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**CAREGIVER PRACTICES OF HOME MANAGEMENT DURING DIARHOEAL
DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT,
THULAMELE MUNICIPAL AREA**

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DECLARATION

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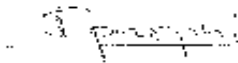
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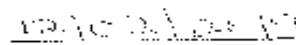
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"CAREGIVER PRACTICES OF HOME CARE MANAGEMENT DURING
DIARRHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VECHEE
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is my own original work and has not been previously submitted by me or anyone in any other
university. All criteria in acknowledgement section used in this study were taken.



Signed



Date

Azwimbavhi Violet Phophi

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ABSTRACT

In Vhembe district, diarrhoeal disease and dehydration are the leading causes of death in children under five. The researcher aimed to explore and describe caregiver's practices of home management of diarrhoeal disease in children under five years in Vhembe district, Thulamalele municipal area at the health centre and paediatric ward. Knowledge of the caregiver's practices of home management of diarrhoeal disease in children under five years, enable the researcher to construct an action plan to address diarrhoeal diseases and contribute to reduction in mortality related to diarrhoea disease and dehydration in children under five years in Vhembe District.

The population of the study included any person who was taking care of a child under five years at home. A qualitative, explorative, descriptive and contextual design was used. Three focus group interviews were used to collect data; two focus groups had five participants each while one focus group had eight participants. Data were analysed by using content analysis. It was found that use of remedies, traditional medication and giving of wrongly prepared oral rehydration solution were common practices to the caregivers.

KEYWORDS

Caregiver, diarrhoeal disease, home management, practices.

LIST OF ABBREVIATIONS / ACRONYMS

ABBREVIATION / ACRONYM	MEANING
Child PIP	Child Health Care Problem Identification Programme
CoMMIC	Committee on morbidity & mortality in children under five years
DoH	Department of Health
IMCI	Integrated Management of Childhood Illness
ORS	Oral Rehydration Solution
RTHC	Road to Health Chart
SSS	Salt and Sugar Solution
UNICEF	United Nations International Children Emergency Fund
WHO	World Health Organisation

TABEL OF CONTENTS

DECLARATION		i
ACKNOWLEDGEMENTS		ii
ABSTACT		iii
LIST OF ABBREVIATIONS / ACRONYMS		iv
TABLE OF CONTENTS		v
CHAPTER 1		
OVERVIEW OF THE STUDY		
NUMBER	TOPIC	PAGE NUMBER
1.1	INTRODUCTION	1
1.2	RATIONALE	2
1.3	BACKGROUND	2
1.4	PROBLEM STATEMENT	4
1.5	SIGNIFICANCE OF THE PROPOSED STUDY	5
1.6	RESEARCH QUESTION	5
1.7	AIM	6

1.8	CONCEPT CLARIFICATION	6
1.8.1	Caregiver	6
1.8.2	Diarrhoea	6
1.8.3	Practice	6
1.9	PHILOSOPHICAL ASSUMPTIONS	6
1.10	ONTOLOGICAL ASSUMPTION	7
1.10.1	Epistemological assumption	7
1.10.2	Methodological assumption	7
1.11	QUALITATIVE RESEARCH DESIGN	7
1.12	METHODOLOGY	8
1.12.1	Setting of the study	8
1.12.2	Population and sample	9
1.12.3	Data collection	9
1.12.3.1	Challenges encountered during the focus group interviews	11
1.12.4	Data analysis	12
1.13	TRUSTWORTHINESS ENSURED IN THE STUDY	13
1.14	ETHICAL ISSUES CONSIDERED	14
1.15	CONCLUSION	15

CHAPTER 2		
LITERATURE REVIEWED IN SUPPORT OF THE STUDY		
NUMBER	TOPIC	PAGE NUMBER
2.1	INTRODUCTION	16
2.2	MEANING OF DIARRHOEAL DISEASE IN CHILDREN	16
2.3	PREVALENCE AND DIAGNOSIS OF DIARRHOEAL DISEASE IN CHILDREN	17
2.3.1	Diarrhoeal disease caused by viral pathogens	17
2.4	DIAGNOSIS OF DIARRHOEAL DISEASE	18
2.4.1	History	18
2.4.2	Assessment	18
2.4.2.1	Physical assessment	18
2.4.2.2	Investigations	19
2.5	CONSEQUENCES OF DIARRHOEAL CONDITIONS FOR CHILDREN YOUNGER THAN FIVE YEARS OF AGE	19
2.6	DIFFERENT TREATMENT MODALITIES OF DIARRHOEAL DISEASE IN CHILDREN	20
2.6.1	Western modality	20
2.6.1.1	Rehydration therapy	20
2.6.1.2	Dietary recommendation	21
2.6.1.3	Drug therapy	21

2.6.1.4	Consultation	21
2.6.2	Cultural modality	21
2.7	MODIFIABLE DETERMINANTS OF DIARHOEAL DISEASE	22
2.7.1	Poor utilisation of health services	22
2.7.2	Food security and nutrition	22
2.7.3	Human Immune Virus related	22
2.7.4	Water and sanitation	23
2.8	POSSIBLE RELATIONSHIP BETWEEN DIARHOEAL DISEASE IN CHILDREN AND OTHER CONDITIONS	23
2.9	PREVENTATIVE STRATEGIES AVAILABLE FOR THE MANAGEMENT OF DIARHOEAL DISEASE IN CHILDREN YOUNGER THAN FIVE YEARS	23
2.9.1	Improving hygiene	23
2.9.2	Health education	23
2.9.3	Water and sanitation	24
2.9.4	Fly control and waste disposal	24
2.9.5	Breastfeeding	24
2.9.6	Improved complimentary feeding practice	24
2.9.7	Immunisation	25
2.9.8	Micronutrient supplements	25

2.10	CONCLUSION	25
CHAPTER 3		
METHODOLOGY USED IN THE STUDY		
NUMBER	TOPIC	PAGE NUMBER
3.1	INTRODUCTION	26
3.2	FRAME OF REFERENCE FOR THIS STUDY	26
3.2.1	Philosophical assumption	26
3.2.1.1	Ontological assumption	27
3.2.1.2	Epistemological assumption	27
3.2.1.3	Methodological assumption	28
3.3	AIM OF STUDY	28
3.4	OBJECTIVES	28
3.5	THE CONTEXT OF THE STUDY	28
3.6	RESEARCH DESIGN	28
3.6.1	Qualitative research design	29
3.6.1.1	Inductive reasoning	29
3.6.1.2	Natural setting	29
3.6.2	Exploratory design	30
3.6.3	Descriptive design	31

3.6.4	Contextual team	31
3.7	POPULATION AND SAMPLE	31
3.7.1	Inclusion criteria	32
3.7.2	Exclusion criteria	32
3.7.3	Preparation and sampling	32
3.8	PILOT TESTING OF THE INTERVIEW QUESTIONS	34
3.9	DATA COLLECTION METHOD	35
3.9.1	Data collection procedure	35
3.9.2	Focus group interview	35
3.9.2.1	Advantages of focus group interviews	36
3.9.2.2	Disadvantages of focus group interviews	36
3.9.3	Semi structured interviews	37
3.9.3.1	Focus group 1	38
3.9.3.2	Focus group 2	38
3.9.4	Personal reflection during post data collection	39
3.10	DATA ANALYSIS	39
3.11	DATA ORGANISATION	39
3.12	ATTAINMENT OF TRUSTWORTHINESS	40
3.13	CONCLUSION	40

CHAPTER 4		
RESULTS AND FINDINGS		
NUMBER	TOPIC	PAGE NUMBER
4.1	INTRODUCTION	41
4.2	DEMOGRAPHIC INFORMATION	41
4.3	DISCUSSION OF FINDINGS	42
4.3.1	Practices to stop diarrhoea	43
4.3.1.1	Remedies	43
4.3.1.2	Traditional medication	44
4.3.1.3	Feeding options to stop diarrhoea	46
4.3.2	Practices to replace fluids and electrolytes	49
4.3.2.1	Fluids and electrolytes	49
4.3.3	Seeking healthcare	51
4.3.3.1	Time taken before to seeking health	51
4.3.3.2	Ability to identify danger signs	53
4.3.3.3	Influence of other family members to seek healthcare	53
4.4	CONCLUSION	54

CHAPTER 5		
CONCLUSIONS AND RECOMMENDATIONS		
NUMBER	TOPIC	PAGE NUMBER
5.1	INTRODUCTION	55
5.2	CONCLUSIONS OF THE FINDINGS	55
5.3	RECOMMENDATIONS	55
5.3.1	Education	55
5.3.2	Practice	56
5.3.3	Research	56
5.4	DISSEMINATION OF THE FINDINGS	57
5.5	LIMITATION OF STUDY	57
5.6	CONCLUSION	57

REFERENCES	
TOPIC	PAGE NUMBER
References	59

TABLES		
TABLES	TOPIC	PAGE NUMBER
Table 1.1	DETAILS OF FOCUS GROUPS	13
Table 1.2	TRUSTWORTHINESS ENSURED	14
Table 3.1	SUMMARY OF DATA COLLECTION PROCESS	34
Table 3.2	DETAILS OF FOCUS GROUPS	34
Table 4.1	DEMOGRAPHIC INFORMATION	41
Table 4.2	SUMMARY OF FINDINGS OF THEMES AND SUBTHEMES	42

ANNEXURES		
ANNEXURE	TOPIC	PAGE NUMBER
ANNEXURE A	Declaration regarding plagiarism	67
ANNEXURE B	Interview guide for focus group interviews	69
ANNEXURE C	Participation information and informed consent	71
ANNEXURE D	Letter of consent: Department of Health Vhembe District	76
ANNEXURE E	Letter of Ethical Approval: University of Pretoria	79
ANNEXURE F	Letter of the Editor	84
ANNEXURE G	Example of Coding	86
ANNEXURE H	Limpopo Approval letter	92

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Children are lovely and smiling when they are healthy and playing around, yet they are vulnerable to untimely deaths due to different causes. Most causes of such deaths are preventable; however, survival and recovery of children during a disease episode depends on practices carried out by caregivers. Onwukwe, van Deventer and Omole (2015:45) were of the opinion that proper management of diarrhoeal disease depends on well-informed caregivers rather than the health system. Millennium Developmental Goal 4, to reduce child mortality, was an effort to reduce worldwide deaths of children under five years by two thirds between the period of 1991 and 2015 (Gaffey et al., 2015:285), and such goal was not met. Now the world's focus is on Sustainable Developmental Goals, which according to Liu, Oza, Hogan, Chu, Perin, Zhu et.al.(2016: 3027), each country is advised to prioritise its policy and programmes on child survival considering causes of death in children and to have better strategies to achieve such goals. Globally, diarrhoeal diseases are the second leading cause of deaths among children under the age of five years and is more common in low-income countries where infection transmission is caused by poor sanitation and hygiene, contamination of drinking water and low health and nutritional status (Unger, Salam, Sarker, Black, Cravioto & Arifeen, 2013:273).

Guerrera (2015:1) is of the opinion that there is a higher risk for children in Sub-Saharan Africa who are born in rural areas, in a poor family and cared for by an uneducated mother, die before the age of five years. Webair and Bin Ghouth (2014: [n.p]) relate that specific cultural perceptions regarding disease and illness might influence the beliefs and actions of caregivers when they manage diarrhoeal disease in children. During the study, the researcher observed that cultural beliefs and perceptions about the possible cause of illness plays a major role in caregivers' practices at home when managing diarrhoeal diseases. Furthermore, it was revealed that other family members such as grandmothers play a major role in decision making, depending on what caregivers believe [View Chapter 4: Section 4.3.1.2].

1.2 RATIONALE

Diarrhoea is a condition when a child is passing frequent and profuse loose watery stools, with or without vomiting (Department of Health (DoH), 2013:2.9). For the purpose of this study, only diarrhoea in children under five years will be discussed. If treatment is delayed, dehydration and metabolic disturbances can occur, leading to irreversible organ damage and death in children (DoH, 2013:2.9). In most cases, death as a result of diarrhoeal disease is associated with fluid loss (Wittenberg, 2009:504; Lenters, Das & Bhutta, 2013:n.p).

Development of diarrhoeal disease is associated with the use of contaminated water and food as well as poor personal hygiene (Blessing, Chima, Leera & Chidinma 2014:002; George, Perin, Neiswender de Calani, Norman, Perry et al., 2014; Unger et al., 2013:273). The researcher observed different practices used by caregivers during the management of diarrhoeal disease [View Chapter 4: Section 4.3]. Although caregivers in the Vhembe district believe that contaminated water and food and poor personal hygiene contribute to diarrhoeal disease, they also view diarrhoeal disease as an integral part of growth and development when a child is teething. Such beliefs are transferred from one generation to another and are considered as normal, such as believing that if a child is teething, it is normal to develop diarrhoea. The communities are encouraged to adhere to these traditional beliefs because it is part of their cultural beliefs.

Diarrhoeal disease is usually treated at home where caregivers are encouraged to give children more fluids to drink. If a child is still breastfed, the child should be fed more often and continue to receive nutritious foods, which are available within that community (DoH, 2014:43). The mother is advised to take the child to the clinic if the child continues to be unwell, fails to drink or breastfeed, develops a high temperature or when blood appears in the stools (DoH, 2014:46). The researcher observed that caregivers have different practices related to diarrhoeal disease. These practices include taking a child to a traditional healer, use of over-the-counter medication and giving traditional home remedies. Sometimes a caregiver will be implicating elderly people such as grandmother as the one who delayed her to bring the child to hospital as she was still administering indigenous plants as treatment. It is usually during this period that caregivers restrict fluids and food during diarrhoeal disease and delay in seeking healthcare [View Chapter 4: Section: 4.3].

1.3 BACKGROUND

The United Nations International Children's Emergency Fund (UNICEF) reports a global decline in diarrhoeal disease from 1990 to 2013 as reflected in the mortality statistics for children under the age of five years (UNICEF 2013: [n.p]). The report stated that mortality in the under-five age groups declined from 12.6 million to 6.6 million, which is an estimated annual reduction in child deaths by

48 per cent (UNICEF 2013:[n.p]). Although a decline in child mortality was reported, death in children under the age of five years related to diarrhoeal diseases amounted to 9 per cent of total deaths during the same period (Guerrera 2015:1, Qazi, Aboubaker, MacLean, Fontaine, Mantel, Goodman et al., 2014: n.p, Bustreo, Okwo-Bele & Kamara, 2014:s34) for children in Sub-Saharan Africa.

In Sub-Saharan Africa, it is estimated that 340 000 children under the age of five years die annually due to diarrhoeal disease caused by a lack of safe drinking water, poor sanitation and poor hygiene (WHO, 2015:[n.p]). In South Africa, diarrhoeal disease is responsible for approximately 20 per cent of deaths in children under the age of five years (Chola, Michalow, Tugendhaft & Hofman, 2015:[n.p]). This shows that diarrhoeal disease is still a challenge in South Africa.

Vhembe district is one of the areas that is affected by diarrhoeal disease and remains a challenge. According to the report of the committee on morbidity and mortality in children under five years, the leading cause of death in Limpopo province is diarrhoeal disease (DoH, 2011:63). Ntuli, Malangu and Alberts (2013:97) reported that in a referral hospital in the Limpopo province in South Africa, diarrhoeal related mortality between 2008 and 2010 in children under one year accounted for 13.2% of deaths, and in children between one year and four years of age, 12.7%. Death in children under five years due to diarrhoea and dehydration in the paediatric wards in Vhembe district for the period April 2014 to March 2015 amounts to 4.4% of the total admission of children under five years. The mortality statistic mentioned above, accounts for children under five years admitted to the paediatric wards in Vhembe district hospitals, while a high number of deaths was observed in the paediatric wards in the Thulamele municipal area (Final monthly death raw data sheet, 2015).

Unfortunately, no information was available about deaths at homes, clinics and emergency departments. Many of these deaths could be prevented by appropriate caregiver practices of home care management of diarrhoeal disease in children as well as seeking healthcare advice at an earlier stage [View Chapter 2: Section 2.6]. Although the Department of Health (DoH 2013:2.9) and Wittenberg (2009:264) relate to the interrelationship between diarrhoea, malnutrition, poor feeding and restricting of nutritious meals that contribute to malnourishment and dehydration, resulting in death, this study was influenced by the researcher observing children dying within the first 72 hours of admission in hospital.

According to the Child Healthcare Problem Identification Programme (Child PIP, 2009:64) report, the largest number of modifiable factors were linked to care given to the child before taken to hospital and emergency settings. Evidence exists which indicates that caregivers follow different practices for the management of diarrhoeal disease in children under five years [View Chapter 4: Section

4.3.3.1]. Webair and Bin-Gouth (2013:1135) explained that the interest and trust of caregivers has shifted from medical to traditional practices and the caregivers of children only use professional medical care as the last option. The same authors (Webair & Bin-Ghouth, 2014:315) discovered that caregivers have become secretive about their practices as they believe that doctors undermine their beliefs. Therefore, this study explored and describe caregiver practices of home management during diarrhoeal disease in children under five years of age [View Chapter 4].

1.4 PROBLEM STATEMENT

Limpopo is a more rural province in South Africa, one of the poorest provinces with more than half of the population having no piped water or adequate sanitation (DoH, 2011:61). Vhembe district is one of the rural areas within Limpopo province. It has four municipal areas, two of these areas cover farming areas and deep rural areas. Caregivers of children under five years in Vhembe district have decreased levels of education and experience challenges such as poverty, lack of running tap water, poor sanitation and walking distance being more than five kilometres to access healthcare facilities in the villages. Most of these areas in Vhembe District are visited once a month by nurses with a mobile clinic service.

The researcher observed that children were dying of diarrhoeal disease and dehydration. These deaths or mortality have been confirmed by the death auditing programme, known as Child Healthcare Problem Identification Programme (Child PIP). While the Child PIP did not provide specific statistics on death caused by diarrhoeal disease, the first Triennial report of the committee on morbidity and mortality in children under five years, First report of the committee on morbidity and mortality in children under 5 years (CoMMIC) (2011:62) revealed that the leading cause of death in children under five years in the Vhembe district is diarrhoeal disease. The researcher observed that most deaths occurred within 72 hours of admission to the hospital in the Thulamele municipal area. While the Thulamele municipal area (Final monthly death raw data sheet, 2015) statistics indicated that the Thulamele municipal area is mostly affected by these deaths, the researcher was of opinion that there might be other children under the age of five years in deep rural area who are also affected by diarrhoeal disease but die before arriving at the clinic or hospital. The researcher observed that caregivers of children under the age of five years followed different practices when they manage diarrhoeal disease at home [View Chapter 4: Section 4.3.3.1]. These practices followed at home are associated with the cultural beliefs of the caregivers and the community [View Chapter 4: Section 4.3.1.2]. Caregivers also believe that traditional healers know how to treat diarrhoeal disease better than medical professionals do. This belief and practice delay caregivers to seek health care advice when children under five years develop diarrhoeal disease [View Chapter 4: Section 4.3.3.1].

Mukiira and Ibisomi (2013:9) observed that a delay in seeking healthcare advice by caregivers was associated with not knowing the danger of diarrhoeal disease in a child. Giles-Vernick, Bainilago, Fofana, Bata and Vray (2015:9) indicated that a delay in accessing healthcare can be related to seeking health advice from friends and relatives, use of over the counter medication, fear of expenses and the use of home-made herbal remedies. Nasrin, Wu, Blackwelder, Farag, Saha & Sow et al. (2013:10) describe health advice seeking behaviour as a hierarchy, starting at the less expensive services to most expensive, which contribute to a delay in the child receiving proper care. Such practices were observed by the researcher as caregivers indicated that they thought that the child is teething and did not take the child to the clinic but used over the counter medication and home-made herbal remedies [View Chapter 4: Section 4.3.1.1].

1.5 SIGNIFICANCE OF THE STUDY

The results of the study will be used to improve the caregiver practices of home management of diarrhoeal disease in children under the age of five years. Results of the study will be reported to DoH Vhembe District and may assist the Department to change the current policy on diarrhoeal disease management. The researcher needed to know more about home management of diarrheal disease in children under five years with the following reasons:

Healthcare professionals will be conscious while treating children with diarrhoeal disease that they might be dealing with a child who has been given any other form of treatment other than western treatment, which might need further and early referral to hospital to exclude any possible complications. This might reduce death due to diarrhoeal disease in children under five years.

Healthcare professionals will have to ask more questions regarding fluids which have been given during the period of illness such as, type of fluids, its preparation and how much was given. This will help the healthcare professionals to identify the need to rehydrate the child before discharging the child from his/her care. By so doing, number of children who were seen dying with diarrhoeal disease and dehydration might decrease. Furthermore, healthcare professionals will be able to acknowledge cultural beliefs and practices of caregivers and find ways to health educate about the use of indigenous plants and western medication.

1.6 RESEARCH QUESTION

Following is the research question:

What are the practices of caregivers at home during diarrhoeal disease in children under five years in Vhembe district, Thulamele municipality area?

1.7 AIM

The overall aim of the study was to explore and describe the practices of caregivers at home during the management of diarrhoeal disease in children under five years in the Vhembe district, Thulamalele municipal area [View Chapter 4].

1.8 CONCEPT CLARIFICATION

The following concepts were used in this study and are clarified in Sections 1.8.1 to 1.8.3.

1.8.1 CAREGIVER

Caregiver “means any person other than a parent or guardian who factually care for a child” (Republic of South Africa, 2005; Child Act No, 38 of 2005: [n.p]). In this study, caregiver means any person, including the mother or father, who is taking care of a child under the age of five years.

1.8.2 DIARRHOEA

This is a condition when a child is passing frequent profuse loose watery stools, with or without vomiting (Department of Health, 2013:2.9).

1.8.3 PRACTICE

Practice means “the customary or expected procedure or way of doing something” (Stevenson & Waite, 2011:1126). In this study, practices mean actions which are carried out by caregivers as a way of managing diarrhoeal disease symptoms at home, which may include giving oral fluids, specific beliefs practices and visiting traditional healers.

1.9 PHILOSOPHICAL ASSUMPTIONS

An assumption is “a principle that is accepted as being true based on logic or custom, without proof” (Polit & Beck, 2012:720). Assumptions were guided by the type of theory that the researcher used to find the truth of the phenomena. In this study, a qualitative approach was used. A qualitative approach allowed participants to communicate their views about how they understand social reality (Botma, Greeff, Mulaudzi & Wright, 2010: 42) [View Section 1.11 for a discussion on the qualitative approach]. The philosophical assumptions for the qualitative approach in this study are discussed in Section 1.10.1 to 1.10.2.

1.10 ONTOLOGICAL ASSUMPTION

Ontology deals with nature of reality (Botma et al., 2010:44). According to the qualitative approach, reality is subjective and people experience it differently. The world is defined by people’s experiences

as they interact with each other (Botma et al., 2010:44). In this study, the researcher had the assumption that caregivers have a certain reality about how they perceive and manage diarrhoeal disease in children under five years and share their practices of home management of diarrhoeal disease with each other within their villages. The reality exists that in the Vhembe district, caregivers use different homecare management practices during diarrhoeal disease in children younger than five. The researcher regarded it as an important factor to include caregivers as participants in this study to explore and describe exactly what the practices are during home management of diarrhoeal disease [View Chapter 4: Section 4.3.1].

1.10.1 EPISTEMOLOGICAL ASSUMPTION

Epistemological assumptions deal with the nature of knowledge (Botma et al., 2010:40). In this study, the researcher interacted with caregivers to collect information from caregivers on practices of home management of diarrhoeal disease in children under five years. Caregivers possessed different beliefs of practices of home care management of diarrhoeal disease in children under five years, which influenced the type of care that was given to children who had diarrhoea. This was influenced by cultural beliefs and other family members and acted as the source or nature of knowledge which caregivers took when they practice home care management of diarrhoeal disease [View Chapter 4: Section 4.3.1].

1.10.2 METHODOLOGICAL ASSUMPTION

Methodological assumption deals with finding the truth of the phenomena (Botma et al., 2010: 47). The researcher used the interpretivist approach to co-create meaning to information (Botma et al., 2010: 47), [View Chapter 4: Section 4.3.1]. In this study, a qualitative approach was used, where the researcher used an explorative, descriptive and contextual design to explore and describe caregiver practices of home care management of diarrhoeal disease in children under five years during diarrhoeal disease [View Chapter 3].

1.11 QUALITATIVE RESEARCH DESIGN

Polit and Beck (2012:741) define a research design as a plan of action that enables the researcher to get answers from the research questions and ensuring that the study will have integrity. A qualitative, explorative, descriptive and contextual design was used in this study to explore and describe caregiver practices of home care management during diarrhoeal disease in children under five years in Vhembe district, Thulamalele municipality area through the use of focus group interviews [View Chapter 3: Section 3.6.3].

A qualitative research design is an approach that is used to gain an understanding of human experiences, behaviours, perception and to explore in-depth social phenomena (Parahoo, 2006:63). It involves inductive reasoning, which is explained as a process that begins with what the researcher has experienced and observed, leading to the generation of assumptions (Moule & Goodman, 2014:175). In this study, the researcher observed children under the age of five years dying due to diarrhoeal disease, which made the researcher want to know which practices are carried out by caregivers at home during diarrhoeal disease [View Chapter 3: Section 3.6.1].

The exploratory design in this study explores the extent of the researchable problem (Polit & Beck, 2012:727). In this study, the researcher was interested to explore the practices of caregivers at home during diarrhoeal disease in children under five years [View Chapter 3: Section 3.6.2].

The descriptive design is an approach used to obtain an actual resemblance of people's characteristics within other circumstances (Polit & Beck, 2012:725). In this study, the researcher will describe caregiver practices of home care management of diarrhoeal disease in children under five years [View Chapter 3: Section 3.6.3].

In a contextual study, the focus is on a specific phenomenon, single event or case (Botma et al., 2010:195). In this study, the researcher focused on knowing the practices of caregivers at home when they manage diarrhoeal conditions in children under five years [View Chapter 3: Section 3.6.4].

1.12 METHODOLOGY

Methodology is the plan of action that the researcher will employ to get to the truth of the phenomena being studied (Botma et al., 2010:41). An overall explanation of the methodology included the population, sampling, data collection and analysis as used in this study is in depth discussion in Chapter 3.

1.12.1 Setting of this study

The study was conducted in the Limpopo province. The Limpopo province has five districts, of which one is the Vhembe district. In the Vhembe district, there are four municipal areas, and one is Thulamalele municipal area in which the study was conducted. Vhembe district has six district hospitals and one regional hospital. A paediatrician is working in the regional hospital and visits the district hospitals according to a planned schedule. The researcher collected data at one clinic that is regarded as the main access health care facility by caregivers of children under five years and one hospital in the Thulamalele municipal area where children younger than five years of age are admitted for any medical care. The researcher travelled fifteen minutes from home to Tshilidzini Hospital using a car. To go to Thohoyandou health centre, the researcher travelled eight minutes using a car.

1.12.2 Population and sample

Population is the group of people who have the same characteristics required for the study purpose (Polit & Beck, 2012:738). A sample is a group of individuals who are identified and invited to become representative of the entire population (Offredy & Vickers, 2010:131). Brink, van der Walt and van Rensburg (2006:124) define sampling as a process in which the researcher selects a sample from the population for the purpose of collecting information regarding the study in a way that represents the entire population. In this study, the population consisted of caregivers with children under five years who were invited to participate in the data collection

Purposive sampling was used. The researcher selected participants who had knowledge about the phenomenon to be studied (Botma et al., 2010:201). Caregivers who visited the healthcare facility for any service related to children under five years in Vhembe district, Thulamele municipal area were invited to participate in the study. Caregivers who were waiting for under five years services for their children were greeted and requested to participate in the focus group interviews only if they feel free and interested. The participants were asked about the practices they use at home during the management of diarrhoeal disease (View Annexure B). The participants were informed about the aim of the study and voluntarily participated after signing a consent form. (View Annexure C).

Inclusion criteria are conditions stipulating that an individual can become a participant of a study (Offredy & Vickers, 2010:169). For the purpose of this study, caregivers of children under five years who visited the clinic for any of the under-five year's services or are admitted to the paediatric ward of the identified hospital, were included. The identified exclusion criteria was elimination of caregivers with children older than five years of age.

1.12.3 Data collection

Data was collected by using focus group interviews. A focus group interview is when participants are grouped together, selected according to the inclusion criteria. The size of the group varies from four to eight participants depending on the aim of the study (Botma et al., 2010:211) (View Section 10.1.1). A focus group interview allows the researcher to have four to eight participants with the same experiences. Participants are invited to share the knowledge which they have on a certain phenomenon [View Chapter 3].

Three focus groups were carried out in this study. The first focus group had five caregivers and the second focus group had seven caregivers and the last focus group had five caregivers who all agreed voluntarily and gave a written consent. Two focus group interviews were carried out with caregivers of children under five years who visited Thohoyandou health centre for any under-five services,

which are wellness and immunisation. All participants were female and only one caregiver was not the biological mother whereas all others were the biological mothers and fulltime caregivers to their children. In all the settings, the groups were seated in circle to encourage caregivers to feel welcome. The first focus group interview that was carried out with caregivers of children under five years admitted to a paediatric ward in Tshilidzini hospital due to any disease who have children under the age of five years, lasted for 45 minutes and the second focus group was carried out in Thohoyandou health centre and lasted about 30 minutes. The participants were actively participating and looked to be enjoying the interviews. The third focus group was also done in the Thohoyandou health centre and lasted about thirty minutes. Such time excludes time taken to help participants to sign informed consent. All caregivers agreed voluntarily and provided a written consent (In depth discussion: View Chapter 3).

In this study, the researcher aimed to explore caregivers' practices of home care management of diarrhoeal disease in children under five years of age by inviting caregivers to describe practices they are using (view Chapter 3). Creswell (2007:43) indicates that an important aspect in qualitative data collection is to have in-depth information from different sources. To collect trustworthy data, three focus group interviews were conducted: two with caregivers of children under five years who were visiting the clinic for any under five services, most of them came in for the well-baby clinic and another one was done in paediatric ward with caregivers of children under five admitted in paediatric ward due to any medical condition.

With all focus group interviews, a quiet room was identified and used to conduct focus groups. A field worker was available with all focus group interviews to ask questions as guided by the interview guide, while the researcher had good opportunity to take notes and observe reaction of the participants. [View Chapter 3]

The format of the focus group was semi-structured interviews. Semi-structured interviews are conducted when the researcher has specific questions that need to be answered in order to explore and describe the phenomenon (Polit & Beck, 2012:537). According to Botma et al. (2010:208), semi-structured interviews are a selected approach to use when the researcher wants to have information regarding the participants' beliefs and their perceptions. Polit and Beck (2012:537) do not have a different view about the use of semi-structured interviews, but elaborate that participants are given the opportunity to explain their stories freely using their own words as they are guided by the interviewer's questions.

The following main research question were used to guide the researcher during the focus group interviews (view Annexure B):

What are the practices of caregivers at home during diarrhoeal disease in children under five years in Vhembe district, Thulamele municipality area?

The following sub questions were used to obtain a deeper understanding of caregiver practices used at home for the management of diarrhoeal disease in children under the age of five years:

- What do you do at home when your child has diarrhoea?

Probing questions:

- What type of drinks do you give to a child at home during diarrhoeal disease which you normally don't give when the child is well?
- What type of food do you give to a child during diarrhoeal disease which you normally don't give when a child is well?
- What other practices are carried out at home for a child during diarrhoeal disease?
- When will you take the child to a healthcare facility?
- What is the role and influence of other family members (grandmother/father, aunt and uncles) during diarrhoeal disease?

These questions were followed by using various questions to gather more information. Field notes were taken by the fieldworker to support the researcher with observational notes on the behaviour and non-verbal communication of the participants. The field notes were used to supplement the tape-recorded data and contribute to the trustworthiness of the study (View Section 1.13)

A tape recorder was used, and the participants were informed and asked consent for the intention to use it. It was explained to the participants that tape recording will allow for an accurate record of the verbal word and the manner in which it was communicated. The use of a tape recorder has been reflected in the participant information document (View Annexure C).

1.12.3.1 Challenges encountered during the focus group interviews

The following challenges were encountered:

- Caregivers were afraid of the unknown nature of the whole procedure because they were scared to find their names on the social media, but after repeatedly providing information, they

voluntarily signed consent to participate. This was seen as a challenge because participants needed more time to understand the process involved.

- Participants wanted to know more and they had many questions that were addressed after each focus group interview. Researcher observed that caregivers were interested to know more about proper management of diarrhoeal disease in children under five years. This was seen as a challenge because after the focus group interviews, I had to give health education even though it was not planned for.
- At the health centre, there were minor disturbances as children were crying at times. It was seen as challenge because interviews had to stop for a minute waiting for quietness.
- Older people, those who were above thirty five years old did not want to be part of the group as they feel their information is not taken into consideration and were afraid that what they practice is not really acceptable with modern practices.

1.12.4 Data analysis

Data was transcribed to transcript and then analysed manually. Manual analysis of data involves reviewing of all recorded data that has been collected by the researcher during data collection period (Brink et al., 2006:185). Each written script has a copy for safe keeping. A file has been created to keep the extra copies safely and a second file created to keep the copies for daily use.

Botma et al. (2010:213) indicates that content analysis is one of the approaches which can be used to analyse focus group interviews, because content analysis supports a systemic and detailed process of data analysis. Polit and Beck (2012:564) describe qualitative content analysis as a process where the content of the narrated information is analysed to identify main aspects and its pattern of relationship. Data analysis started during the data collection process and involved a close look at what has been said by the participants (Brink et al., 2006:184).

In this study, narrated information was read first, followed by breaking the information into smaller units with the purpose of identifying common ideas, and data arranged according to the themes and sub-themes based on patterns and relationships. This was done to identify that which is common from the collected data, which according to Polit and Beck (2012: 564) is called categorical distinction. Thereafter, reporting of the findings in writing was done (View Chapter 4 and 5).

1.13 TRUSTWORTHINESS ENSURED IN THE STUDY

Trustworthiness in qualitative research is described as confidence which the researcher have in the collected data evaluating such data according to credibility, transferability, dependability, confirmability and authenticity (Polit & Beck, 2012:745). In this study, trustworthiness was ensured through credibility, dependability, conformability, transferability and authenticity. Table 1.2 displays the strategies and the application thereof:

TABLE 1.1: TRUSTWORTHINESS ENSURED IN THIS QUALITATIVE STUDY

STRATEGY	DEFINITION AND REFERENCE	APPLICATION
Credibility	Ability of research report to prove that data presented is the true picture of what the participants had said (Moule & Goodman, 2014:191)	Data was collected from caregivers. [View Chapter 3: Section 3.9]. Prolonged engagement took place during focus groups with all participants [View Chapter 3: Section 3.9.2].
Dependability and conformability	Dependability is when the data will be proven as true and reliable and conformability means “measure of objective of data” (Moule & Goodman, 2014:192).	Research results were sent for peer review by a knowledgeable person in paediatric nursing, with experience of working in rural areas who is considered an outside examiner for marking [View Chapter 3: Section 3.9.2].
Transferability	Probability of the research findings to be transferable to another similar context (Moule & Goodman, 2014:193)	The report includes thick and detailed descriptions of the findings and setting in order to enable another person to determine the findings of the study applicable in another setting or context [View Chapter 4].
Authenticity	Ability of the researcher to exhibit fairness and faithfulness in research realities and be able to simulate the real-life experiences (Polit & Beck, 2012:585)	The research report reveals those important statements which have explainable meaning in real life and statements quoted as it was said by the participants [View Chapter 4].

1.14 ETHICAL ISSUES CONSIDERED

Approval to conduct the study was requested from the Research Ethics Committee Faculty of Health Sciences at the University of Pretoria and the Department of Health Vhembe District (View Annexure D). Table 1.4 depicts the ethical principles as applied in this study:

TABLE: 1.2 ETHICAL CONSIDERATIONS APPLICABLE IN THIS STUDY

PRINCIPLE	MEANING AND REFERENCE	APPLICATION
Beneficence	Minimizing harm and try to maximise benefits and includes right to freedom and protection from exploitation (Polit & Beck, 2012:152). Participants were allowed to participate freely with no incentives given to them.	All participants were protected from emotional, physical and social harm or trauma by providing an explanation of all the processes that will be followed and reassured that they have the right not to participate if they are not interested. Language which easily understood by everyone was used. Participants were not exploited by promising benefits as a way of buying favour or manipulate them for information [View Chapter 3: Section 3.9.3.1]
Respect for human dignity	All people have the right to self-worthiness and know in full what they are involved in (Polit & Beck, 2012: 154).	Full information about the purpose of the study was provided to the potential participants and participants were allowed to join the focus groups voluntarily. All focus group members were respected, and consent was obtained to use letters as their names during focus group interviews [View Annexure C and Chapter 3: Section 3.9.3.1]
Justice	Treating all participants fairly while maintaining their privacy (Polit & Beck, 2012:155).	All participants were treated fairly, and privacy of their lives maintained by respecting their decision of withholding other information despite their level of education and social standards. All participants were given the same opportunity to share their knowledge and

PRINCIPLE	MEANING AND REFERENCE	APPLICATION
		practices regarding the study without fear of discrimination [View Chapter 3: Section 3.7]
Informed consent	Giving participants adequate information about the study so that he or she can agree or refuse to participate with understanding (Polit & Beck, 2012:157).	All participants were asked to sign an informed consent form before participating in the study. All caregivers were able to read and write and sign after information on the consent form was explained to them using their own language about the purpose of research and voluntary participation (View Annexure C), [View Chapter 3: Section 3.9.3.1].
Anonymity and confidentiality	Hiding participants information in a way which does not allow any link of information to any participant (Polit & Beck, 2012:720) and confidentiality refers to protecting the information given by the participants not to be accessed by any unauthorised person (Polit & Beck 2012: 723)	Each participant was called by alphabet letter which does not have relationship with her initials to ensure anonymity [View Chapter 3: Section 3.9.3.1] and all the recorded information was kept by the researcher to ensure confidentiality.

1.15 CONCLUSION

This chapter provided background information regarding the problem statement, aim and objective for the study. An overview of the methodology, data collection and analysis, trustworthiness and ethical principles, were also provided this study. Chapter 2 explains the literature review.

CHAPTER 2

LITERATURE REVIEWED IN SUPPORT OF THE STUDY

2.1 INTRODUCTION

In Chapter 1, an overview of the study was discussed. This chapter addresses the literature reviewed that reflect on diarrhoeal disease as a serious condition in children under the age of five years, the effect of diarrhoeal disease on the physiology of young children, the relationship between diarrhoeal disease and malnutrition as well as the different treatment modalities for diarrhoeal disease. The discussions in this chapter include the meaning, prevalence, diagnosis and consequences of diarrhoeal conditions in children younger than five years of age. A further literature discussion was included in Chapter 4 to discuss and support the results and findings.

Disturbances in normal functioning of the gastrointestinal system poses a challenge to the body, and in children under the age of five years, it can affect their health negatively. According to Kibel, Saloojee and Westwood (2012:357), diarrhoeal disease remains the major cause of preventable death among young children globally. There are different types of diarrhoeal diseases, but for the purpose of this study, the focus was on acute diarrhoeal disease. The reason for this is that the researcher observed children under five years admitted in hospital with diarrhoea dying within a period of seventy-two hours after admission [View Chapter 1: Section 1.1].

2.2 MEANING OF DIARRHOEAL DISEASE IN CHILDREN

Acute diarrhoea has been defined as the passage of loose or watery stools, commonly occurring more than three times within 24 hours (Motala, Davidson, Figaji & Levin, 2010:121). According Kibel et al. (2012:357), acute watery diarrhoea is the passing of unusual loose or fluid stools more often than usual, depending on the interpretation of the caregiver of what is usual. The South African Department of Health (DoH) (2013:2.9) describes diarrhoea as “a serious common childhood illness evidenced by the passing of frequent profuse loose stools”. Coovadia and Wittenberg (2009:439) indicated that during diarrhoea, the amount of fluid within the colon exceed its absorptive capacity leading to damage of the small intestines causing an imbalance between secretion and absorption,

including motility disturbance with intestinal imperativeness. Motala et al. (2011:121) alleged that diarrhoea results in increased loss of water and electrolytes through the stool.

2.3 PREVALENCE AND DIAGNOSIS OF DIARRHOEAL DISEASE IN CHILDREN

Factors related to the risk of diarrhoeal disease in children differs according to particular settings and populations (George et al., 2014 [n.p]). Chola, Michalow, Tugendhaft and Hofman (2015 [n.p]) stated that diarrhoeal disease is associated with socio-economic status. In South Africa, diarrhoeal disease is more common in children living in poverty, putting them at risk of dying ten times more than children living in home with no poverty (Chola et al., 2015 [n.p]). Unger et al. (2014:273) also associate diarrhoeal disease with poor countries, where infection is more associated with poor sanitation and hygiene, contaminated drinking water and low nutritional status and health. Blessing, Chima et al. (2014:2) identified four possible factors that might lead to diarrhoeal infection, namely: infectious diarrhoea, contaminated water, contaminated food and poor personal hygiene.

In South Africa, the DoH (2013:2.9) indicates that diarrhoeal disease is usually caused by a viral or bacterial infection, but dietary and other causes do play a role. According to the CoMMiC report, DoH (2011:61) has declared Limpopo Province as one of the poorest provinces with more than half of its population living with no piped water or adequate sanitation. Lack of piped water results in residents using water from the rivers and wells, which is usually contaminated while lack of proper sanitation leads to poor disposal of waste, which might affect food. This report indicated that diarrhoeal disease was the leading cause of all registered deaths in 2008.

2.3.1 Diarrhoeal disease caused by viral pathogens

Kibel et al. (2012:358) indicated that there are different causes of diarrhoea, which shows protozoa as 5 %, bacteria as 20 %, viruses as 40 %, and unidentified cause as 35 %. Kibel et al. (2012:358) indicated that a common cause of diarrhoeal disease in developing countries is Rotavirus, which accounts for 20 to 60 per cent. It has been indicated that Rotavirus is responsible for the most serious form of gastroenteritis among children under five years worldwide, accounting for 5 % of deaths annually (Agocs, Serhan, Yen, Mwenda, de Oliveira, Teleb et al., 2014:634).

Kibel et al. (2012:359) further indicate that Rotavirus is the most common cause of serious life-threatening diarrhoea in children under two years worldwide. On the African continent, Rotavirus have been found in quarter of children admitted to hospitals with equal proportion to those seen as outpatients. This was also supported by Pecenka, Johansson, Memirie, Jamison and Verquet (2015: [n.p]), who indicate that 27 % of serious diarrhoeal disease and deaths in the African region is caused by Rotavirus. Kibel et al. (2012:359) indicate that Rotavirus is found all year round in Africa, reaching its highest peak during dry months and this is the same pattern which has been observed in South Africa where diarrhoea was found to reach its highest numbers between April to June. This was also observed at Vhembe district paediatric units in different hospitals, as more children were admitted due to diarrhoeal disease during the winter period.

2.4 DIAGNOSIS OF DIARRHOEAL DISEASE

In order to diagnose diarrhoeal disease history taking and assessment is necessary and the use of IMCI approach is a mandatory guideline to use public healthcare providers' institutions (DoH: 2014)

2.4 1 History

During assessment of a child with diarrhoeal illness, it is expected that the healthcare provider is expected ask the caregiver for the onset of diarrhoeal disease, any blood in stools, the amount and type of fluids which the caregiver has given (DoH: 2014: 27).

2.4.2 Assessment

DoH (2014:27) advises the healthcare provider to look at the general condition of a child to exclude lethargy or loss of consciousness, restlessness and irritability (general danger signs).

2.4.2 1 Physical assessment

DoH (2014:27) advises the healthcare provider to assess for signs of dehydration, namely, sunken eyes and skin turgor to classify the degree of dehydration which can be mild or severe.

2.4.2.2 Investigations

According to the DoH (2013: 2.10), full assessment of shock and dehydration must be done and the following investigations are necessary:

- Assessment of sodium, potassium, urea, creatinine and blood acid-base. Level of sodium and potassium is important to guide the medical practitioner to properly make diagnosis and guide on which type of the intravenous fluids therapy to be given in diarrhoeal disease.
- Stool culture must be taken especially if dysentery, typhoid and cholera is suspected, to make conclusive diagnosis on the causative organism
- Urine specimen to investigate leucocytes, nitrates and blood. This is done to exclude any related symptoms to urinary tract infection.

In Vhembe district, the diagnosis is usually through history taking from the caregiver who will explain when the child did started to have diarrhoeal disease, how often the child passes stools, the consistency and the constituency of the stools. Later blood samples to determine sodium, potassium, urea, and creatinine and blood acid-base will be collected. Stools will be taken for microscopic culture and sensitivity and sent to the laboratory to confirm the causative organisms of the diarrhoea.

2.5 CONSEQUENCES OF DIARRHOEAL CONDITIONS FOR CHILDREN YOUNGER THAN FIVE YEARS OF AGE

According to the Child PIP (2009:141) report, diarrhoeal disease was the second leading cause of deaths in children under five years in South Africa, while in Limpopo Province diarrhoeal disease is the leading cause of deaths (CoMMIC 2011:63). When a child is not well all members of the family are directly or indirectly affected as a child depends upon caregivers for every day care.

Diarrhoeal disease has devastating effects in children under five years. According to the DoH (2013:2.9), diarrhoeal disease may cause dehydration and metabolic disturbances if there is a delay in treatment initiation, leading to more serious complications of the disease, which might cause irreversible organ, such as the kidneys, damage and death in children. The researcher observed most children who were admitted with severe dehydration dying within seventy-two hours of admission and usually had an associated history of delayed seeking of health care.

2.6 DIFFERENT TREATMENT MODALITIES OF DIARRHOEAL DISEASE IN CHILDREN

Different treatment modalities for diarrhoeal disease exist. The western and cultural modalities are discussed in Sections 2.6.1 and 2.6.2.

2.6.1 Western modality

For the sake of this study, western modality will be considered as any other treatments other than indigenous plants or remedies, prescribed by a qualified healthcare professional for management of diarrhoeal disease. The WHO (2017: [n.p]) identifies key measures to treat diarrhoeal disease in children which includes the following:

2.6.1.1 Rehydration therapy

This measure involves rehydrating the child with an Oral Rehydration Solution and the use of an intravenous solution only in severe cases of dehydration or shock, and the use of zinc supplements. According to the DoH (2014:43), caregivers should be health educated on the importance of giving more oral fluids, which may include the following; Oral Rehydration Solution (ORS) or Salt and Sugar Solution (SSS), and if the child is still breastfed, to be breastfed more often. Caregivers must be taught how to prepare, give ORS or SSS and how much fluid to give after each loose stool. According to DoH (2013: 2.13), sugar and salt solution must be prepared as follows:

“½ level medicine measure of table salt, plus eight level medicine measure of sugar dissolved in one litre of boiled (if possible) then cooled water (one level medicine measure is approximately one level five millilitres teaspoon)”.

Kibel et al. (2012:360) indicated that the use of ORS has been recommended as the safest method to prevent dehydration in children and adults with any diarrhoeal disease. Despite such recommendations, caregivers have been found not using ORS during diarrhoeal disease as they verbalise that children dislike its taste (Arvelo, Degollado, Reyes & Alvarez, 2013:[n.p]; Webair & Bin-Ghouth 2014:[n.p]) while it has been found that most caregivers have demonstrated a lack of knowledge about ORS (Shah, Ahmad, Khalique, Afzal, Ansari & Khan, 2012:139; Pantenburg, Ochoa, Ecker & Ruiz, 2012:924). A study done by Unger et al. (2014:274) showed that there is a decrease in the use of ORS in Sub-Saharan Africa and South Asia, where it is needed most.

2.6.1.2 Dietary recommendation

World Health Organisation (2017: [n.p]) recommended giving nutrient rich food to a child who is having diarrhoeal disease in order to break the cycle in the development of malnutrition after diarrhoea, and encouraging exclusive breastfeeding for the first six months and beyond to at least two years, have been found to be beneficial in reducing the risk of malnutrition after diarrhoeal disease. Coovadia et al. (2009:448) showed that the main purpose of treatment of diarrhoea is to prevent dehydration and to continue feeds to promote the highest absorption of nutrients. In South Africa (DoH 2014:43), as guided by the World Health Organisation (WHO), it is recommended that food-based fluids such as soft porridge or Amasi can be given in addition to breastfeeding and other fluids.

2.6.1.3 Drug therapy

The DoH (2013:2.11) stated clearly that “there is no place for antidiarrheal medications, i.e. kaolin and pectin, atropine and diphenoxylate, loperamide, or antiemetic in the routine management of acute diarrhoea”. Kibel et al. (2012:362) also indicated that the use of drugs is not recommended as it might lead to toxic effects, but it has been found that the use of anti-diarrhoeal and antimicrobials is prevalent globally. These have been found to not be beneficial, but increasing the risk of antimicrobial resistance, as most of diarrhoeas are caused by viruses. Nasrin et al. (2013:10) showed that the treatment of diarrhoeal disease with zinc was found to reduce mortality of children under five years by 4 per cent, but its use has been found to be slow, especially in developing countries. Unger et al. (2014:276) revealed that countries who are scaling-up the use of zinc are facing the challenge of its cost. Shah et al. (2012:139) indicated that caregivers don’t know anything about zinc supplementation.

2.6.1.4 Consultation

Consulting healthcare for proper management of persistent diarrhoea or when there is blood observed in stools or signs of diarrhoea.

2.6.2 Cultural modality

According to Onwuke, van Deventer and Omole (2016:46), mothers still consider traditional medicines to be the best option for managing diarrhoea in children. Sarmiento, Zuluaga and Andersson (2016:4,5) indicated that traditional medicine was the first option to caregivers, and they

further explained that the truth about the administering of traditional medicine is usually revealed only after repeated probing. In their study findings, Webair and Bin Gouth (2014:[n.p]) said mothers prefers use of both traditional and western medicine but traditional medicine has been found to be the most favourable and trusted by mothers. In their study, Kareem, Irshad, Asad and Alam (2016:16) said it was found that the use of home remedies was common to the majority of the mothers and concluded their study by indicating that most of the mothers used different traditional methods to manage diarrhoea, and recommended that mothers need to be made aware of undesirable effects of traditional methods.

2.7 MODIFIABLE DETERMINANTS OF DIARRHOEAL DISEASE

According to Child PIP (2009:18), avoidable and modifiable factors suggest that most deaths related to diarrhoeal disease, when addressed, can be prevented. It has been found that leading modifiable factors related specifically to diarrhoeal disease between 2005 and 2009 are:

2.7.1 Poor utilisation of health services – this might be associated with failure of caregivers to identify danger signs that needs attention in about half cases of audited deaths (Child PIP 2009:69). In the study done by Akinyemi, Fagbamigbe, Omoluabi, Agumbiade and Adebayo (2017:7), it was found that children who were taken to the health facility during diarrhoeal illness received good management. This shows that there is a need to encourage caregivers to seek professional health care services were possible.

2.7.2 Food security and nutrition – it was indicated that nutrition or feeding was identified as modifiable factors about eight hundred times, which accounted for about 20 per cent of deaths related to diarrhoeal disease (Child PIP2009:66). It is important that caregivers are given information about child nutrition which will keep their children healthy.

2.7.3 Human Immune Virus (HIV) related – it was more related to the increased risk of diarrhoeal disease progressing to a more chronic infection, with negative effects on the nutritional status of the patient (Child PIP, 2009:67). Logan, Beadsworth & Beeching (2016: 486) in their introduction of their study indicated that diarrhoea have impact on the quality of life in patients who are infected by HIV.

2.7.4 Water and sanitation- while it was not properly explained in the Child PIP report, CoMMIC (2011:61) revealed that less than 50% of the population of the Limpopo Province have access to piped drinking water and do not have adequate sanitation. This situation might increase chances of higher rate of diarrhoeal disease. Caregivers need to be encouraged to use any available method to reduce water contamination and to improve sanitation.

2.8 POSSIBLE RELATIONSHIP BETWEEN DIARRHOEAL DISEASE IN CHILDREN AND OTHER CONDITIONS

In the fact sheet of the WHO Media Centre (2017: [n.p]) it is reported that diarrhoea is the leading cause of malnutrition in children. According to Coovadia et al. (2009:446), the following effects of diarrhoeal disease, irrespective of the cause, might cause impaired digestion and nutrient absorption causing malnutrition: dehydration, acidosis and electrolyte disturbance, clinical symptoms such as fever, convulsions and muscle tone disturbances, protein losing enteropathy and/ or necrotizing enterocolitis, and dysfunctional. Such effects usually complicate diarrhoeal disease.

2.9 PREVENTATIVE STRATEGIES AVAILABLE FOR THE MANAGEMENT OF DIARRHOEAL DISEASE IN CHILDREN YOUNGER THAN FIVE YEARS

According to Kibel et al. (2012:365) following are the intervention strategies that needs to be put in place for the prevention of diarrhoeal diseases and only those which are related to findings of the study has been explained:

2.9.1 Improving hygiene – good personal hygiene such as hand washing with soap and water reduces the risk of food contamination, hence diarrhoeal disease is also reduced. Yaya, Hudani, Udenigwe, Shah, Ekholuenetale & Bishwajit (2018:n.p) advised that improving water, sanitation and hygiene might greatly reduce burden of disease related to diarrhoea and under five mortality in the country.

2.9.2 Health education – it is believed that with extensive health education on the prevention of diarrhoeal disease and the use of ORS, there can be a reduction of 28 per cent in diarrhoeal incidence. Kareem et al. (2016:21) recommended that it is important to health educate mothers about the importance of rehydration therapy and signs and symptoms of diarrhoea. Through health

education, caregivers are given knowledge which they will be able to use while they are at home. Study done by Shahzad, Farooq, Noor, Batool, Ain Alvi, Armir et al. (2018:n.p) revealed that giving health information to the mothers about preventive and management of diarrhoea will benefit the mothers as they will know what to do for their children during diarrhoeal disease.

2.9.3 Water and sanitation – improved sanitation and supply of clean piped water can reduce diarrhoeal disease with 25%, because if the community have proper sanitation, there is reduced risk of drinking contaminated water and eating contaminated food. This was supported by the study done by Ayalew, Mekonnen, Abaya and Mekonnen (2018:n.p) who argued that absence of latrines for proper waste disposal and water shortage led to higher chances of occurrence of diarrhoea in children.

2.9.4 Fly control and waste disposal –reduction in flies has been found to reduce diarrhoeal disease with 22 to 26% in children. Proper disposal of waste reduces breeding of flies, leading to reduced risk of food contamination and reduction in diarrhoeal disease.

2.9.5 Breastfeeding – According to the National Department of Health (2014), following are the benefits of breastfeeding to the baby: protects against illness, intelligent babies, meets nutrient needs, ensures food security, reduces risk of allergies, maintains normal growth, teaches family tastes and Saves babies lives. Study done by Mittal, Goyal, Jain and Khandelwal (2016:n.p) concluded that children who were exclusively breastfed for six months were found to grow, develop and healthy and had reduced risk of allergy and infections such as pneumonia and diarrhoea.

2.9.6 Improved complimentary feeding practice – it is thought that proper weaning, which can be achieved through health education, can reduce diarrhoeal disease by 12%. According to Ricci, Carboo, Asare, Smuts, Dolman and Lombard (2018: n.p.) improved nutrition is an important element in child mortality. Study which was done by Null, Stewart, Pickering, Dentz, Arnold, Arnold et al. (2018: n.p.) concluded that children who were given lipid-based nutrient supplement were found to have improved growth as compared to those who only practiced improved water supply, proper sanitation and hand washing practices.

2.9.7 Immunisation – the introduction of a Rotavirus vaccine in South Africa has reduced hospital admissions related to diarrhoeal disease. Ayalew et al. (2018:n.p) said that children who were immunised were found to have lesser chance to have diarrhoeal disease as compared to the nonimmunised children.

2.9.8 Micronutrient supplements – the use of zinc supplements in children in developing countries has been found to reduce deaths related to diarrhoea. While zinc supplement is recommended, study done by Becker-Dreps, Zambrana, Reyes, Vilchez and Weber (2014:151) showed that only half of their participants recommended its use.

2.10 CONCLUSION

This chapter dealt with detailed information about diarrhoeal disease according to the literature reviewed. The next chapter discusses the methodology followed to generate data.

CHAPTER 3

METHODOLOGY USED IN THE STUDY

3.1 INTRODUCTION

In Chapter 2, the literature that were consulted for the study was explained. In this chapter, an in-depth explanation of the methodology of study is explained.

3.2 FRAME OF REFERENCE FOR THIS STUDY

The frame of reference for this study was also explained in Chapter 1 in terms of the paradigm, assumptions and conceptual definitions [View Chapter 1: Section 1.10]. This chapter focuses on the methodology utilized by the researcher to generate data. In-depth discussions include the approach to focus group interviews, conducting of focus group interviews and organization and analysis of the data. As indicated in Chapter 1 the researcher observed that most children admitted with diarrhoeal disease were dying within 72 hours of admission to hospital. It was of interest to the researcher to know what is practiced at home before children were taken to hospital. Different practices were explained by the caregivers [View Chapter 4] and recommendations were discussed in the final chapter [View Chapter 5].

A discussion of the philosophical underpinning this study were discussed in Chapter One [View Chapter 1: Section 1.9 and 1.10].

3.3 AIM OF THE STUDY

The aim of the study was to answer the following research question: “What are the practices of caregivers at home during diarrhoeal disease in children under five years in Vhembe district, Thulamele municipality area”.

3.4 THE CONTEXT OF THE STUDY

The study was conducted in the Limpopo Province, Vhembe District, Thulamale Municipality, at Tshilidzini Hospital paediatric ward and Thohoyandou Health Centre. The setting or context of the study was outlined and discussed in Chapter 1 [View Chapter 1: Section 1.12.3].

3.5 RESEARCH DESIGN

Polit and Beck (2012:741) define research design as a plan of action which enables the researcher to get answers from the research questions and ensuring that the study will have integrity.

A qualitative, exploratory, descriptive and contextual design was used in this study. This approach assisted the researcher to achieve a good understanding of the practices carried out by caregivers at home during the management of diarrhoeal disease. Because of its contextual nature, the focus was only on diarrhoeal disease. As the caregivers were exploring and describing their home practices, the researcher was able to realise and understand the real practices outside the healthcare practices' knowledge.

3.5.1 Qualitative research design

A qualitative research design is an approach that is used to gain understanding of human experiences, behaviours, perception and to explore in depth social phenomena (Parahoo, 2006:63). According to Moule and Goodman (2014:206), qualitative approaches makes it possible for a researcher to explore relationships and human experiences. Furthermore, Moule and Goodman (2014: 208) indicated that qualitative research occurs in natural settings. In this study, the natural setting was the same clinic and hospital where caregivers usually visit for under five child health services.

The following are characteristics that are used within a qualitative research approach.

3.5.1.1 Inductive reasoning

Inductive reasoning involves observing situation, and then move towards the generation of ideas. The researcher makes an effort to have ideas on what is taking place or identify the problem using the chosen methodology (Moule & Goodman, 2014:207). In this study, inductive reasoning occurred as caregivers were explaining their practices and the researcher would ask probing questions for clarification. The generation of ideas took place from all the discussions which were done by the caregivers.

3.5.1.2 Natural setting

A natural setting is described by Moule and Goodman (2014:208) as an environment that has not been changed. In other words, the setting remains as normal, no changes were done to suit the needs of the researcher. The study was carried out in the health care service where caregivers' voluntarily visited in their daily normal lives to access under five years services and it was again done in a paediatric ward where caregivers have been admitted with their children. The setting remained natural, no changes were done in the health care facility environment so that environment remained as natural as possible to reduce stress from caregivers.

The researcher deemed it important to explore the views, experiences and perceptions of the participants as they were the caregivers of children younger than five years and normally took care of these children at home during diarrhoeal disease. As indicated by Moule and Goodman (2014:209), research participants provide details of their experiences of the social world, which can be interpreted by others who create meaning from it. In this study, caregivers were given the opportunity to explain their practices in children under five years during diarrhoeal disease. The researcher interpreted the knowledge shared by the caregivers to create meaning.

Moule and Goodman (2014:209), and further describe data collection in qualitative approach as flexible and guided by the participants, making it reflexive of participants' situations. This was observed as participants were free to exchange their ideas and were interested in receiving information from each other and the researcher [View Chapter 3: Section 3.9]. The researcher used three focus group interviews to collect data [View Chapter 3: Section 3.9.1]. During the process of conducting the focus group interviews, the researcher was able to analyse and interpret some of the collected data and used probing questions to generate in depth data [View Chapter 3: Section 3.9.2].

3.5.2 Exploratory design

Exploratory design is an approach which explores the extent of the researchable problem (Polit & Beck, 2012:727). According to Wood and Ross-Kerr (2011:121), the word exploratory shows that less is known about the occurrence, and the researcher needs to explore the occurrence for him or herself. The exploratory approach was further described as a flexible design that gives the researcher opportunity to explore all phases of the problem, because ideas are generated as data is being collected and analysed [View Chapter 3: Section 3.9].

An exploratory design needs the personal participation of the researcher with a limited number of people, and the use of purposive sampling is favoured. In this study, the researcher had the

opportunity to personally participate in the exploration of the practices of caregivers during diarrhoeal disease in children under five years with limited number of caregivers, three focus groups, first with five caregivers, second with seven caregivers and third with five caregivers [View Chapter 3: Section 3.9].

According to Wood and Ross-Kerr (2011:123) the idea being studied is explored with the purpose of making sense of the collected data and describe an exploratory design as having three assumptions which are: the topic has never been studied before, the participants have individualised familiarity or knowledgeable about the topic, and the participants are free to talk about the subject. This topic has never been studied in Vhembe District, and the topic was individualised as the researcher identified the challenge as she was doing auditing of files according to Child PIP requirements and participants were free to talk about their practices. [View Chapter 1: Section 1.2]

3.5.3 Descriptive design

A descriptive design is an approach used to get actual resemblance of people's characteristics within other circumstances (Polit & Beck 2012:725), in other words, peoples real life experiences according to their daily lives experiences are easily observed. Botma et al. (2012:110) describes it as a non-experimental design which can be used to explain things of interest in its natural manner when less is known about the study. In this study, caregivers were explaining their real practices at home and caregivers were sharing what they actually practice for home management of diarrhoeal disease in children under five years.

The advantage of using a descriptive design is that the results which were found give more clarification of the phenomenon being studied (Wood & Ross-Kerr: 124). In this study, exploration of caregiver's practices at home during diarrhoeal disease in children under five years was found. [View Chapter 4]

One of the disadvantages of a descriptive design is that information which were explored can be superficial (Botma et al. 2012:110). This can be influenced by the level of interest of caregivers in giving the depth of what they practice during diarrhoeal disease in children under five years. The researcher was aware of this disadvantage and bridged the challenge by allowing participants to voluntarily participate in the study, explaining the aim and outcome of the data collection session and using probing questions to generate in depth information. [View Chapter 3: Section 3.9.3]

3.5.4 Contextual design

A contextual design is when the researcher's focus is on specific phenomena, a single event or case. (Botma et al. 2010:195). This study focused on the practices of caregivers at home during diarrhoeal disease in children younger than five years. Caregivers from the Thulamele municipal area in the Vhembe district were purposefully selected and invited to participate in this study. The researcher regarded these caregivers as ideal participants to explain the practices at home during diarrhoeal disease in order to describe the phenomenon because the researcher had experience of children under five years dying within seventy-two hours of admission within Thulamele municipality hospital.

The next session discuss the population and sampling which was followed to generate the data in order to achieve the objective for this study.

3.6 POPULATION AND SAMPLE

A population is the group of people who have same characteristics needed for a study purposes (Polit & Beck 2012:738). In this study the population was caregivers with children under five years who were visiting the health care facility for utilizing one of the health care services provided to children under five. Such services include growth and development services including immunisations, and Integrated Management of Childhood Illness (IMCI) for those children who are not well.

Sampling is when part of the population is selected and invited to become part of a study (Polit & Beck 2012:742). For this study, caregivers of children under five years who were visiting the health care service for any under-five year's services sampled to participate in the study.

The following were inclusion and exclusion criteria for this study

3.6.1 Inclusion criteria

Inclusion sample criteria has been described as those features which are needed for an element to be considered as appropriate population (Burns & Grove 2011:539). In this study caregivers of children under five years who visited the health care service and who signed consent. The caregivers who were selected and invited to participate in a focus group interview participated voluntary. All participants were respected. Nothing was promised to the participants as incentives after participation to the focus group interviews. Caregivers who understood English and any other language such as Tshivenda because it is the popular vernacular language and it is a language the researcher and field worker is familiar with. They should be 18 years and older.

3.6.2 Exclusion criteria

Polit and Beck (2012:537) define exclusion sample criteria relates to those characteristics which restrict an individual or group not to participate on the study while Burns and Grove (2011:727) define exclusion criteria as criteria which states features which the population does not have them. In this study, caregivers with children older than five years who were visiting the health care facility for utilizing one of the health care services provided to children above five years of age were excluded. Also excluded were caregivers who refused to give informed consent and caregivers who were younger than 18 years.

3.6.3 Preparation and sampling

Permission to conduct the study was requested from Vhembe District Department of Health [View Annexure D]. The permission was granted on the 21 November 2016 and allow the researcher to use any health care facility within the District and memorandum of understanding was signed on the 21 November 2016 with Tshilidzini Hospital.

According to Brink, van der Walt and van Rensburg (2014:141) purposive sampling is type of non-probability sampling which enables a researcher to judge who deserves to become a participant. It also allows the researcher to include participants who have different characteristics (Brink et.al. 2014:141) but still meet the inclusion criteria. In this study the researcher included caregivers who were visiting health care services for under five health care services. [View Chapter 3: Section 3.9]. The researcher regarded this as a good approach to allow for collection of rich information during data generation it gave the researcher to have an opportunity to have first-rate sample from population which have knowledge about the phenomena being studied (Brink et al. 2014:141). Purposive sampling was regarded as appropriate due to the fact that it allowed the researcher to choose correct group of participants. This provided the researcher the opportunity to visit the health care facility and find caregivers who were appropriate for the study. One aspect the researcher kept in mind was the fact that purposive sampling could also turn into unfairness, use of an unrepresentative sample and partial generalisability (Brink et al. 2014:141). This can occur when participants are forced to become part of the study. That was avoided by inviting caregivers to participate voluntarily.

The invited caregivers who participated were regarded as representative with comparative characteristics of caregivers who were able to describe practices of home care management during diarrhoeal disease in children under five in the Vhembe district. Caregivers were selected and invited

to participate because it was convenient for the researcher to gain access to the population while the children were hospitalized and the caregivers available.

The researcher used health care facilities as the access point to invite the participants. One group of caregivers were recruited from Tshilidzini paediatric ward while two groups of caregivers were recruited from Thohoyandou health care centre. All caregivers who participated in the study were requested to give written informed consent [View Annexure C].

In this study, the researcher visited the paediatric ward of Tshilidzini hospital on the 14 December 2016 at 06h30. Caregivers were found in the mother lodger's house where they bath, eat and relax if children are asleep. The researcher was not wearing a uniform so that caregivers must not have the feeling of being intimidated. The researcher started by greeting caregivers and shared jokes with them to create good rapport. After receiving full attention from the caregivers, introduction and explanation of the visit by the researcher was given. It was raining heavily, and caregivers were not interested to go back to the ward, and it was not possible to conduct the interview in their house as it was noisy and both parties agreed to go back to the ward where it was quieter. All caregivers were respected and were not forced to join the group, but they decided to participate voluntarily and were promised that no harm will be done to them if they don't participate. Five caregivers agreed to be part of focus group. The researcher visited Thohoyandou health centre on the 15 December 2016 at 07H00, report at the office to inform the manager about the visit to carryout focus group number two. Researcher was not on uniform but have all letters which were giving her permission to collect data. Caregivers who brought their children to attend one of the services rendered for children younger than five years of age, were approached. The inclusion criteria as set out in Section 3.7.1 were considered when caregivers were approached for inclusion. The aim and objective for this study were explained and the caregivers were given time to decide voluntary on participation. Thereafter the caregivers were invited to join the focus group voluntarily. Researcher was able to have seven participants on the second focus group interview.

On the 21 December 2016, researcher went back to Thohoyandou Health centre for a third focus group interview. Same procedure was followed, and five participants agreed to join focus group interview. Some of the participants were Indians, because of that English was sometimes used to allow every member to participate fully. To allow justice and fairness, caregiver of an Indian origin was alone and interested to be part of the group, so she was included, and other participants were happy about it that they will be able to learn what other cultures are practising during diarrhoeal disease in children under five years. All information said in Venda language was translated to English and she was actively participating to the discussions.

3.7 PILOT TESTING OF THE INTERVIEW QUESTIONS

Pilot testing is small scale of trial which is done prior the actual study to refine or obtain possible outcomes (Burns & Groove 2015:544). Pilot testing was done on the November 2016 by the researcher. The purpose of pilot testing was to see if questions were clear and easy to answer [view Annexure B], to test the use of the questions on the interview guide, to decide on the appropriateness of the questions and the use of the probing questions. Pilot testing was done with one participant who is a caregiver to one of her grandchild as the mother is still attending school. The caregiver was recruited from her own home. The reason for the interview was explained to the participant and she agreed to participate, she signed consent and interview started. During the interview, the participant was relaxed and seemed to enjoy the process. After the interview, the participant reflected that questions were clear and easy to answer. The researcher realised that caregivers might have many questions after the interview.

3.8 DATA COLLECTION METHOD

Polit and Beck (2012:725) define data collection as collecting evidence to address a research problem while Burns and Groove (2011:535) define data collection as a way of identifying subjects which are appropriate to get the information which is relevant to the study.

3.8.1 Data collection procedure

Data were collected on the 14, 15 and 21 December 2016 at the health care facilities within Thulamele municipal area using focus group interviews. Only three focus groups were used because there was repetition of information which was more related. Any data collected during focus group interviews such as field notes, audio-tapes and any observations has been considered. Field worker was used as an interviewer. The field worker was a professional nurse who understands diarrhoeal disease in children under five years. The field worker works in Psychiatric ward and have experience in conducting the focus group interviews as it is part of her monthly activity in psychiatric ward. Grove et al. (2015:85) indicated that focus group interviews are conducted by a moderator or facilitator, he/she might be or not the researcher but needs to have good understanding of the participants characteristics. In this study, the researcher remained as an observer and taking notes where necessary because facilitator was used to conduct the focus group interview. The field worker was orientated the night before the first focus group interview.

TABLE 3.1 Summary of data collection process

DATE	LOCATION	NUMBER OF PARTICIPANTS	LANGUAGE USED
14 December 2016	Tshilidzini paediatric ward	Five	Venda
15 December 2016	Thohoyandou health centre-mother and child section	Seven	Venda and English
21 December 2016	Thohoyandou health centre-mother and child section	Five	Venda

The following table shows the details of the focus groups:

TABLE 3.2 Details of focus groups

FOCUS GROUP	PLACE	NUMBER OF PARTICIPANTS	AGE VARIATION	AVERAGE AGE	GENDER
First focus group	Tshilidzini hospital paediatric ward	5	20 years – 38 years	28 years	5 females
Second focus group	Thohoyandou health centre	7	22 years – 31 years	26 years	7 females
Third focus group	Thohoyandou health centre	5	21 years – 36 years	28 years	5 females

3.8.2 Focus group interview

Focus group interview is when participants are grouped together, selected according to inclusion criteria. Botma et al. (2010:211) indicates that the size of the group varies from four to eight

participants depending on the aim of the study while Moule and Goodman (2014:349) describe focus group interviews as an approach which saves time as a group of five to ten participants are able to give rich dialogue at the same time. Because of the different views regarding number of participants in focus group interview, the researcher will prefer to use Moule and Goodman's approach.

A focus group interview gives participants opportunity to share their views in a nonthreatening environment and helps the participants to express and clarify their ideas better than in one to one interview (Grove, Gray and Burns 2015:85). Participants share the knowledge which they have. Focus group interviews gives dense description of the information as participants share the knowledge which they have (Botma et al. 2010:211).

3.8.2.1 Advantages of focus group interviews

According to Offredy and Vickers (2010:169), following are advantages of focus group interview:

- Time efficient as large number of participants are communicated with at the same time. The researcher was able to interview seventeen participants using three focus groups.
- Same ideas within the group of participants are examined. It was observed that participants shared same ideas even though they are different.
- Participants might feel free within the group to share their ideas. Participants were free to each other and enjoyed exchanging ideas.

3.8.2.2 Disadvantages of focus group interviews

Offredy and Vickers (2010:169) further explains the disadvantages of focus group interview as follows:

- Worth of information gathered can be affected if principles of group dynamics are not adhered to. Principles of group dynamics were applied for the group to remain focused by explaining properly the procedure of the discussion, such as the use of the alphabets only as the names of participants.
- Outspoken individuals can take over the group creating a situation wherein quite individuals will not contribute. The facilitator was able to control all the participants by allowing them to have same opportunity to comment or answer.
- Some group members might feel uncomfortable to share their ideas with other people. All participants were actively participating and indicated that that is all what they know as caregivers.
- It is difficult to arrange focus group at times depending on the availability of participants. It was easier to arrange participants because in Tshilidzini hospital caregivers have specific time to go

and rest in their rooms while in Thohoyandou Health centre caregivers are given specific time as an appointment to see healthcare workers.

3.8.3 Semi structured interviews

Semi structured interviews were used. Semi structured interview is when a researcher has specific questions which needs answers and have a list of questions which will guide the interview process (Polit & Beck 2012:537). Grove et.al. (2015:83) describes semi structured interviews as set of fixed questions but which gives different answers while Brink et.al. (2014:158) describe semi structured interviews as a guide which give the researcher opportunity to ask specific questions which can be probed more. Polit and Beck (2012:537) say the participants have an opportunity to explain their stories freely using their own words as they are guided by the interviewer's questions. By using semi structured interviews, the researcher will get detailed information about practices of the caregivers during diarrhoeal disease in children under five years as caregivers will have chance to talk freely.

In this study, the following questions guided the researcher during focus group interview:

1. How do you view diarrhoeal disease in a child under five years?
2. What do you do when your child has diarrhoea?
3. When will you take the child to a healthcare facility? What makes you to take child earlier or delay the child to receive healthcare services?
4. What is the role and influence of other family members (grandmother/father, aunt and uncles) during diarrhoeal disease?

The following probing questions were asked. Probing is when the researcher have follow-up questions which needs to be elaborated further by the participants (Grove et al. 2015:83).

The following key words and probing questions were used to clarify the meaning prior giving the questions:

- What type of drinks do you give to a child during diarrhoeal disease which you normally don't give when the child is well?
- What type of food do you give to a child during diarrhoeal disease which you normally don't give when a child is well?
- Which food do you strictly don't give at all to a child during diarrhoeal disease?
- What are specific practices which are carried out to a child during diarrhoeal disease?

Three focus group interviews were carried out in this study:

3.8.3.1 Focus group 1

The first focus group in Tshilizdini paediatric unit. It was early in the morning at 06h30 and caregivers were already in their lodger rooms outside the ward. The researcher went to lodger rooms and requested all caregivers to come at the centre of waiting area. Caregivers came, they were more than ten, and information given about the purpose of the study and freedom of participation was stressed. This was done to meet the ethical principle of beneficence. At first there was reluctance, but they were encouraged to ask questions and such questions were answered and five of the caregivers volunteered to participate. It was heavily raining, and we agreed to go to the ward as it is much quitter even if it was raining. We used cubicle with no patients, seated in a circle. Participants' were identified using alphabet such as Ms A, and all were given their alphabet to keep it with them and raise it before speaking. That was done to protect privacy and maintain confidentiality of the participants to abide with ethical principle of justice. The researcher repeatedly tell the participants about importance of not sharing the information of the discussion with any other person who was not part of the group discussion. Audiotape was used to record the interviews with the permission of the participants who understood that recording is done to remind the researcher of what has been discussed. Furthermore, it was explained to the participants that the audiotape will be safely kept by the researcher to protect all the information. Consent forms were signed before the start of interviews. This was done according to ethical principle of informed consent; every participant has a right to information and needs to join the group voluntarily. Researcher had a field worker who conducted the interviews which was recorded using audiotape, while the researcher was taking notes of what was said and observing the reaction of caregivers. After the interviews, it was observed that caregivers had many questions and they were given opportunity to ask questions before they disperse.

Challenges encountered during this focus group - Participants wanted to know more about diarrhoeal disease and have many questions which were addressed after each focus group interview.

Older people did not want to be part of the group as they felt their information is not considered and they were not forced to join the group because it is the individual 's decision to join the group voluntarily as the researcher was observing the ethical principle of justice and fairness.

Caregivers were afraid of the unknown, about the whole procedure, but after repeated information giving, they were free and voluntarily signed consent to participate [View Annexure C].

3.8.3.2 Focus group 2 and 3

Two focus groups were carried out in Thohoyandou Health centre, in the mother and child section where under five health services are rendered. After given permission to speak with the caregivers who were seated at the waiting area, the researcher greeted and broke the ice by sharing a joke with the caregivers who were bringing their children for immunization and weighing. After that, all the information was given about the purpose of the visit and request for participation in the focus group was made. Seven caregivers volunteered on the first day and five caregivers volunteered on the second day to participate. One big room in the health centre was identified and used for interviews because it offered better privacy. All the processes were followed as done with the first focus group to make sure that all ethical principles have been followed and observed. Audiotape was used to record the interviews with the permission of the participants who understood that recording is done to remind the researcher of what has been discussed. Furthermore, it was explained to the participants that the audiotape will be safely kept by the researcher to protect all the information. The field worker was there and continued with her role as a facilitator. First interview at the health centre was different as two languages had to be used because one of the caregivers was an Indian and could not be discriminated. Everything said in Tshivenda language was translated to English so that she may understand. Despite that, it went well as most of the caregivers were able to understand English and both languages were used interchangeably according to the need. The second interview at the health centre was done using Venda language only.

Challenges encountered – Similar to challenges encountered during focus group, there were disturbances caused by children as they wanted to play around. The challenge was overcome by allowing children to have minimal restrictions and allow them to explore their environment. This was helpful as children were no longer fighting for freedom, instead, they played with minimal disturbance to the interview.

3.8.4 Personal reflection post data collection

The researcher enjoyed all the focus group interviews which were carried out. It was an eye opener of the real world outside the health care services as caregivers were sharing their practices and experiences about home management of diarrhoeal disease in children under five years. Sometimes the researcher would repeat the same statement as said by the participant to ensure that what was said is correct and if the statement is not clear, rephrasing of the statement will be done until the participant is satisfied that it is what she is saying. During the third focus group, there was repetition of the same practices as in the first and second focus group interview. This made the researcher to

realise that data saturation was reached. According to Polit and Beck (2012:742) data saturation is when there is no longer new information during collection of data in qualitative data.

3.9 DATA ANALYSIS

Data analysis in qualitative research starts during data collection and involves close look at what has been said by the participants (Brink, van der Walt & van Rensburg 2010:184). Because of that, Brink et al. (2010:184) indicate that researchers in qualitative research spend most of their time finding meanings and its relationship of the collected data and referred to it as “dwelling” with the data. Coding has been described by Grove et al. (2015:89) as a process of reading, breaking down information into subparts and giving a marker to that subpart, therefore, a code is a symbol or mark which is used to classify words or phrases. Grove et al. (2015:89) advises that the researcher might name the files and store them safely so that it will be easier to get them when needed.

Polit and Beck (2012:564) describe qualitative content analysis as a process where in content of the narrated information is analysed to identify main aspects revealed during study and its pattern of relationship. In this study, narrated Venda information was translated to English manually, then read as compared to the available field notes. Again, the information was read, identifying the themes of the information to ensure that themes are done correctly. Following were the identified themes: practices to stop diarrhoea, practices to replace fluids and electrolytes and seeking health care service.

Data was arranged according to the themes and sub-themes according to patterns and relationships. Information which was closely related to one of the themes, was grouped under such theme and became sub-theme. To ensure privacy, all this was done by the researcher and the use of alphabet continued to ensure anonymity. Field notes which included non-verbal communication behaviours such as nodding of head, were also used to verify the statements as correct and if the voice was not clear from the audio tape. All comments from the participants were just strengthening their ideas and giving them a strong point that they are telling what they are practicing at home. [View Chapter 4].

3.10 DATA ORGANISATION

Brink et al. (2010:185) say coding of data and its organisation begins with data collection and coding is done to organise interview information. After all information was translated to English, colour coding of the same ideas was done using the markers. Data organised manually. Each written script has a copy for safe keeping in case the other copy might be destroyed or accidentally misplaced. A file has been created to keep the extra copies safely and another file created to keep the copies for

daily use. Each script is identified according to its information, e.g.: focus group 1, caregivers admitted with children under five years in paediatric ward hospital A, date and time of the interview. Two audio tapes have been used with each focus group interview. The second audiotape is for back-up in case the other one might not record properly. Each audio tape has been identified the same way as the script for easy identification.

3.12 CONCLUSION

Chapter 3 discussed in detail the research methodology used in this study. The discussions were based on the aim and objective of this study. The next chapter discusses the findings in terms of themes and sub-themes.

CHAPTER 4

RESULTS AND FINDINGS

4.1 INTRODUCTION

The previous chapter discussed the methodology used in this study and the procedure followed was explained. In this chapter, the findings of the collected data will be discussed. The findings will be discussed in terms of themes and sub-themes and literature control will be provided that relate to the findings. Quotes are in *Italics* and indicated by inverted commas and are used to indicate the responses of the participants during the interviews.

The overall aim of the study was to explore and describe the practices of caregivers at home during the management of diarrhoeal disease in children under five years in the Vhembe district, Thulamalele municipal area.

4.2 DEMOGRAPHIC INFORMATION

Demographic information of the participants is illustrated in Table 4.1:

Table 4.1: Summary of demographic information

Focus group	Place	Number of participants	Age variation	Average age	Gender
Focus group 1	Tshilidzini hospital: Paediatric ward	5	20 years – 38 years	28 years	5 females
Focus group 2	Thohoyandou Health Centre	7	22 years – 31 years	26 years	7 females
Focus group 3	Thohoyandou Health Centre	5	21 years – 36 years	28 years	5 females

Most of the participants were within child bearing age and actively involved in child rearing because their mean average age is 26 years and 28 years. Only female participants were involved as there

was no male caregiver visiting the health care facilities on the days the data were collected. [View Table: 4.1]. According to Child PIP (2009:13) 73 % of primary caregivers were mothers, 11 % were grandmothers and less than 1 per cent were fathers, while 12 per cent was unknown.

4.3 DISCUSSION OF FINDINGS

Three focus group interviews were held with 17 caregivers in total [(View Table 4.1)] to explore and describe their practices at home during the management of diarrhoeal disease. All participants were caregivers of children under the age of five years and from the Vhembe district in the Thulamalele municipal area. The primary question during the focus groups was:

What are the practices of caregivers at home during diarrhoeal disease in children under five years in Vhembe district, Thulamalele municipality area?

Probing questions were used to get more details of the answers as below:

- What type of drinks do you give to a child at home during diarrhoeal disease which you normally don't give when the child is well?
- What type of food do you give to a child during diarrhoeal disease which you normally don't give when a child is well?
- What other practices are carried out at home for a child during diarrhoeal disease?
- When will you take the child to a healthcare facility?
- What is the role and influence of other family members (grandmother/father, aunt and uncles) during diarrhoeal disease?

The researcher identified three main themes (illustrated in Table 4.2), which includes practices to stop the diarrhoea, practices to replace fluids and electrolytes and seeking healthcare services.

Table 4.2: Summary of themes and subthemes for caregiver practices of home care management during diarrhoeal disease in children under five years

THEMES	SUBTHEMES
4.3.1 Practices to stop diarrhoea	4.3.1.1 Remedies 4.3.1.2 Traditional medication 4.3.1.3 Feeding options to stop diarrhoea
4.3.2 Practices to replace fluids and electrolytes	4.3.2 1 Fluids and electrolytes

THEMES	SUBTHEMES
4.3.3 Seeking healthcare services	4.3.3.1 Period taken before seeking healthcare 4.3.3.2 Ability to identify danger signs 4.3.3.3 Influence of other family members to seek healthcare

Each one of the themes and sub-themes will be discussed in the following sections. The first theme for discussion relates to practices to stop diarrhoea.

4.3.1 Practices to stop diarrhoea

During diarrhoeal disease, caregivers are frustrated by the burden of care, and especially worried about the cost of nappies and failure to perform other household activities as most of their time will be spent with the ill child. Because of that, most of the caregivers' main objective is to stop diarrhoea as soon as possible, hence they will explore different practices to find a quicker solution to the problem. This ranges from giving remedies, fluids and seeking healthcare advice if deemed necessary. Three sub-themes emerged for this theme, namely remedies, traditional medication and feeding options to stop diarrhoea. These sub-themes are discussed in the Sections 4.3.1.1 to 4.3.1.3. Direct quotes from participants are included in italics, followed by a discussion and literature control. The first sub-theme for Theme 4.3.1 is the use of remedies.

4.3.1.1 Remedies

According Stevenson and Waite (2011:1216), a remedy is defined as something used to neutralise anything that is not desirable.

Coca-Cola was mentioned and supported by most of participants as a fluid of choice to stop diarrhoea, but participants indicated that they prepare it differently. Some participants said that they boil it and then give to the child to drink while other caregivers said that they shake it to reduce acid and then give to the child to drink.

Supportive quotes:

FG 2, Ms B "We boil the coke and give it to the child, it will stop the diarrhoea".

FG 2, Ms A "I have heard that you can use Coke, shake it until the acid comes out."

FG 1, Ms C "I heard that you give a child Coca-Cola drink, it is said that it stops diarrhoea".

FG1, Ms A "I heard about using cold drink (cocacola)"

Discussion:

Only one literature was found to support the use of Coca-Cola to manage diarrhoeal disease, practice which was observed in the study done by Gandra and Farooqui (2017:1997) where they indicated that 7.35% of mothers gave Pepsi/Coca- Cola.

The use of coffee also emerged as a remedy for this sub-theme. One participant was non-specific while the other one specified that she uses FG coffee.

Supportive quotes:

FG 3, Ms A "I make soft porridge for the child and put in FG to make it a bit thick. FG is a coffee".

FG 3, Ms E "I give him or her maybe two or three spoons, it stops the diarrhoea".

FG 2, Ms O "I use coffee with warm water, after the child has six month, just a bit".

Discussion:

No literature was found to support the use of coffee to manage diarrhoeal disease. In their study, Carvajal-Velez, Amouzou, Perin, Maiga, Tarekegn et al. (2016:n.p.) advised that even if diarrhoea can be treated by any informal, traditional or any type of care, it is advisable for any child to be taken to the healthcare facilities, as the care has proven to be good as compared to other remedies that are not evidence based, such as the use of coffee and Coca-Cola. The researcher identified that the use of such remedies by the caregivers look as a normal practice. Gandra and Farooqui (2017:2000) said that practices performed during diarrhoeal disease are influenced by social and cultural beliefs with no scientific basis.

4.3.1.2 Traditional medication

The second sub-theme for Theme 4.3.1 emerged as the use of traditional medication. Stevenson and Waite (2011:1529) define tradition as beliefs or custom that are taken further from one generation to the other. This means that traditional medication can be regarded as those medicines that were used by that group of people and they believed that it is helpful. Even though other caregivers verbalised that they know indigenous plants that are used, others indicated that grandparents are the ones who give children with diarrhoea traditional remedies as they know indigenous plants better than caregivers. Only two indigenous plants were mentioned, while others are said to be known by elder people.

Supportive quotes:

FG 3, Ms A “She just leaves the house to get something from her friend and then come back holding a small bag with something to give the child”.

FG 3, Ms A “I do not know, it is medicine, she does not even allow me to see”.

FG1, Ms E “I heard about leaves of another tree which you grind and give to the child it will stop diarrhoea.”

The use of indigenous plants has showed to be more common to most of participants as it was mentioned with all focus groups. Some caregivers indicated that they only heard about it, while others stated that they used it and that it is effective. Mugwiti and Mukolokote were specifically mentioned as the commonly used indigenous plants while the other plants could not be called by its name.

Supportive quotes:

FG 3, Ms H “They remove the leaves of the ‘Mukolokote’ tree. They boil the tree and then take the boiled water which is green in colour to cook soft porridge for the child. After that the child is given to eat.”

FG 2, Ms C: “I have heard about the tree, and it stops diarrhoea immediately”.

FG 2, Ms F “There is a tree which is dig, grind it and then the child is given to eat the tree”.

FG 1, Ms D “I know about Mugwiti leaves, you grind it and mix with water and give child that water to drink”.

Discussion:

The use of the above mentioned indigenous plants during diarrhoeal disease looks like a common practice of caregivers and most of them showed to have a good understanding of it. This was supported by the findings from Onwuke, van Deventer and Omole (2016:46) who revealed that some mothers still consider traditional medicines to be the best option for managing diarrhoea in children. Sarmiento et al. (2016:4,5) indicated that traditional medicine was the first option to caregivers and they further explained that the truth about the administering of traditional medicine is usually revealed only after repeated probing. The same response was always observed during all focus group interviews, caregivers would not spontaneously say anything about traditional medicine unless probing was done. Caregivers did not feel free to talk about the use of indigenous plants unless the interviewer repeatedly probe.

4.3.1.3 Feeding options to stop diarrhoea

The third sub-theme for Theme 4.3.1 emerged as feeding options to stop diarrhoea. According to Paintal and Aguayo (2016:66), feeding needs in a sick child are widely influenced by the traditional beliefs and norms of that society, and caregivers usually give less than the required amount as they perceive that the child might vomit.

During diarrhoeal disease in a child, caregivers will usually think about ways to stop the diarrhoea by avoiding food suspected to possibly cause or worsen the diarrhoea. Caregivers believed that children who are formula fed must continue with formula feeds, with the greatest caution during preparation. Caregivers fully support the need to continue with breastfeeding and to do it more frequently whenever possible. This practice was also observed in the study done by Gandra and Farooqui (2017:1997) who found that 73.9% of mothers supported the continuing of breastfeeding.

Caregivers did not show any specific knowledge about specific diets but believe that ordinary daily food are better during diarrhoeal disease.

Supportive quote:

FG 3, Ms H "The child is given the soft porridge only, plain as it is, and it stop diarrhoea."

FG 1, Ms E "It is better to give porridge and vegetable if any".

FG 1, Ms A "Soft porridge and green vegetables, meat with reduced fats and you can give fruits too".

FG 2, Ms B "Also porridge and any type of vegetable or sour milk".

Discussion:

The last quote which the caregiver said she gives soft porridge and vegetables is a good practice as it allows the child to receive basic nutrients for growth and development and it adheres to feeding recommendations. According to DoH (2014:18), sick children must be given food rich in iron such as meat and dark green vegetables, vitamin A rich foods which includes full cream milk and green leafy vegetable, and food rich in vitamin C such as citrus fruits. Diallo et al. (2017:88) indicated that health education and nutritional advice from healthcare providers during diarrhoeal illness is not clear and not consistent.

With the purpose of stopping diarrhoea, the caregivers believed that any food which contains milk and sugar should be restricted because they believe milk products worsens diarrhoea and because of that they will avoid such feeds to stop diarrhoea.

Supportive quote:

FG 2, Ms B "Fresh milk, because it increases diarrhoea".

FG 3, Ms F "Milk, fresh milk, food like Danone, Yoghurt and other food which contains milk. Those things make the diarrhoea to be worse. So that is why we should not give the children that when they have diarrhoea. Instead it is better to give a child food like a pear which has hard peels, they make the stomach to be much better because of the hard peel they have".

FG 2, Ms G "You stop giving the child milk and give tea, it stops diarrhoea".

FG 2, Ms B "Yoghurt? It is made of sugar and milk. Fresh milk increases diarrhoea"

FG 2, Ms E "Soft porridge with no milk".

Discussion:

This practice revealed that children are denied milk, it is one of foods which is good source of vitamin A and it opposes feeding recommendations by the DoH (2014:18) which encourages providing milk in the diet of a child, even if the child is having diarrhoeal disease. According to van Wyk (2011:231), milk feeds can only be restricted for children who have been found to have lactose intolerance, and they must be given lactose free milk. Becker-Dreps et.al (2014:153) concluded their study by saying that caregivers need to be encouraged to give children with diarrhoeal disease high protein diet and to continue breastfeeding.

While caregivers believed that they cannot give milk and milk products to a child during diarrhoea, they believed that a child who is not on breast milk needs to continue with formula feeds, however milk feeds must be properly prepared.

Supportive quote:

FG 1, Ms A "all other forms of milk, except breastmilk. With formula milk, if you fail to mix it properly, it can worsen the diarrhoea, including fresh milk".

FG 1, Ms B "you can give formula milk but it must not be kept for longer period as it gets sour and worsen diarrhoea".

Literature did not show any evidence of a specific diet during diarrhoeal disease. Recommendations made from WHO about nutritious food was non-specific but stressed the importance of breastmilk. Wittenberg (2009:508) encourages caregivers to continue with a normal diet according to child's appetite, given in small frequent amounts depending on the tolerance as this reduces the risk of developing malnutrition, while Conkle et al. (2016:618) reported that the risk of diarrhoea increased in children who eat sweets and dairy products.

The caregivers were of the opinion that food such as biscuits, sweets and Simba (chips) should not be given to a child during diarrhoeal disease as they affect the appetite of the child.

Supportive quotes:

FG 1, Ms A "Things like biscuits, I also think that sour milk, sugary substances and tea with a lot of sugar is not good for a child with diarrhoea because it might worsen diarrhoea".

FG 1, Ms C "We avoid simbas (chips) and juice but give normal feeds but avoid hard things like bread as it might cause hardening of the stomach".

FG 2, Ms B "Also junk food like simba chips and sweets, because junk food decreases the appetite".

Supportive literature:

Caregivers believed that sugary substances increase diarrhoea, and this was supported by the DoH (2014:18) who encourages that sugary substances should be avoided in children under nine months while tea and coffee reduces or interferes with iron absorption and it should not be used to replace healthy food (DoH, 2014:20).

The use of Mageu was mentioned in the first focus group by the caregivers as preferred feeding option during diarrhoeal disease.

Supportive quotes:

FG 1, Ms B "We heard that mageu helps with digestion".

FG 1, Ms A "I haven't use it before but they believe is that because the child stomach is empty, as you give mageu, at least the stomach will have something as it looks like soft porridge".

Discussion:

Mageu is one of the commercial products made of maize meal and flour and have a mild sweet taste. No scientific information was found in literature, but the producer, which is RCL Foods Company, describes Mageu number 1 as a fermented non-alcoholic drink which is widely consumed in South Africa and serves perfectly as a meal replacement and energy-giving snack. As indicated by the supportive quote above, caregivers give it to a child to be reassured that child has eaten something. It is in-between fluids and soft porridge. Caregivers use it to replace normal feeds, and because of its mild sour taste, children usually like it. The product information on its container states that it is not recommended for children.

4.3.2 Practices to replace fluids and electrolytes

The second theme that emerged is practices to replace fluid and electrolytes. Only one sub-theme was identified for this theme, and this will be discussed in the next section.

4.3.2.1 Fluids and electrolytes

Caregivers indicated an understanding of the risk of dehydration for a child during diarrhoea disease. The majority of them were able to indicate the need for oral rehydration solution and, if possible, to increase fluid intake in the form of ordinary clean water and more frequent breastfeeding. The need to increase oral fluids was also observed in 35.26% of mothers who were studied by Gandra and Farooqui (2017:1997), but also found that 69.50% did not know the correct preparation of Oral Rehydration Solution (Gandra & Farooqui, 2017:1999). Caregivers showed to know that diarrhoeal disease causes a child to be at risk of losing more fluids.

Supportive quote:

FG 1, Ms A "Because child is losing fluid from the body".

FG 2, Ms D "Since the child will be losing a lot of water in the system it is advisable for the child to drink lots of water".

FG 1, Ms E "in an older child, ordinary water is important"

Discussion:

Caregivers have an understanding of the need to avoid dehydration during diarrhoeal disease in children under five years of age, but do not know the correct preparation of home-made Oral Rehydration Solution.

Supportive quotes:

FG 3, Ms F "I take a one litre bottle and pour eight teaspoons of sugar in warm water, thereafter I pour one and a half teaspoon of salt, and then mix for the child to drink that water which is now called a drip. So, he or she drinks that if I cannot manage to go to the clinic".

FG 3, Ms D "I take my kettle, wash it, pour water and then boil it, after that, I take one litre bottle, measure eight spoons of sugar, not heaped spoons but normal measures spoons, then add one and half teaspoon of salt to the bottle, when it gets cool that is when I take and give my child to drink. If the diarrhoea does not stop, that is when I will take him to the clinic".

FG 2, Ms C "I know the mixture of 6 teaspoons and one salt".

FG 2, Ms B "I know that we boil water and add 2 granules of coarse salt".

Discussion:

According to Wittenberg (2009:506), excess sodium due to incorrect preparation of Oral Rehydration Solution is the common cause of hypernatremia. In diarrhoeal conditions, dehydration and excessive intake of sodium (hypernatremia) might lead to cerebral oedema and put the child at risk for developing complications during management. In their study, Onwuke et al. (2016:45) identified that more than half of the participants (62.3%) were not able to prepare Oral Rehydration Solution correctly. This was also supported by Onwukwe, van Deventer and Omole (2015:45), who observed that Oral Rehydration Therapy was practised by 66 per cent of caregivers but only 33 per cent were able to prepare it correctly.

Oral Rehydration Solution is the recommended fluid to give a child during diarrhoeal disease to prevent dehydration. The correct preparation of Oral Rehydration Solution includes one litre previously boiled water, with eight level medicine measures of sugar and half level of salt added [View Chapter 2: Section 2.6.1]. Caregivers who were interviewed in paediatric ward had better understanding about ORS, they indicated that daily health education during their stay in hospital is helpful to them.

Supportive quotes:

FG 1, Ms A: 'Before admission I didn't know, but since I was admitted, now I know that I must prepare him drip water. I boil the water, leave it to cool at a medium temperature, then measure one litre of it, add eight teaspoons of sugar and half teaspoon of salt and mix, it will taste like sweat. So I will give to the child.'

FG 1, Most of participants "most of things we did not know but learned it hear in the ward during this admission as they teach us every day."

In South Africa, the correct preparation of Oral Rehydration Solution is clearly recorded in the Road to Health Chart booklet. Caregivers indicated that they were not aware of it and said that they did not read the booklet.

Supportive quotes:

FG3, All participants "No, we have never opened that page. It has everything, it even shows the food types".

FG3, All participants "No, we never read it".

Discussion:

Gandra and Farooqui (2017:1997) revealed in their study that knowledge shown, and practices performed by mothers during diarrhoeal disease is inadequate and it is associated with a low level

of education. Those who are not educated show to have less knowledge about diarrhoea and oral rehydration solution. Although Kibel et al. (2012:360) advocated over a period of 40 years for the use of ORS as the safest method to prevent dehydration in children and adults with any type for diarrhoeal disease, caregivers have been found to not use ORS during diarrhoeal disease as they verbalise that their children do not like its taste (Arvelo et al. 2013: [n.p]; Webair & Bin Ghouth, 2014: [n.p]).

4.3.3 Seeking healthcare

The third theme emerging from the data was seeking health care. For this theme, three sub-themes were identified, namely time taken before to seeking health care, ability to identify danger signs and influence of other family members to seek healthcare. A discussion follows in the next section.

4.3.3.1 Time taken before to seeking health

One of the caregivers indicated that she will take the child to the clinic immediately, because she is scared to practice what she is not sure about it. She responded like this after follow up on her statement that she don't do anything at home but only take the child to the clinic.

Supportive quotes:

FG 3, Ms H "Yes, I am only afraid of making the wrong mixtures or using the wrong spoon whether a teaspoon or a tablespoon, because of that, "I take my child straight to the clinic".

Discussion:

It is important to start rehydrating a child with diarrhoeal while preparing to go to the clinic. Failure to rehydrate a child with oral rehydration solution puts the child at higher risk of being dehydrated. It was further supported by the findings from the Child PIP (2009:64) report, which showed that early intervention can reduce the complications caused by diarrhoea and that the largest number of modifiable factors were linked to care given to the child before being taken to hospital and emergency settings. Gandra and Farooqui (2017: 2000) said that mothers should be encouraged to seek medical help as early as possible.

Time taken to seek healthcare varied from same day, twenty-four hours, two days, three days and up to a week. The cause of delay is related to attempts to stop diarrhoea by practicing those things which caregivers believe will bring a solution to the problem such, as giving plants and other remedies. Caregivers indicated that they usually take the child to the clinic after one to two days of giving oral rehydration solution with no improvement or when the child is refusing to drink the oral rehydration solution.

Supportive quotes:

FG 2, Ms D “After I treat the child and it doesn’t work, or after giving him coke and it doesn’t work then I send him or her to the clinic the following day.”

FG 2, Ms C “I start with the plant, if no improvement I use coke, if no progress, then can go to the clinic. This can take two to three days.”

FG 1, Ms D “I wait for two days observing if the child is improving or not, then will take it from there”.

FG 3, Ms H “Ok they normally say it is change of season. So they tell us to make the drip medicine called ‘motswako’ (ORS). Then if it does not work that is when they advise you to send the child to the clinic. Sometimes they also tell us to stop giving the child food like purity to see whether the diarrhoea will stop or continue”.

Discussion:

There is a hierarchy in the search for a solution to stop diarrhoeal disease, which shows to be the cause of delay in seeking healthcare advice.

One of the caregivers indicated a serious delay in seeking healthcare.

Supportive quote:

FG 1, Ms E “I took one week before bringing the child to hospital as the diarrhoea was not stopping, and now they are saying my child is having malnutrition.”

Discussion:

As discussed previously, there is a relationship between diarrhoeal disease and malnutrition [View Chapter 2: Section 2.8]. A delay in seeking healthcare service was identified as one of the modifiable factors which accounted for 47.6% of audited deaths according to the Child PIP report (2009:69). As discussed previously in Chapter 1, Mukiira and Ibisomi (2013:9) observed that a delay in seeking healthcare advice by caregivers was associated with not knowing the danger of diarrhoeal disease in a child. According to the DoH (2013:2.9), diarrhoeal disease may cause dehydration and metabolic disturbances if there is a delay in treatment initiation, leading to more serious complications of the disease, which might cause irreversible organ, such as the kidneys, damage and death in children.

4.3.3.2 Ability to identify danger signs

The majority of caregivers indicated knowledge about the danger signs of diarrhoeal disease and revealed that they take the child to the clinic if he/she looks weak or developed a high temperature. When any of these two danger signs are present, the caregivers seek urgent and immediate healthcare.

Supportive quotes:

FG 2, Ms G "I give him or her water and see if he gets better, if he becomes weak I take him or her to the clinic".

FG 2, Ms E, "I look at the situation, if the child becomes weak I take him to the clinic at the same time".

FG 2, Ms D "since the child will be losing a lot of water in the body it is advisable for the child to drink lots of water".

FG 3, More than one participants, "If the temperature of the child is high and the child is weak, it means the child does not have water in the body any more".

Discussion:

The caregivers showed to have a good understanding of the danger signs during diarrhoeal disease. It is advised that caregivers must seek healthcare advice within two days if diarrhoea is not improving and to seek healthcare advice if a child becomes sicker, unable to drink or breastfeed, vomits everything, has convulsion and develops a fever DoH (2014:15 & 46).

4.3.3.3 Influence of other family members to seek healthcare

The belief that diarrhoeal disease is due to teething and fontanelle not well developed according to the elder people within the family, was observed and associated with delay in healthcare service as caregivers still want to practice what they believe it will solve the problem. Family members play a vital role regarding a sick child within the family. The belief that teething is the cause of diarrhoea in children was also mentioned in the study that was done by Gandra and Farooqui (2017:1999) and found that 32.64% of mothers have that belief. The following supportive quotes shows the delay in seeking healthcare advice because of elder relatives to the child, such as grandmothers, still practicing what they believe.

Supportive quotes

FG 1, Ms B "They sometimes say it is fontanel which is not pulsating well. They will take the child to the traditional healers and medication will be given to apply on the fontanel and some of the medication will be given orally".

FG 1, More than one participant “Yes, they say the fontanel has fallen into the gastro-intestine and believe that the stomach is not yet well organised, and they will give child medication to drink”.

FG 1, Ms B “The granny always says the child is teething, she just leaves the house to get something from her friend and then come back holding a small bag with something to give the child”.

FG 2, Ms F: “I do not know which trees but grannies cut trees and grind them then give the child to drink”.

FG 3, Ms A “the granny always says the child is teething.”

4.4 CONCLUSION

There are many practices that are practiced at home during diarrhoeal disease in children under five years. Caregivers prepare oral rehydration solutions containing high levels of sodium, which makes diarrhoeal disease more complicated. The use of traditional/indigenous plants seems to be more common, even though caregivers are not free to talk about it unless if reassured that they are not going to be judged about it. Feeding options during diarrhoeal illness is a challenge and the practice revealed that of denying most of nutritious food except breastfeeding.

The next chapter address recommendations made by the researcher. The recommendations are based on the findings and focus on the improvement of caregiver practices of home care management during diarrhoeal disease in children under five years in Vhembe district, Thulamela municipal area. The recommendations will address education, practice and research.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The aim of this study was to explore and describe the practices of caregivers at home during management of diarrhoeal disease in children under five in Vhembe district, Thulamele municipal area. The researcher used a qualitative, exploratory and descriptive design with a contextual nature. This allowed the researcher to explore and describe caregiver practices of home care management during diarrhoeal diseases in children under five. This chapter consists of the recommendations that were based on the findings [Discussed in Chapter 4].

5.2 CONCLUSIONS TO THE FINDINGS

The conclusions were based on the findings discussed in Chapter 4. The researcher concluded that caregivers used different practices at home as a way to manage diarrhoeal disease in children under the age of five years. Furthermore, the use of non-evidence-based practices were found more common and done with confidence. Cultural beliefs and the use of indigenous plants were commonly practiced [View Chapter 4: Section 4.3.1.2].

5.3 RECOMMENDATIONS

In this section, the recommendations as drawn up from the findings, are explained. The goal of the recommendations is to improve caregiver practices of home care management during diarrhoeal diseases in children under five in Vhembe district, Thulamele municipal area. The recommendations address education to caregivers, the practice of healthcare professionals and the Department of Health as well as future research.

5.3.1 Education

The researcher recommends that health education needs to be strengthened and intensified at the healthcare facilities where possible. During the collection of data, the researcher observed that caregivers who were interviewed in paediatric ward, which was the first focus group, had more knowledge and understanding of preparation and use of ORS and they clearly indicated that

information was gained through daily health education in the ward, which was more beneficial to them.

It is important to educate caregivers on the correct preparation of oral rehydration solution as tabulated in the RTHC booklet. The researcher recommends that the issuing of RTHC booklet must be done while offering health educating to the caregiver, who must be informed that it is her/his manual procedure booklet that guides the child care. The researcher also recommends the distribution of posters to all public areas to shows the preparation of oral rehydration solution, which might be of benefit to those who seldomly visit the health care facilities.

5.3.2 Practice of health care professionals

This recommendation include for health care professionals include the following:

The researcher recommends that the use of ORS be strongly encouraged by all healthcare professionals, both in public and private settings such as pharmacies, private medical practitioners and private clinics. This can be done by encouraging public and private health care facilities to have an ORS corner for all caregivers who have children with diarrhoeal disease. Each healthcare facility must prepare ORS daily to give children while they are waiting to be seen by a healthcare professional. This can be reinforced by the DoH Vhembe District in a policy that makes it an obligation to have an ORS corner in every healthcare facility, both private and public. This practice will encourage caregivers to understand that ORS is used in every healthcare provider setting as a way to prevent dehydration in children with diarrhoeal disease

5.3.3 Research

It was revealed in the findings that caregivers do not read the RTHC booklet. The researcher recommends that Vhembe District DoH do further research to identify the hindrances in reading the RTHC booklet. The researcher recommends that if possible, the RTHC booklet must be printed using vernacular language to accommodate those caregivers who might have a challenge in reading English. The DoH in Vhembe district can also provide caregivers with information pamphlets, which will be written in vernacular language. The researcher is willing to assist the Department of Health to identify the obstacles of caregivers for not reading the RTHC booklet. The researcher is interested in conducting further research on how the caregivers can be encouraged to read and practice healthcare advices as captured in the RTHC. The researcher recommends to the Department of Health to develop ways to integrate the use of indigenous plants/traditional medicine with health care services to reduce the secrecy about its use and improve care of children under five years. The use

of Coca Cola and FG coffee as remedies to stop diarrhoea appears to be a common practice and no evidence could be found in the literature about this practice. The researcher is of the opinion that it needs to be researched.

5.4 DISSEMINATION OF THE FINDINGS

The following suggestions are for disseminate the findings of this study:

Publication of articles in accredited journals to inform the broader communities in South Africa of the research findings. In-service education sessions will be scheduled to inform the health care professionals who are experiencing challenges related caregivers practices of diarrhoeal disease in children under five years.

5.5 LIMITATION OF STUDY

The level of education and socio-economic class of the participants were not taken into consideration when the study was planned. The socio-economic status and level of education have a great influence on caregivers' approach to home management of diarrhoeal disease in children under five years. The socio-economic status might have an influence on where to access healthcare services, while level of education can have an influence on the understanding of day-to-day running of healthcare services and management of diarrhoeal diseases.

Diarrhoeal disease was not classified but discussed in general as acute diarrhoea [View Chapter 2: Section 2.2]. Diarrhoeal disease differs with signs and symptoms according to related causes, which might possibly guide the caregiver to different home management. Because of that limitation, researcher could not get information regarding specific home management specific diarrhoeal disease.

5.6 CONCLUSION

Caregivers are responsible for the home care management during diarrhoeal disease in children under five in Vhembe district, Thulamela municipal area. Home care management include practices to stop diarrhoea and replace fluids and electrolytes. It was found that most of caregivers are providing ORS that contains a high level of sodium. Most of the practices are not evidence based but seems to be common to the caregivers and they practice them with confidence. Caregivers also have the ability to identify danger signs associated with diarrhoeal disease and have different views on how soon to seek healthcare. The aim of the study was met: the researcher was able to identify

those practices that are not evidenced based and concludes that caregivers do not know how to correctly prepare ORS.

REFERENCES

Agocs, M.M., Serhan, F., Yen, C., Mwenda, J.M., de Oliveira, L.H., Tebeb, N., Wasley, A., Wijesinghe, P.R., Fox, K., Tate, J.E., Gentsch, J.R., Parashar, U.D. & Kang, G. 2014. WHO Global Rotavirus surveillance network: A strategic review of the first five years, 2008 – 2012. *Morbidity and mortality weekly report*, 63 (29):634-637.

Akinyemi, A.I., Fagbamigbe, A.F., Omoluabi, E., Agunmbiade, O.M. & Adebayo, S.O. Diarrhoea management practices and Child Health Outcomes in Nigeria: Sub-National Analysis. *Advances in Integrative Medicine*. Available from: <https://doi.org/10.1016/j.aimed.2017.10.002>

Arvelo, W., Degollado, J., Reyes, L. & Alvarez, A. 2013. Perceptions regarding oral rehydration solutions for the management of diarrhoea in Guatemalan children: implications for diarrheal management in the Americas. *Pan American Health Organisation*, 34.2:121.

Ayalew, A.M., Mekonnen, W.T., Abaya, S.W. and Mekonnen, Z.A. 2018. Assessment of diarrhea and its associated factors in under-five children among open defecation and open defecation-free rural settings of Dangla district, Northwest Ethiopia. *Hindawi Journal of Environmental and Public Health*. Article ID 4271915. Available from: <https://doi.org/10.1155/2018/4271915>

Becker-Dreps, S., Zambrana, L.E., Reyes, D., Vilchez, S. and Weber, D.J. 2014. Household management of childhood diarrhoea: A population-based study in Nicaragua. *J Health Popul Nutr* 32(1): 149-154

Blessing, S., Chima, U.D., Leera, S. & Chidinma, I.V. 2014. The effectiveness of oral rehydration therapy in the treatment of diarrhoea in children who attend primary health care clinic in Bori, Rivers State, Nigeria. *Advanced Journal of Medical Reports and Reviews*. 2(001): 001-007 (Accessed 07/05/2015). Available from: <http://www.advancedjournals.org/ajmrr/>

- Bustreo, F., Okwo-Bele, J.M. & Kamara, L. 2014. World Health Organisation perspective on the contribution of the global alliance for vaccines and immunization on reducing child mortality. *Arch Dis Child*, 100(S1):s34-s37.
- Botma, Y., Greeff, M., Mulaudzi, F.M. & Wright, S. 2010. *Research in Health Sciences*. Pearson Education South Africa (Pty) Ltd.
- Brink, H., van der Walt, C. & van Rensburg, G. 2006. *Fundamentals of research methodology for health care professionals*. 2nd ed. Cape town. Juta & Co. (Pty) Ltd.
- Brink, H., van der Walt, C. & van Rensburg, G. 2006. *Fundamentals of research methodology for health care professionals*. 2nd ed. Juta & Co. (Pty) Ltd.
- Brink, H., van der Walt, C. & van Rensburg, G. 2014. *Fundamentals of research methodology for healthcare professionals*. 3rd ed. Juta & Company Ltd.
- Burns, N. & Grove, K.S. 2011. *Understanding nursing research. Building an evidence – based practice*. 5th ed. Elsevier Saunders.
- Carvajal-Vélez, L., Amouzou, A., Perin, J., Maïga, A., Tarekegn, H., Akinyemi, A., Shiferaw, S., Young, M., Bryce, J. & Newby, H. 2016. Diarrhea management in children under five in sub-Saharan Africa: does the source of care matter? A Countdown analysis. *BMC Public Health*, 16(1):830.
- Chola, L., Michalow, J., Tugendhaft, A. & Hofman, K. 2015. Reducing diarrhoea deaths in South Africa: costs and effects of scaling up essential interventions to prevent and treat diarrhoea in under-five children. *BMC Public Health*, 15. (Online) Available from: DOI 10.1186/s12889-015-1689-2 (Accessed on 07/05/2015).
- Conkle, J., Ramakrishnan, U. & Freeman, M.C. 2016. Prechewing infant food, consumption of sweets and dairy and not breastfeeding are associated with increased diarrhoea risk of 10-month-old infants in the United States. *Maternal & Child Nutrition*, 12(3):614-624.

Creswell, J.W. 2007. Qualitative inquiry & research design choosing among five approaches. 2nd ed. Thousand Oaks, Calif. Sage Publications.

Department of Health. 2011. First report of the committee on morbidity and mortality in children under 5 years (CoMMiC). Page 61, 63.

Department of Health. 2013. Standard treatment guidelines and essential medicines list. Hospital Level Paediatrics, Page 2, 9.

Department of Health. 2014. Integrated Management of Childhood Illness. Pretoria. Government printers. Page 43, 46.

Diallo, A.F., Cong, X., Henderson, W.A. & McGrath, J. 2017. Management of childhood diarrhoea by healthcare professionals in low income countries: An integrative review. International Journal of Nursing Studies, 66:82-92.

Gandra, N.R. & Farooqui, D. 2017 Diarrhoea, nutrition and oral rehydration therapy awareness, attitude and practices among mothers of children under five years. International Journal of Paediatrics, 4(6):1995-2001.

Gaffey, M.F., Das, J.K. & Bhutta, Z.A. 2015 Millennium Development Goals 4 and 5: Past and future progress. Seminars in Foetal & Neonatal Medicine, 20:285-292.

Giles-Vernick, T., Bainilago, L., Fofana, M., Bata, P. & Vray, M. 2015. Home care of children with diarrhoea in Bangui's therapeutic landscape (Central African Republic). Qualitative Health Research, 1-12. (Online) Available from: sagepub.com/journalsPermissions.nav. DOI: 10.1177/1049732315570117. (Accessed: 07/05/2015).

George, C.M., Perin, J., Neiswender de Calani, K.J., Norman, W.R., Perry, H., Davis Jr, T.P. & Lindquist, E.D. 2014. Risk factors for diarrhoea in children under five years of age residing in peri-urban communities in Cochabamba, Bolivia. The American Journal of Tropical Medicine and Hygiene, DOI: 91:61190-1169/ajtmh.14-0057. (Accessed 22/05/2015). Available from: <http://www.ajtmh.org/content/91/6/1190.long>

Grove, K.S., Gray, R.J. & Burns, N. 2015. Understanding nursing research. 6th ed. Elsevier Saunders.

Guerrera, G. 2015. Neonatal and paediatric healthcare worldwide: A report from UNICEF. Clin Chim Acta, n.p. (Online) Available from: <http://dx.doi.org/10.1016/j.cca.2015.03.004> 0009-8981/2015 Published by Elsevier B.V.

Kareem, R., Irshad, S., Asad, R. and Alam, S. 2016. Cultural and traditional practices for the management of diarrhea in children under 5 years of age in selected suburbs of Khyber Pakhtunkhwa. J Rehman Med Inst. 2(3): p. 12-23

Kibel, M., Saloojee, H. & Westwood, T. 2012. Child health for all, a manual for Southern Africa. 5th ed. Oxford University press, South Africa.

Lenters, L.M., Das, J.K. & Bhutta, Z.A. 2013. Systemic review of increase use of oral rehydration solution at the household level. BMC Public Health, 13(S3), p. 1-8. Available from: <http://www.biomedcentral.com/1471-2458/13/S3/S28>

Logan, C., Beadsworth, M.B.J. and Beeching, N.J. 2016 HIV and diarrhoea: what is new? Volume 29. Number 5. p. 486-492 Copyright@ 2016 Wolters Kluwer Health, Inc. All rights reserved.

Liu, L., Oza, S., Hogan, D., Chu, Y., Perin, J., Zhu, J., Lawn, J.E., Cousens, S., Mathers, C. & Black, R.E. 2016. Global, regional, and national causes of under-5 mortality in 2000-15: an updated systematic analysis with implications for the Sustainable Development Goals. Lancet 2016; Vol 388. P. 3027-3035. Available from: [http://dx.doi.org/10.1016/s0140-6736\(16\)31593-8](http://dx.doi.org/10.1016/s0140-6736(16)31593-8)

Mittal, H., Goyal, D.K., Jain, J. and Khandelwal, A. 2016. Assessment of knowledge of mothers regarding benefits of exclusive breast feeding in mother and children: a hospital based study. Int J Community Med Public Health. 3(11):p. 2993-2996

Motala, C., Davidson, A., Figaji, A. & Levin, M. 2010 Handbook of paediatrics. 7th edition. Oxford University press, South Africa.

- Moule, P. & Goodman, M. 2014. *Nursing Research an Introduction*. 2nd ed. SAGE Publications Ltd.
- Mukiira, C., Ibisomi, L. 2013. Health care seeking practices of caregivers of children under five with diarrhoea in two informal settlements in Nairobi, Kenya. *Journal of Child Health Care*, p. 001-11. Available from: DOI: 10.1177/1367493513508231 chc.sagepub.com (Accessed 7/05/2015)
- Nasrin, D., Wu, Y., Blackwelder, W.C., Farag, H.T., Saha, D., Sow, S.O., Alonso, P.L., Breiman, R.F., Sur, D., Faruque, A.S.G., Zaidi, A.K.M., Biswas, K., Van Eijk, A.M., Walker, D.G., Levine, M.M. & Kotloff, K.L. 2013. Health care seeking for childhood diarrhoea in developing countries: evidence from seven sites in Africa and Asia. *Am. J. Trop. Med. Hyg*, 89(S1):3-12.
- National Department of Health. *Integrated management of children with acute malnutrition in South Africa: Operational guidelines*. 2015. Pretoria, South Africa; National Department of Health. *Integrated management of childhood illness*. 2014. South Africa. UNICEF, URC/CHS. *The community infant and young child feeding (IYCF) counselling package*. 2012.
- Ntuli, S.T., Malangu, N. & Alberts, M. 2013. Causes of death in children under-five years old at a tertiary hospital in Limpopo province of South Africa. *Global Journal of Health Science*, p. 95-99. (Online) Available from: DOI:10.5539/gjhs.v5n3p97 (Accessed on: 21/05/2015).
- Null, C., Stewart, C.P., Pickering, A.J., Dentz, H.N., Arnold, B.F., Arnold, C.D., Benjamin-Chung, J., Clasen, T., Dewey, K.G. & Fernald, L.C.H. et.al. *Lancet Global Health*. 2018. Effects of water quality, sanitation, handwashing, and nutritional interventions on diarrhea and child growth in rural Kenya. *Nutrition News Africa*. n.p.
- Offredy, M. & Vickers, P. 2010. *Developing a healthcare research proposal: An interactive student guide*. Wiley-Blackwell.
- Onwukwe, S., van Deventer, C. & Omole, O. 2015. Evaluation of the use of oral rehydration therapy in the management of diarrhoea among children under 5: knowledge attitudes and practices of mothers/caregivers. *South African Family Practice*, 58:42-47.

Paintal, K. & Aguayo, V.M. 2016. Feeding practices for infants and young children during and after common illness. Evidence from South Asia. *Maternal & Child Nutrition*, 12(S1):39-71.

Pantenburg, B., Ochoa, T.J., Ecker, L. & Ruiz, J. 2012 Short report: Use of commercially available Oral Rehydration Solutions in Lima, Peru. *Am. J. Trop. Med. Hyg.*, 86(6) 922-924

Parahoo, K. 2006. *Nursing Research, Principles, Process and Issues*. 2nd ed. Palgrave Macmillan.

Pecenka, C.J., Johansson. K.A., Memirie, S.T., Jamison, D.T. & Verquet, S. 2015 Health gains and financial risk protection: an extended cost-effectiveness analysis of treatment and prevention of diarrhoea in Ethiopia. *BMJ Open*, 5(4):e006402.

Polit, D.F. & Beck, C.T. 2012. *Nursing Research: Generating and assessing evidence for nursing practice*. 9th ed. Wolters, Kluwer, Lippincott Williams & Wilkins.

Qazi, S., Aboubaker, S., MacLean, R., Fontaine, O., Mantel, C., Goodman, T., Young, M., Henderson, P. & Cherian, T. 2015. Ending preventable child deaths from pneumonia and diarrhoea by 2025. Development of the integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea. *Arch Dis Child*, 100:S24. (Online) Available from: DOI: 10.1136/archdischild-2013-305429 (Accessed on: 20/04/2015).

RCL Foods limited ("RCL Foods"). Registration number 1966/004972106

Republic of South Africa. 2005. Children's Act, No. 38 of 2005: Pretoria. Government Gazette.

Ricci, C., Carboo, J., Asare, H., Smuts, C.M., Dolman, R. & Lombard, M. 2018. Nutritional status as a central determinant of child mortality in sub-Saharan Africa: A quantitative conceptual framework. *Matern Child Nutr.*2018;e12722. Available from: <https://doi.org/10.1111/mcn.12722>

Sarmiento, I., Zuluaga, G. & Andersson, N., 2016. Traditional medicine used in childbirth and for childhood diarrhoea in Nigeria's Cross River State: interviews with traditional practitioners and a state-wide cross-sectional study. *BMJ Open*, 6(4):e010417.

Shah, S.M., Ahmad, A., Khalique, N., Afzal, S., Ansari, A.M. & Khan, Z. 2012. Home-based management of acute diarrhoeal disease in an urban slum of Aligarh, India. *J Infect Dev Ctries*, 6(2):137-138.

Shahzad, S., Farooq, S.A., Noor, A., Batool, S.F., Aivi, Q.A., Amir, T., Qureshi, S. & Afaq, A. 2018. Association of maternal knowledge and care of diarrhea at home for children less than 5 years of age: A study conducted in tertiary level hospitals of Lahore, Pakistan. *Int Arch Biomed Clin Res*; 4(2): 68-72. Available online: www.iabcr.org DOI: 10.21276/iabcr. 2018.4.2.21

Stephen, C.R., Bamford, L.J., Patrick, M.E. & Wittenberg, D.F. eds. 2011. *Saving Children 2009: Five Years of Data. A sixth survey of child healthcare in South Africa*. Pretoria. Tshepesa Press, MRC, CDC.

Stevenson, A. & Waite, M. 2011. *Concise Oxford English Dictionary*. 12th ed. Oxford University Press.

Unger, C.C., Salam, S.S., Sarker, S.A., Black, R., Cravioto, A. & Arifeen, S.E. 2013. Treating diarrhoeal disease in children under five: the global picture. *Arch Dis Child*, 99:273-278.

United Nations International Children's Emergency Fund. 2013. *Committing to child survival: A promise renewed progress report*.

Van Wyk, N.C. 2011. *Nursing in the community*. Pearson Education South Africa World Health Organisation Media centre. Diarrhoeal disease Fact sheet updated 2017.

Vhembe District Department of Health. 2015. Final monthly death raw data sheet.

Webair, H.H. & Bin-Gouth, A.S. 2013. Factors affecting health seeking behaviour for common childhood illnesses in Yemen. *Patient Preference and Adherence*, 7:1129-1138.

Webair, H.H. & Bin-Gouth, A.S. 2014. This diarrhoea is not a disease... Local illness concepts and their effects on mothers' health seeking behaviour. *BMC Public Health*, 14:581 (Online) Available from: <http://www.biomedcentral.com/1471-2458/14/581>. (Accessed 8/12/2015).

Wittenberg, D.F. 2009. Coovadia's Paediatrics & Child Health: A manual for health professionals in developing countries. 6th ed. South Africa: Oxford University Press.

Wood, J.M. & Ross-Kerr, J.C. 2011. Basic steps in planning nursing research. From question to proposal. 7th ed. Jones and Bartlett Publishers.

World Health Organisation. 2015. Water Sanitation Health, Key Facts from JMP 2015 Report (Online) Available from: http://www.who.int/water_sanitation_health/monitoring/jmp-2015-key-facts/en/ p 1-4. (Accessed 8/12/2015).

Yaya, S., Hudani, A., Udeningwe, O., Shah, V., Ekholuenetale, M. and Bishwajit, G. 2018. Improving water, sanitation and hygiene practices, and housing quality to prevent diarrhea among under-five children in Nigeria. *Tropical medicine and infectious disease*, 3,41; doi:10.3390/tropicalmed3020041

ANNEXURE A**DECLARATION REGARDING
PLAGIARISM**

ANNEXURE A 2019

Declaration regarding plagiarism

Full names of student: Phophi Azwinumbavhi Violet

Student number: 5832240

Topic of work: CAREGIVER PRACTICES OF HOME CARE MANAGEMENT DURING NEARPHYSICAL DISEASE IN CHILDREN UNDER FIVE YEARS IN MUEWANA DISTRICT, THULAMP F MUNICIPAL AREA

Declaration:

1. I understand what plagiarism is and am aware of the University's policy in this regard.
2. I declare that this dissertation is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.
3. I have not used work previously produced by another student or any other person to hand in as my own.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signature: Phophi Azwinumbavhi Violet

AV Phophi

Date: 11/11/2019

Azwinumbavhi Violet Phophi

68

ANNEXURE B

**INTERVIEW GUIDE FOR FOCUS
GROUP INTERVIEWS**



Interview guide for focus group interviews

Following is the research question:

- What are the practices of caregivers during diarrhoeal disease in children under five years in Vhembe district, Thulamele municipality area?

The following main question will be used to obtain a deeper understanding of caregiver practices used at home for the management of diarrhoeal disease in children under the age of five years:

- What do you do at home when your child has diarrhoea?

Probing questions:

- What type of drinks do you give to a child at home during diarrhoeal disease which you normally don't give when the child is well?
- What type of food do you give to a child during diarrhoeal disease which you normally don't give when a child is well?
- What other practices are you carried out at home for a child during diarrhoeal disease?
- When will you take the child to a healthcare facility?
- What is the role and influence of other family members (grandmother/father, aunt and uncles) during diarrhoeal disease?

ANNEXURE C

**PATIENT OR PARTICIPANT'S
INFORMATION AND INFORMED
CONSENT DOCUMENT**



PATIENT OR PARTICIPANT'S INFORMATION AND INFORMED CONSENT DOCUMENT

STUDY TITLE:

CAREGIVER PRACTICES OF HOME CARE MANAGEMENT DURING DIARHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMELA MUNICIPAL AREA

Principal Investigators: AV Phophi
Institution: University of Pretoria

DAYTIME AND AFTER HOURS TELEPHONE NUMBER(S):

Daytime numbers: 082 672 4383
Afterhours: 082 672 4383

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

			H
Date	Month	Year	Time

Dear Participant

Dear Dr / Mr. / Mrs. _____ date of consent procedure ____./____./____

1) INTRODUCTION

You are invited to volunteer for participation in this study as a participant. This information leaflet is to assist you to decide if you would like to participate. Before you agree to take part in this study you should fully understand what is involved. If you have any questions, which are not fully explained in this leaflet, do not hesitate to ask the investigator. You should not agree to take part unless you are completely happy about all the procedures involved.

2) THE NATURE AND PURPOSE OF THIS STUDY

You are invited to take part as a participant in this study by being one of the four to eight members of the focus group. The aim of this study is to know the practices of caregivers during diarrhoeal disease in children under five years at home in Limpopo province, Vhembe district, South Africa.

3) EXPLANATION OF PROCEDURES TO BE FOLLOWED

You will be a participant of the study which will take only forty-five minutes. You will participate by joining the four to eight focus group of other caregivers who have knowledge of home management of diarrheal disease in children under five years. Focus group interview will only take forty-five minutes. Focus group interview will be audio-recorded upon consent by the participants. Data will be analysed by the researcher. The researcher will explain and discuss the protocol and procedures before the start of focus group.

Following questions will be asked:

What are the practices of caregivers during diarrhoeal disease in children under five years in Vhembe district, Thulamale municipality area? to find out what the home practices are when children younger than five years have diarrhoeal disease.

A question such as:

What do you do at home when your child has diarrhoea? can be asked to find out exactly what children are drinking when they are having diarrhoeal disease.

4) RISK AND DISCOMFORT INVOLVED

As a participant, you will experience no discomfort. There is also no risk involved in this study and it will only take forty-five minutes of your time.

5) POSSIBLE BENEFITS OF THIS STUDY

The study may result in improvement of caregivers' management of diarrhoeal disease at home

6) VOLUNTARY PARTICIPATION IN AND WITHDRAWAL FROM THE STUDY

Participation occurs on a voluntary basis. If you as a participant want to withdraw from the study at any time during the study, you may withdraw without submitting a reason. Feel free to contact the researchers if it may happen that you would want to withdraw. No compensation will be provided for participation in the study.

7) HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, telephone numbers 012 356 3085 as well as the Research Committee of the health care facility and written approval has been granted by these committees. The study has been structured in accordance with the Declaration of Helsinki (last update: October 2013), which deals with the recommendations guiding doctors in biomedical research involving human/subjects. A copy of the Declaration may be obtained from the investigator should you wish to review it. (View Annexure A).

Please feel free to contact Mrs Manda Smith, Departmental Administrator- Student Research Ethics Committee, if you need any clarification pertaining to ethical approval inquiries at:

Manda Smith

Tswelopele Building

Level 4: Room4-59

Tel nr: 012 356 3085

e-mail: manda.smit@up.ac.za

8) INFORMATION

If you have any questions about your participation in the research process, you should contact the Violet Phophi at the daytime and night time numbers supplied on page 1 of this document.

9) CONFIDENTIALITY

All data collected during this study will be regarded as confidential. Names of participants and the hospital group will not be recorded at all. Numbers will be used to differentiate participants during the focus group interview. Results will be published or presented in such a manner that all participants remain unidentifiable. Recorded audio-tapes will be kept for fifteen years and will be password protected. The researcher does not guarantee that everything said in the focus group will be kept confidential by all members of the group even though they will be asked to do so.

10) CONSENT TO PARTICIPATE IN THIS STUDY

I have read or had read to me in a language that I understand the above information before signing this consent form. The content and meaning of this information have been explained to me. I have been given opportunity to ask questions and am satisfied that they have been answered satisfactorily. I understand that if I do not participate I will not be victimized. I hereby volunteer to take part in this study.

I have received a signed copy of this informed consent agreement.

_____	_____
Participant's name	Date
_____	_____
Participant's signature	Date
_____	_____
Investigator's name	Date
_____	_____
Investigator's signature	Date
_____	_____
Witness name and signature	Date

ANNEXURE D

**APPLICATION TO CONDUCT
RESEARCH STUDY IN
TSHILIDZINI HOSPITAL AND
THOHOYANDOU HEALTH
CENTER**





UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
TUNIBESITHI YA PRETORIA

P O Box 1210

Phangani

0904

The District Manager

Department of Health Vhembe District Offices

Private Bag X 5009

Thohoyandou

0950

Dear Sir/Madam:

RE: APPLICATION TO CONDUCT RESEARCH STUDY IN TSHILIDZINI HOSPITAL AND THOHoyANDOU HEALTH CENTER

The above matter refers:

I, Phophi Azwimbavhi Violet, currently a Masters student at the University of Pretoria hereby request to conduct research study within Vhembe district, Thulamela municipal area. The title of the proposed study is: **CAREGIVER PRACTICES OF HOME MANAGEMENT OF DIARRHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMELA MUNICIPAL AREA.**

The researcher has interest in this study after observing children under five years with diarrhoeal disease and dehydration dying within seventy two hours of admission. The Child Healthcare Problem Identification

Azwimbavhi Violet Phophi

76

Programme statistics revealed that diarrhoeal disease is the leading cause of deaths in Vhembe district, with the hospitals within Thulamela area being the most affected.

Copy of research proposal will be forwarded to you as soon as it is approved by the Research Ethics Committee of Faculty of Nursing Science, University of Pretoria.

Yours faithfully

Phophi

PHOPHI A.V.

14/08/2016

Date

Azwimbavhi Violet Phophi

77

ANNEXURE E

**LETTER OF ETHICAL APPROVAL:
UNIVERSITY OF PRETORIA**



The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal-wide Assurance.

- FWA 00016a27, Approved on 22 May 2002 and Expires 23 Oct 2016.
- IRB 0000 2205 IORG1001782 Approved on 22/04/2014 and Expires 22/04/2017.



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences Research Ethics Committee

18/08/2016

Approval Certificate
New Application

Ethics Reference No.: 265/2016

Title: CAREGIVER PRACTICE OF HOME MANAGEMENT DURING DIARRHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMELE MUNICIPAL AREA

Dear Mrs Azwimbavhi Phophi

The New Application as supported by documents specified in your cover letter dated 2/08/2016 for your research received on the 4/08/2016, was approved by the Faculty of Health Sciences Research Ethics Committee on its curate meeting of 17/08/2016.

Please note the following about your ethics approval:

- Ethics Approval is valid for 1 year
- Please remember to use your protocol number (265/2016) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, or monitor the conduct of your research.

Ethics approval is subject to the following:

- The ethics approval is conditional on the receipt of 6 monthly written Progress Reports, and
- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

Additional Conditions:

- Approval is conditional upon the Research Ethics Committee receiving permission from the Healthcare Facility

We wish you the best with your research.

Yours sincerely

Dr R. Behar; MDClinS; MMed (Int); MPiurMed, PhD
Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

☎ 012 358 2087 ✉ r1.behar@up.ac.za / r1.ethics@up.ac.za 🌐 <http://www.up.ac.za/healthethics>
📄 Private Bag X273, Arcadia, 0007 Tswelopele Building, Level 4, Room 80, Gaborone, Botswana

Home > My Profile > Add Post Submissions

Protocol Number: 2019012
 Application Form: S. 01 (Initial visit)
 Submission date: 2019-07-11
 Type: 001 (IRB) - 001 (2019012)

March Meeting

Post Approval Submission

Amendment:
 Annual Renewal Application
 Serious Adverse Events
 Other Submissions
 Reporting Medication Errors (Related to Annual Renewal)

Annual Renewal Application

Describe the progress during the past year:
 None

Which protocol deviations have occurred during the past year?
 None

Which protocol deviations have occurred during the past year?
 None

Which information risks were raised during the past year?
 None

Did you find any changes to the IRB in any respect that have been made without obtaining prior ethics approval or such amendments?
 None

Attachments

Attach file(s) (Maximum: 10 files)

Return Save

Office of the Research Ethics Committee
 University of Toronto
 2019-07-11
[Signature]



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences Research Ethics Committee

26/07/2018

Mrs Azwimbavhi Phophi
Department of Nursing Science
University of Pretoria

Dear Mrs Azwimbavhi Phophi

RE: 265/2016 – Letter dated 3 June 2018

265/2016 Phophi	
Protocol Title	CAREGIVER PRACTICE OF HOME MANAGEMENT DURING DIARRHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMELE MUNICIPAL AREA
Principal Investigator	Mrs Azwimbavhi Phophi, Tel: Email: Dept: Nursing Science

We hereby acknowledge receipt of the following document:

- Extension until end of December 2018.

which has been approved at 25 July 2018 meeting.

With regards

Dr R Sommers; MBChB; MMed (Int); MPharm; PhD
Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

☎ 012 356 3085 🌐 fhsethics.up.ac.za 🌐 <http://www.up.ac.za/healthethics>
📍 Private Bag X323, Arcadia, 0007 - Tswelopele Building, Level 4-59, Gezira, Pretoria.



Faculty of Health Sciences

The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002587, Approved 04 May 2002 and Expires 03/20/2022.
- IRB 0000 3235 ICRG0001762 /Approved 04/22/04/2014 and Expires 03/14/2020

15 May 2019

**Approval Certificate
Annual Renewal**

Ethics Reference No.: 265/2016

Title: CAREGIVER PRACTICE OF HOME MANAGEMENT DURING DIARRHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMELE MUNICIPAL AREA

Dear Mrs AV Phophi

The **Annual Renewal** as supported by documents received between 2019-04-09 and 2019-05-15 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on its quorate meeting of 2019-05-15.

Please note the following about your ethics approval:

- Renewal of ethics approval is valid for 1 year, subsequent annual renewal will become due on 2020-05-15.
- Please remember to use your protocol number (265/2016) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

Ethics approval is subject to the following:

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely

Dr R Sommers

MBChB MMed (Int) MPharmMed PhD

Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

Research Ethics Committee
Room 4.00, Level 4, Tswelopele Building
University of Pretoria, Private Bag X529
Arcadia 0001, South Africa
Tel: +27 (0)12 329 3004
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www.up.ac.za

Fakulteit Gesondheidswetenskappe
Lefapha la Disaense tsa Maphelo

ANNEXURE F

LETTER OF THE EDITOR



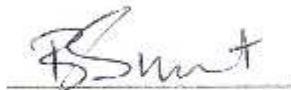
EDITING CERTIFICATE

Date: 13 September 2018

I, Berdine Smit, ID 7712190011083, hereby certify that the M Cur dissertation by Violet Phophi:

CAREGIVER PRACTICE OF HOME MANAGEMENT DURING DIARHOEAL DISEASE IN CHILDREN UNDER FIVE YEARS IN VHEMBE DISTRICT, THULAMEMELE MUNICIPAL AREA

has been edited by me according to the Havard Author-date System APA application).




BERDINE SMIT

BA. Publishing (UPE)



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ANNEXURE G

EXAMPLE OF CODING



THEMES AND CATERGORIES OF COLLECTED DATA

FOCUS GROUP 1 AT PAEDIATRIC UNIT

THEME	CATERGORIES	PAGE
REPLACEMENTS Boil water, measure one litre, add eight teaspoons of sugar and half teaspoon of salt	Homemade replacement fluid	Ms A, page 1
Coca-Cola/ coke	Feezy drink to stop diarrhoea	Ms A and other participant
Mugwiti	Indigenous plant to stop diarrhoea	Ms D, page 4
If the fontanelle is not seen pulsating, certain plants are given orally and applied on the fontanelle by traditional healers	traditional practices to stop diarrhoea	Ms B, page 5
Starch water from rice and potatoes	To stop diarrhoea	Ms B, page 4
Mageu	Commercial drink made of maize and flour. Used as replacement fluid with a purpose to reduce hunger	Ms A, page 3
Ordinary plain water	Replacement fluid	Ms A, Page 7
FOOD WHICH ARE RESTRICTED DURING DIARRHOEAL DISEASE		
Food which contains milk such as Danone and sour milk	Type of yoghurt in small containers. Believed to worsen diarrhoea	Ms C, page 2 & Ms D, page 6
Purity soft porridge if not correctly prepared	Type of commercial soft porridge	Ms A, page 3
Junky foods such as sweets, biscuits or surgery substances	Worsens diarrhoea	Ms C, page 7
PREFERED FEEDING OPTIONS DURING DIARRHOEAL DISEASE		

Soft porridge only	To avoid anything which might cause diarrhoea	Ms B, page 1
Porridge and vegetables	To maintain normal diet	Ms B, Page 6
WHEN DO YOU CONSIDER TAKING CHILD TO THE CLINIC		
After one day		Ms A, page 4
After use of first drip and no sign of improvement		Ms B, page 5
I don't just go to the clinic, I first observe how is the child doing before taking the decision		Ms C, page 5
I wait for two days observing if it is improving or not		Ms D, page 5
After one week		Ms E, page 5

FOCUS GROUP 1 AT THOHOYANDOU CLINIC

THEME	CATERGORY	PAGE
REPLACEMENTS		
Boil water, add seven spoons of sugar and one spoon of salt	Home-made oral replacement fluid	Ms B, page 1
Shake coke to reduce acid, then give to a child	Feezy drink, believed to stop diarrhoea	Ms A, page 1, again in page 5 with same participant
You take one litre bottle, pour water, add eight spoons of sugar and one of salt	Home-made oral replacement fluid	Ms F, page 1
Water only	To keep child well hydrated	Page 2
Boil water, add six teaspoons of sugar	Home-made oral replacement fluid	Ms C, page 3
Water, six teaspoons of sugar and one of salt	Home-made oral replacement fluid	Ms C, page 8
Boil water, add two granules of ungrinded salt	Home-made oral replacement fluid	Ms B, page 8
Boil coke	To stop diarrhoea	Ms B, Page 4

Give more water	To keep child well hydrated	Ms D, Page 4
Certain plant is grinded and give the child to drink	Indigenous plant to stop diarrhoea	Ms F, Page 4, again Ms C, page 5 and Ms B, page 7
Small amount of coffee added in water and give for two days	Used to stop diarrhoea	Ms One, page 5
I don't do anything, I am scared to do something wrong as people are giving different information		Ms E, page 8
FOOD WHICH ARE RESTRICTED DURING DIARRHOEAL DISEASE		
Yoghurt because it contains milk	Increases diarrhoea	Ms E, Page 3
Fresh milk	Believed to worsen diarrhoea	Ms E, Page 3
Junk food such as Simba's and sweets	Decreases appetite	Ms B, Page 4
Pour 1.5 litre of water, add eight spoons of sugar and one spoon of salt	Home-made oral replacement fluid	Ms F, Page 8
PREFERRED FEEDING OPTIONS DURING DIARRHOEAL DISEASE		
Water and porridge only		Ms A, page 1
Soft porridge with no milk		Ms E, Page 2
Fruits and Indian food (Indian caregiver)		Ms One, Page 2
Porridge and any type of vegetables or sour milk		Ms B, Page 2
Stop to give milk and give rooibos tea	To stop diarrhoea	Ms G, Page 5
WHEN DO YOU CONSIDER TAKING CHILD TO THE CLINIC		
After giving coke and diarrhoea continues, the following day I take child to the clinic		Ms C, Page 6
Within twenty four hours, but I look at the situation. If child is weak, I take him/her at the same time to the clinic		Ms E, Page 6

After two days		Ms G, page 6
If it starts in the morning, I check the condition, if not improving, I go to the clinic		Ms F, page 6
I don't wait, I go to the clinic same time		Ms One, page 6

FOCUS GROUP 2 AT THOHOYANDOU CLINIC

THEMES	CATERGORY	PAGE
REPLACEMENTS		
Take one litre of warm water, add eight teaspoons of sugar, and one and half teaspoon of salt and mix.	Homemade replacement solution	Ms F, page 1, repeated by Ms D, page 2
I don't give anything, I take the child to the clinic immediately		Ms C, page 1, Ms H page 2
Some traditional medicines are given as it is believed that it is teething, after few days teeth will be seen but sometimes it will not come out	Indigenous plants to stop diarrhoea and facilitate faster eruption of teeth	Ms A, page 4
It might be due to change of season, so prepare motswako	Home-made oral replacement fluid	Ms H, Page 4
FOOD WHICH ARE RESTRICTED DURING DIARRHOEAL DISEASE		
Fresh milk, danone , yoghurt any food which contains milk products	Worsen diarrhoea, so it is better to replace with pear because it has peels and will improve the digestion	Ms F, page 3
Stop giving purity	Commercial food, believed to might be the precipitating factor of diarrhoea	Ms H, Page4
PREFERED FEEDING OPTIONS DURING DIARRHOEAL DISEASE		
Prepare soft porridge and add FG coffee to make soft porridge thicker and feed the child, if it does not stop I prepare drip	To stop diarrhoea	Ms A, page 1

Depends on the age of the child, but preferably give more food than usual	To replace loss which is taking place through diarrhoea	Page 2
Soft porridge with vegetable or peanut butter		Page 3
Boil leaves of mukolokote, use that water to prepare soft porridge and feed the child	Use of indigenous plants to stop diarrhoea	Ms H, Page 6
There is other plant which is dug from the ground, grinded and given to the child to drink	Use of indigenous plants to stop diarrhoea	Ms B, Page 7
WHEN DO YOU CONSIDER TAKING CHILD TO THE CLINIC		
After one day if no improvements		Page 5
If the temperature is high or the child looks weak	Danger signs	Most of participants, Page 5
If the child is refusing to drink home-made replacement fluid	Danger sign	Ms D, Page 5

ANNEXURE H

LIMPOPO APPROVAL LETTER





LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Latif Shamila (015 293 6650)

Ref:4/2/2

Azwimbavhi Phophi
University of Pretoria
Private Bag X323
Pretoria
0007

Greetings,

RE: Caregiver practice of home management during diarrhoeal disease in children under five years in Vhembe District, Thulamela Municipal Area

The above matter refers.

1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
 - Research must be loaded on the NHRD site (<http://nhrd.hst.org.za>) by the researcher.
 - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
 - In the course of your study there should be no action that disrupts the services.
 - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
 - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
 - The above approval is valid for a 3 year period.
 - If the proposal has been amended, a new approval should be sought from the Department of Health.
 - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.


Head of Department


Date

18 College Street, Polokwane, 0700, Private Bag x9302, POLOLKWANE, 0700
Tel: (015) 293 6000, Fax: (015) 293 6211/20 Website: <http://www.limpopo.gov.za>