also.

R- P4 Thinks that mobile nurses can also use the visit dates to different villages as an opportunity to give health education regarding feeding practices.

R- P2 do you want to say something.

P2-Yes, ummm, Eish things are difficult, people do things differently, were I leave we are only children, there’s no grandmothers and we don’t have a mother, the thing is my sister work in Polokwane, Somewhere there, Im not sure, but that’s what she told us and I depend on the children’s SASSA and my other sisters to take care of this children.

R- Ok.

P2- Yes, my sisters also have children and to be honest is difficult when it comes to food, they eat what is available at that time, I don’t have money to buy formula milk for the child, her mother don’t give me enough money, she sometimes send money and sometimes she don’t. I try to give her what we have at home.

R- What exactly?

P2- Soft porridge, there’s nothing else.

R- So, you only give the child soft porridge? What causes you to give soft porridge only?

P2- Yes, I don’t have money to buy milk.

R- Ok, what do you think caused your sisters child not to grow well?

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P2- To be honest, there's nothing to give to the child except soft porridge only and the child is not having any kind of milk as said by the nurses.

R- So, what causes the child not to grow is because the child is not taking any kind of milk and she is eating soft porridge only?

P2- Yes.

R- When did you start giving the child that?

P2- Since my sister left me with the child, I think the child was 8 months? My sister used to come every months when it started but out of the blue she came back after 2 months sometimes after 3 and when she come back she will only stay for a weekend and go back saying that the boss only gave her weekend off and she is taking care of the children. And you will call her and not find her, she changes numbers frequently one can never find her when you need her.

R- How many children are taking care off now including your sisters?

P2- Eh! Five, 3 for my sister and 2 for me.

R- Ok, in this case what do you think can be done for this child to grow well?

P2- To be honest I don't know because the problem here is I don't have money to buy what is needed, if I have I was going to give the child.

R-What do you mean what is needed?

P2- eh! Milk and add it in soft porridge.

R- Have you ever had any information on what to give and what not to give to the children?

P2- No.

R- But if you come to the clinic regularly you should have heard something about feeding?

P2- To be honest I don't know if the child was coming to the clinic or not, I don't even know where the child's clinic card is, so how will I know if the child is to come to clinic or not.

R- How did you find out that the child is not growing well?

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P2- The child was sick, very sick and I came here at the clinic that's where they told me that the child was not growing well and because I refused to go to hospital they made me promise that I will come to see a Dr Here in the clinic, so came last month the Dr did not come that's why I came today and they said she will come around 12.

R- Yoo! Ok umm, you said that the child is not coming to the clinic for child growth monitoring and you don't have the child road to health card with you and your sister she sometimes don't send money and also comes back after 2 or 3 months?

P2- Yes.

R- So, the money your sister is sending is it adding from the SASSA or is the SASSA money she is sending?

P2- I don't know but she send me R500 only and that money is not enough, it is too little for her 3 children.P1 want to say something.

P1- Iyoo, if it was me, I was going to get her arrested.

R- Umm, P1 is saying if it was her, she was going to get the sister arrested, how best can we help P2 for the children to have enough proper food at the end of the day, because getting her arrested will not solve the problem. P1?

P1- Okay she must take the matter to the social worker, who will then help her to get SASSA for her sisters children, it happens, there are people who are getting the SASSA because they spend most of the times and take care of the children.

R-P1 suggest that she take the matter to the social worker.Ok, I just want to find out from you, the nurse that told you that the child is not growing well, didn't she refer you to the social worker?

P2- That nurse I guess she was feeling sorry for me due to my story and at least she tried to find my sister and yes she referred me to the social worker.

R- What did the social worker say?

P2- I did not come, I know is wrong but I don't have time to do all of this, there are other children to take care of that are at school.

R- So in your case, what do you think can be done to ensure that the correct food is given to the child?

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P2- To be honest I don't know, I think my sister should come back and take care of her children and also I will focus on mine, I can't manage.

R- To all of us in here, what do you think can be done, since now you heard her story? Yes P1

P1- I think she should have went to see the social worker as referred by the nurses, social workers will have a way to track the sister back and even notify her bosses, that is what I am thinking.

R- P1- Thinks visiting the social worker will help, what else?

P3- Like I said before, Doctors must find a way to come to the clinic at least to talk to every mothers with young children and must not come to the clinic only for children who are not growing well. At least they should come once per month and mothers should also visits the clinic on the date given this will help us to get more information from others as well as nurses and others.

And also the idea of going to the social worker is a good idea, the social workers will deal with her sister, they will help her since it is their work.

R-Ok, P2 I think the best way to deal with this is to go to the social worker for now since the sister is not responding well to your agreements.

P2- Ok, I will go .

R- Most of you said that nurses, doctors should give health education about correct feeding practices. P4 said that she failed to take the child for growth monitoring that why she did not have information about correct feeding, so, how will giving nutritious feeding information or going to the clinic as you indicated help our children? Anyone who want to try? P1

P1- Our children will grow well, they will gain weight.

R- P1 say that children will grow well after giving health information. P5 what do you say about what P1 has said?

P5- It is true our children will grow well, yes. I think it will also protect our children from getting sick.

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R- P1 and P5 indicated that giving health education will help in growth of our children, what else? P3.

P3- To be honest I wouldn't be here if I was taught the importance of breastfeeding, maybe my grandmother would have agreed for me to breastfeed. Yes I think it will help children to grow well.

R- Ok, P2 what do you think about what P5, 1 and 3 have said.

P2- I don't know, I think it is true that children will grow, umm.

R- I can sense a but from you.

P2- Umm, education is correct but we also have other problems at homes that need to be solved, so I don't know.

R- Okay I understand you, anyone with anything to say? If there's nothing more to say, ill quickly remind you of what we talked about, most of you talked about giving children soft porridge only without anything else, some chose to give formula instead of breast due to work and those that opted to give breast but not giving it correctly, the cause of your children not growing is not giving the correct food and the money for SASSA is not spent correctly, mothers of children don't come to the clinic for child growth monitoring and social workers should be involved to help those that are using SASSA money incorrectly ,CHBC should give information about feeding when they do their home visits, and Dr must have time to give information about feeding at least once per month and they must not wait for children not to grow well and then come. Giving health education about nutritious feeding practices will promote growth and children will gain weight as well as prevent children from sickness.

Like I said before, this information will be between us and my supervisors so it is amongst us not to give information shared today to other people who were not part of this group, I did not use your real names but I referred you all to P1, 2, 3 and 4. If there's anything I need to be clarified with I may come back for clarity. Otherwise thank you so much for coming here and be part of this interview, time is no longer on our side. Let's me play back the voice recorder to you, because you have to see the Dr in 30 minutes time. Thank you all.

The researcher played back the recorded interview to the participants.

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Creating Future Leaders

APPENDIX G3: PRE-INTERVIEW TRANSCRIPT FOR NURSES (CLINIC A, NURSE 1)

Translated from Tshivenda to English on a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS **R- RESEARCHER**

R- good afternoon.

P- Afternoon.

R- How are you?

P- I am fine and you?

R- I am fine, how is the sun today?

P- Hey it's too hot really.

R- Why is it not raining, I really want more vegetables.

P- Haa vegetables is too much.

R-winter is approaching so we need more vegetables to sustain us the whole winter. I know that you are going back to work, let's start so that you go and have few minutes of your lunch.

P-No don't worry about time, you can as much time as you want.

R- Ok, as I have indicated before that my name is Eldah, a university of Venda student, Mhh! since we have already talked about this interview about the information you give caregivers regarding feeding nutritious food to children under the age of five. I have also already indicated that this conversation will be recorded, for me to gather all the information you said without adding anything or subtracting, no payments will be made and you are not forced to participate in this interview, the consent form you signed does not bind you to participate. As health workers, your refusal will not in any way affect the relationship between us in relation to providing health care. Soo can I continue, do you still want us to continue with this interview?

P- Yes, we can continue.

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R- **Ok, as a nurse working with children, for growth and development, what kind of information do you give regarding feeding those caregivers?**

P- People who come and teaching them about feeding of children, we start by giving information for newborns to six months.

R- Yes.

P- That a newborn to six months are not given anything but breastfeeding only, if the mother will then go out, she must pump breast milk and label them as 1, 2, 3 so that the person who is left with the child will be able to give the child that milk, because this thing of people giving children water or something else other than milk, it hurts babies and not healthy.

R- Yes.

P- When you give the baby only breast milk, the baby will grow well, without having any other disease and breast milk help the baby not to have diseases like diarrhoea and other diseases because that breast milk have all the nutrients to the baby for the baby to grow well.

R- Ee! Ok

P- And when the mother is breastfeeding exclusively without giving anything and the mother is HIV positive the child will be free from HIV, but if the mother is mix feeding the baby intestines will be corroded and infected with the virus through breastfeeding while adding with other things, that is from birth to six months. Can I continue with other months?

R- Ee! While at it I heard you talking about children not given anything except breast milk, according to you do you think this people are practicing it?

P- According to my view, mothers or those that are caring for the children, they are not practicing it, I say this because the weight of the child during growth monitoring will proof that, and when trying to find out about the cause nothing will come out, but when you go out you will find that the child is given soft porridge and when looking at the child is less than 2 or 3 months.

R- Yoo.

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P- Yes, already feeding the baby because the baby is crying and they cannot take it. And others give the babies glucose of which i don't know where they take it from because even me as a nurse I don't know it as something that is recommended to the child and i don't talk about it.

R- Yoo...I heard you talking about pumping breast milk when the mother is not around as a way of promoting breastfeeding only. And you said the milk should be labelled as 1234, can you please say something about this, do you think this people understands this?

P- Some people do understand but some they don't, they say that breast milk is disgusting, but according to me is the good thing to breast pump, when labelled as 1 it means is the first milk to take out, 2nd one and the 3rd one. You put the milk labelled as 1 into the bowl with boiled water, as the milk is getting warm even the nutrients are warmed up and feed the child by teaspoon and will be enjoying it like breastfeeding.

R- But it looks like is very difficult especially to a granny who cannot read or wright, what do you advice the grannies based on labelled 123.

P- Grannies will be encouraged to seek help to anyone who is at home for that day or these grannies they know how to take care of this children so when placing this milk, you first put the first milk to be used at front, then the second one and so on they will know which one to use first.

R- Yes, yes it is understandable.

P- Soo after this we will move to the child from 6 months to a year. we teach them to continue breastfeeding and start by introducing 2- 3 teaspoon of soft porridge, and any other food that are available at home e.g. egg yolk, fish, mincemeat, livers and Mopani worms, when it comes to Mopani worms they don't give it like that they grind if first then give bit by bit. And this child can be given milk as well as clean water to drink and the milk should not be formula, but you give full cream milk.

R- Mhh, I heard you talking about giving them mincemeat, and meat, when i grew up i was told that we don't give the child meat because will cry for other people food.

P- In this days the way we are teaching them, they understand because if you are not giving the child meat or mincemeat and everything it means you are not giving

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nutritious food not even a single one. Because you cannot give the child soft porridge only you must put milk.

R- Mhh.

P- Even the mincemeat im talking about you put it to the soft porridge, even the source of fish or minced fish to the soft porridge, by doing so at least you gave your child vitamin, protein not soft porridge only.

R- Yaa! it's understandable, so I hear your health education, but we find that the number of children with malnutrition is increasing, you know when working with these children some of them are not growing well, so what do you think can be done or let's start with what do you think might be the cause?

P- For malnutrition to increase is due to mothers of these children, most of them the get social grant, they don't do the right thing for this children, they play cards, buy jeans with social grants money, they are busy entertaining themselves not the children, they will buy Danone on the pay day only for the child, something that is not even nutritious and it ends there. She will go and play cards and muchaina.

R- Ee, I heard you saying they are not doing the right thing with this social grant money, do you indicate to them what they should buy?

p- Yes, we tell them to buy nutritious food and clothes.

R- Mhh.

P- The child also need clothing, the child must look presentable.

R- Mmm.

P- We end up not knowing what to do, because they don't do as advised, i think it is something that need intervention because the child also have the right to be taken care off. I think we need to work together as nurses with the traditional council to tackle this issue.

R- Mhh, I hear you taking about traditional council, how do you think the traditional council should help us?

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P- The traditional council should call the Imbizo (gathering called by traditional leader) and invites the caregivers as well as mothers, and during this gathering the council should tell them to buy the right things for the child if they are getting grant.

R- Mhh.

P- Because if the right things are not bought for the child, the grant will be stopped, majority of this mothers are not buying right food for this children.

R- I heard you saying that council should be involved, call Imbizo (gathering called by traditional leader) invites the caregivers as well as mothers to talk about using the money for their children, what else?

P- The other thing is that community health workers, should be delegated to do home visits like what we used to do before, and give information regarding feeding and they will bring the reports back indicating that they visited at Maragenis home and they found the child not growing well. When doing follow up will expect to find the child weight improving.

R- I hear you talking about the right food, and back there you talked about mincemeat and Mopani worms, what about those that cannot afford to buy.

P- It is not all that cannot afford and there's a lot of vegetables here, "muroho wa thanga" you can give the child to eat, you can also give something like "Delele" to the child and eat, you can also give the child corn the soft one (lukhwakhwa), when the child is eating that is gaining some nutrients in the body, is not like when we talk about nutritious food we are telling you to go and buy, livers and what , Mopani worms since this days is also bought, you can give your child anything you have at home , like mangoes, you can also mash bananas and give to the child by spoon.

R- It seems like this people are not aware that the food they are supposed to give to their children is not a matter of spending much, because we have farms this side, and they do come back with potatoes, are these people aware that they can use those foods or does not consider as something serious?

P- I think they don't know that the food they have are the food to give, because the very same potato as well as butternut they have can be mashed with oil and give to

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the child, it is very nutritious, but the caregivers and mothers don't consider the children but themselves.

R- Ok, I understand, you talked about community health workers to intervene, what else do you think can be done, for this information to reach the caregivers?

P- I think we can involve the dept. of health and do Imbizo, all health care workers will be involved in giving information about growth and development of the children, I think it could help

R- When you say health care workers, who are you referring too exactly?

P- I am talking about those nutritionist and dieticians.

R- Yes, how do they do it?

P- You mean the dieticians.

R- Yes.

P- The dieticians will help in giving health education as they are expects when it comes to what to give and they will understand it and it will prevent conditions like malnutrition and kwashiorkor, because this conditions were common previously but when they come back in times when social grant is available I am afraid, instead of buying food for children they play cards.

R- Umm! Women have a lot of things they are involved in places like societies, do you think it would help.

P- I think in places like societies, women here together with community workers will give information to each other it will help.

R- What else do you think can be done if you still have any?

P- Other things are giving information in gatherings like traditional dances (zwigombelani), zwitepeni, because you may find that this women do have children at home that are not growing well, so she must be given this kind of information that while we are here lets ensure that children are eating well.

R- Yes, it is in fashion this traditional steps and it is good in the sense of them doing exercises, and you said that nutritious information should be given in those gatherings

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P- Yes, for this people to see that this is important, to help children in growth and development of the brain to be Doctors, Teachers or inspector of tomorrow without any difficulties.

R- Mhh, you spoke well, is there any place where we can get information from?

P- I think along the way when you come across a nurse or any health workers ask them, if the person does not have information she will refer you to the clinic other than doing the wrong things.

R- In our culture we do visits the traditional healers for “u thusa” vhana, are we not supposed to include this traditional healers when it comes to feeding?

P- That is our culture and we cannot go away with we are who we are because of that, so traditional healers must be given information especially about “Tshiunza” because there’s no nutrient in giving those fermented things, I think traditional healers should be involved and stop giving those kind of things to give to children as they are of no use to the child body.

R- This means that traditional healers as well must have information regarding feeding practices as they are the second people from nurses to help the children, but I heard that “Tshiunza” is very nutritious and the child is fat.

P- Iyoo, it is not true, the child might look fat, but the weight will tell you a different story to show that those things does not work.

R- Yes.

P- That’s why I am saying traditional healers must have information about exclusive breastfeeding before 6 months, without giving “Ntsu”.

R- “Ntsu” what is it?

P- It is water mixed with roots from the traditional healers to give to the child.

R- Ohoo.

P- Yes, they force feed “u nusa” the child.

R- I heard you talking about, HIV mothers to exclusively breastfeeding because mixed feeding corrode their intestines and end up getting infected, way back there, HIV

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positive mothers were not supposed to breastfeed their children, so do you think now that they are supposed to breastfeed do they understand this?

P- Not all of them understand this, because some they prefer formula feeding from day one and some opt breastfeeding, so we all have a job to teach them that for as long as the child is breastfed only without giving something else for 6 months the child will be okay.

R- You talked a lot but out of those you said exclusive breastfeeding for 6 months, give soft porridge with grinded Mopani worms, mincemeat, eggs and the cause of malnutrition is giving non nutritious food, mothers are using the child grant to buy jeans, playing cards, and you also talked about giving information through Imbizo as well as visiting the homes by community health workers.

P- And traditional healers should give information to the mothers about feeding as they have a chance to receive this children as soon as they come out of the hospital.

R- Information about feeding should also be given in gatherings like zwitepe and zwigombela as well as the society. You also mentioned that giving nutritious food promote growth and development of the child to be something better tomorrow. Is there something you would like to add?

P- Other thing is when we are at traditional dances, there are those that have failed to visit the clinic, because they no longer have a child of their own, but there's this child that they are taking care off every day that is brought to them every morning, they can have the information about the kind of food they should give with vitamin A, like livers, mangoes, spinach, oranges guava, give lot of water as well as tomatoes, because we cannot say that mothers leave their work to take care of the children .

R- How.

P- When they have relaxed or while eating after dancing, one of them can entertain them by teaching them about feeding practices, traditional dances this days includes people who have knowledge.

R- Ok, I hear you but how would this people know that they need to teach each other.

P- Ok, it is simple, includes this at the traditional council meeting that every leader should ensure that they learn one or two things health related on their day of gathering

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R- You said a mouth full, I am glad that you considered caregivers that have children under their care. Is there something else you want to add?

P- No, unless you have questions you can ask.

R- No I don't have, thank you very much for your time today, like I said before, no names will be mentioned but codes will be used, no payments will be made and you were not forced to participate in this interview. I will come back to validate what you just said. Now I will play back the voice recorder.

P-Ok, I am also thank full because this thing will help us and our children as well.

R- Yes.

The researcher played back the recorded interview to the participants.

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APPENDIX G4: TRANSCRIBED INTERVIEW TRANSCRIPT FOR NURSES (NURSE 2 CLINIC B)

Translated from Tshivenda to English a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS R-RESEARCHER

R- Good afternoon.

P- Good afternoon.

R- How are you?

P- I am good and you?

R- I am good, I am Takalani Makhubele/ Thabathi, a student at the University of Venda, since we have agreed to meet today for interview and working with children under five for growth monitoring. You are happy mus?

R- I am so happy my name is ……………… (Participant mentioned her name).

P- Like I said before, no need to say your name, only codes will be used instead of names, am I audible since im wearing a mask? Our recorded interviews will be known by us and the supervisors. No payment will be made to you I only need information from you as per agreement since working with children on daily basis. Do we still agree with each other up to so far?

P- Yes it understandable.

R- But how is Corona treating you up to so far?

P- Yoo! We are always in fear.

R- In fear for what?

P- This corona disease people of God, but it is better because we are always wearing a mask.

R- While talking about a mask, I won't be able to see you smiling showing any signs of happiness of sadness, because we are forced to wear a mask.

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P- Laughing.

R- Yes we are supposed to do that, and other thing sanitise after coming from toilet, I have placed a sanitizer there and we are 2 chairs apart or 1.5m. There's no problem with wearing a mask for as long as we are audible to each other.

P- Thanks Thabathi.

R- Okay. You are working with children on daily basis, I believe I came to the right person.

P- Yes.

R- Before we could even go further which language would you prefer to use.

P- The one we are using is fine.

R- Oh Tshivenda is fine.

P- Yes Ill mix.

R- **Ok, can you please share with me as a nurse working with children under the age of five, the kind of information you give to caregivers regarding feeding on day to day basis.**

P- On day to day basis, we give health talk to mothers coming for child growth monitoring just before we weigh them, we tell them what they should eat for children to have good health and grow well. These women we teach them according to the child age, like now I teach them that you don't give anything to a newborn until 6 months of age. The baby should be breastfed only and one other thing while still at young babies, if the mother is going out, just need to express or pump the breast milk to can feed the child when the mother is not around for the child to grow well and healthy.

R- Yes.

P- And they must not even a single day give soft porridge or water, I also tell them that they can breastfeed as many times as more than 8 times per 24 hours.

R- I heard you talking about expressing breast milk and cup feeding.

P- Yes.

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R- Do you think grandmothers that are caring for this children do you think they understand what you are talking about?

P-That's the problem I have up to so far, grandmothers likes to give ''Tshiunza'' they believe that Tshiunza is the best and it is a taboo to express breast milk and give it to the child, that's the challenge we are experiencing at the end of the day they give this children soft porridge.

R- Oh, I heard you talking about Tshiunza, what is it? And how does it affect children growth?

P- When I ask these caregivers they tell me that it is very thin soft porridge they give to the child. They know that they are not supposed to give a normal soft porridge to the baby. "Tshiunza" have the same effect as glucose to the child, the child will look like growing well but the weight will tell you a different story, the child's growth will be affected because one type of food is given which is soft porridge with some roots and to add on that the child is not breastfed on demand because the mother is at work or at school.

R- OK. What else do you teach this mothers?

P- I teach them to breastfeed this children up to the age of 18 months, then the very same children at 6 months we tell them to give mashed fruit and things like mashed potatoes, grinded mopani worms or put mopani worm s gravy in the soft porridge, give beans as well as eggs in small portion. Even when they are growing up as from 18 months and above depending on the background because you will just see that these people cannot afford to buy some foods. So I advise them to give a child tin fish without chillies. That's it and for those that can afford milk they can give them to drink.

R- Ok, you talked about soft porridge they give after 6 months, how do they give this?

P- At 6 month I tell them to give soft porridge at least once per day and gradually give the child twice per day using spoon not force feeding, also advise them to add peanut butter, Rama or cooking oil by tea spoon depending on how much is the soft porridge if possible, they can also add formula milk into the soft porridge for the child to eat. Those children that are grown up already, I advise them to give mashed potatoes and any food that they eat at home because the soft porridge does not suit the child anymore.

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R- Ok.

P- Also tell them that the child do eat meat to, because you'll find that children are only given gravy not meat.

R- But isn't that when we grew up we were told not to give a child salty food it will affect teething.

P- Iyoo I believe that the teeth are already there, so they will come out no matter what.

R- When you tell them about this do they do it or what?

p- Ah, it is difficult because I would even refer them to dietician or the RtHC (Road to Health Card) as you can see it.

R- Oh ok, still at feeding, you said you advice the children under 6 months to be breastfed only and those that are left with grandmothers are advised to express the milk to feed the child. You also indicated that those at 6 months and above can be given mashed potatoes, grinded Mopani, add Rama or formula milk into the soft porridge, as well as meat, it is what you said up to so far, Based on the good information that you gave what do you think might be the cause of this children not growing well of having malnutrition?

Furthermore I heard you saying that grandmothers give children “Tshiunza” and is one of the things that is making children not to grow, what else?

P- Other things that I see is that what we believe in is not what grandmothers believe in. another thing is that we are different and they are people that I could see that it is really hard for them to give healthy food leading to giving wrong food. Also lack of knowledge or ignorance and not following the information we give them can be the cause. They will now consider it later when the child is having a problem.

R- Mhh, you said caregivers do ignore the information given maybe because they believe what they are giving is what they grew up eating. They grew up not eating meat whereas you are saying they should eat it. What are the other causes?

p- What makes other children not to grow is that they were born underweight, but the matter become worse when they are given soft porridge at early stage before the time, the child will be stunted (Tshirole) because of it.

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R- So you are saying, the child is given soft porridge before the age of 6 months as you indicated?

P- Yes.

R- You also talked about Poverty as one of cause, and this days children are getting social grant, what makes you think that?

P- I don't want to get into it because really it depend on individuals, you may find that the child is having porridge with Inkomazi but the problem is eating with Inkomazi every day and not having various foods that is the cause because Inkomazi is what they afford. I don't know, others will also buy Danone thinking it is having nutrients in the true sense it doesn't, you even find that it was better to give the child beans than Danone but hey, people don't understand.

R- I heard you very well, you are saying yes these caregivers are getting grant but the problem is they don't know how to use it, is that so?

P- Yes, it is.

R- You went further and say they even buy milk(Inkomazi) thinking that they are doing okay, where as they are not, so it goes back to what you said earlier that they don't have knowledge. If there's no other causes what do you think can be done in situation like this, what do you think can be done for caregivers to have this information?

P- I've being thinking about this for quite some time now, we could visit the chief kraal (tribal office) to give this information, besides grandmothers and grandfathers are our target when it comes to making a decision on what to give and what not to give to these children.

R- Ok, going to the tribal office to give information, but how do you think can be done?

P- Reaching the tribal office is not a problem, we can just write a letter to make an appointment with the community to can give them information.

R- Who should give this information?

P- The nurses.

R- What else can be done?

P- Another thing is through media, I think through media it will work for us

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R- Who should go to the media?

P- Since you know that it is not easy to find yourself in media as a nurse, you can find yourself in trouble, it's very difficult because it will be like exposing the community or the clinic, but if we can follow the right channel like start from our operational manager, then assistant manager then to the district manager to give us go ahead and allocate a person who will give this feeding information.

R- Who should give that information according to you?

P- I think it be Nurses who work with these children on daily basis not someone who will be giving information according to the book. And also the dietician as sometimes I do consultation with her.

R- What do you mean giving information according to the books?

P- As a nurse working with these children I know what food they give and what they don't, I also know what they afford and what they can't. I cannot talk about giving their children fruits everyday knowing very well they cannot afford to buy them every day but that is what the book wants isn't, but ill advise them to give fruit at least once a week as well as giving other various foods well I know that tomato is a fruit so they can at least give tomato juice to those younger ones and give it like it is to the older ones, I mean they can afford tomatoes but not apple every day.

The other thing is to give information one on one, it gives the mother an opportunity to ask freely and understand, because is not easy to ask question in a group.

R- You are very right, sometimes one on one is better and it will you a chance to teach based on their pockets. Is there anything else?

P- There's nothing else im thinking.

R- In the absence of any questions, you talked about visiting the tribal office to give information to the grandmothers and grandfathers, also through media or one on one. We used to have outreach whereby dentist and dieticians will be there to give information.

P- It is long since I've heard about it and besides during these time of corona it won't work and besides the issue of corona the Government is more concerned with the budget than anything else.

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R- But what do you think about this outreach without the government concerned with the budget?

P- I think it can work, the dietician will be able to give information and this will even help those that don't come to the clinic for growth monitoring they will also gain from this visits

R- Then who should be responsible to organise this outreach?

P- I think it should be the assistant manager after seeing the high rate of the statistics through the district manager, because the outreach need the cars, posters, pamphlets for people to refer too and it need money to do that. We can also use the home based care, I see that they refer children who are not up to date with vaccinations or who are not growing well.

R- What are we using home based care for, is it for mobilising the outreach or what

P- No for giving us the names of children they find that are not growing well while in the community so that we can do follow up and maybe end up referring to the social worker.

R- How do we contact these social workers?

P- We are so lucky because the social worker we have here in the clinic so anything that need their attention we can contact them then they will do follow up and end up providing them with food if it is really difficult.

R- Ok, you refer to the social worker who could end up providing food. Is there anything you would like to say?

P- No, unless you want to ask other questions.

R- What do you think is the only thing that will make all the activities you talked about to be successful?

P- Let's treat our patient with respect as simple as that.

R- Okay.

P- Yes, respect.

R- Any addition from what you said?

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P- No.

R- Okay, thank you very much you said a mouth full, as I've indicated when I start that this information will be known by me and my supervisors only and no payments will be made, no names will be mentioned, the only thing I need is the information, if I find the need to be clarified I may come back for clarity is that okay?

P- You are most welcome.

R- Thank you, have a good day and I've delayed you a bit, you should have knocked out already.

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APPENDIX G5: TRANSCRIBED INTERVIEW TRASCRIPT FOR NURSES (NURSE 1 CLINIC D)

Translated from Tshivenda to English a strategy to facilitate the implementation of educational nutritional guidelines for caregivers of children in selected rural communities of the Vhembe District.

P-PARTICIPANTS **R-RESEARCHER**

R-Good afternoon.

P- Afternoon.

R- How are you today?

P- I am fine except that the rain is too much, we no longer want it.

R- And it does not seem to be stopping anytime soon.

P- Exactly.

R- Before I could start with our meeting today lets agree on the language you'll prefer to use.

P- I will use both Tshivenda and English some words are difficult to say in Tshivenda.

R- Ok, that's fine, I have indicated that I'll be recording our conversation last time I was here, isn't.

P- Yes.

R- The idea of recording is to get all the information during this interview as I indicated before, so I am Takalani Thabathi, a student at the University of Venda doing research about the information you give to caregivers of children under the age of five. Before going forward we need to ensure that all precautions regarding Corona are observed, so we are sitting 1, 5 m apart, I have screened you the signs of Corona and measured your temperature, sanitised our hands and we are wearing our mask correctly(covering the nose and mouth). Speaking of Corona, how is it this side?

P- Iyoo people this side are not wearing their mask to be honest, they are not following any precautions at all, they only wear their mask when going to town other than that

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no they don't, they are all over the place going up and down, what can you do, the government are even aware of how reckless people of here are.

R- I have also heard it on radio, I believe you knocked off now at 16:00 let me not delay you any further and start with the interview. I have already indicated that no payments will be made, your name will not be mentioned but codes will be used, your participation is voluntarily and you have every right to withdraw at any time you feel like, I have already talked about voice recorder, so if you feel like you want to say something that you think don't need recoding press here on stop (showing her the stop button).

P- Ok.

R- **As a nurse working with children under the age of five, what kind of information do you give to caregivers of children under the age of five regarding feeding?**

P- I tell them to breastfeed only at the age of 0- 6 months, they must not add even water, the child at this age needs breastfeeding only and nothing else. Those that are above 6 months now we tell them to start eating food, now is the time to introduce soft porridge, although it is not what they are practising, they give soft porridge before 6 months, but we teach them the correct things. We advise then not to give soft porridge only but with peanut butter or Rama. this days people have blenders, we advise them to blend different fruits and vegetables and give to the child to drink, it is a healthy homemade juice with nutrients than the one they buy with lots of sugar, also advise them to give mashed vegetables like potatoes, sweet potatoes to the children. The child must have various food every day, not to eat soft porridge only. Caregivers must treat children like themselves, they would not want to eat pap and vegetable every day, they would want to eat meat isn't? Same applies to the children. Tell them to continue with breastfeeding or formula feeding for those who can afford, mothers of children must give children meat it is healthy, we must go away with old ways of doing things.

R- You said a mouth full, you talked about formula feeding to those who can afford, what about those that cannot afford?

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P- I tell them to express the milk and keep them in the freezer, and when it is time to use them, they will defrost them by putting in the warm water, people this day's use breast pump to do that.

R- Tell me more about the expressed milk and storage, do they express every day that will last for the day or what?

P- I advise them that they must keep enough to last for the day but if It happens that there is left overs they must mark them by date so they can be used first the next day.

R- OK, with all this information you give, children are still not growing well, what do you think might be the cause?

P-Like I indicated before mothers of children give soft porridge before the age of 6 months and they give soft porridge only without adding anything else, the other thing is, most of them are not financially ready, they depend on social grant which does not even cover half of the child needs, peer pressure of others getting grant is the cause of having children that they cannot afford that will cause the child not growing well. In this area you buy everything from vegetables to meat, unlike at the villages where they plough their own vegetables.

R- MHH!

P- I think people must be financial ready before they have children.

R- In cases like this what do you think can be done to ensure that children are growing well?

P- I think nurses must continue giving information regarding correct feeding practices, and also add that the child is expensive, social grant without other source of income is not enough, nurses should also go to schools and give information about feeding especially in higher grades, by so doing we will target the young mothers there.

I also think that the idea of ideal clinic, whereby patients come according to the time they are booked for, it will make it difficult to give information to most of patients, patients that come later during the day is not possible to give health information, I think when it comes to child growth monitoring, the must come early in the morning get some health talk and start with the daily work. It is difficult to give one on one education

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bearing in mind of patient waiting period, is just that one end up not knowing what to do.

R- Who do you think should be responsible for this idea you suggested, who should see to eat that it reach the relevant people?

P- The operational manager should take this suggestion to the ideal clinic team maybe they will see what im seeing, it is just a suggestion, this people must stop making decision for us , as a nurse working with children I know their challenges more than them , I spent most of my time here.

R- I here you what else can be done on this issue?

P-What I have noticed is that most children spent their day in the day care centres (Chreche), there are those Crèches that does not consider correct feeding important, so nurses should go through the municipality and arrange the meeting with all the crèche's to find out about their feeding programme and also emphasise the importance of nutritional feeding practices, social workers, health inspectors must also be involved in this, then do follows up after that.

R- Ok, you said that nurses should continue to give health education at the clinic, and the operational managers should advocate that booking system as far as ideal clinic is concerned must not be applicable to children under five because it makes it difficult to give education to caregivers, you also said that nurses through municipality must also go to crèche's and emphasise the importance of nutritional feeding practices as children spent most of their times there.

P- Yes, I also think mobile clinics should also be involved.

R- How so?

P- In their monthly programme, they should also include teachings to the group of mothers or caregivers that are there on the scheduled day, they must not concentrate on giving medication and knock off early to come and sit at the clinic, nurses at the mobile clinic their duty is to access those patients that are unable to access the clinic, so the clinic go to them so nurses at mobile must do everything we do at the clinic.

R- Ok, with what you just said visiting the crèche or day care centre, mobile clinic to access those that cannot reach the clinic, what is it that a nurse should have, or what

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quality or a behavior that a nurses should possess in order to achieve our goal at the end of the day?

P- Umm, Respect, yes caregivers are taking care of their children, but that does not mean we should disrespect them, or treat them like otherwise you know.

R- I can see that you really mean what you are saying.

P- Yes, I mean it, they are still nurses who don't know even now that patients also have right to be respected and let me tell you if we don't respect them, they won't either and the information that you give to them they won't use it either. We should try to be at their level, the experiences we had while growing up, we should share it with them, let them understand that yes we are poor but we can use what we have for our children to grow well. We do not have to act like we were born with a silver spoon in our mouth.

R- I hear you say we can use what we have for our children to grow well, tell me more.

P- Yes, caregivers don't have to go all out buying expensive things for their children but they can cook or give the children the same food they are eating for the child to grow. Most of food adults eat at home are nutritious as they contain various nutrients compared to when giving soft porridge only or with formula milk, so the child body need this variant nutrient to build up their body, to promote growth and grow up being strong and healthy.

R- Ok.

P- Yes I tell mothers of children that food play an important role in child brain development, for the child to be intelligent at school it depends on the food given at early stages.

R- Ok, Is there anything you would like to add?

P- No, I think I covered most of things.

R- Without any more addition, lets me thank you for this precious time of yours, and remind you that   you are agreed to this interview because you wanted too I did not force you to, and our interview was recorded to gather all the information we talked about, I am going to use codes no names will be used.

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P- It is okay, it was good talking to you.

R- I will come back to validate what you said. I will play back the voice recorder now.

P- Ok.

R- The recorded interview was played back for validation and the participant agreed with the contents of the interview.

THE END

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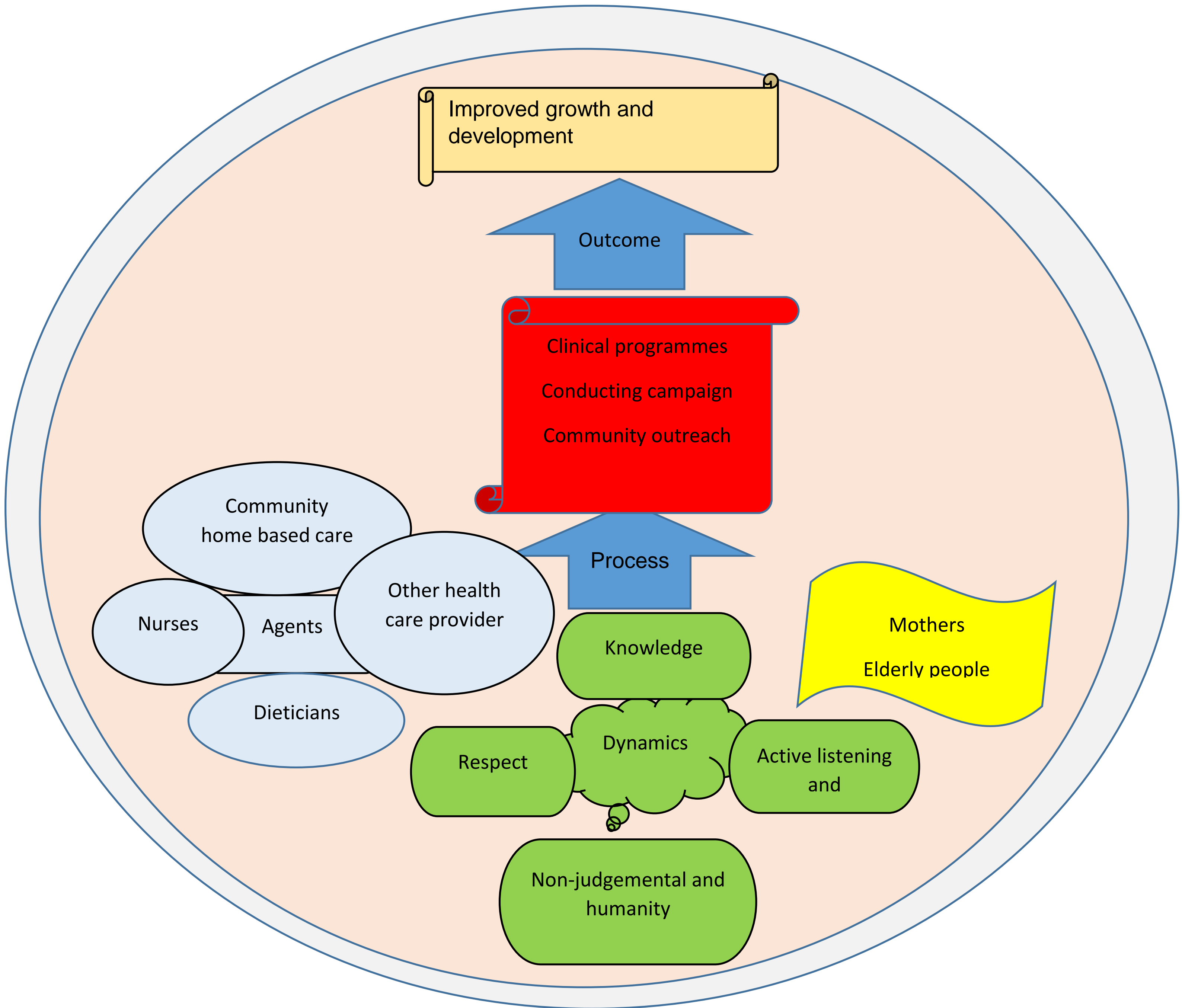
APPENDIX H1: FIRST DRAFT STRUCTURE OF THE STRATEGY AND COMMENTS



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COMMENTS BY THE GROUP DURING THE FIRST PRESENTATION

- How clear is the strategy? **Contex**t: a group of validators felt that the strategy is not clear, as no community or clinic context was indicated in the diagram. Further indicated that everything happens inside the community, so the community be the outer context.
- How simple is the Strategy? The validators indicated that the strategy is not simple as one could not really understand the relationship between the structures. The was no relationship between the dynamics, agents and recipients
- How accessible is the strategy? No comment was made with regard to this element
- How general is the strategy? No comments made to this element
- How important is the strategy? The strategy will have meaning after all the corrections are made.

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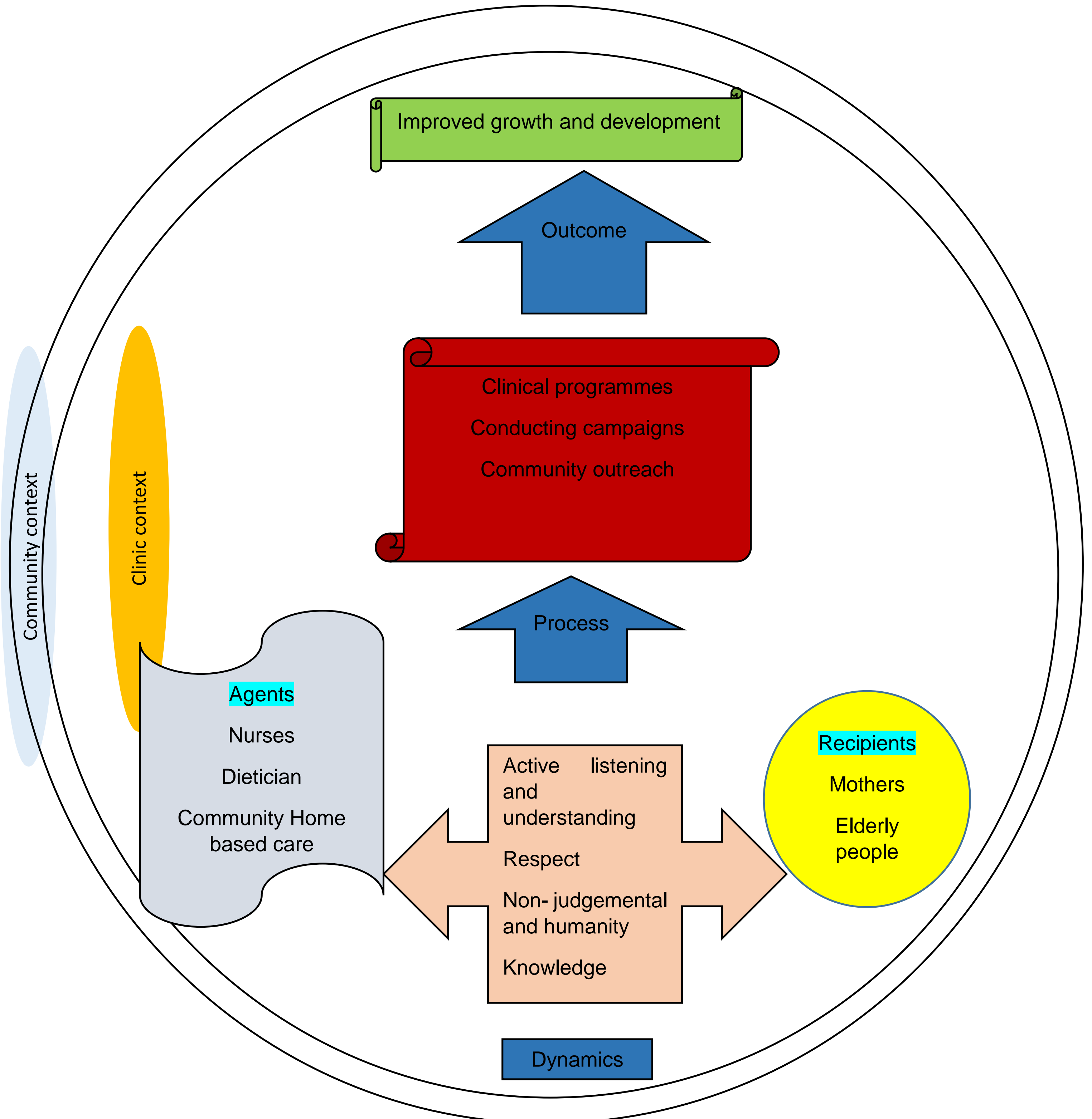
APPENDIX H2: SECOND DRAFT STRUCTURE OF THE STRATEGY AND COMMENTS



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COMMENTS BY THE GROUP DURING THE SECOND PRESENTATION

- How clear is the strategy? Context: a group of validators felt that the strategy is now clear, as community and clinic context was indicated in the diagram. **Agents** "Get one concept that covers the nurses, dietician, community home based cares and other health care and the mothers and elderly people in **recipients"** "the structure and the colour of the agents and recipients should be the same. The dynamics should be in sequence as follows: Active listening and understanding, respect, non- judgemental and humanity and knowledge.
- How simple is the Strategy? To make the strategy simple the validators indicated that "the collective name for the agents should be health care professionals. The structure and the colour of the agents and recipients should be the same. the should be an arrows indicating the relationship between the agents, dynamics and the recipients"
- How accessible is the strategy? No comment was made with regard to this element
- How general is the strategy? The strategy was described based on the need to facilitate the implementation of educational nutritional guidelines for caregivers. The findings of this study indicate that most participants accept that they need help with regard to nutritional feeding practices. The participants also indicated the kind of support needed in providing the children with nutritional food. The developed strategy can be practiced by all health facilities that offer child health services. The group of validators agreed with what the researcher presented.
- How important is the strategy? The strategy would close the gap in providing the caregivers with nutritional feeding practices when the facilitation of guidelines about nutrition is implemented.

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APPENDIX I: PROOF OF LANGUAGE EDITING

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Editorial Certificate

To Whom It May Concern,

This certificate confirms that the proposal entitled; **A STRATEGY TO FACILITATE THE IMPLEMENTATION OF EDUCATIONAL NUTRITIONAL GUIDELINES FOR CAREGIVERS OF CHILDREN IN SELECTED RURAL COMMUNITIES OF THE VHEMBE DISTRICT** by **THABATHI TAKALANI ELDAH**, was edited by an expert English editor with a PhD. The following issues were corrected: grammar, spelling, punctuation, sentence structure, phrasing, and formatting.

Signed on behalf of NIM Editorial by:

……………………………

Dr N.I Mabidi

Founder & Chief Editor

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