PERSPECTIVES OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES OF VHEMBE DISTRICT, LIMPOPO PROVINCE

By

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A dissertation submitted in fulfilment of the requirements for the degree:

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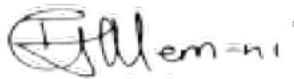*Supervisor*   *Co-Supervisor*

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December 2020

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DECLARATION

I declare that **"PERSPECTIVES OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES OF VHEMBE DISTRICT, LIMPOPO PROVINCE"** is my own unaided work and that all the sources that I have used or quoted have been indicated and acknowledged by means of a complete reference list and that this work has not been submitted before for any other degree at any other institution.

14 May 2021

………………………………….. …………………………

SIGNATURE: TG NEMAVHULANI DATE

DEDICATION

To our Heavenly Father, in whose strength I stand forever. Above all, I praise God's grace for giving me good health, courage, commitment, wisdom and for making it possible for this dissertation to be completed against all odds.

I dedicate this dissertation to my lovely parents Mr Malindi Peter Nemavhulani and Mrs Azwidohwi Valerie Nemavhulani as well as my Ever-Supporting Husband Prof Lufuno Makhado and our son, my siblings Makwarela, Daniel and Dakalo Nemavhulani.

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ABSTRACT

PERSPECTIVES OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES OF VHEMBE DISTRICT, LIMPOPO PROVINCE

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Background

Maternal health care provision is still seen as the main challenge in emerging countries, South Africa is no exception. Although the agreement has been made worldwide emphasizing the importance of the provision of quality maternal health care services when increased maternal mortality rates are to be reduced. Nevertheless, regardless of interventions to improve access to these services, a high number of women are not accessing these services timeously. It might be perpetuated by the deprived understanding of the relationship between most available antecedent factors, including sociocultural, economic and logistic factors. The purpose of this study was to discover the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of Limpopo province. This study investigated perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of Limpopo province, using Kroeger's determinant Model Conceptual framework.

Methods

A quantitative descriptive design was utilized. The researcher made use of the researcher/research assistant-administered completed questionnaires to investigate the perspectives of elderly women regarding factors contributing to maternal mortality. The population included all elderly women who met the criteria to participate, and who reside in the sampled villages. Questionnaires portrayed perspectives of elderly women regarding factors contributing to maternal mortality in the Vhembe district within the sampled villages. The analysis was done with the use of the SPSS Version 26.0 computer programme. Descriptive statistics were presented through frequencies, mean, standard deviations and percentages. Factor analysis was run to determine the factors contributing to maternal mortality according to the perspectives of elderly women.

Results

The majority of elderly women in this study preferred that pregnant women should consult at the health care facilities even though there were factors that have been revealed that hinder women from visiting the healthcare facilities such as the attitude of health care practitioners (n=161, 43%) and the long ques at the healthcare facilities (n=78, 20,8%). Being seen in public at the early stages of pregnancy was considered taboo (n=349, 93,4%) and is one of the causes that lead to late booking which causes the complications that lead to maternal mortality.

Recommendations

Given the evidence provided in this study, it is of paramount importance that there is a culturally congruent awareness intervention programme implemented to prevent misconceptions and myths as well other practices dominant in the study area. This is true given the need to prevent overlapping practices and approaches that can be detrimental to women during pregnancy, labour and postpartum.

Conclusions

The results of this study revealed the perspectives of elderly women regarding the contributory factors to maternal mortality. The findings provided clarity on the preference of the majority of elderly women which revealed that the western health care system was mostly preferred than the traditional practices.

Keywords: Elderly Women, Maternal Mortality, Non-medical factors, Perspectives, Pregnancy

LIST OF ACRONYMS AND ABBREVIATIONS

ABET   : Adult Basic Education and Training

AIDS   : Acquired Immunodeficiency Syndrome

ANC   : Antenatal Care

CIA   : Central intelligent Agency

ESHDC   : Executive School Higher Degree Committee

FGC   : Female Genital Cutting

HIV   : Human Immunodeficiency Virus

KMO test   : Kaiser-Meyer-Olkin Test

MDG   : Millennium Development Goals

MMR   : Maternal Mortality Rate

NDOH   : National Department of Health

PCA   : Principal Component Analysis

PHC   : Primary Health Care

PPH   : Postpartum Haemorrhage

SA   : Strongly Agree

SD   : Strongly Disagree

SDG   : Sustainable Development Goals

SHDC   : School Higher Degrees Committee

SPSS   : Statistical Package for Social Sciences

Stats SA   : Statistics South Africa

TBA's   : Traditional Birth Attendants

USA : United States of America

WHO : World Health Organisation

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Maternal mortality is not only a catastrophe to the family, but it is also an indicator of the atrocious failure of the health system, particularly because many of these disastrous demises are avoidable (Ahmed & Fullerton, 2019). Ahmed & Fullerton (2019) further mentioned in their study that skilled birth attendance by elderly women in low and middle-income countries is promoted as a key for reducing maternal mortality. Nevertheless, there is still high maternal mortality. The Department of Health South Africa released various policies regarding the improvement of maternal mortality rate which includes the strategic plan for maternal, newborn, child and women's health policy (MNCWH, 2016). The aim of the strategic plan that the government put in place was to empower women and to ensure universal access to reproductive health services (MNCWH, 2016). Despite government strategies to reduce the maternal mortality rate, the number of women dying due to pregnancy complications in South Africa continues to rise.

The purpose of this study was to determine the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of Vhembe District, Limpopo Province. In this chapter, the researcher presents the background of the study, the research problem statement, describes the significance of the study and also presents an overview of the design and methodology used.

1.2 BACKGROUND

World Health Organization (WHO) (2015) describes maternal mortality as the death of a woman during pregnancy, childbirth and within 42 days after the termination of pregnancy. Progress towards the Millennium Development Goal (MDG) (5) of decreasing

maternal mortality by 75% between 1990 and 2015 continues to show slow uptake in many parts of the world. The total number of maternal deaths in 2010 were estimated at 287,000 deaths per live birth as shown in most recent publications from WHO and partners. Studies further reflected a decline of 44% from 1990 to 2010. One of the objectives of the fifth Millennium Development Goal (MDG) was the reduction in maternal mortality rate by 75% in 2015 which failed to be reached (Santos, Nogueira, Paiva, Rodrigues, Oliveira & 2017). In the new Sustainable Development Goal (SDG's) Goal 3, maternal mortality reduction remains the prime concern. The SDG's maternal mortality reduction globally by 2030 is 70 maternal death per 100 000 live birth whereas every country is expected to have reduced maternal mortality by at least two-thirds from the 2010 baseline. When pregnancy and giving birth are planned and envisioned, they are usually accompanying joy and celebration for the whole family including elderly persons in that household (Chi & Urdal, 2018).

Muhlanga (2017) also attests that pregnancy and childbirth are informally made events, which marks an essential period in the lives of women because newborns contribute to the continued existence of humanity. These two developments herald the commencement of a new life; husband and wife are reproduced through their descendants and the living dead are reincarnated and this process brings joy to the family at large. Elderly women during this period of pregnancy and childbirth are marked by beliefs and practices meant to protect both the pregnant woman and the foetus (Hlatswayo, 2017). Elderly women further regard the newborn child as a gift to the family and the world at large. Most women expect the successful delivery of a healthy baby in most cases. Nevertheless, maternal mortality remains prevalent in rural settings. In many cases, pregnancies end in fatalities, killing either the mother, baby or both (Miller & Smith, 2017).

One of the approaches identified as being critical for saving the lives of pregnant women and as an indicator for progress in the reduction of maternal mortality was the utilisation of elderly women's advice and skilled birth care (Hernandez, Oliveira & Shirazian, 2017). Even though skilled birth care is identified as the ultimate approach for saving the lives of pregnant women and babies, in rural and underserved communities in developing

countries such as South Africa, women continue to die during pregnancy, labour and puerperium. In their study findings, Wilunda, Dall'Oglio and Scanagatta (2017) report the significant roles played by elderly women in the health of women and children among the rural communities. Elderly women are the custodians of cultural health education and they have knowledge of preventive health education such as advising pregnant women to reduce starch intake to prevent a caesarean section. Studies recognised that one of the approaches to increase the utilisation of elderly women in maternal care, particularly in the rural areas, is through the involvement or the linking of elderly women or traditional birth attendants (TBAs) with the formal health care institutions and nurturing collaborative practice with the elderly/TBAs. South Africa has implemented the traditional health practitioners Act (22 of 2007) in February 2013. The act gives the required recognition to traditional healers under the general name of traditional health practitioners (Louw, 2018). Furthermore, these traditional health practitioners are divided into four groups namely: diviners, herbalists, traditional surgeons and traditional birth attendants (Louw, 2018). However, there are limited studies in South Africa in the collaboration of traditional birth attendants with the formal health care system.

Much success has been made in affluent countries to improve maternal health, which has contributed to a decline in worldwide maternal mortality by 45% between the year 1990 and 2015 from an estimated 385 to 216 deaths per 100,000 live births (WHO, 2015). According to WHO (2016), one of the objectives of the fifth (5) Millennium Development Goal (MDG) was the reduction in maternal mortality rate by 75% in 2015 which failed to be reached. This shows that even if there is a decline, maternal mortality is still a problem globally.

Although the maternal mortality rate has declined in countries like Australia to 4 per 100 000 live birth, other developed countries as well, such as the United States of America (USA) are still experiencing a double increase in maternal death as reported by Central Intelligent Agency (CIA) (2018) as well as Shetty (2013).

A USA study conducted by Kuria (2016) revealed that primary causes of maternal death include sepsis, cardiac disease, haemorrhage, venous thromboembolism, and

hypertensive disorders. Similar to the Nigerian study which also revealed that direct or major contributory factors are haemorrhage, pre-eclampsia or eclampsia, septicaemia, ruptured uterus, and problems of unsafe abortions (Sageer, 2019). This means that contributory factors of maternal mortality in the USA and Nigeria are similar.

Maternal mortality is unacceptably high in sub-Saharan Africa, ranking among the highest in the world followed by Southern Asia (WHO, 2017). Apart from health-related contributory factors such as haemorrhage, hypertensive disorders, etc., there are other causes related to culture and traditions (Mogawane, Mothiba & Malema, 2015). In Ethiopia for instance, cultural and religious factors have been proven to contribute to maternal mortality such as female genital cutting (FGC) (Berha & Berhan, 2014). FGC, according to Berhan and Berhan (2014), is a traditional procedure of cutting or removing part of the woman's external genitals after birth. This practice increases the risk of postpartum haemorrhage in the country and beyond (Balachandran, Duvalla, Sultan & Thakar, 2018).

South Africa is no exception since this dire situation of high maternal mortality has produced a lot of responses to understand where and why such deaths are continuously increasing (WHO, 2018). A South African study conducted by Ngunyulu; Mulaudzi and Peu (2015) revealed that certain indigenous practices were reported responsible for certain complications that result in maternal mortality. Therefore, indigenous practices and beliefs cannot be underestimated since they shape people's lives and are passed from one generation to another to an extent that it becomes part of people's lives (Idang, 2015).

According to the African culture, when a woman is pregnant, there should be older women in the family who are the custodians of indigenous practices who take care of a woman (Hlatshwayo, 2017). In some cases, it is the mother-in-law who takes care of the woman from pregnancy, childbirth and postpartum stage. According to Ngunyulu, Mulaudzi and Peu (2016), old women prohibit pregnant women from booking antenatal care (ANC), reasons associated with this are preventive measures that once a woman interacts with other women at the health care facility, she may be subjected to the evil spirits that may

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harm the fetus. This study concludes that elderly women believe that the only way to protect pregnancy is through traditional healers and traditional herbs (Ngunyulu, Mulaudzi & Peu, 2016).

The study that was conducted in the Limpopo Province revealed that different traditional practices during pregnancy, childbirth and 42 days after childbirth still exist (Mogawane et al., 2015). Similarly, another study conducted that revealed that traditional practices are important in protecting the pregnancy (Aziato, Odai & Omenyo, 2016).

Studies on maternal mortality prevalence, contributory factors, knowledge and intervention have been conducted. However, there are limited studies on perspectives of elderly women (Custodians of indigenous practices) regarding maternal mortality amid the traditional practices. Therefore, this study focused on the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Limpopo Province since there are limited studies on the perspectives of elderly women.

1.3 PROBLEM STATEMENT

Maternal health care provision is still seen as the main challenge in developing countries, South Africa is no exception. Despite strategies and policies placed to reduce maternal mortality around the world, South Africa did not reach the fifth (5) millennium goal development in 2015. Even though the target for the reduction of maternal mortality was estimated to reach the Sustainable Development Goal target of 70 per 100 000 lives, South Africa could not reach the target by 2015 because women continue to die from childbirth complications. The agreement has been made through all health ministries globally, that the provision of quality clinical health services is essential given the high rates of maternal death which require reduction. Nevertheless, motherhood is something that most women desire to experience at a certain point in their lives. That being said, the normal, life-affirming process of pregnancy and delivery brings along severe risks of death, psychological issues and disability. Yearly, about 303,000 maternal deaths happen worldwide, resulting in a maternal mortality ratio (MMR) of about 520 per 100,000 per live

births (LB) (80% CI: 207-249) (WHO, 2018). Notwithstanding the availability of interventions instituted by the South African National Department of Health (NDoH), which comprise free maternal and child healthcare services, a substantial number of women do not reach out and utilise these services to avoid complications. Noteworthy, even though the country has the availability of free and accessible maternal and child health services, indigenous or traditional practices during pregnancy and postpartum are still being practised and they are of great concern.

The researcher as a professional nurse working in the maternity section witnessed several admissions of women at post-natal ward coming due to post-partum bleeding due to traditional procedures performed as remedies to treat *"GOKHONYA"* (this is a traditional practice of cutting the genitals of the woman after birth and cutting of the neck of the new-born) among others so that the neonate should not die, and such practices lead to complications that also bring maternal mortality. Furthermore, pregnant women possess restricted independence in decision-making to seek healthcare, negative cultural beliefs and practices, including lack of elderly/community participation in caring for pregnant women, and these factors have the potential to cause delays in pregnant women's need to seek appropriate care, thereby hindering rural women from participating fully in the safe motherhood initiatives (Gazi et al., 2018). All pregnant women should be made aware of the criticality of having access to maternal healthcare during pregnancy, delivery, and post-delivery, and prompt case findings and management for obstetric complications should aim to achieve the reduction of maternal mortality (WHO, 2019). It is against this narrative evidence that this study aimed at the investigation of the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages.

1.4 SIGNIFICANCE OF THE STUDY

This study is exclusive because though in numerous regions of the world, rural villages and communities have been involved in different ways to address various women health issues, no trace has been documented in the Vhembe district of Limpopo province, despite the impact of maternal mortality experienced in these rural communities. This is

the first study that focused on the perspectives of the elderly women regarding their participatory approach in a low resource setting in Limpopo province, tracing their cultural practices in terms of caring for a pregnant woman.

The significance of the study was based on the discussion under the following structures: policy, nursing education and practice.

Policy

The results of this study may help the policymakers/developers to have an idea of what to improve on the existing policies regarding maternal health. The improvements of the existing policies may benefit women because their risk of dying during pregnancy, childbirth and postpartum stage will be reduced.

Nursing education

Nursing education may benefit by finding more information regarding the contributory factors to maternal mortality amid the traditional practices. Therefore, nursing students will be more equipped and become better professional midwife.

Practice

Health care professionals may be aware of the perspectives of elderly women regarding factors contributing to maternal mortality. Therefore, they may gain knowledge for giving health education during pregnancy, childbirth and postpartum stage to reduce maternal mortality.

Community members

The perspectives of elderly women regarding factors contributing to maternal mortality that were investigated in this study may be translated into health education which may result in the prevention of maternal mortality and refraining from practices that may cause complications that lead to maternal mortality.

1.5 DELIMITATION

Delimitation of the study are choices that the researcher makes that should be mentioned and it describes the boundaries that have been set for the study. In this study, only elderly women from the age of 50 years and above in rural villages of the Vhembe District, Limpopo Province were selected to participate in the study.

1.6 PURPOSE OF THE STUDY

The purpose of this study was to determine the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of Vhembe District, Limpopo Province and the provision of recommendations to the National Department of Health (NDOH) and communities.

1.7 STUDY OBJECTIVES

- To determine perspectives of elderly women regarding factors contributing to maternal mortality in rural villages in the Vhembe District in South Africa

- To run factor analysis to determine major contributing factors to maternal mortality during traditional practices within rural villages of the Vhembe District, Limpopo province

1.8 DEFINITION OF TERMS

1.8.1 Elderly women

Elderly women are more regarded as a group of women who have attained menopause and have grandchildren (Eboiyehi, 2017). American Psychological Association (2009) has defined elderly women as women approaching or surpassing the life expectancy of human beings and is thus the end of the human life cycle. For this study, elderly women

referred to women who have attained menopause and have grandchildren, who are aged 50 years and above living in rural villages of the Vhembe District.

1.8.2 Maternal mortality

The dying of a woman during pregnancy or within 42 days after the termination of pregnancy, regardless of the duration and the site of the pregnancy, from any cause related to or provoked by the pregnancy or its management, but not from accidental or incidental causes (Chou, Tunçalp, Firoz, Barreix, Filippi, von Dadelszen, van den Broek, Cecatti & Say, 2016). Similarly, for this study, maternal mortality refers to the death of women during pregnancy and within 42 days of termination of pregnancy.

1.8.3 Traditional practices

Traditional practices are defined as superstitions such as making vows, animal sacrifices, using herbal remedies, to name a few and these traditional practices are passed from one generation to another. Traditional practices are inherited, established or customary pattern of thought, action or behaviour (Idang, 2015). According to Maluleke (2012), Traditional cultural practices refer to the values and beliefs that have been held by members of a community for years, passing from one generation to another and differ according to the social grouping. These practices and beliefs are believed to be beneficial. For this study, traditional practices refer to the inherited behaviours/superstitions by elderly women during pregnancy, childbirth and 42 days after childbirth.

1.8.4. Contributory factors

Contributing factors are scientifically established factors that directly affect the level of a determinant (Turnock, 2014). In this study contributory factors refer to all factors that are indicated, linked and associated with maternal mortality.

1.9 RESEARCH DESIGN AND METHODS

A research methodology is the study design and methods that the researcher utilised to obtain the research answers to a research question (Grove & Gray, 2019). According to Mukherjee (2019), research methodology is similar to a strategy surrounding the principles, processes, procedures and techniques to seek a resolution to an identified research problem. The research methodology of this study is outlined briefly in this chapter; however, it is discussed in detail in chapter 3.

1.9.1 Research design

The researcher used a cross-sectional descriptive design to describe the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District, Limpopo Province.

1.9.2 Population

The population is the whole group of individuals or objects that is of interest to the researcher; meaning that this is the criteria that the researcher is interested in studying (Brink, Van der Walt & Van Rensburg, 2017). The population for this study consisted of all elderly women living in rural villages of the Vhembe District, in Limpopo Province.

1.9.3 Study Setting

The current study was conducted in the rural villages of Vhembe district, Limpopo province where the economic conditions remains a challenge due to high levels of unemployment and where most rural households are affected by poverty and unemployment. The distribution of the villages around Limpopo province is shown on the map in chapter 3.

1.9.4 Sampling design and sample size

The cluster sampling method was utilised in this research and the sample size was calculated using the Raosoft sample size calculator from the estimated population of elderly women in the Vhembe district. The sample size was found to be 374.

1.9.5 Data collection

Data collection is the accurate gathering of information related to the research purpose or specific objectives, question or hypothesis of a study (Grove & Gray, 2019). The researcher made use of the researcher/research assistant-administered completed questionnaires to investigate the perspectives of elderly women regarding factors contributing to maternal mortality.

1.9.6 Data analysis

The SPSS Version 26.0 software program was used to analyse the data and descriptive statistics were presented through frequencies, mean, standard deviations and percentages to present the data. Factor analysis was run to determine the factors contributing to maternal mortality according to the perspectives of elderly women.

1.9.7 Reliability and validity

Reliability is when the measuring instrument yields consistent results in the study (Grove & Gray, 2019). Reliability in this study is detailed in chapter 3. The validity of an instrument is a determination of how sound the instrument measures the abstract concept being examined (Grove & Gray, 2019). Therefore, two types of validity were adopted by the researcher for this study and they are content validity and face validity.

1.10 ETHICAL CONSIDERATIONS

According to Grove and Gray (2019), ethics are sets of moral principles that control or influence an individual's behaviour. The respondents will be respected by the researcher throughout the study. A variety of ethics will be observed by the researcher. The researcher ensured that there were honesty and integrity during the study. The observation of access to confidentiality, informed consent and ethical clearance was considered (*See Chapter 3*)

1.11 OUTLINE OF THE STUDY

This study incorporated five chapters as explained below:

Chapter 1: Overview of the study:

The researcher introduced the research topic, outlined the background and the research problem statement, aims, objectives, significance of the study, definitions of key terms, research methodology, ethical consideration, validity and reliability of the study.

Chapter 2: Literature review:

In this chapter, the researcher gave a detailed review of the literature which was published using a systematic review related to the topic under study.

Chapter 3: Research design and methodology:

This chapter outlined the well explained research methodology which included the research design, population, sampling method, data collection, data analysis procedures and ethical considerations.

Chapter 4: Data presentation and Analysis:

This chapter presented the findings of the study, interpreted them according to the objectives of the study that were set.

Chapter 5: Discussion, Conclusions and recommendations:

This chapter interprets the data that is analysed in chapter 4 according to the set objectives and discusses them in relation to the findings of the studies. The chapter also reports the conclusions of the study about the set objectives, outlines limitations and makes recommendations based on the results of the research.

1.12 SUMMARY

This chapter presents the overview of the study which include the background of the topic perspectives of elderly women regarding factors contributing to maternal mortality as well as the problem statement. The aim of the study and the study objectives were also discussed in this chapter, including the significance of the study. This chapter further presented the delimitations of the study. Definitions of the key concepts and ethical consideration were also part of this chapter. The following chapter presents the literature review.

CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

The previous chapter outlined the background of the study as well as the problem statement. In this chapter, the researcher provides a review of literature relevant to the factors contributing to maternal mortality. A literature review is a descriptive summary of what has been researched before that is relevant to the phenomenon of interest in this study. According to Skills for Learning (2018), the literature review is a comprehensive review of the literature available for any given research question. Additionally, it is a summary, analysis and evaluation of the literature and a description of what research has already been conducted for a research area (Skills for learning, 2018). A literature review can also help to provide an overview of areas in which the undertaken research is bringing in a different view. Snyder (2019) states that a literature review is an outstanding way of integrating research results to show evidence on a meta-level and to uncover areas in which more research is needed, which is a critical component of creating theoretical frameworks and building conceptual models.

2.2 Scope of the Literature review

This chapter will provide the background information and the review of literature related to factors contributing to maternal mortality in Africa. Thus, the relevant literature from local, national and continental (African) sources providing evidence regarding factors contributing to maternal mortality will be reviewed. A critical synthesis of literature will be undertaken to make informed inferences related to factors contributing to maternal mortality.

There are different types of literature reviews and these include *traditional/narrative*, *scoping*, *comprehensive*, *argumentative*, *integrative* and *systematic* literature review.

Given the wide variety of available types that one can select from, the researcher opted for a systematic review, given its strength based on the systematic process incorporated within it. According to Cruz-Benito (2016), a systematic literature review is a type of literature review that collects and critically analyses multiple research studies/papers through a systematic process. The purpose of the systematic literature review is to provide a comprehensive summary of the available literature relevant to the studied phenomenon (Cruz-Benito, 2016). There are two types of systematic review, namely, meta-analysis and meta-synthesis. The researcher employed meta-synthesis because it is a systematic review type that uses non-statistical review methods to analyse and synthesize both quantitative and qualitative research studies to locate common elements, themes, and core similarities to build an understandable picture of a phenomenon under study, theory and even develop new conceptualizations. Therefore, in the end, the study will provide a critical analysis, synthesis, development of an argument in a meaningful way and identification of gaps in terms of factors contributing to maternal mortality in the African continent.

Furthermore, according to Martinic, Pieper, Glatt & Puljak (2019), a systematic review is a review that comprises the following:

> "Research question
> Sources that were searched, with a reproducible search strategy (naming of databases, naming of search platforms/engines, search date and complete search strategy)
> Inclusion and exclusion criteria
> Selection (screening) methods
> Critically appraises and reports the quality/risk of bias of the included studies
> Information about data analysis and synthesis that allow the reproducibility of the results"

In a nutshell, the systematic review of this study will provide an objective and a thorough summary of available and relevant research evidence in terms of factors contributing to maternal mortality.

2.3   Purpose of the Literature Review

The universal purpose of conducting a systematic literature review is to orientate the researcher on what is already known and available regarding their phenomenon of interest as well as the provision of up-to-date information, thus the status quo regarding the topic under study (Tichapondwa, 2013). Systematic literature review further provides proper justification of the intended study. Thus, a systematic literature review induces further information related to the problem as it strengthens the identified problem with evidence-based gaps identification.

2.4   Background to the Systematic Review

Maternal mortality has emerged as a global crisis. In African countries, maternal mortality has been recorded by (WHO, 2019) to be having high maternal mortality despite all the interventions put in place. South Africa is one of the African countries which had a decline in maternal mortality, however, it has not reached the target yet. The target was emphasized by WHO (2019) stating that "*reducing the global MMR to less than 70 per 100 000 births, with no country having a maternal mortality rate of more than twice the global average*". Moodley, Fawcus & Pattinson (2018) reported that South Africa has a decline in maternal mortality, however, deaths owing to some complications that lead to maternal mortality remain stubbornly high. Multiple studies have been conducted to identify factors contributing to maternal mortality in different African countries including South Africa, however, maternal mortality continues to rise (WHO, 2019). Traditional practices have been reported in an African study to be one of the factors that delay pregnant women from seeking care, hence, these leads to maternal mortality (Ariyo, 2017). This means that there are certain cultural beliefs that when practised may lead to maternal mortality.

The purpose of this systematic review is to provide a clear or complete picture of traditional practices/factors that have been recognized to contribute to maternal mortality, specifically in academic articles of studies conducted in Africa. Evidently, no systematic review has been published to summarize the developing knowledge of research regarding this topic, and specifically in Africa. Therefore, the researcher conducted this systematic review of available data on traditional practices/ factors

(traditional birth attendants) contributing to maternal mortality in Africa and identified factors that were outlined by the mentioned studies.

2.5 Review question

The review question was:

"What are the traditional practices/factors contributing to maternal mortality in Africa?"

2.6 Review Search Methods and Mechanisms

The review search methods and mechanisms for this literature search included the literature search methods, keywords that were used for the search, the inclusion criteria for the searched articles, study selection, data abstraction, characteristics of the included articles and appraisal of the included study.

2.6.1 Literature Search Methods

The search methods included PUBMED, Google Scholar, National EDT, EBSCOHost and Science Direct.

2.6.2 Keywords Used for the Search

Throughout the literature review, the keywords used for the search included: traditional practices, factors, contributing, maternal mortality, Africa. The use of the keywords is described following the search engine used and indicated below:

➢ *PUBMED*

Search keywords: traditional [All Fields] AND practice* [All Fields] AND factors [All Fields] AND contribut* [All Fields] AND maternal [All Fields] AND mortality [All Fields] AND Africa [All Fields]

➢ *GOOGLE SCHOLAR*

Search keywords: Traditional Practice*/Factors contribut* to maternal mortality in Africa

➢ **NATIONAL EDT**

Search keywords: Traditional Practice*/Factors contribut* to maternal mortality in Africa

➢ **EBSCOhost**

Search keywords: Traditional Practice*/Factors contribut* to maternal mortality in Africa

➢ **SCIENCE DIRECT**

Search keywords: Traditional Practice*/Factors contribut* to maternal mortality in Africa.

2.6.3 Inclusion Criteria for Searched Articles

The inclusion criteria of this review were based on the type of participants and type of study. Type of study: the review incorporated only articles and literature review providing traditional factors/ practices that are contributing to maternal mortality in Africa and which used qualitative and quantitative methods; articles that were published within 2011and 2020 (10 years); articles that were published in English; articles that were accessible and were researched on humans. Type of participant: pregnant women and women within 42 days after childbirth.

2.6.4 Study Selection

The study selection was conducted through the use of the PRISMA flow diagram of 2009 to identify data included and excluded, and their rationale for exclusion. Initially, all studies were screened using their titles and abstracts, these include PubMed (n=23); EBSCOHOST (n=227); National EDT (n=129), ScienceDirect (n=1922) and Google Scholar (n=18400) to a total of 20572. Furthermore, 2536 duplicates were removed from the list leaving a total of 18036. Then the studies' abstract and topics were reviewed, and 7632 studies were excluded. Of 10404 studies, which were subjected to inclusion criteria which consisted of a year of publication from 2010 to 2019, written in English and within the African continent, 10383 studies were not included. The full texts of the 21 selected studies were reviewed and 7 studies met the

eligibility criteria and were included in this systematic review (see PRISMA Flow Chart in Figure 2.1).
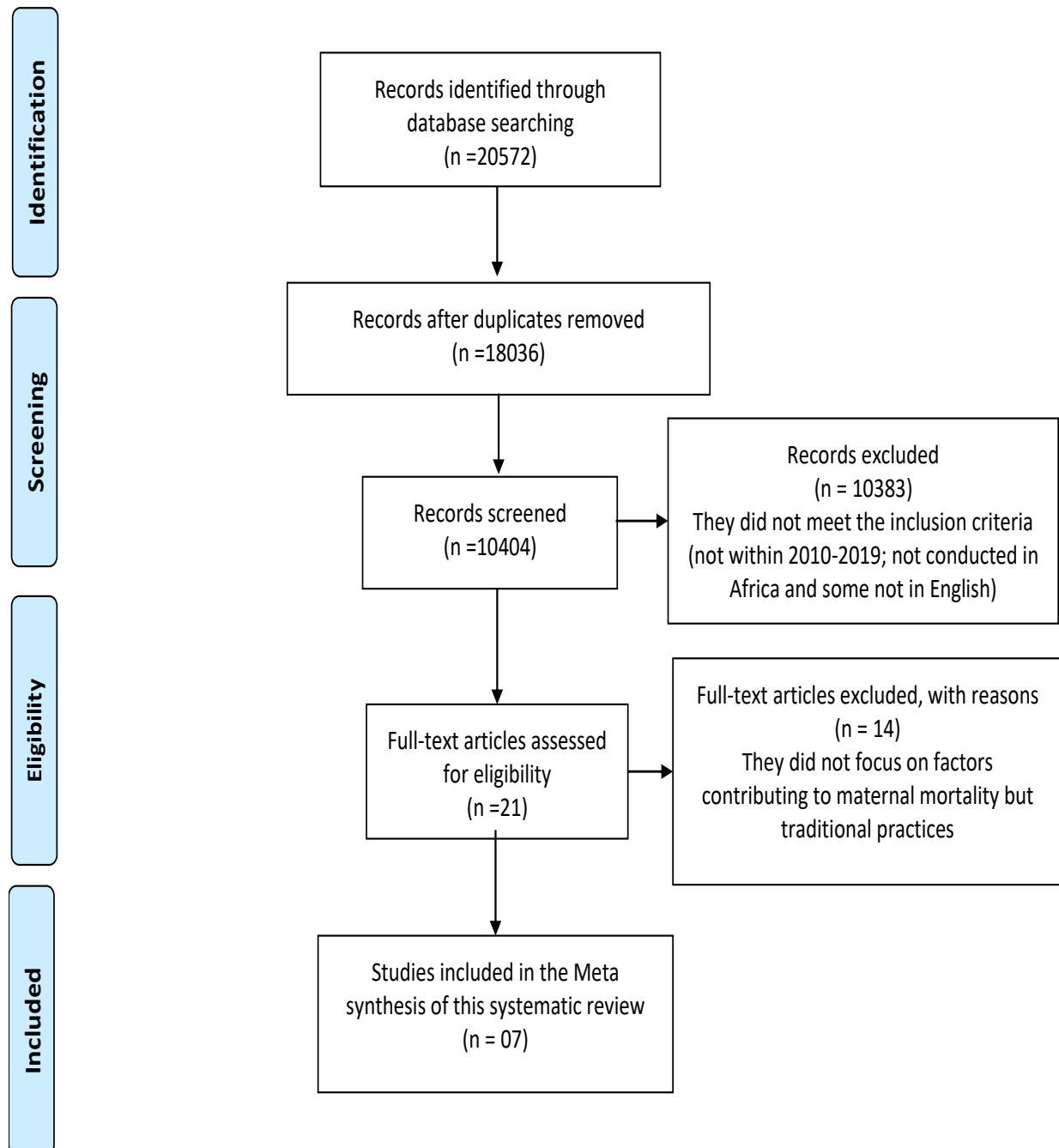
Figure 2.1: PRISMA flow chart

All studies selected did not require consent from the authors for use as they were accessible publicly.

2.6.5. Data abstraction

The researcher extracted data and compared the information that was collected. All the studies (articles and literature reviews) that met the inclusion criteria, details about the following were retrieved: the author of the study, year of publication, where the study was conducted, objectives of the study, study population, documented outcomes and limitations of the studies. Refer to Table 2.1 for the characteristics of the study included in the review.

2.6.6 Characteristics of included studies

The characteristics of the studies that were included were well described in the table below and they consisted of the following: author, year of publication, the country where the study was conducted, study design, population, documented outcomes and limitations (See Table 2.1).

Table 2.1: Characteristics of the selected studies

Author	Year	country	Objectives of the article	Study design	Population	Documented outcomes	Limitations
Kea et.al	2018	Ethiopia	"To identify factors influencing the use of maternal health services at the primary health care unit (PHCU) level in rural communities in Sidama zone, south Ethiopia To design quality improvement interventions."	Explorative qualitative study	Community members (women, male, traditional birth attendants, local kebele administrators). Health professionals and health extension workers	"The finding in this study revealed that traditional and cultural beliefs, a distance of healthcare facilities, the experience of previous delivery and trust in TBAs are the key factors affecting accessing quality care."	"Due to the recent ban on TBAs not to conduct delivery services, they were often reluctant to give detailed information."
Bucher et.al	2016	Kenya	"To ascertain the practices of traditional birth attendants in our catchment area. To help inform conversations regarding the roles that traditional birth attendants"	Descriptive study	Traditional Birth Attendants (TBAs)	"Results of this study reported a positive relationship between the TBAs and health care facilities." "It also reported potentially harmful practices that might lead to maternal mortality."	"The findings of this study were based on self-report. This study was a descriptive study of a small sample of traditional birth attendants in western Kenya. Therefore, the results might not be wholly representative of TBAs in other parts of Kenya or other global regions."

Berhan & Berhan	2014	Ethiopia	"To grossly estimate the effect of selected socioeconomic and cultural factors on maternal mortality,"	Literature review	"Electronic databases of Ethiopian Central Statistics Agency, MEASURE DHS, World Health Organization and PUBMED."	"This study revealed that limited use of contraceptives in Ethiopia; harmful traditional practices, low income and adult literacy rate are the reasons for persistently High Maternal and Perinatal Mortalities in Ethiopia."
Abubakar; Yohanna & Zubairu	2018	Nigeria	"To examine cultural perceptions influencing obstetric complications among women who delivered at Yusuf Dantsoho Memorial Hospital, Tudun-Wada, Kaduna".	Cross-sectional quantitative study	"The population of this study were women who delivered at Yusuf Dantsoho Memorial Hospital, Tudun-Wada, Kaduna in April 2014."	"The findings in this study are similar to the global report of common obstetric complications." "However, other cultural factors were contributing to the complications by delaying women from seeking health care".

Sibiya et.al	2018	South Africa	"To describe how ANC services were accessed and utilised by pregnant women from the KwaMkhizwana rural community." "To explore the factors that influenced the access to ANC services by pregnant women from the KwaMkhizwana rural community." "To explore the factors that influenced the utilisation of ANC services by pregnant women from the KwaMkhizwana rural community".	The qualitative design used was exploratory, descriptive and contextual in nature.	"The population consisted of pregnant women residing within this rural community and all categories of nurses working in the three Health care facilities in the area."	"The majority of the study participants who were pregnant women reported limited access to health care."	"The research was conducted on pregnant women who were 18 years and above." "Some pregnant women could not participate as most of them did not use the available health care facilities in the area."

Muhwava, Morojele & London	2016	South Africa	"To examine the association of psychosocial factors with early initiation of ANC and adequate frequency of attendance of ANC among women in South Africa"	Cross-sectional quantitative research design	The population of this study were only women who had ever been pregnant were eligible	There were no significant associations between adequate ANC attendance and the psychosocial factors in the urban site.	The use of a pre-existing data set limited the study to the questionnaire design which was used in the data collection. Although the frequency of ANC attendance was explored, our study did not examine the frequency of timely ANC attendance.
Marchie	2012	Nigeria	"To investigate the socio-cultural factors that contribute to Maternal Mortality in Edo South Senatorial District"	A descriptive survey method was used for this study	The population was made up of all females of productive age who were married, all health care workers and all relatives of women who died in pregnancy, labour and puerperium.	The study reported that cultural and traditional factors have tendencies to increase the risks of maternal death. Harmful traditional practices such as female genital mutilation were also reported to be the socio-cultural factors contributing to maternal mortality	

2.6.7 Appraisal of included studies

Only the full text of the selected studies that met the inclusion criteria was subjected to quality appraisal (Table 2.2). All the studies included in the review were systematically and carefully examined using CASP (Critical Appraisal Skill Programme) to assess the trustworthiness, value and relevance of those articles.

Table 2.2: Appraisal of studies using CASP

Authors and year	Study Design	Assessment of Studies
Marchie (2012)	Descriptive survey Method	80%
Muhwava, Morojele & London (2016)	Cross-sectional quantitative method	70%
Sibiya et.al (2018)	Qualitative, exploratory, descriptive design	69%
Berhan & Berhan (2014)	Literature review	60%
Bucher et.al (2016)	Descriptive study	85%
Kea et.al (2018)	Explorative qualitative study	90%
Abubakar; Yohanna & Zubairu (2018)	Cross-sectional quantitative study	70%

2.7 RESULTS

From the studies included in this review, it was found that most of the women choose not to visit the health institutions, rather TBAs which is a high risk leading to complications that can cause maternal mortality. This revealed that other factors are contributing to the choice of healthcare by women. From the articles included, six (6) themes and twenty-three (23) sub-themes emerged regarding traditional factors/practices that contribute to

maternal mortality. The themes that emerged included culturally related factors, pregnant women related factors, health system factors, choice of care and traditional birth attendants related factors.

2.7.1 Perceptions held by community members regarding maternal health

Among the reviewed studies, it has been revealed that the perceptions regarding maternal health are influenced by different factors which include lack of knowledge (n=7,100%), traditional birth attendance experience (n=3,43%), previous childbirth experience (n=3,43%), perceptions of risk (n=1, 14%) and facility-based experiences (n=2, 29%). The major factor that affects the perceptions of maternal mortality among community members was found to be a lack of knowledge. Bucher et.al, (2016); Kea et.al, (2018); Muhwava et al., (2016); Sibiya et al., (2018); Marchie, (2012); Abubakar et al., (2018) and Berhan and Berhan (2014) reported that the lack of knowledge regarding the risk factors and complications can lead to maternal mortality that has the potential to results in most of the women not booking early for Antenatal services and also choose to deliver safely in the health care facilities. In a study that was conducted by Kea (2018), lack of knowledge has been reported as the first delay to access maternal health and most of the women who have delivered at home wouldn't deliver at home if they knew the benefits associated with maternal health in health facilities.

Most women's perceptions regarding maternal health through the studies that were reviewed have been reported to be affected by the previous experiences during pregnancy, their perceptions regarding the risks associated with maternal mortality and the previous experiences with the health care facilities services during childbirth (Bucher et.al, 2016; Kea et.al, 2018; Muhwava et al., 2016). According to Kea (2018), some women who encountered complications during delivery at the healthcare facilities and were assisted with passion, consider visiting the healthcare facilities during the period of pregnancy, childbirth and after delivery. However, other women had a bad experience with previous childbirth at the healthcare facilities due to healthcare system factors such as the bad attitude of health care practitioners, the distance where the healthcare facilities are situated and lack of privacy which prompt them to prefer home delivery to health care facilities.

Lack of women's decision making towards their pregnancy with the previous pregnancy, which is influenced by culture is also one of the factors that affect the perceptions regarding maternal health. Studies conducted by Kea, (2018) and Marchie, (2012) revealed that women are never allowed to decide during pregnancy, childbirth and after delivery. However, the custodians of culture (the elderly in the family) make a decision based on their culture and traditions. Different practices have been documented that hinder women from attending antenatal care services in a way of avoiding risks that can lead to maternal mortality (Kea, 2018).

2.7.2 Culture related factors

Early marriage, genital mutilation, limited women power in decision making, cultural beliefs and harmful traditional practices were identified to be the factors influencing maternal mortality under cultural factors (Muhwava et al., 2016; Sibiya et al., 2018 & Aschenaki et al., 2018). It was revealed that there are traditional practices or culturally related factors that contribute to complications that lead to maternal mortality. Women in this context are participants within the included studies who reported that it is very hard for them to make decisions to visit the healthcare facilities due to culture as they are not allowed to make decisions (Marchie, 2012; Kea et al., 2018; Berhan & Berhan, 2014). The main factor in this theme was limited women power in decision making (n=3, 43%) which means that elders are responsible for making decisions for pregnant women according to culture (Aschenaki et al., 2018; Abubakar et al., 2018). Therefore, elderly women hold power over the outcomes of ANC attendance.

2.7.3 Pregnant women related factors

In this theme, the sub-themes that were identified were: late ANC booking, frequency of ANC attendance, unwanted pregnancy and lack of knowledge (Muhwava et al., 2016; Sibiya et al., 2018; Aschenaki et al., 2018). The studies revealed that women who were married attended ANC early compared to those who were unmarried. Moreover, women who were employed attended most frequently ANC compared to the unemployed women (Muhwava et al., 2016). Furthermore, it was also revealed that a high number of women

attending ANC most frequently were women with wanted pregnancy than an unwanted pregnancy.

Pregnant women in the studies that were included in the review did not attend ANC in time and some did not attend ANC at all. Therefore, poor attendance of ANC or the late booking may prevent the women from being diagnosed with early pregnancy conditions that may lead to complications that can cause maternal mortality (Muhwava et al., 2016; Sibiya et al., 2018; Aschenaki et al., 2018). Factors that affected late booking were the unprofessional attitude of healthcare practitioners, unwanted pregnancy and lack of knowledge about the importance of attending antenatal clinics.

2.7.4 Health care system factors

The other factors that were revealed to contributing to maternal mortality were found to be the healthcare system factors which included distance where the healthcare facilities are situated, shortage of resources which include also human resources, provision of services only within the allocated hours and lack of privacy in the healthcare facilities (Aschenaki et al., 2018; Marchie, 2012; Sibiya et al., 2018). One of the factors that affected pregnant women from visiting the health care facility was lack of privacy which they reported as being better to deliver in the presence of their husband and relatives than health workers. Healthcare facilities are situated far from where pregnant women live, therefore, due to lack of transportation, there is poor attendance/ visits at the healthcare facility (Marchie, 2012; Sibiya et al., 2018). The literature revealed that women are hindered to attend the health care facilities because sometimes when they go to attend ANC, there are no health care providers to assist them or sometimes there is no medical equipment to give them proper care (Aschenaki et al., 2018 and Sibiya et al., 2018).

2.7.5 Choice of care

Pregnant women in this context mostly choose not to visit the health care facilities and choose to be assisted by the TBA's (Muhwava et al., 2016; Aschenaki et al., 2018; Marchie, 2012; Sibiya et al., 2018 and Abubakar et al., 2018). Various factors affect the choice of women which were found in the included studies: the attitude of healthcare

practitioners in the healthcare facilities and past birth experiences. The main factor in this theme was found to be past birth experiences in the healthcare facilities (n=5, 71%) (Muhwava et al., 2016; Aschenaki et al., 2018; Marchie, 2012; Sibiya et al., 2018 and Abubakar et al., 2018). The women in the included studies revealed that the horrific experiences that they had regarding the healthcare facility influenced them from not choosing the healthcare facilities during pregnancy.

2.7.6 Traditional Birth Attendants related factors

Factors revealed under this theme were poor referral practices for obstetric complications and poor relationship with the local health care team (Bucher et al., 2016). This means that there are no collaborations between the healthcare facilities and the traditional birth attendants which aggravate the complications that may lead to maternal mortality because there is a lack of referrals when there is an obstetric complication. Traditional birth attendants had reported that in case of complications such as prolonged labour, obstructed labour, retained placenta and maternal bleeding, there are traditional substances that are applied in order to manage the complication instead of referring the women to a health care facility (Bucher et al., 2016). It has also been revealed that there is a poor relationship between the TBA's and the local healthcare facilities which may also affect the lack of referrals when complications arise (Bucher et al., 2016).

The themes were conceptualised hereunder into a framework that provides the interrelationship triad between the pregnant women, the health care facility and the traditional birth attendants. The review provided that both directions of the relationship triad have contributory factors which are at different levels (See Figure 2.2).

Health Care Facility Related factors
- Geographical situation of the health care facilities
- Shortage of resources (Human and Material)
- Hours of operation

Health Care Facility

Cultural Norms and Practices
- Early Marriage
- Genital mutilation
- Limited women power in decision-making
- Cultural beliefs
- Harmful traditional practices

Pregnant women

Traditional birth attendance factors
- Poor referral practices for obstetric complications
- New-born practices
- Poor relationship with the local health care team

Pregnant Women Related Factors
- Late ANC Booking
- Frequency of ANC attendance
- Unwanted pregnancy
- Lack of knowledge
- Choice of care

Traditional Birth Attendants

Perceptions held by community members regarding maternal health
- Lack of knowledge
- Traditional birth attendance experience
- Facility-based experiences
- Previous childbirth experience
- Perceptions of risk

Figure 2.2: Conceptual map of the systematic review results

2.8. DISCUSSION

In this systematic review, five (5) major factors that influence maternal mortality in Africa emerged and these were identified as past birth delivery, late booking, lack of transportation to the facility, attitude of healthcare professionals and traditional practices. The major factor that leads to complications causing maternal mortality according to the included studies was traditional practices. It has been revealed that TBA's do not refer

pregnant women to healthcare facilities for further management. However, they report to the traditional authorities about the complications (Bucher et al., 2016).

Although maternal mortality is declining in developed countries, it remains unexpectedly high in rural communities. Various factors have been found to contribute to maternal mortality and in this systematic review, the above-mentioned factors were found as major factors that contribute to complications that cause maternal mortality. However, cultural norms and practices are the umbrellas to all the factors that contribute to maternal mortality. The included studies revealed that culture plays a major role in a pregnant woman. For instance, some women do not start to attend ANC because the culture does not allow them to be seen during pregnancy and this is believed to prevent witchcraft and protect the baby from dying. Several practices hinder women from reaching out to healthcare facilities during this period.

2.9 IDENTIFIED GAPS

The included studies revealed that culture plays a major role, especially in a pregnant woman, and the custodians of this culture are mostly elderly people. According to WHO (2019), early booking is one of the measures in place to prevent complications that can lead to maternal mortality. However, based on the included studies, some women are not allowed to go out when they are pregnant, to prevent witchcraft. Therefore, there is a need for a study to investigate the perspectives of elderly women (custodians of culture) regarding factors contributing to maternal mortality.

2.10 RECOMMENDATIONS

This systematic review has revealed certain factors that contribute to maternal mortality. However, the results of this systematic review cannot be generalised to other countries. Therefore, there should be a study conducted to investigate the perspectives of culture custodians (elderly women) and the factors contributing to maternal mortality.

2.11 CONCLUSION OF THE SYSTEMATIC REVIEW

Maternal mortality is a very crucial issue worldwide. Due to certain factors, the MDG of 38 deaths per 10000 live births, was not met in 2015. This systematic review highlights factors that contribute to maternal mortality in Africa. The interventions that are being established are aimed at reducing this problem and are also based on patient-reported factors that hinder visit to healthcare facilities for ANC or maternal check-ups to prevent complications that can cause maternal mortality. However, there still seems to be a gap regarding the compliance required in other parts of the world, especially rural areas due to different traditional factors. It is believed that from the information provided in this review, interventions can be drawn, and this will help to prevent the complications that lead to maternal mortality.

2.12 CONCEPTUAL FRAMEWORK

This study was guided by Kroeger's Determinant Model (KDM) (1983) as a conceptual framework. This model suggests that the patient's choice of treatment is influenced by various factors such as characteristics of the patient/ household member taking care of the patient, health care facilities, and those of the illness. However, in this study, the factors that influence the choice of treatment were characteristics of elderly women, characteristics of illness and characteristics of a healthcare facility. All these factors affected the choice of treatment that can lead to maternal mortality.

2.12.1 Characteristics of elderly women

During pregnancy, elderly women play a huge role in pregnant women as it is believed that they are the custodians of cultural norms and practices. The characteristics of elderly women such as age, ethnicity, level of education, socio-economic level (status) and pregnancy and childbirth experiences can affect the pregnant woman's choice of treatment. The age, education and the location where the elderly woman resides, determines the level of advice she may give to a pregnant woman, as well as the health care they provide to pregnant women.

2.12.2 Characteristics of healthcare facilities

Certain factors affect the choice of treatment of pregnant women at the healthcare facility, and for this study, factors that affected the choice of treatment of pregnant women were distance where the healthcare facilities are located, cost, the attitude of healthcare practitioners, long ques and quality of care.

2.12.3 Characteristics of illness

The type of illness, the severity of illness, ethology of illness (supernatural powers), length of illness and expected benefits of treatment can also affect the choice of treatment which is either self-medication, traditional healers or healthcare facilities. It was and has been an African nature for a pregnant woman to be taken care of at home by elderly women/ traditional healers from pregnancy, during and after childbirth. This has been a norm that had been carried through in most rural areas given the strength of traditional practices.

However, given the civilization and the introduction of western medicine, most of these practices have been discouraged with the introduction of western maternal health services which include antenatal, perinatal and postnatal care services. Despite the introduction of maternal health services within the PHC and their progress in improving maternal health outcomes, there are still women who prefer utilizing the traditional maternal health practices and some of these practices result in complications that cause maternal mortality. Therefore, Kroeger's determinant Model characteristics that influence the patient's choice of medication was used as perspectives of elderly women regarding factors contributing to maternal mortality.

Figure 2.3: Kroeger's determinant Model Conceptual framework

2.13 SUMMARY

This chapter presented the literature review which was conducted through a systematic review using meta-synthesis because it is a systematic review type that uses non-statistical review. The systematic review included research question, sources that were searched, with a reproducible search strategy (naming of databases, naming of search platforms/engines, search date and complete search strategy), inclusion and exclusion

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criteria, selection (screening) methods, critically appraises and reports the quality/risk of bias of the included studies and information about data analysis and synthesis that allows the reproducibility of the results. The chapter also described the conceptual framework that guided this study.

CHAPTER 3

RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter describes the procedures and methods that were utilised when undertaking the study. This chapter's discussion is focusing on the study approach, study design, study setting, study population, sample and sampling techniques, data collection methods, validity and reliability of research instruments and data collection procedures, data analysis procedures as well as ethical considerations.

3.2 STUDY APPROACH: QUANTITATIVE APPROACH

A quantitative approach is a research strategy that emphasizes quantification in the collection and analysis of data. According to Payne and Payne (2004), quantitative methods which typically use a deductive logic approach pursue consistencies in human lives through the disentanglement of the social world into the practical components termed variables that can be denoted statistically as frequencies or percentage, whose relations with one another can be explored using statistical procedures, and accessed using the researcher-introduced stimuli and systematic dimension. Leavy (2017) further described quantitative research as an approach characterized by deductive methods of the investigation procedure that is aimed at verifying, validating, or offering credibility to currently available theories. Furthermore, the principles underlying the quantitative research approach comprise neutrality, objectivity, and the attainment of a considerable scope of knowledge. This approach is usually suitable when the researchers' principal drive is to explain, describe or evaluate a phenomenon.

The quantitative research approach helps the researcher to explore the answers to the questions starting with how many, how much and to what extent (Rahman, 2017).

In this study, a quantitative research approach was utilised by the researcher because of its ability to generalize findings to a whole population or broader population (Rahman, 2017).

3.2.1 STUDY DESIGN: CROSS-SECTIONAL DESCRIPTIVE DESIGN

A research design is a blueprint for the conduct of the study that maximizes control over factors that could interfere with the study's desired outcome and it is also a comprehensive plan for data collection in a research project (Grove & Gray, 2019). The researcher in this study made use of the cross-sectional descriptive design to describe the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District, Limpopo Province. A cross-sectional descriptive study is a kind of descriptive study that is suitable for assessing the exposures as well as the health outcomes in a specified population group at one point in time (Polit & Beck, 2017). According to Creswell (2014), the cross-sectional design provides the quantitative or numeric description results of a particular population by studying a potion/ sample of that population.

The researcher chose the cross-sectional descriptive design because of its ability to collect data at a single point in time from elderly women in rural villages of the Vhembe district. Additionally, given that the study is descriptive, the researcher observed, described and documented the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District, Limpopo Province (Burns & Grove, 2013). Equally, Hemed (2015) further highlighted that a cross-sectional descriptive study design encompasses the collection of data at one point in time. Furthermore, the researcher employed the cross-sectional descriptive design given its advantage to allow the researcher the chance to investigate several variables, outcomes and exposures concurrently. Thus, the design permits numerous variables to be accessed concurrently, and this has the potential to increase the accurateness of an investigation on the set research purpose within the specific population group which in this case is the elderly women.

3.3 STUDY SETTING

Vhembe is one of the five districts of the Limpopo Province in South Africa and covers an area of 25,597.42 km². It is the northernmost district of the country and shares its northern border with Beitbridge District in Matabeleland South, Zimbabwe. Vhembe consist of all territories that were part of the former Venda Bantustan, however, two large densely populated districts of the former Tsonga homeland of Gazankulu, Hlanganani and Malamulele were also incorporated into Vhembe, hence the ethnic diversity of the district (Stats SA, 2016). These districts are largely settled in rural areas, with women in the majority and most people are under the age of 20 years. It is extremely difficult and costly to improve levels of service delivery in these districts because of low population density.

Economic conditions remain a challenge due to the high level of unemployment, hence most rural households in the Vhembe district are affected by poverty and unemployment. According to Stats SA (2016), Social conditions have generally improved especially in the Vhembe District. The majority of people in the Vhembe District have access to clean piped water and have flush toilets. Vhembe district consists of four municipalities which are Thulamela, Musina, Makhado and Collins Chabane. The Collins Chabane Local Municipality is a Category B municipality within the Vhembe District in the far north of the Limpopo Province. This district municipality shares borders with Musina in the north, Collins Chabane Municipality in the Southeast, Mopani District in the south, and Makhado in the west.

The Makhado Local Municipality is a Category B municipality situated within the Vhembe District in the Limpopo Province. It borders with Musina in the north, Greater Giyani in the south (Mopani District), Thulamela in the east, and Molemole in the west (Capricorn District). It is one of four municipalities in the district, making up almost a third of its geographical area. The Musina Local Municipality is a Category B municipality located in the Vhembe District of the Limpopo Province. It is bordered by Zimbabwe in the north, Makhado and Thulamela in the south, Mozambique in the east, and the Capricorn District in the west. The Thulamela Local Municipality is a Category B municipality situated within the Vhembe District in the far north of the Limpopo Province. The Kruger National Park forms the boundary in the east while sharing the border with Makhado in the south and south-west. Thulamela Municipality and Musina

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municipality were selected for the study which was conducted in the sampled villages of Vhembe district, Limpopo province in Thulamela and Musina Municipalities.
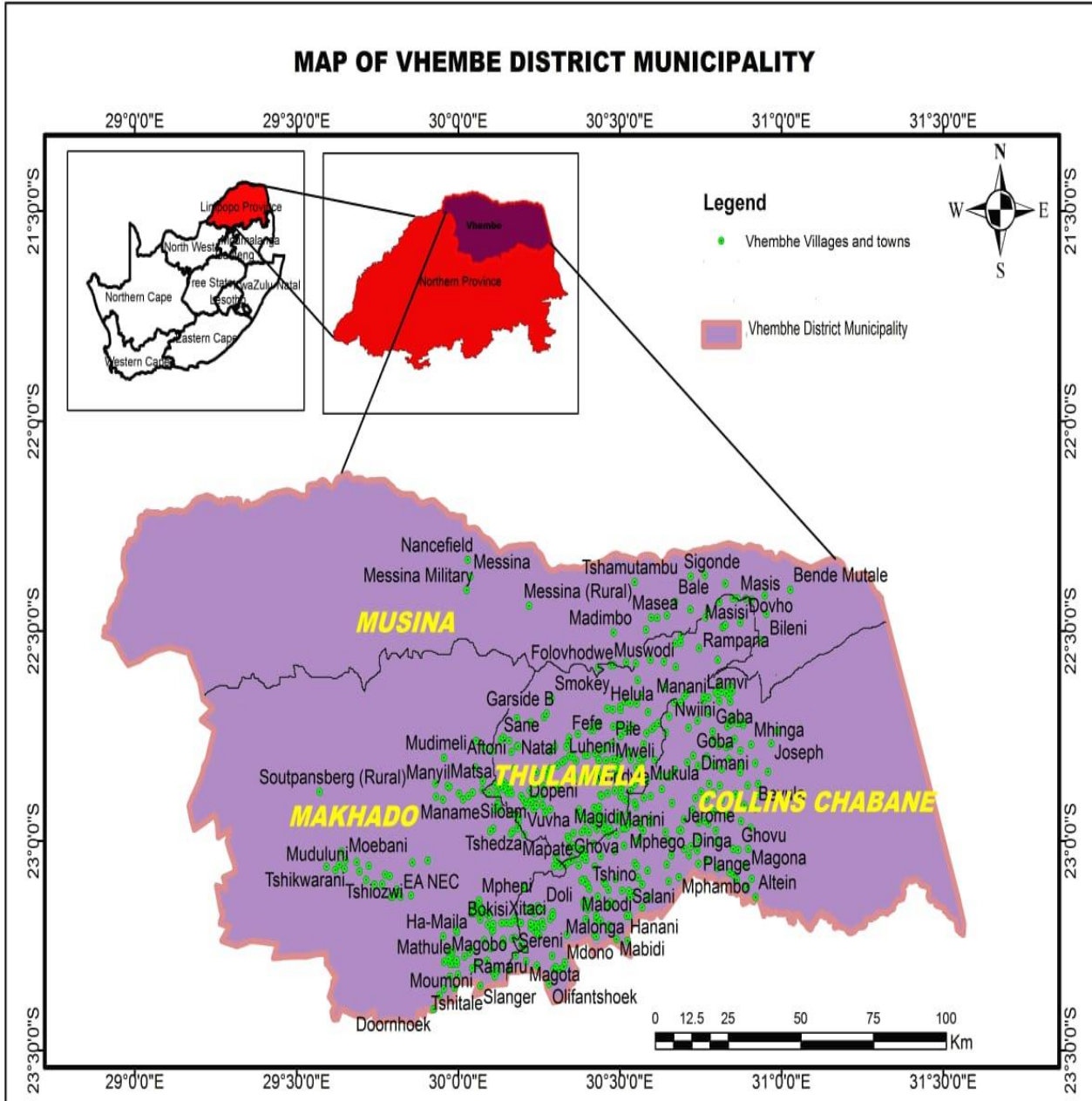
Figure 3.1: Vhembe District Map (Prepared by Vhembe GIS Sections)

3.4 STUDY POPULATION

The population is the entire group of persons or objects that is of interest to the researcher, meaning that this is the criteria that the researcher is interested in studying (Brink, Van der Walt & Van Rensburg, 2017). A study population is further defined by Polit and Beck (2017) as a group of individuals or entities within which the required information can be attained and who meets the study's inclusion criteria. The population for this study consisted of all elderly women living in rural villages of the Vhembe District, in Limpopo Province.

The target population is the whole set of elements or individuals who meet the sample criteria to be studied (Grove & Gray, 2019). Equally, previous work of Burns and Grove (2009) provided a much detailed definition that highlighted that a target population is the total cluster of persons meeting the study inclusion criteria and from which a needed sample can be drawn, and a sample is a subset of the target population which composes of the participants who participate in the study. In this study, the target population was elderly women aged 50 and above residing in the villages of the Vhembe District, Limpopo Province.

The accessible population is the portion of the target population to which the researcher has reasonable access (Grove & Gray, 2019). The accessible population in this study were all elderly women aged 50 years and above who were available in the households on the days of data collection. Table 3.1 represents the estimated population of each municipality in the Vhembe District inclusive of the total estimated population of the Vhembe District, Limpopo Province.

Table 3.1: Estimated population of elderly women, adopted from Stats SA (2016)

Names of municipalities	Estimated population of elderly women
Thulamela Municipality	4828
Makhado Municipality	3414
Musina Municipality	2365
Collins Chabane Municipality	3050
Vhembe District	13 657

The study was also guided by the inclusion and exclusion criteria. Based on these inclusion and exclusion criteria, the researcher can make decisions regarding how they influence the external validity of the study findings (Patino & Ferreira, 2018). Furthermore, arriving at those decisions involves and needs in-depth knowledge about the area of research, as well as the understanding of the direction that each of the criteria could affect the external validity of the study.

3.4.1 Inclusion criteria

Inclusion criteria refer to the crucial features of the target population that the researcher uses to riposte to her study research question (Patino & Ferreira, 2018). Henceforth, typical inclusion criteria include the demographic, clinical, and geographic characteristics of the target population.

The respondents who participated in this study were:

- Elderly women 50 years of age and above who reside at the sampled and selected villages found in the Vhembe District of the Limpopo Province.

- Elderly women who are willing to participate in the study and to sign the consent form.

Elderly women were selected given the perceived level of knowledge about the main purpose of the study.

3.4.2 Exclusion criteria

In contrast, exclusion criteria refer to those features of the potential study participants that meet the inclusion criteria and also possess other or additional characteristics that have the potential to interfere with the accomplishment of the set purpose of the study or upsurge the risk towards a detrimental result. According to Brink, Van der Walt and Van Rensburg (2017), exclusion criteria are those characteristics that disqualify the phenomenon to be included in the study. Thus for this study, the exclusion criterion elements that disqualifies or excludes respondents included:

- Elderly women who meet the criteria to participate in the study but suffering from mental illness and not able to provide the needed information regarding the study.

- Elderly women who meet the inclusion criteria and not residing at the selected study site.

- Elderly women who are not willing to participate in the study

3.5 SAMPLING

The researcher employed a purposive sampling technique to select Vhembe District which is one of the five districts of Limpopo province, alongside Capricorn, Waterberg, Mopani and Sekhukhune districts. Vhembe district is one of the districts in Limpopo province that is deep-rooted in the Tshivenda culture and tradition, moreover, maternal mortality in Vhembe district is still high. Therefore, the researcher selected the Vhembe district and explored the perspectives of elderly women regarding factors contributing to maternal mortality amidst the Tshivenda customs and traditions.

Cluster sampling is a probability sampling technique in which all population elements are categorized into mutually exclusive and exhaustive groups called clusters (Frey, 2018). Similarly, cluster sampling is a type of probability sampling in which the researcher advances the sampling frame that includes the list of all the states, organisations or clinicians in which the part of the identified population can be linked (Grove & Gray, 2019). Clusters are selected for sampling, and all or some elements from selected clusters comprise the sample (Frey, 2018). The researcher chose the type of cluster sampling that is commonly used in research which is geographical cluster sampling. This method is typically used when natural groups exist in the population, in this case, elderly women as obtaining a list of all population elements is impossible or impractical. The selected district, Vhembe district, consist of four (4) local municipalities, namely Thulamela, Makhado, Collins Chabane and Musina municipalities.

The researcher used the municipalities as clusters. The municipalities were allocated numbers as indicated in the following list:

1 Thulamela Municipality

2 Makhado Municipality

3 Collins Chabane Municipality

4 Musina Municipality

The researcher then applied simple random sampling to select two clusters from the four clusters. The numbers attached to the municipalities were written in small papers which were folded and placed in a container, mixed using a hand for about 20 seconds. The researcher then picked two papers from the container one after another. The selected clusters were Thulamela and Musina municipalities. As the Municipality was viewed to be big, the researcher further subdivided each municipality into smaller clusters based on the settlement clusters. Settlement Clusters indicate the priority development areas or nodes in which primarily first and second-order settlement are identified (Vhembe District Municipality IDP, 2019-2020).
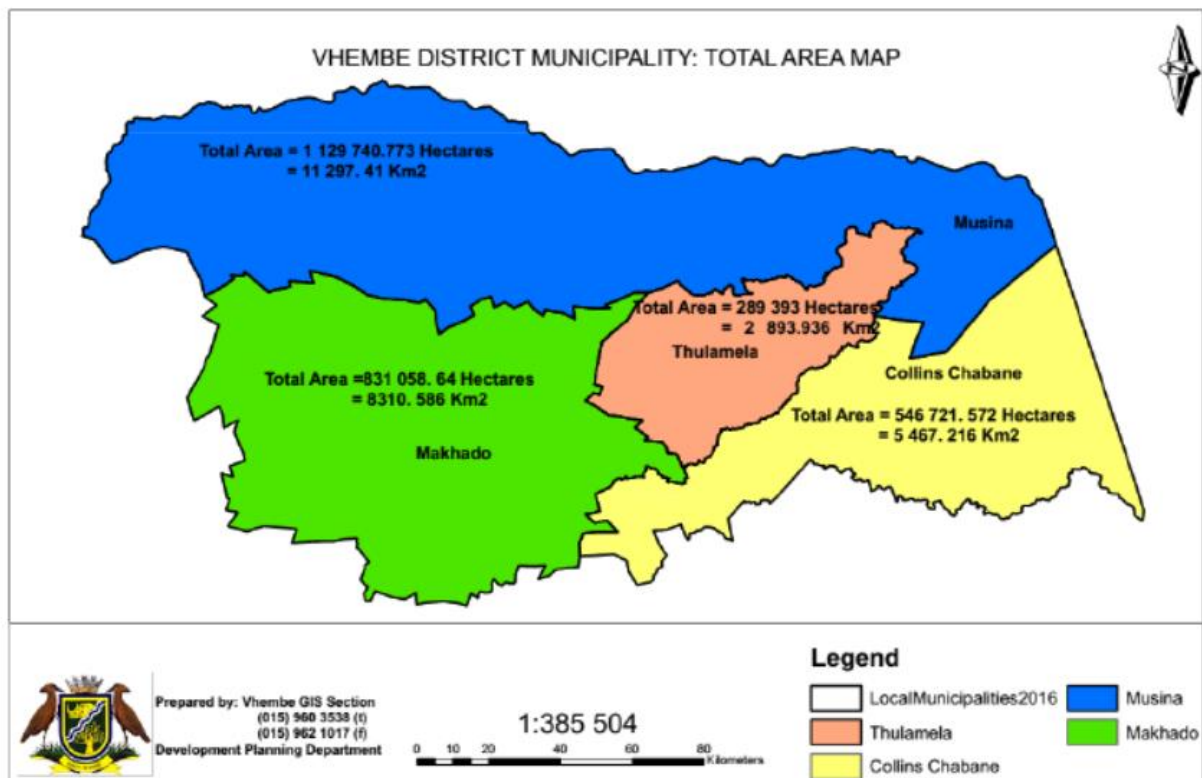
Figure 3.2: All-local municipalities within Vhembe District municipality: Makhado, Thulamela, Musina and Collins Chabane (Prepared by Vhembe GIS Sections)

In this study, the researcher was interested in the second-order settlements which are the population concentration areas. For Musina Municipality the population concentration area included Musina, Folovhodwe, Muswodi and Masisi communities

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(Vhembe District Municipality IDP, 2019-2020). While, the Thulamela municipality's population concentration area comprised of Mukula, Tshisaulu, Lufule, Makonde and Dzwerani communities (Vhembe District Municipality IDP, 2019-2020). Among the two selected municipalities, the researcher selected only one of the population concentration areas from each using a simple random sampling technique as indicated above. The two selected clusters were the Mukula community for Thulamela municipality and the Masisi community for Musina municipality. Elderly women in the clustered population concentration areas who were willing to participate in the study were recruited to participate in the study.

3.5.1 Sample size

Proctor, Allan, and Lacey (2010) enlightened that in a quantitative research study the sample size for the study should be calculated very early at the study design stage. Additionally, quantitative researchers have to select the largest sample probable to make sure that the selected sample is representative of the target population (Polit & Beck, 2017). Moreover, it should be noted that small samples present the potential risk of being disproportionately representative of the available smaller groups within the target population of interest (Coughan et al., 2007). In this study, the sample size was calculated using the Raosoft sample size calculator from the estimated population of the Vhembe District Local municipalities. The estimated population of elderly women in Vhembe District is 13657. The calculated sample size at the confidence level of 95% is 374. Raosoft sample size calculator is software that automatically computes for the sample size with the given margin of error (5%), confidence level (95%), population size, and response distribution (50%). The sample size was proportionally allocated to the selected population concentration areas (clusters), thus 187 for each cluster.

3.6 MEASUREMENT INSTRUMENT

A structured questionnaire was designed after the literature review and with the help of the study supervisors and the professional Statistician. According to Brink, Van der Walt and Van Rensburg (2017), the choice of a data-collection method is one of the most important steps in the research process. The researcher used self-developed

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structured questionnaires because it enabled the investigator to be consistent when asking questions. The researcher also made use of the researcher or research assistant-administered completed questionnaires. The instrument consisted of closed-ended and open-ended questions and it was translated into the Tshivenda language for consistency.

The structured questionnaire was divided into two (2) sections which were Section A and Section B. Section A consisted of items related to biographic information of the respondents. Biographic information included Age, ethnicity, occupation, religion, marital status of elderly women from selected villages of Vhembe District. This section also included a question that required the respondents to indicate whether or not they had been traditional birth attendants (TBAs) and their experiences in terms of years as TBA's. Section B consisted of Perspectives of elderly women regarding factors contributing to maternal mortality and was divided into three sub-sections namely, perspectives regarding the place of consultation which were measured using the 4-point Likert scale, perspectives regarding ANC attendance and perspectives regarding traditional practices during pregnancy and 42 days after childbirth. The four-Likert scale was used for this study using 1- Strongly Disagree, 2- Disagree, 3- Agree and 4- Strongly Agree.

3.7 PRE-TEST

Pre-testing was conducted to test if the research instrument (questionnaire) wording and questions are clear enough and understandable (Brink, Van der Walt & Van Rensburg, 2017). It was also done to check the feasibility of the study (Pilot & Beck, 2014), reduce the number of the anticipated problems by allowing the researcher to redesign the study to overcome difficulties in the main study (Grove & Gray, 2019). Furthermore, it gave the researcher clues if the main study could be accomplished (Brink, Van der Walt & Van Rensburg, 2017).

The researcher administered questionnaires to 10 respondents with similar characteristics who were not part of the study and asked questions to identify the uncertainties and difficult questions. In the process, the time taken to complete the questionnaires to measure if it's reasonable was considered. Rewording and revision

of the questions that were not answered as expected were done and modification was done before the main study was conducted.

3.8 RELIABILITY

Reliability is when the measuring instrument yields consistent results in the study (Grove & Gray, 2019). Therefore, in this study reliability was ensured through the test-retest method by administering self-developed questionnaires to 10 respondents with similar characteristics who were not part of the study and after 2 weeks the structured questionnaires were administered to the same respondents as before to see if the instrument would have yielded the same outcomes. A reliability test was conducted and yielded the following results as indicated in Table 3.1

Table 3.1 Reliability statistics for Perspective of elderly women on contributory factor to maternal mortality

Reliability Statistics	
Cronbach's Alpha	N of Items
.760	15

3.9 VALIDITY

The validity of an instrument is a determination of how sound the instrument measures the abstract concept being examined (Grove & Gray, 2019). There are two types of validity that the researcher adopted for this study. Content validity examines the extent to which the items in an instrument adequately represent the universe of the content (Grove & Gray, 2019). In this study, the researcher developed a structured questionnaire from a literature review and subjected it to the supervisors of the study as well as the experienced research staff. This was to determine whether the items in the questionnaire were relevant and suitable to determine the perspectives of elderly women regarding factors contributing to maternal mortality. Also, to ensure content

validity, the structured questionnaire was subjected to the experienced Professional Statistician who verified and confirmed it.

Face validity means that the instrument appears to measure what it is supposed to measure (Brink, Van der Walt & Van Rensburg, 2017). During the development of the questionnaire, the researcher avoided using ambiguous or difficult questions so that the respondents could understand the structured questions with ease. In addition to maintaining face validity, the researcher used the language that was preferred by the participants and close-ended questions were used to measure the perspectives of elderly women regarding factors contributing to maternal mortality and it assisted participants not to have difficulties when they answer.

To further test for validity, the researcher used the SPSS software to run the correlation analysis- Pearson correlation. This was done to establish the correlation of each question in the perspectives of elderly women regarding factors contributing to the maternal mortality questionnaire and its total value. The findings are interpreted based on the significance value (Sig. or p-value):

– If Sig. < 0.05 the question is valid

– If Sig. > 0.05 the question is not valid

The findings of this validity test are described in Table 3.4 which provides that all items of the perspective of elderly women regarding factors contributing to maternal mortality scale were significantly correlated to the total value of the scale at a significant value of $p < 0.000$. Thus, their correlation was significant at the 0.01 level. This indicates that the items of the perspectives of elderly women regarding factors contributing to maternal mortality scale using the 4-point Likert scale were found to be statistically valid. All women after birth should tie the abdomen for the restoration of the abdomen (r= .551), '*Women's private part should be removed (cut) after birth to keep the baby healthy and prevent the baby it from dying* (r=.534), '*Attitudes of health care practitioners make women not to go for a consultation*' (r= .524) and '*Women do not consult during pregnancy simply because they are not aware of the pregnancy'* (r= .530) had the strongest significant correlation (p<0.000). While the items '*It is a waste of money for women to consult during a pregnancy instead of consulting elderly women with experience at home*' (r= .223) and '*Attending ANC will make women be*

attacked by diseases that may even harm the husband' (r= .257) had the weakest but significant correlation (p<0.000).

Table 3.2: Validity test of the perspectives of elderly women regarding factors contributing to maternal mortality scale

	Correlation Coefficients	Total Score of the scale
Health care facilities are far from where pregnant women live	r	.471**
	Sig.	.000
Attitudes of health care practitioners make women not go for a consultation	r	.524**
	Sig.	.000
Long queues are one of the reasons why women prefer traditional herbs and traditional practices	r	.335**
	Sig.	.000
Health care facilities do not have strong medication to protect the fetus	r	.420**
	Sig.	.000
It is a waste of money for women to consult during a pregnancy instead of consulting elderly women with experience at home	r	.223**
	Sig.	.000
Women do not consult during pregnancy simply because they are not aware of the pregnancy	r	.530**
	Sig.	.000
Some women do not consult during pregnancy because of not accepting pregnancy and not loving the unborn baby	r	.486**
	Sig.	.000
Fear of being attacked by evil spirits when you attend ANC	r	.348**
	Sig.	.000
It is a waste of money and time to go for antenatal services whereas there are traditional practices to protect the baby and the woman.	r	.347**
	Sig.	.000
Pregnant women should not be seen in public to prevent witchcraft on the baby	r	.449**
	Sig.	.000
Attending ANC will make women be attacked with diseases that may even harm the husband	r	.257**
	Sig.	.000
Women's private parts should be removed (cut) after birth to keep the baby healthy and prevent it from dying	r	.534**
	Sig.	.000
Traditional herbs heal a wound faster	r	.447**
	Sig.	.000
All women after birth should tie the abdomen for the restoration of the abdomen	r	.551**
	Sig.	.000
To precipitate labour, women should drink traditional herbs	R	.350**
	Sig.	.000

**. Correlation is significant at the 0.01 level.
*. Correlation is significant at the 0.05 level.

3.10 DATA COLLECTION METHOD

Data collection is the precise gathering of information relevant to the research purpose or specific objectives, question or hypothesis of a study (Grove & Gray, 2019).

The researcher requested approval to conduct the study from the University of Venda Higher Degrees Committee, respective ward chancellor and headman (Chief) of the sampled villages in Vhembe District. Upon getting the approval and ethical clearance, the researcher started collecting data from December 2019 to January 2020 with the help of the community health care workers who became the research assistants and helped identified elderly women in respective villages of the Vhembe District. Self-introduction was done and the purpose of the study was explained to all elderly women identified. Thereafter, the researcher requested informed consent from all elderly women who were willing to participate in the study.

Self-developed questionnaires were distributed to all elderly women who were able to read and write from the age of 50 years and above. Moreover, elderly women who were given the questionnaires were those who had agreed to participate in the study. The researcher used the researcher/research assistant-administered completed questionnaires to elderly women who could read and write. Questionnaires were translated into Tshivenda language for participants to understand easily and to ensure consistency and back-translated to English to ensure that there is no loss of meaning.

The total number of elderly women from the age of 50 and above who were interviewed through questionnaires and those who completed the questionnaires were 374. Moreover, all the respondents were appreciated and thanked for participating in the study. The time that was utilised to complete the questionnaire was approximately 25 minutes. However, elderly women who were interviewed through questionnaires utilised approximately 45 minutes to respond to the questions on the questionnaires.

3.11 DATA ANALYSIS

Data analysis is the methodical arrangement of research data and the testing of the research hypothesis, using those data (Polit & Hungler, 2015). It also entails

classifying, ordering, manipulating and summarizing the data, and describing it in meaningful terms (Brink, Van der Walt & Van Rensburg, 2017). Descriptive statistics were used to analyse data which included frequencies (percentages) and means (standard deviations). Thus, the descriptive data analysed were presented in frequency and percentage tables. The researcher also employed factor analysis in this study. Factor analysis is referred to as a statistical technique that is used to define variability between the observed, associated variables in terms of a hypothetically lower number of unobserved variables called factors (Pallant, 2013). Thus, factor analysis takes a large set of variables and looks for a way the data may be reduced or summarised using a smaller set of factors or components (Pallant, 2013). For this study's analysis, factor analysis was also run using principal components analysis (PCA) with Kaiser-Meyer-Olkin (KMO) value exceeding the recommended value of .6 and Bartlett's Test of Sphericity (Pallant, 2013). Principal Component Analysis (PCA), is referred to as a dimensionality-reduction method that is frequently used to decrease the dimensionality of huge datasets, through the transformation of a bulky group of variables into a reduced set that still encompasses most of the information comprised in the bulky group. Jollife and Cadima (2016) similarly emphasized and highlighted principal component analysis (PCA) which is a procedure used in data analysis to reduce the dimensionality of larger datasets, while simultaneously increasing interpretability. However, the procedure minimizes information loss as well. The factorability of the data was determined using the two statistical measures which are KMO and Bartlett's test for sphericity. The KMO index typically ranges from 0 to 1, and 0.6 had been proven and suggested as the minimum acceptable value representing a good factor analysis (Pallant, 2013). While with Bartlett's test for sphericity, it should only be appropriately considered when the significance is less than 0.05 (Pallant, 2013). The statistical significance of this study was set at 0.05.

3.12 ETHICAL CONSIDERATIONS

According to Grove and Gray (2019), ethics are sets of moral principle that control or influence an individual's behaviour. They were respected by the researcher throughout the study. A variety of ethics were implemented by the researcher. The researcher

ensured that there were honesty and integrity during the study. The observation of access to confidentiality, informed consent and ethical clearance was considered.

The researcher presented the research proposal to the School's Higher Degree Committee (SHDC), Executive School Higher Committee (ESHC), respective ward councillor and headman (Chief) of the sampled villages in the Vhembe District and was given an ethical clearance certificate that was used for collecting data. Ethical clearance protected both the researcher and the respondents from any harm and exploitation.

3.12.1 Confidentiality

Confidentiality is the researcher's safe management of collected information or data shared by subjects to ensure that the data are kept private and confidential from others (Grove & Gray, 2019). This means that the researcher agrees not to share the respondents' information without their consent. In this study, confidentiality was ensured by storing the collected data under lock and key and saving the captured data under the password-protected folder that only the primary investigator, the study supervisor and co-supervisor had access to. The researcher made it a point that the collected data questionnaires and the informed consent are placed in a different locked cabinet and made sure that there were no identifiable aspects of the elderly women anywhere in the completed questionnaire. The researcher had ensured that the analysed data was presented using a general presentation that was not individualised to individual elderly women but the general group.

3.12.2 Right to anonymity

According to Grove and Gray (2019), anonymity exists when the researcher cannot link the respondent's identity with their responses. In this study, the right to anonymity was ensured by using 'respondent 1' instead of the respondent's name. Thus, each participant was assigned an exceptional or unique study identification number that corresponds with the date, time and cluster where the elderly women reside and not corresponds to the elderly women's identity in any way.

3.12.3 Privacy

Grove and Gray (2019) refer to privacy as the freedom that people have to determine the time, extent and general circumstances under which their private information will be shared with or withheld from others. The invasion of privacy occurs when private information is shared without the respondent's will or against the respondent's knowledge (Grove & Gray, 2019). Therefore, to ensure privacy, the researcher and research assistant conducted the researcher or researcher assistants administered questionnaire data collection in the comfort of the participants' home, where the elderly women are free and able to express themselves freely and without any form of fear of prejudice as they were allowed to select the appropriate environment for the private and safe data collection process.

3.12.4 Informed Consent

Informed consent means that the respondents have a full understanding of the study that is being undertaken for them to give the researcher permission to conduct a research study (Grove & Gray, 2019). After receiving the ethical clearance from the University of Venda to conduct the study and permission from tribal authorities, the researcher recruited and selected respondents (elderly women) to participate in the study. However, it was the voluntary choice of the respondents to agree to take part in the study. The researcher further gave information to the respondents about the purpose of the study and the expectations thereof, as well as asked them for written informed consent before conducting the study. This was considered paramount, given the importance of respondents having an understanding of the study purpose and how it affects them before agreeing to participate in the study. Respondents were allowed to decide whether they want to be part of the study or not, and they were told that they were free to terminate their participation at any given point without fear of being punished in whatsoever way. Thus, a consent form was given to the elderly women for them to sign using a signature or a cross (X), given that most of them could not read and write.

3.13 SUMMARY

In chapter 3, a discussion of the methodology used in the study was presented. A cross-sectional descriptive design was used to describe the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District, Limpopo Province. The study population and units of analysis were described including the sampling techniques utilised. Data collection was also presented with data analysis. The data that was collected was presented using tables and factor analysis.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF DATA

4.1 INTRODUCTION

The previous chapter outlined the study design and methods that were utilised in this study, data collection was also included. This chapter presents data analysis and interpretation. A total of 374 elderly women participated in the study voluntarily. They were informed about the aim of the study, the details in the consent forms, and why it was important for them to participate. Every elderly woman signed the consent form, these were collected before distribution of self-developed researcher/research assistant-administered questionnaires and were kept separate from the completed questionnaires to ensure anonymity.

A statistician analysed the data, using the Statistical Package for SPSS Version 26.0. The statistics are presented in tables using frequencies and percentages. Relationships between variables were identified using correlation coefficient and level of significance set at p-value= 0.05, the researcher collected data from the elderly women using structured questionnaires, which had three sections:

- Section A: Socio-demographic characteristics of elderly women
- Section B: Elderly women's perspectives regarding factors contributing to maternal mortality
- Section C: Knowledge regarding complications and medical conditions leading to maternal mortality among elderly women

The presentation of the data collected in the previous chapter addressed the socio-demographic characteristics of the elderly women and two (2) objectives of this study.

The objectives of this study were as follows:

- To determine perspectives of elderly women regarding factors contributing to maternal mortality in rural villages in the Vhembe District in South Africa
- To run factor analysis to determine major contributing factors to maternal mortality during traditional practices within rural villages of the Vhembe District, Limpopo province.

The findings are discussed in numerical sequence, according to the format of the questionnaire.

4.2 SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF ELDERLY WOMEN

The socio-demographic characteristics in the self-developed researcher/research assistant-administered questionnaires included the elderly women's age, level of education, ethnicity, occupation of the elderly women, religion, marital status, experience as a birth attendant and whether maternal mortality affects elderly women. Furthermore, the socio-demographic characteristics of the study questionnaire attempted to obtain personal information about elderly women to contextualise their responses concerning factors contributing to maternal mortality.

4.2.1 Respondent's age

The elderly women's ages were between 50-110 years (mean= 65.79; SD= 11.75). Table 4.1 depicts the elderly women's ages. Many elderly women were aged 50-60 years (n=143; 44.1%) and with the least ages ranging from 61-70 years (n= 88; 27.2%) and 71 years and above (n=93; 28.7%).

Table 4.1: Socio-demographic characteristics

	Frequency	Percentage
Age		
50-60 years	143	44.1
61-70 years	88	27.2
71 years and above	93	28.7
Level of education		
Didn't go to school	42	11.2
Primary	94	25.1
ABET	73	19.5
Secondary	76	20.3
Tertiary	89	23.8
Ethnicity		
Venda	360	96.3
Tsonga	3	0.8
Pedi	5	1.3
Other	6	1.6
Occupation of elderly women		
Employed	85	22.7
Unemployed	49	13.1
Self-employed	83	22.2
Pensioner	157	42.0
Religion		
Christianity	264	70.6
Islamic	16	4.3
Traditional	93	24.9
Other	1	0.3
Marital status		
Single	93	24.9
Married	136	36.4
Divorced	36	9.6
Widowed	109	29.1
Have you ever been a traditional birth attendant?		
Yes	21	5.6
No	353	94.4
Does Maternal Mortality affect you?		
Yes	361	96.5
No	13	3.5

4.2.2 Level of education

Of the respondents, about 11.2% (n=42) possessed no formal education as depicted in Table 4.1. However, 25.1% (n= 94) reported having attended primary education, while 20.3% (n= 76) had secondary education, as many as 23.8% (n=89) had tertiary education among the elderly women who participated in this study. By comparison between the grades, the findings of this study indicate that most of the elderly women had secondary education, which is vital to their lives, as to be an elderly person and educated at the same time gives one better experiences than the one who is old but without education in terms of coaching pregnant women when to commence attending the reproductive health services.

4.2.3 Ethnicity

Out of 372 of the elderly women, approximately 96.0% (n=360) were Tshivenda speaking group, while only the least were Sepedi speaking (n=5; 1.3%) and Xitsonga speaking (n=3; 0.8%) group. In this study, the majority are the Vhavenda ethnic group because the study focal area was in the Limpopo area, Vhembe district, where the majority are Vhavenda, and the area is more concentrated with the Vhavenda ethnic group. However, the cultural practices of the Vhavenda alone were not discussed since it is not the focus of the study.

4.2.4 Occupation

About 42.0% (n=157) of the elderly women were pensioners, while 22.2% (n=83) reported being self-employed, yet 22.7% (n=85) reported being employed in the job market, however, the minority of the elderly women 13.1% (n=49) reported being unemployed. These findings may influence the practices of the people, if the financial capabilities are low, people will turn to cling to their own practices such as not attending Antenatal care (ANC) till late in pregnancy, because the elders do not have the means to pay for the transport.

4.2.5 Religious affiliations

As illustrated in Table 4.1, the study indicates that the majority 70.6% (n=264) of elderly women were Christians, as many as 24,9% n=93) reported being non-Christians

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(traditional) while 4.3% (n=16) reported that they were Muslims. The findings of this study depicted that most of the elderly women were Christian. It would mean that elderly women would share best practices in terms of the prevention of obstetrical complications because Christian elders would be expected to influence the care of pregnant women. This also means that the area where the study was conducted comprises mainly Christians, which is typical of the coastal area in this country South Africa. In this study, then, the elderly women represented Christians and other/no religion.

4.2.6 Elderly women's marital status

Of the elderly women who participated in this study, 36,4% (n=136) were married, while the minority 24.9% (n=93) of the elderly women reported that they were never married, and a small percentage of divorcees 9.6% (n=36) were also reported. In this study, the researcher wished to establish the elderly women's marital status, as it would reflect whether the elderly women are in the matrix of social relation, which also contributes in the family where both elders help one another to encourage a pregnant woman to utilise reproductive health care services.

4.2.7 Knowledge of elderly women about traditional birth attendants

The majority of the elderly women 94.4% (n=353) who responded to this question, reported that they were never assisted by the traditional birth attendant (TBA) in the time in which they were at the childbearing stage. However, elderly women included in this study could not realise the fact that South Africa, like other countries in Sub-Saharan Africa, traditional birth attendants (TBAs) is practised mostly in rendering postnatal care to women at home after they would have been discharged from the Primary Health Care facilities (PHC) or hospitals.

4.2.8 knowledge of elderly women about maternal mortality

The elderly women were asked to report by indicating "Yes/No". As per the findings of this study, as indicated in Table 4.1, almost all 96.5% (n= 361) of the elderly women reported having had experienced maternal mortality in a way or another. Findings of the study show that almost all (96.5%) of the elderly women had no barriers or pregnancy-

related traditional beliefs that prevented them from encouraging pregnant women from the commencement of the antenatal care since they were Christians.

4.2.9 Type of care preferred by elderly women

As illustrated on table 4.2, most elderly women preferred western health systems (n=210; 56.1%) and both types of care (n= 142; 38%) with the least who preferred traditional practices (n= 22; 5.9%). This had in some ways revealed the shift from traditional to western health systems among elderly women as the majority felt it is much safer to give birth using available health care institutions (n= 351; 93.9%) and only 5.1% (n= 19) indicated that the safe environment for women to give birth is a traditional healer's place or home delivery.

Table 4.2: Type of care preferred and safe environment for women to deliver

Type of care preferred by elderly women	Frequency	%
Traditional Practices	22	5.9
Western Health Systems	210	56.1
Both	142	38.0
Safe environment for women to give birth		
Health care institution	351	93.9
Traditional healer/home	19	5.1
Both	4	1.1
The person that can help women to deliver safely		
Doctor	68	18.2
Nurse/Midwife	100	26.7
Traditional birth attendant	9	2.4
Both Doctor and Nurse/Midwife	197	52.7

4.3. SECTION B: ELDERLY WOMEN'S PERSPECTIVES REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY

Table 4.2 illustrates the perspective of elderly women regarding the contributing factors to maternal mortality that were analysed under three main factors namely, health care system, cultural practices during pregnancy and 42 days after birth and factors contributing to late booking.

4.3.1. Health Care System Factors

Based on the question that was asked on the questionnaire, most elderly women did not agree with the factors that were listed under health care system factors as contributing to maternal mortality. Out of 374 elderly women, about (n= 255; 68.2%) reported that the distance of where the health care facilities are located cannot be mentioned as a factor because there are many modes of transports that can assist pregnant women to go and visit the health care facilities during this period. Other elderly women also mentioned that women cannot be hindered by the attitudes of the health care practitioners (n= 213; 57%) to go and consult, therefore, the attitude of health care practitioners cannot be regarded as a factor. However, there is a high number of elderly women who reported that attitudes of health care practitioners (n= 161; 43%) are the main reasons why women do not seek health care during pregnancy and 42 days after childbirth which lead to complications that can cause maternal death.

Even though some elderly women revealed that women choose to be treated by elderly women or traditional healers during this period due to long ques at the health care facilities (n= 78; 20.8%), the majority of elderly women (n= 296; 79.2%) regarded long ques not as a factor that can hinder women from seeking health care at the facilities or not as a factor that affects the choice of treatment. Most of the elderly women were also emphasising that health care facilities have the best treatment during pregnancy and 42 days after childbirth, this is supported by the majority of elderly women (n= 302; 80.8%) who responded that there is trust in the medications at the health care facilities that can treat these women better although some of the elderly women still believe that there is no trust in the services at the health care facilities (n= 72; 19.2%).

4.3.2. Factors Relating to a Late Booking at Antenatal Clinic

Out of 374 elderly women who responded to this question, late booking was revealed by the results of this study as one of the factors perceived to contribute to maternal mortality. Most of the elderly women (n= 322; 86.1%) showed that even though they are skilled and have experience regarding maternal health and childbirth, pregnant women should visit

the health care facilities for antenatal care and consultation during this period. However, some elderly women (n= 24; 6.4%) prefer that women should not waste money and time by visiting the health care since they will be treated with a bad attitude by the health care practitioners and further reported that by not going to the facilities for antenatal care will also prevent them from being attacked by the evil spirits (n= 213; 57%).

Most of the responses showed that elderly women have different perspectives regarding maternal health because most of them support the view that pregnant women should visit ANC regardless of the challenges that they face like distance where the health care facilities are situated (n= 255; 68,2%) and attitudes of healthcare practitioners (n= 213; 57%). However, there are a few elderly women who prevent pregnant women from attending antenatal health care for the reason that it will prevent them from being attacked by the evil spirits (n= 161; 34%) that can harm the baby and the husband (n= 97; 25.9%). In this regard, the majority of elderly women (n= 277; 74%) disagreed with the statement saying "Attending ANC will lead women towards being attacked with diseases that may even harm the husband".

The results of this study also revealed that it is taboo for pregnant women to be seen in public (n= 349; 93.4%) with the conception that being seen in public during pregnancy attracts evil spirits that can harm the unborn child, therefore, pregnant women should remain indoors. Moreover, it was also supported that most pregnant women do not attend antenatal clinics due to the fear that they may be attacked by evil spirits (n= 213; 57%).

About 146 (39%) of elderly women responded that the reason why women do not book for Antenatal clinic early, which results in complications contributing to maternal mortality, is because of not knowing about their status, however, the majority of elderly women 228 (60.9%) have expressed a different opinion towards the uncertainty of pregnancy. It was also revealed that most women (n= 340; 92%) who do not love the unborn child can distance themselves from consulting or attending antenatal care and this can lead to complications that can even cause maternal death.

4.3.3. Cultural Practices During Pregnancy to Postpartum Stage

The results of this study revealed that certain cultural practices are practised on women from pregnancy until after childbirth as a belief that such practices protect the unborn child and prevent women from dying during pregnancy and after childbirth. Furthermore, these cultural practices are also practised to save the lives of newborn babies. The majority of elderly women reported that cutting off of part of the private part [genital warts] *(Gokhonya)* (n= 304; 81.3%) and tying of the abdomen after birth to restore the abdomen to its normal shape (n= 290; 77.2%) are the traditional practices that women should practice after delivery. However, a few elderly women did not concur with such practices (n= 70; 18,7%; n= 84; 22.5%) respectively.

Although a few elderly women do not believe in such practices, most (n= 290; 77.2%) believe that the cutting off of part of genital after giving birth (genital warts) *(Gokhonya)* is the traditional practice that should be practised to prevent the new-born baby from getting sicknesses that can even lead to newborn's death. About 61.8% (n= 231) of elderly women indicated that traditional herbs are not that strong to heal the wounds faster after birth and about 75.9% (n= 284) did not support the issue of precipitating labour. The results of this study show that even though most elderly women support healthcare facilities visits during pregnancy, other elderly women believe in traditional practices to prevent complications that can lead to maternal mortality.

Table 4.3: Elderly women's perspectives regarding factors contributing to maternal mortality				
Item	**D**	**SD**	**A**	**SA**
Health care system factors				
1 Health care facilities are far from where pregnant women live.	26 (7.0)	229 (61.2)	92 (24.6)	27 (7.2)
2 Attitudes of health care practitioners make women not go for a consultation.	22 (5.9)	191 (51.1)	103(27.5)	58(15.5)
3 Long queues are one of the reasons why women prefer traditional herbs and traditional practices.	34(9.1)	262(70.1)	55(14.7)	23(6.1)
4 Health care facilities do not have strong medication to protect the fetus.	32(8.6)	270(72.2)	48(12.8)	24(6.4)
Factors contributing to late booking				
5 It is a waste of money for women to consult during pregnancy instead of consulting elderly women with experience at home.	28(7.5)	322(86.1)	11(2.9)	13(3.5)
6 Women do not consult during pregnancy simply because they are not aware of the pregnancy.	23(6.1)	205(54.8)	100(26.7)	46(12.3)
7 Fear of being attacked by evil spirits when you attend ANC	15(4.0)	146(39.0)	71(19.0)	142(38.0)
8 It saves money to use traditional practices to protect the baby and the woman instead of attending the antenatal clinic.	38(10.2)	282(75.4)	38(10.2)	16(4.3)
9 Pregnant women should not be seen in public to prevent witchcraft on the baby.	29(7.8)	320(85.6)	12(3.2)	13(3.5)
10 Attending ANC will make women be attacked by diseases that may even harm the husband.	20(5.3)	257(68.7)	83(22.2)	14(3.7)

11	Some women do not consult during pregnancy because of not accepting pregnancy and not loving the unborn baby.	30(8.0)	317(84.8)	8(2.1)	19(5.1)
Cultural practices during pregnancy to post-partum stage					
12	Women's private part should be removed (cut) after birth to keep the baby healthy and prevent it from dying	10(2.7)	60(16.0)	36(9.6)	268(71.7)
13	Traditional herbs heal wound faster, therefore, women who prefer using traditional herbs to heal the wound faster get cured easily without complications	22(5.9)	209(55.9)	70(18.7)	73(19.5)
14	All women should tie the abdomen after birth for the restoration of the abdomen.	9(2.4)	75(20.1)	52(13.9)	238(63.6)
15	To precipitate labour women should drink traditional herbs	37(9.9)	247(66.0)	41(11.0)	49(13.1)

Keys: D- disagree, SD-strongly Disagree, A- Agree, SA- Strongly Disagree

4.4 Establishment of association between perspectives on contributing factors to maternal mortality and the demographic characteristics of elderly women

The correlation regarding perspectives on factors contributing to maternal mortality amongst elderly women and their demographic characteristics revealed weak to mild associations yet very significant.

As presented in Table 4.4, the elderly women's age was positively and significantly associated with item 12 (r= 0.115; p= 0.0038) and item 14 (r= 0.116; p= 0.036). This means that the more aged is the elderly women the more they agreed to the statement that indicated that "Women's private part should be removed (cut) after birth to keep the baby healthy and prevent it from dying" and that "All women should tie the abdomen after birth for the restoration of the abdomen". The level of education had a strong positive and significant association with Item 11 (r= 0.157; p= 0.005) and a strong negatively significant association with item 14 (r= 137; p= 0.013). As provided by the aforementioned statement, the higher the level of education the higher the perception that the attendance of ANC may lead one to be exposed to diseases that may harm the husband as well. Furthermore, it was also revealed that most elderly women who possess lower educational status are of the higher perceptions that all women should have their abdomen tied to restore the abdomen.

Ethnicity was found to be negatively and significantly associated with item 4 (r= -0.131; p= 0.018). the item "health care facilities do not have strong medication to protect fetus" was found to be negatively correlated to ethnicity in that when more elderly women are of a Venda ethnicity the less they perceived the statement to be true.

The occupational status of elderly women was significantly associated with item 12 (r= 0.126; p= 0.023) and item 14 (r= 0.140; p= 0.011). The traditional practices were noted to be influenced by elderly women's occupational status, thus the more the elderly women are pensioners, the more they agreed to the practices of tying the abdomen of women and the cutting off of private part after birth.

Table 4.4: Correlation of perspectives of elderly women regarding contributing factors of maternal mortality and their demographic characteristics									
Items		**Age**	**Level of education**	**Ethnicity**	**Occupation**	**Religion**	**Marital status**	**Care preference**	**A place to give birth**
Item 1	R	-.018	.056	.002	-.059	.108	**-.129***	**.163****	-.001
	Sig.	.741	.313	.972	.293	.052	**.020**	**.003**	.985
Item 2	R	-.094	-.039	-.037	-.012	.082	**-.167****	.003	-.075
	Sig.	.091	.482	.511	.826	.142	**.003**	.957	.176
Item 3	R	-.003	-.018	.060	-.006	**.147****	-.062	.016	.031
	Sig.	.955	.751	.285	.917	**.008**	.264	.770	.579
Item 4	R	.015	-.009	**-.131***	.080	**.160****	.038	**-.119***	-.098
	Sig.	.785	.871	**.018**	.150	**.004**	.490	**.032**	.077
Item 5	R	-.031	.061	-.075	.022	.050	.006	-.017	.066
	Sig.	.580	.270	.179	.699	.373	.909	.764	.237
Item 6	R	-.010	-.056	-.083	.097	.084	-.032	.101	-.071
	Sig.	.858	.311	.136	.081	.131	.562	.068	.204
Item 7	R	.014	-.005	.036	.066	.092	.035	**.189****	-.107
	Sig.	.809	.923	.521	.239	.098	.527	**.001**	.054
Item 8	R	.013	-.052	-.071	-.010	**.138***	.007	.002	**.111***
	Sig.	.814	.353	.199	.858	**.013**	.903	.974	**.046**
Item 9	R	.004	-.023	-.074	.013	.060	-.043	.007	.061
	Sig.	.941	.677	.182	.812	.280	.445	.900	.277
Item 10	R	-.028	.026	-.033	-.046	**.173****	-.065	**.134***	-.022
	Sig.	.616	.644	.550	.413	**.002**	.241	**.016**	.692
Item 11	R	-.056	**.157****	-.073	-.026	.059	-.079	.016	**-.112***
	Sig.	.312	**.005**	.189	.643	.290	.155	.775	**.044**
Item 12	R	**.115***	-.079	.091	**.126***	**.175****	.067	**.205****	-.103
	Sig.	**.038**	.156	.101	**.023**	**.002**	.227	**.000**	.063
Item 13	R	.094	.015	.076	.022	**.204****	.017	.008	-.039

66

	Sig.	.090	.792	.175	.696	**.000**	.757	.879	.486
Item 14	R	**.116***	**-.137***	.035	**.140***	**.167****	.093	**.116***	-.069
	Sig.	**.036**	**.013**	.525	**.011**	**.003**	.096	**.036**	.219
Item 15	R	.049	.083	.060	-.017	**.119***	.105	-.002	.027
	Sig.	.381	.134	.286	.764	**.033**	.059	.978	.630

Elderly women's religion was found to be positively correlated to item 3 (r= 0.147; p= 0.008), item 4 (r= 0.160; p= 0.004), item 8 (r= 0.138; p= 0.013), item 10 (r= 0.173; p= 0.002), item 12 (r= 0.175; p= 0.002), item 13 (r= 0.204; p=0.000), item 14 (r= 0.167; p= 0.003) and Item 15 (r= 0.114; p= 0.033). Religion was marked to have influenced the agreement of elderly women towards most of the perceptions as indicated in table 4.4: as there was a significant positive association in terms of perspectives of elderly women regarding the place of consultation during pregnancy, perceived ANC attendance during pregnancy and cultural or traditional practices during and after pregnancy.

It was also found that the elderly women's marital status was negatively and significantly correlated to item 1 (r= -0.129; p= 0.020) and item 2 (r= -0.167; p= 0.003). The distance from where the pregnant women live to the health care facilities was reported to be negatively associated with the elderly women's marital status as most unmarried elderly women disagreed with the statement. Furthermore, they also disagreed with the statement that indicates that the attitudes of health care practitioners drive pregnant women not to go for a consultation in the health care facilities, hence the negative significant association was marked.

Type of care preferred was positively and significantly associated with item 1 (r= 0.163; p= 0.003), Item 10 (r= 0.134; p= 0.016), item 12 (r= 0.205; p= 0.000) and Item 14 (r= 0.116; p= 0.036). Although most elderly women reported preferring western health systems, there were differing perspectives among some given the positive association with cultural or traditional practices. Thus, those who prefer the traditional practices agreed more with the perspectives relating to cultural or traditional practices and those who prefer the western health system disagreed more with cultural or traditional perspectives. However, the type of care preferred was negatively and significantly associated with item 4 (r= -119; p= 0.032) and item 7 (r= -0,189; p= 0.001). Perspectives around health care facilities not having strong medication to protect the pregnancy and no consultation due to lack of women's love for the unborn baby were negatively associated with the preference of care by elderly women.

There was also a marked association between the perceived safe place for women to give birth at and item 8 (r= 0.111; p= 0.046), while a significant negative correlation

was marked in relation to item 11 (r= 112; p= 0.044). The findings indicate that elderly women who prefer traditional healer/TBA as a safe place to give birth agreed more with the perception that the pregnant women are afraid to be attacked by evil spirits when they attend ANC in health care facilities, hence the positive association. While the opposite was marked in terms of the perspectives that attending ANC exposes women to diseases that may even harm the husband, which was negatively associated with the safe environment for women to give birth.

The correlation findings of this study revealed that the perspectives of elderly women are influenced by multiple demographic characteristics, mainly religion, type of care preferred, marital status, age, safe place for giving birth and occupational status.

4.5. SECTION C: KNOWLEDGE REGARDING COMPLICATIONS AND MEDICAL CONDITIONS LEADING TO MATERNAL MORTALITY AMONG ELDERLY WOMEN

Knowledge help individuals to be able to understand better and have a good attitude towards a phenomenon. Therefore, this study also assessed the knowledge of elderly women regarding factors contributing to maternal mortality.

4.5.1. Knowledge of Complications that Cause Maternal Mortality

Knowledge regarding complications that may predispose, lead to or cause maternal mortality was also measured on elderly women who were part of this study. Table 4.5 displays the elderly women's knowledge regarding complications of maternal mortality.

About 266 (71.1%) of elderly women indicated that they were aware of the complications that could contribute to maternal mortality. However, 108 elderly women (28.9%) reported that they were not aware of the complications that could contribute to maternal mortality. This means that even though most elderly women (n= 266; 71.1%) are indicating/showing to be knowing complications that lead to maternal mortality, others are still unaware of the complications that lead to maternal mortality. Amongst the elderly women who displayed knowledge of complications that could lead to maternal mortality, the majority of them knew that excessive bleeding (n= 227; 85%)

could lead to or could cause maternal death followed by those who knew caesarean section (n=118; 44.4%) and abortion (n=117; 44%). Only 79 elderly women (29.7%) mentioned that HIV was also a factor that could contribute to maternal mortality (See Table 4.5).

Table 4. 5: Knowledge regarding complications of maternal mortality.

Awareness of the complications that can lead to maternal mortality	Yes	**266 (71.1%)**
	No	108(28.9%)
Complications	Excessive Bleeding	**227(85.3%)**
	Caesarean Section	**118(44.4%)**
	Abortion	**117(44%)**
	HIV and AIDS	79(29.7%)
Knowledge of medical conditions that contribute to maternal mortality	Yes	**208(55.6%)**
	No	166(44.4%)
Medical conditions	Anaemia	**120(57.7%)**
	Malaria	**117 (56.3%)**
	Urinary Tract Infection	52 (25%)
	Hypertension	**166 (79.8%)**
	Diabetes Mellitus	**124 (59.6%)**
	Epilepsy	74 (35.7%)
Diet practices of pregnant women that lead to maternal mortality	Eating too much of Starch	72(19.3%)
	Eating Oranges	37 (9.9%)
	Eating eggs during pregnancy	7(1.9%)
	Eating cold foods during pregnancy	32(8.6%)
	None of the above	**226(60.4%)**
Complications leading to Maternal Mortality after childbirth	Yes	**250 (66.8%)**
	No	124 (33.2%)
Complications after childbirth	Excessive bleeding	**245(98%)**
	Wound infection	**193(77.2%)**
	Swelling of the Breast	**80(32%)**
	Deep Vein Thrombosis	26(10.4%)
	Post-partum psychosis	30(12%)
	Puerperal fever	48(19.2%)

4.5.2. Knowledge regarding medical conditions that can lead to maternal mortality.

This study revealed that there are medical diseases that can also lead to maternal mortality, hence the questions about the knowledge of medical conditions that can lead to maternal death were asked to the elderly women. Out of 374 elderly women who answered the questionnaires, about 55.6% (n=208) of elderly women reported that they were aware of the medical conditions that could contribute to maternal mortality and about 44.4% (n= 166) indicated that they did not know any medical conditions that could cause maternal mortality which is a very high number for not knowing those medical conditions. Of the elderly women who revealed that they knew different conditions that could lead to maternal mortality, 57.7% (n= 120) mentioned anaemia, 56.3% (n= 117) agreed that malaria was one of the medical conditions and only a few elderly women mentioned that urinary tract infection (n= 52; 25%) could contribute to maternal mortality. About 79.8% (n= 166) and 59.6% (n= 124) of elderly women reported that the main conditions that are contributing most to maternal mortality were hypertension and diabetes mellitus respectively.

4.5.3. Knowledge Regarding Diet Practices

Out of 374 elderly women, about 226 (60.4%) revealed that women during pregnancy should not be restricted from eating nutritious food, whereas 72 of elderly women (19.3%) were against women from eating too much starchy food, oranges (n=37; 9.9%), eggs (n= 7; 1.9%) and cold food (n= 32; 8.6%) during pregnancy. The responses to this question revealed that some elderly women have the belief that eating some of the food items can be one of the contributing factors to maternal mortality. However, most of these food items that pregnant women are informed not to take are very nutritious and can even boost the immune system of the mother, as well as nourishing the unborn child.

4.5.4. Knowledge Regarding Postpartum Complications

The elderly women also answered the question regarding the complications that come after birth and 42 days after childbirth. Out of 374 elderly women, 250 (68.8%) responded that they knew the complications at the postpartum stage and about 124 (33.2%) were not aware of those complications. Amongst the elderly women who

indicated that they were aware of the complications during the postpartum stage, the majority mentioned excessive bleeding (n= 245; 98%) followed by wound infection (n= 193; 77.2%). Other elderly women were aware of swelling of the breast (n= 80; 32%) and puerperal fever (n=48; 19.2%). Other factors were also reported by elderly women as factors contributing to maternal mortality after birth which include postpartum psychosis (n= 30; 12%) and deep vein thrombosis (n= 26; 10.4%). There is a high number of elderly women who are not aware of the complications that can lead to maternal mortality at the postpartum stage that were revealed in this study, even though many elderly women showed that they were aware of those complications.

4.5 FACTOR ANALYSIS

The 15 items of the perspectives of elderly women regarding factors contributing to maternal mortality were subjected to the principal components analysis (PCA) using SPSS version 26. Before performing the principal components analysis (PCA), the suitability of data for factor analysis was assessed. The inspection of the correlation matrix revealed the presence of many coefficients of .3 and above (see Table 4. 5). The Kaiser-Meyer-Olkin value was .623, exceeding the recommended value of .6 and Bartlett's Test of Sphericity (Pallant; 2013) reached the statistical significance (p < 0.000), supporting the factoriability of the correlation matrix as indicated in figure 4.1.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.623
Bartlett's Test of Sphericity	Approx. Chi-Square	**1061.389**
	Df	105
	Sig.	**.000**

Figure 4.1: KMO and Bartlett's Test

According to Pallant (2013), the only factor with an eigenvalue exceeding 1.0 and explaining 18.9%, 12.6%, 12.4%, 10.2% and 7.7% of the variance respectively were considered on PCA (As indicated in Table 4.5).

Table 4.5: Explanation of total variance (PCA)

9-Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	**2.836**	**18.907**	**18.907**	2.836	**18.907**	18.907
2	**1.898**	**12.654**	**31.561**	1.898	**12.654**	**31.561**
3	**1.866**	**12.440**	**44.001**			
4	**1.531**	**10.205**	**54.206**			
5	**1.160**	**7.730**	**61.936**			
6	.904	6.028	67.964			
7	.846	5.637	73.601			
8	.727	4.845	78.446			
9	.659	4.392	82.838			
10	.590	3.936	86.774			
11	.494	3.296	90.070			
12	.456	3.039	93.109			
13	.376	2.509	95.618			
14	.345	2.302	97.920			
15	.312	2.080	100.000			

The principal component analysis (PCA) revealed the presence of five (5) components with the eigenvalues exceeding 1, thus component 1 (2.836), component 2 (1.898), component 3 (1.866), component 4 (1.531) and component 5 (1.160). The five components explained 18.9%, 12.6%, 12.4%, 10.2% and 7.7% of the variance respectively. The scree plot inspection revealed a clear break after the second component, therefore, it was decided that the two components are retained for further investigation (see Fig 4.1).
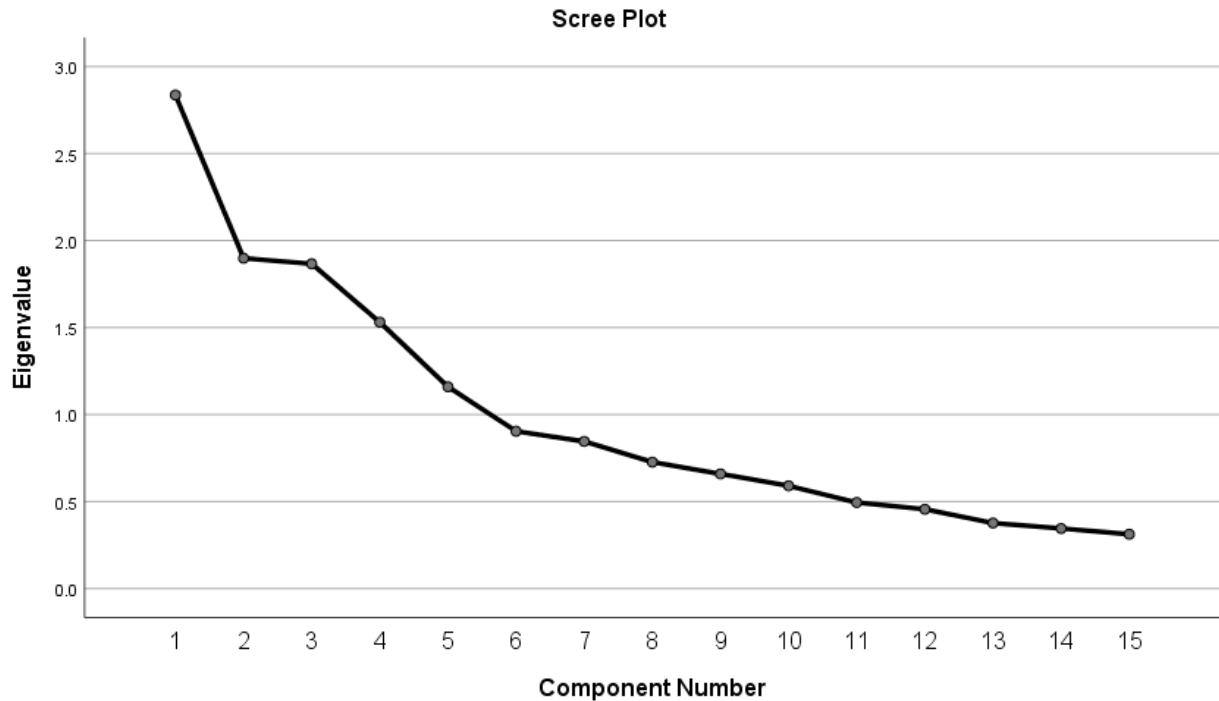
Figure 4.2: Scree plot

Table 4.6 presents the pattern and structure matrices for PCA with oblimin rotation of the two-factor solution of the perspectives of elderly women regarding contributing factors to maternal mortality as guided by the scree plot (Figure 4.2).

The two-component solution explained a total of 31.6% of the variance with component 1 contributing 18.91% and component 2 contributing 12.65% to help in the clarification of these two components, oblimin rotation was performed. The rotated solution revealed the presence of a simple structure with both components showing several strong loadings and all variables loading substantially on only one component. Concerning pattern coefficients, component 1 which contributed 18,91% of the variance, had a strong factor loading consisted of *attitudes of health care practitioners, not accepting pregnancy and not loving the unborn baby, long queues in health care facilities, distance to the Health care facilities, removal of Gokhonya, unawareness of own pregnancy, the practice of tying the abdomen after giving birth, shortage of medication and fear of being bewitched during pregnancy* (coefficients range from .366 to .725). Furthermore, component 2 which had five strong factor loadings and contributed 12.65% of the variance had strong factor loading consisted of *fear of being bewitched during pregnancy, traditional practices protect the baby and the woman,*

attending ANC predisposes women to diseases, fear of being attacked by evil spirits when you attend ANC and traditional herbs heal wound faster without complications.

According to Table 4.6, it was revealed in structure coefficients that component 1 contributed 18,91% of the variance and had strong factor loading similar to that of the pattern coefficients which consisted of *attitudes of health care practitioners, not accepting pregnancy and not loving the unborn baby, long queues in health care facilities, distance to the Health care facilities, removal of Gokhonya, unawareness of own pregnancy, the practice of tying the abdomen after giving birth, shortage of medication and fear of being bewitched during pregnancy,* however, coefficients are ranging from .438 to .702.

Similarly, component 2 which had five strong factor loadings and contributed 12.65% of the variance also had strong factor loading similar to pattern coefficients which comprised of *fear of being bewitched during pregnancy, traditional practices protect the baby and the woman, attending ANC predisposes women to diseases, fear of being attacked by evil spirits when you attend ANC and traditional herbs heal wound faster without complications.* Even though the factor (fear of being bewitched during pregnancy) was the smallest in the pattern and structure matrix, it featured in both component 1 and component 2 of both structure and pattern coefficients. Table 4.6 also revealed that there are two (2) factor loadings that were not considered as a factor namely, (1) *to precipitate labour, women should drink traditional herbs; and (2) it is affordable to consult elderly women*. The discussion and summary of the findings including the conclusions and recommendations for further research will be outlined in Chapter 5.

Table 4.6 Pattern and structure matrix for PCA with oblimin rotation of two-factor solution of the perspective of elderly women regarding contributing factors to maternal mortality.

	Pattern Coefficient		Structure Coefficient		C
	Component		Component		
	1	2	1	2	
Attitudes of health care practitioners	**.725**	-.117	**.702**	.026	.329
Not accepting pregnancy and not loving the unborn baby	**.591**	-.110	**.572**	.147	.507
Long queues in health care facilities	**.583**	-.250	**.569**	.007	.345
Distance to the Health care facilities	**.566**	.035	**.534**	-.135	.235
Removal of *Gokhonya*	**.502**	.022	**.532**	.274	.079
Unawareness of own pregnancy	**.497**	.176	**.507**	.121	.312
The practice of tying the abdomen after giving birth	**.434**	.138	**.461**	.224	.335
Shortage of Medication	**.419**	.175	**.453**	.257	.471
Fear of being bewitched during pregnancy	**.366**	**.362**	**.438**	**.435**	.587
Traditional practices protect the baby and the woman.	-.055	**.775**	.098	**.765**	.318
Attending ANC predisposes women to diseases	-.141	**.697**	.096	**.685**	.467
Fear of being attacked by evil spirits	-.041	**.693**	-.003	**.669**	.257
Traditional herbs heal wound faster without complications	.061	**.405**	.141	**.418**	.178
To precipitate labour women should drink traditional herbs	.014	.284	.070	.287	.231
It is affordable to consult elderly women	.052	.266	.104	.276	.082

Note: major loadings for each item are bolded.

SUMMARY OF THE CHAPTER

This chapter presented the socio-demographic characteristics of elderly women which included the elderly women's age, level of education, ethnicity, occupation, religion, marital status, experience as a birth attendant and whether maternal mortality affects them. The second section presented the perspectives of elderly women regarding factors contributing to maternal mortality which incorporated health care system factors, factors contributing to late booking and cultural practices during pregnancy to the post-partum stage. Furthermore, the study findings also presented the establishment of an association between perspectives of contributing factors to maternal mortality and the demographic characteristics of elderly women. This study also provided knowledge regarding complications and medical conditions leading to maternal mortality among elderly women, encompassing knowledge of complications that cause maternal mortality, medical conditions that can lead to maternal mortality, diet practices and postpartum complications. The next chapter presents a discussion of the findings of this study.

CHAPTER 5

DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The previous chapter (Chapter 4) presented the data analysis of the perspectives of elderly women regarding factors contributing to maternal mortality. Therefore, this chapter presents the discussion of findings, conclusions, limitations of the study and makes recommendations for strategies to improve maternal health care. The purpose of the study was to describe the perspectives of elderly women regarding factors contributing to maternal mortality in the rural villages of the Vhembe district. The study's objectives which were to determine perspectives of elderly women regarding factors contributing to maternal mortality and to run factor analysis to determine major contributing factors to maternal mortality during traditional practices within rural villages of the Vhembe District, Limpopo province were met as presented in the previous chapter.

This chapter presented the findings which included the socio-demographic characteristics indicating that the majority of elderly women who participated were within the age of 50-60 years and among the Vhavenda ethnic group. Moreover, most of these elderly women were pensioners and belonged to the Christian religion. Preference of care, perspectives of elderly women regarding factors contributing to maternal mortality were also described. There were significant associations between age, religion and type of care towards the perspectives of elderly women regarding maternal mortality (See Chapter 4, Table 4.4). Factor analysis using PCA was conducted and presented the different factors with both positive and negative factor loadings.

The discussion section provides the discussion about the type of care preferred, perspectives regarding factors contributing to maternal mortality and knowledge regarding complications, medical conditions and diet practices leading to maternal mortality.

5.2 TYPE OF CARE PREFERRED

The results of the current study reveal that even though there is the provision of maternal healthcare, there are some of the elderly women who still prefer the traditional healthcare system in the rural villages of Vhembe district and there are others who prefer the use both traditional and western health care systems. This is found to be consistent with the findings of a previous study conducted in Zambia which reported that some women in rural communities preferred traditional care as the first contact and the facility-based as the second contact especially when complications arise (Sialubaje, Massar, Hamer & Ruiter, 2015).

However, in the current study, the majority of elderly women preferred the western health care system which includes the healthcare facilities and maternal health care professionals. The findings of this study are supported by Fantaye, Gunawandera and Saya (2019) whose study reported that facility-based care is regarded best as compared to traditional care. This is because the health care facilities possess all the necessary equipment and trained maternal health care professionals to provide the necessary maternal health care services and prevent the complications that can lead to maternal mortality. The reasons for elderly women preferring the health care facilities to traditional care were based on the skilled health care professionals (Midwives, obstetricians and gynaecologists) because the majority of them illustrated that they preferred to be assisted by both the doctor and the midwife during the health care visits (Fantaye, Gunawandera & Saya, 2019). Furthermore, the findings were also consistent with the study conducted by Alemu, Amenu and Feyiso (2019) on 'Women's Preference of Home Delivery in Wonago District, Gedeo Zone' which highlighted that most of the women preferred health care facility for maternal health care. This means that health care facilities are the safest and secure place for antenatal care, delivery and care after delivery (Postpartum care) to reduce the complications that can lead to maternal mortality. It is, therefore, clear that there is a significant preference for facility-based maternal care services among elderly women and this portrays the availability of potential advice provision for adolescents and young adult females to use available health care facilities for ANC and other maternal health care services.

5.3 PERSPECTIVES REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY

The perspectives of elderly women regarding factors contributing to maternal mortality were discussed herein based on the healthcare system factors, factors relating to a late booking to antenatal clinic and cultural practices during pregnancy to the post-partum stage.

5.3.1 Health Care System Factors

Factors assessed under the health care system included distance where the healthcare facilities are situated, the attitude of the health care practitioners, long queues at the health care facilities and shortage of medication. Based on the responses by elderly women who participated in this study, health care system factors were not considered as factors contributing to poor and delayed visits for ANC complications leading to maternal mortality. In contrast, Sialubanje et al. (2015) indicated that health care system factors are the barriers that hinder pregnant women from consulting and encourages home delivery which then leads to advanced complications that can lead to maternal mortality. Sialubanje et al. (2015) argue that bad attitudes, long-distance travels to health care facilities and long queues at the health care facility are the contributing factors to several complications that may lead to maternal mortality.

A systematic review conducted in rural Africa (Fantaye et al., 2019) revealed similar results that corroborate Sialubanje et al.'s (2015) findings, reporting health care system factors as the contributing factors to maternal mortality in Africa, therefore, contrasting the current study. The reason for the contrasting findings might be because of the different context and different population studied. Although the majority of elderly women did not regard health care systems factors as the contributing factors to maternal mortality, some of them regarded health care system factors as contributing factors to complications that lead to maternal mortality, especially the bad attitude of health care practitioners. This is in line with the study conducted in southern Ethiopia (Alemu, 2019) which revealed that disrespect and abuse during childbirth by health care practitioners were found to be one of the reasons why women choose to be taken care of by birth attendants.

5.3.2 Factors Relating to a Late Booking at Antenatal Care Clinic

Elderly women in this context revealed that late ANC booking can contribute to complications that lead to maternal mortality. Moreover, different studies reported factors that contribute to late booking which mostly included attitudes of health care professionals and lack of money to travel to health care facilities (Tolefac, Halle-Ekane, Agbor, Sama, Ngwasiri & Tebeu, 2017) and (Wolde, Tsegaye & Sisay, 2019). However, the current study is in contrast with the result of other studies because attitudes of health care professionals and lack of money to travel to health care facilities were not considered as factors that can lead to late booking. Factors that were revealed to be contributing to late booking were personal factors which included fear of attracting evil spirits from other women at the clinics, fear of being bewitched because it is considered a taboo to be seen in public during pregnancy and not being ready to be a mother. Even though the majority of elderly women supported that pregnant women should attend ANC, it was revealed that it is taboo for pregnant women to be seen in public due to the belief that making oneself invisible is a way of avoiding witchcraft that can harm the baby. Furthermore, elderly women showed that attending ANC can also attract evil spirits that can harm the baby, corroborating studies conducted in South Africa (Ngomane & Mulaudzi, 2020; Chinamatiro, Hajison, Chipeta & Muula, 2018) which reported that "having contact with other women at the clinic may subject women to evil spirits who could harm the fetus".

This means that even though the majority of elderly women consider ANC during pregnancy, there are still some traditional beliefs regarding pregnancy and that prevent women from early ANC booking, thus leading to complications that lead to maternal mortality. In a study conducted by Ngomane and Mulaudzi (2020), it was reported that to preserve pregnancy, women should not be seen in public, which is in line with the results of the current study. The other factor relating to late booking that the current study revealed was that most women book late for ANC or never book because of not being ready to be a mother/ not loving the unborn baby. This is supported by the study conducted in SA (Kwasa, Repesingle & Mbeza, 2018) which reported that not accepting pregnancy can contribute to late ANC booking. Uncertainty of pregnancy was assessed as one of the factors contributing to late booking. However, elderly women reported that women are always aware of the pregnancy.

According to Kwasa et.al (2018), being unaware of pregnancy is also a factor contributing to late booking, contrary to the current study's results.

5.3.3 Cultural Practices During Pregnancy to Postpartum Stage

Different cultures have certain practices that are practised during pregnancy, childbirth and after childbirth. Cultures are different and have different beliefs, values and practices (Sahin, 2018). The study conducted by (Withers, Kharazmi & Lim, 2018) reported different traditional practices compared to the traditional practices that were revealed in the study conducted in Ethiopia (Berhan & Berhan, 2014) which reported that women should undergo a traditional procedure of cutting or removing part of the woman's external genitals after birth (Berhan & Berhan, 2014). Similarly, the current study revealed that cutting of the external genitals which they usually call (*Gokhonya*) is the traditional practice that all women should undergo after birth to prevent the child from dying. Even though some of the elderly women in this study did not concur with such traditional practices for reasons that it may result in complications that can lead to maternal mortality, the majority of elderly women consider it as an essential traditional practice. A study that was conducted in Sudan (Yassin, Idris & Ali, 2018) reported similar findings,   however, the practice is done for a different purpose depending on the cultural belief. Another study that reported female genital mutilation was the one conducted in Ethiopia which furthermore reported different complications that were associated with the procedure. The complications included postpartum bleeding which is one of the five foremost causes of maternal mortality (Gebremicheal, Alemseged, Ewunetu, Tolossa, Ma'alin, Yewondwessen & Melaku, 2018).

5.4 ASSOCIATION BETWEEN THE SOCIO-DEMOGRAPHIC CHARACTERISTICS AND THE PERSPECTIVES OF ELDERLY WOMEN REGARDING MATERNAL MORTALITY

The perspectives of elderly women regarding maternal mortality were correlated with socio-demographic characteristics. The results of this study revealed that the age of elderly women was significantly associated with most of the cultural practices. This was supported by Fung (2013) who stipulated that people from any cultural context possess the ability to internalize their cultural values in accordance with their age.

Thus, the more they aged the deeper is their cultural values and those who are younger had a reduced amount of regards for the cultural practices or values. Furthermore, the level of education also presents the impact on cultural practices as most elderly women who possess lower educational status are of the higher perceptions that all women should have their abdomen tied to restore the abdomen and those highly educated showing very low perspectives in this regard. As explained by Freira (1967) that "*those invaded come to see their reality with the outlook of the invaders rather than their own: for the more they mimic the invaders the more stable the position of the latter becomes*" which means that due to received education, most people are convinced to leave their cultural practices in favour of the new teachings received. This is true given that those elderly women who are highly educated had low to no perception towards traditional or cultural practices. Furthermore, traditional or cultural practices were also influenced by elderly women's occupational status.

The perspectives of elderly women were also significantly associated with religion which had strongly influenced their agreement with the place of consultation during pregnancy, perceived ANC attendance during pregnancy and cultural or traditional practices during and after pregnancy. The distance between the health care facility and where the pregnant women live was negatively associated with the elderly women's marital status given that most unmarried elderly women disagreed with the statement. Furthermore, they also disagreed with the statement that indicates that the attitudes of health care practitioners drive pregnant women away from consultation in the health care facilities, hence the negative significant association was marked. Attitudes and behaviours of maternal health care providers (MHCPs) had been reported to have an impact on health care seekers. (Mannava et al., 2015). Advisably, the attitudes and behaviours of MHCPs are an imperative component of quality as they promote how women and their partners, and families observe and experience maternal health care, whether positively or negatively (WHO, 2013; Mannava et al., 2015).

Although most elderly women reported that they prefer the western health systems, the marked differences in perspectives among elderly women clearly highlighted a strong positive association with cultural or traditional practices. Thus, those who prefer the traditional practices agreed more with the perspectives relating to cultural or traditional practices and those who prefer the western health system disagreed more

with cultural or traditional perspectives. Furthermore, elderly women who prefer traditional healer/TBA as a safe place to give birth strongly believe that pregnant women are afraid of being attacked by evil spirits when they attend ANC in health care facilities. Thus, there was diversity within the elderly women and the identified diversity may have a strong influence on the prevention of factors influencing or contributing to maternal mortality in the Vhembe district.

5.5 KNOWLEDGE REGARDING MATERNAL MORTALITY

It is important to share knowledge of a specific behaviour with the reasons of shifting knowledge from one individual to another (Pangil & Chan, 2019) and it is also believed that the very first step to take to decrease maternal mortality is by knowing the causes and complication that may arise (Getachew, Kassa, Ayana & Amsalu, 2017).

5.5.1 Knowledge of Complications that Cause Maternal Mortality

Results show that the majority of elderly women were aware of the complications that lead to maternal mortality and the complications that were reported included excessive bleeding, caesarean section, abortion and HIV. However, the majority of elderly women reported excessive bleeding as the leading complication of maternal mortality. A Turkish study reported that about 779 maternal deaths were a result of excessive bleeding during pregnancy (Gulumser, Engin-Ustun, Keskin, Celen, Sanisoglu, Karaahmetoglu, Ozcan & Sencan, 2019). The current study's results also support by the study conducted by Getachew et al. (2017) regarding excessive bleeding as the leading cause of maternal mortality. Other factors under the complications that were amongst the results of the current study were caesarean section, abortion and HIV-AIDS which were also reported in a study conducted by (Filippi, Chou, Ronsmans, Graham & Say, 2016). Filippi et.al (2016) highlighted that 7.9% of death caused by complications following abortion also reported that about 1000 death of 10000 women were HIV infected.

5.5.2 Knowledge Regarding Medical Conditions that can Lead to Maternal Mortality

Filippi et al. (2016) reported that there were medical conditions that may cause complications that may lead to maternal mortality and hypertension which was classified into preeclampsia, eclampsia, and chronic hypertension was reported as the cause of complications leading to maternal mortality. Anaemia and pregnancy-related infection were also reported in the same study (Filippi et al., 2016). Similarly, the current study has also revealed hypertension, Anaemia and urinary tract infection as part of the medical conditions that may lead to maternal mortality. The other medical conditions that were reported from the current study were epilepsy, malaria and diabetes mellitus. Even though women with epilepsy can have a normal pregnancy and give birth normally, it was reported in the current study as one of the medical conditions that may lead to maternal mortality. These findings are in line with a study conducted by (Tomson et al., 2019) which reported that pregnant women with epilepsy are exposed to some of the risk factors which are preeclampsia, haemorrhage, fetal growth restriction, stillbirth, and maternal mortality.

5.5.3 Knowledge Regarding Diet Practices

Several studies that were conducted under the context of maternal mortality have reported that women should be restricted from some food substances that can cause difficulties when delivering (Lennox, Petrucka & Bassendowski, 2017). However, the findings of this study reported that women should not be restricted from any food substances because it might be denying them nutrients that are good/healthy for the unborn baby.

5.5.4 Knowledge Regarding Postpartum Complications

Postpartum complications that are reported in this study were postpartum haemorrhage (PPH), Puerperal fever, Post-partum psychosis, Deep Vein Thrombosis, Swelling of the Breast and Wound infection. PPH has been reported in huge numbers as the leading contributing factor to maternal mortality and according to WHO (2017), PPH has been reported as the leading cause of maternal mortality, especially in rural countries and also reported to be contributing nearly one-quarter of all maternal deaths worldwide. Ngwenya (2016) reported in the study conducted

in Zimbabwe that PPH is the leading cause of death in women after birth and also estimated that about 77% of cases at the time of the study that were attended had PPH and further explained that the most identifiable risk factor for PPH was pregnancy-induced hypertension which has been reported in the current study as one of the medical conditions contributing to maternal mortality.

Wound infection is accompanied by puerperal fever and it includes the caesarean section wound, perineum wound and mastitis which is swelling of the breast and was also reported as part of complications leading to maternal mortality. According to Woodd, Montoya, Barreix, Pi, Calvert, Rehman, Chou, and Campbell, (2019) mastitis, puerperal sepsis, surgical site infections and urinary tract infection were the infections that were discovered under wound infection which are similar to the findings of the current study.

5.6 IMPLICATIONS FOR PRACTICE

Based on the findings of this study, it was revealed that the majority of elderly women were aware and knowledgeable about the factors contributing to maternal mortality and related complications as well as medical conditions. The health care practice goal in reducing maternal mortality can be achieved through strengthening health promotion strategies, especially among elderly women. Elderly women in this context are the custodians of culture and they have a great impact on the lives of pregnant women as it was also revealed that it is regarded a taboo and an act of disrespect not to follow the instruction from elders.

Most elderly women in this study highlighted their support concerning pregnant women attending ANC and visit healthcare facilities as a way of preventing the complications that can lead to maternal mortality. Therefore, elderly women may be used as an instrument or as the first line of contact to provide guidance and advise to pregnant women in terms of early access to ANC, to visit health care facilities during the entire pregnancy. If the maternal health promotion strategies are strengthened among the custodians, this would stimulate them to take responsibility and accountability to emphasize the need for pregnant women to attend maternal health care services accordingly, thus maternal mortality will decrease.

Even though the majority of elderly women welcomed and supported the need for women to visit health care facilities for proper care during pregnancy certain cultural practices were revealed which play a huge role in the lives of the mother and that of the newborn baby. Such practices are believed by the majority of elderly women which therefore revealed the need for collaboration between the way the traditional practices are undertaken, and this should be clearly aligned with the maternal health care requirements or plan to help reduce the maternal mortality rate in the Vhembe district. Thus, there is a need for both the traditional health and western health approaches to have some sort of agreed measures that will promote sustained maternal health without compromising one another, but in a consensus manner. This can be achieved through the use of the collaboration of health care providers, elderly women, community health workers and traditional birth attendants who possess the same strategy to reach one goal which is the reduction of maternal mortality.

5.7 CONCLUSION AND RECOMMENDATIONS OF THE STUDY

The findings of this study revealed the perspectives of elderly women regarding the contributory factors to maternal mortality. The findings provided clarity on the preference of the majority of elderly women which revealed that the western health care system was mostly preferred than the traditional practices. Regardless of the above preferences, elderly women held different perspectives relating to factors influencing maternal mortality. Thus, with ANC, most elderly women highlighted the importance of utilizing the available primary health facilities for ANC, delivery and postpartum care. Besides, others felt it wouldn't benefit them as they would be treated with bad attitudes and it would be a waste of money and time. This is also aggravated by the misconceptions and myths about contracting evil spirits and diseases in the health care facilities.

Most elderly women highlighted the importance of attending ANC, delivery and postpartum care by pregnant women regardless of the distance to the health care facility and attitudes midwives have, in order to get the proper care. This was also emphasized through the view that pregnant women should prioritise attending, visiting and sticking to their follow up visits within the primary health care facilities. This was seen as a better way to curb the preventable complications that may lead

to maternal mortality. Although this was uttered, some still reported that it is taboo for pregnant women to be seen in public as it renders them vulnerable to attacks by evil spirits. This view perpetuates pregnant women's reluctance to report to and visit the health care facility for ANC booking and follow-up visits. This was also advanced when giving reasons for late booking which include women not happy with their pregnancy and others not aware of the pregnancy.

There are also cultural practices that have been identified as factors contributing to maternal mortality which include the ritual of cutting off part of the women's genitalia *(Gokhonya)* after giving birth which in most cases lead to postpartum haemorrhage and also the tying of the abdomen to promote to restore the womb to its original shape, which creates problems because they do this to every mother after delivery irrespective of whether she delivered through normal vaginal delivery or caesarian section.

It was evident from the findings that elderly women possess the necessary knowledge and awareness. This is true given that majority of them were aware and knowledgeable about the complications and medical conditions that have the potential to contribute to maternal mortality among women during pregnancy, delivery and postpartum. When it comes to diet, most elderly women indicated that during pregnancy and postpartum, women should not be prohibited to indulge in nutritious food as it promotes the wellbeing of both the pregnant woman and the unborn baby.

Given the evidence provided in this study, it is of paramount importance that there is a culturally congruent awareness intervention programme implemented to prevent misconceptions and myths as well other practices dominant in the study area. This is true given the need to prevent overlapping practices and approaches that can be detrimental to women during pregnancy, labour and postpartum. As the challenge faced by the women relates to the fact that they are caught in between the two worlds, thus the advice received from the midwives and the true reality they face in their place of living. Hence, they become stuck between adhering to customary or traditional norms which include respect for elders and as a result, they can't talk back or refuse the practices being imposed on them as this may portray the women as disrespectful. The two systems (Western and traditional health care practices) need to be brought close to one another to promote maternal health.

5.8 SUMMARY

This chapter presented the discussion of the results of this study which were subdivided into the type of care preferred, perspectives regarding factors contributing to maternal mortality, knowledge regarding factors leading to maternal mortality, and knowledge regarding medical conditions leading to maternal mortality. The chapter further provided the description and elaboration of the implications for health care systems and the study conclusion.

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ANNEXURE A: REQUEST TO UNIVERSITY OF VENDA RESEARCH ETHICS COMMITTEE (UVREC) TO CONDUCT THE STUDY

P.O. Box 280

Mukula

0978

University of Venda Research Ethics Committee

Private Bag X5050

Thohoyandou

0945

Dear Sir/Madam

REQUEST FOR ETHICAL CLEARANCE TO CONDUCT A RESEARCH STUDY

I, **Thendo Gertie Nemavhulani**, student no: 14007248, a Master in Nursing Degree Student at University of Venda, under the Department of Advanced Nursing Science, hereby request for ethical clearance for a research study titled:

"Perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of vhembe district, Limpopo Province"

My Supervisor is Prof ML Netshikweta, Department of Advanced Nursing Science.

Co-Supervisor: Dr AR Tshililo, Department of Advanced Nursing Science.

The purpose of the study is to:

- Determine the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of Vhembe district.

The questionnaire will be completed within 15-30 minutes.

The following ethical standards will be observed throughout the research process to preserve the name and dignity of the participants:
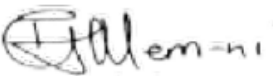
1. Informed consent will be signed voluntarily or under no pressure.

2. Respondents will participate voluntarily and entitled to freedom to withdraw without penalty.
3. Data collected will only be accessed by me and my supervisors.
4. Raw data will be kept under lock and key to ensure confidentiality.
5. Names of the participants will not be mentioned anywhere in the study.
6. The research summary will be made available for the royal councils of communities involved in the study.

Granting the researcher ethical clearance for the research study is important for this study and it holds significance in unrooting the perspectives of elderly women regarding the contributory factors to maternal mortality.

Yours faithfully

Nemavhulani TG

Signature of the Researcher: _____.   Date: ………………..

Contact No: 0662727183

Supervisor: Prof Netshikweta ML

Signature of the Supervisor: ………………………………..   Date: ………………..

Co-Supervisor: Dr Tshililo AR

Signature of the Co-Supervisor: …………………………   Date: ………………..

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ANNEXURE B: UNIVERSITY OF VENDA RESEARCH ETHICS COMMITTEE (REC) CLEARANCE CERTIFICATE

NAME OF RESEARCHER/INVESTIGATOR:

Ms TG Nemavhulani

Student No:
14007248

PROJECT TITLE: **Perspective of elderly women regarding factors contributing to maternal mortality in rural villages of Vhembe District in South Africa.**

PROJECT NO: SHS/19/PDC/46/2211

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof ML Netshikweta	University of Venda	Supervisor
Dr AR Tshililo	University of Venda	Co-Supervisor
Ms TG Nemavhulani	University of Venda	Investigator – Student

ISSUED BY:

UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: November 2019
Decision by Ethical Clearance Committee Granted
Signature of Chairperson of the Committee: ....
Name of the Chairperson of the Committee: Senior Prof. G.E. Ekosse

ANNEXURE C: APPROVAL OF DISSERTATION RESEARCH PROPOSAL BY THE UNIVERSITY OF VENDA HIGHER DEGREES COMMITTEE

UNIVERSITY OF VENDA

OFFICE OF THE DEPUTY VICE-CHANCELLOR: ACADEMIC

TO   :   MR/MS T.G NEMAVHULANI

SCHOOL OF HEALTH SCIENCES

FROM: PROF. J.E CRAFFORD

DEPUTY VICE-CHANCELLOR: ACADEMIC

DATE :   10 SEPTEMBER 2019

DECISIONS TAKEN BY UHDC OF 10th SEPTEMBER 2019

Application for approval of Masters Proposal Report in Health Sciences: **T.G Nemavhulani (14007248)**

Topic: "Perspective of elderly women regarding factors contributing to maternal mortality in rural villages of Vhembe District in South Africa."

Supervisor	UNIVEN	Prof. M.L Netshikweta
Co-supervisor	UNIVEN	Dr. A.R Tshililo

UHDC approved Masters proposal

PROF. J.E CRAFFORD
DEPUTY VICE-CHANCELLOR: ACADEMIC

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ANNEXURE D: REQUEST PERMISSION FROM TRIBAL AUTHORITIES OF SELECTED COMMUNITY OF VHEMBE DISTRICT TO CONDUCT THE STUDY

Private Bag X5050

University of Venda

Private Bag X5050

Thohoyandou

0950

Dear: Sir/ Madam

RE: REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY

I, Thendo Gertie Nemavhulani (14007248) hereby request permission to conduct my research study in your village. The title of my study is "**PERSPECTIVES OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES OF VHEMBE DISTRICT IN SOUTH AFRICA''.** I am currently a Masters student in Nursing under the School of Health Sciences at the University of Venda.

I hope my request will receive a positive response.

Yours faithfully

Thendo Gertie Nemavhulani

Researcher's signature……………………………. Date………………………….

ANNEXURE E: INFORMATION LETTER AND CONSENT FORM

LETTER OF INFORMATION

Title of the Research Study: Perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District in the Limpopo Province, South Africa.

Principal Investigator/s/ researcher: Nemavhulani Thendo Gertie, **Qualification:** BCURP.

Co-Investigator/s/supervisor/s: Prof ML Netshikweta, **Qualification:** D Lit et Phil., Dr AR Tshililo, **Qualification:** PhD

Brief Introduction and Purpose of the Study: South African government supported the issues of preventing maternal death among reproductive women which continues to rise. Poor understanding of the interplay of many antecedent factors, including socio-cultural, economic and logistic factors, combined with poor health services delivery, is a basic challenge in various countries. Elderly women also play significant roles in maternal health care within rural communities, particularly in Sub-Saharan Africa.

The purpose of this study is to determine the perspectives of elderly women regarding factors contributing to maternal mortality in rural villages of the Vhembe District.

Outline of the Procedures: A quantitative, cross-sectional descriptive design will be used for this study. Cluster sampling will be used to sample the wards which are inclusive of villages and within the villages of these selected wards, all elderly women will be eligible to participate in the study. The population will comprise all the elderly women from ages 60 and above who live within the rural villages of the Vhembe District. Sample size will be determined using the Raosoft sample size calculator software. Self-administered questionnaires will be used to collect data.

Risks or Discomforts to the Participant: No risk

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Benefits: The significance of the study will be based on the discussion under the following structures: policy, nursing education and practice.

Reason/s why the Participant May Be Withdrawn from the Study: There will be no penalties if you want to withdraw from the study or if you do not want to answer some of the questions especially if they are violating your rights.

Remuneration: There will be no remuneration

Costs of the Study: *None*

Confidentiality: The information that you give will be kept confidential. I undertake that all information provided by you will be used only for the purpose of the study. Everything that you will say will be treated as private and confidential and no-one will know what you will answer except the researcher

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (066 2727 183), my supervisor (072 4933 694) or the University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director: Research and Innovation, Prof GE Ekosse on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za

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

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CONSENT FORM

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, **Thendo Gertie Nemavhulani**, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _,

- I have also received, read and understood the above-written information (*Participant Letter of Information*) regarding the study.

- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.

- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the researcher.

- I may, at any stage, without prejudice, withdraw my consent and participation in the study.

- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

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

Full Name of Participant   Date   Time   Signature

I, ……………………..   …………….   …………   …………………..

(*Name of researcher*) herewith confirm that the above participant has been fully

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

Full Name of Researcher

…………………….   Date……………..   Signature………………..

Full Name of Witness (If applicable)

……………………. Date ……………….. Signature……………………

Full Name of Legal Guardian (If applicable)

………………….. Date……………….. Signature……………………..

Please note the following:

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

If the potential participant is unable to read/illiterate, then a right thumbprint is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

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

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ANNEXURE F: DATA COLLECTION INSTRUMENT

STUDY QUESTIONNAIRE

PERSPECTIVES OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES IN VHEMBE DISTRICT IN SOUTH AFRICA

INSTRUCTIONS

- Do not write the participant's name on the questionnaire
- Make sure all the questions are answered
- Motivate your answer where indicated

SECTION A

Demographic Data

1. Age: _____ years

2. Level of education (√) in an appropriate box

1	Primary	
2	ABET	
3	secondary	
4	Tertiary	

3. Ethnicity

1	Venda	
2	Tsonga	
3	Pedi	
4	Other	

4. Occupation of respondents please put a tick (√) in an appropriate box.

1	Employed	
2	Unemployed	
3	Self-employed	
4	Pensioner	

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5. Religion

1	Christianity	
2	Islam	
3	Traditional	
4	Other	

6. Marital status

1	Single	
2	Married	
3	Divorced	
4	Widowed	

7. Have you ever been a traditional birth attendant?

1	Yes	
2	No	

8. Years of experience as a traditional birth attendance: _____ years

9. What kind of care do you prefer?

1	Traditional practices	
2	Western health system	

10. Does maternal mortality affect you?

1	Yes	
2	No	

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11. At a scale of 1 to 5, rate yourself on how much maternal mortality affects you. Where 1 is less affected and 5 is more affected

Scale	Tick
1	
2	
3	
4	
5	

12. Where do you think is safer for women to give birth?

1	Health institution	
2	Traditional healer	

13. Who do you think can help women to deliver safely?

1	Doctor	
2	Nurse/Midwife	
3	Traditional birth attendant	
4	Self-delivery	

14. Are you aware of the complications that can lead to maternal mortality?

1	Yes	
2	No	

15. If yes, among the ones below which ones you are familiar with (tick all that apply)

1	Excessive bleeding	
2	Caesarean section	
3	abortion	
4	HIV/AIDS	

SECTION B

PERSPECTIVES REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY

Please indicate with an (X) sign, the appropriate option that reflect your perspectives regarding factors contributing to maternal mortality.

Ranking key

1.Disagree   4. Strongly disagree   3.Agree   4. Strongly agree

NO.	Perspectives of elderly women regarding the place of consultation during pregnancy	1	2	3	4
1.	Health care facilities are far from where pregnant women live.				
2	Attitudes of health care practitioners make women not to go for a consultation.				
3.	Long queues are one of the reasons why women prefer traditional herbs and traditional practices.				
4.	Health care facilities do not have strong medication to protect the fetus.				
5	It is a waste of money for women to consult during a pregnancy instead of consulting elderly women with experience at home.				
6	Women do not consult during pregnancy simply because they are not aware of the pregnancy.				
7	Some women do not consult during pregnancy because of not accepting pregnancy and not loving the unborn baby.				
	Perspectives of elderly women regarding ANC attendance during pregnancy				
8	Fear of being attacked by evil spirits when you attend ANC				
9	It is a waste of money and time to go for antenatal services whereas there are traditional practices to protect the baby and the woman.				
10	Pregnant women should not be seen in public to prevent witchcraft on the baby.				
11	Attending ANC will make women to be attacked with diseases that may even harm the husband.				

	Perspectives regarding traditional practices during pregnancy and post-partum stage				
12	Women's private part should be removed (cut) after birth to keep the baby healthy and prevent it from dying				
13	Traditional herbs heal wound faster and women who prefer using traditional herbs to heal the wound faster get cured easily without complications.				
14	All women should tie the abdomen after birth for the restoration of the abdomen.				
15	To precipitate labour women should drink traditional herbs.				

Mark the correct answer using (X)

1. Do you know medical conditions that contribute to maternal mortality?

1	Yes	
2	No	

2. Among the ones below which one are you familiar with (tick all that apply)

1	Anaemia	
2	Malaria	
3	Urinary tract infection	
4	Hypertension	
5	Diabetes mellitus	
6	Epilepsy	

3. What are the diet practices of pregnant women that lead to maternal mortality?

1	Eating too much starch	
2	Eating oranges	
3	Eating eggs during pregnancy	
4	Eating or even preparing cooling foods during pregnancy, like ice cream, watermelon, bananas and mung bean	

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4. Do you know complications that can lead to maternal mortality after childbirth?

1	Yes	
2	No	

5. Amongst the listed factors, which one is the most common cause of complications that lead to maternal mortality?

1	Excessive bleeding	
2	Wound infection	
3	Swelling of the breast	
4	Deep vein thrombosis	
5	Post-partum psychosis	
6	Puerperal fever	

Thank you for making time to participate in this study.

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ANNEXURE G: LANGUAGE EDITING AND TYPESETTING CERTIFICATE

SCHOOL OF HUMAN AND SOCIAL SCIENCES

07 December 2020

TO WHO IT MAY CONCERN

Sir/Madam

This serves to confirm that I have proof-read Miss T.G. Nemavhulani's dissertation titled, "PERSPECTIVE OF ELDERLY WOMEN REGARDING FACTORS CONTRIBUTING TO MATERNAL MORTALITY IN RURAL VILLAGES OF VHEMBE DISTRICT, LIMPOPO PROVINCE"

The proof-reading entailed editing some parts of the document; for example, to avoid wordiness, redundancy, sub-dividing sentences, and so on, to enhance the readability of the document.

However, I have not tampered with the content of the document, except where this constituted repetition or made the document confusing.

The dissertation is presently ready for examination.

Sincerely

……………………………………………
Mr. F. Mahori
Lecturer
Department of English

University of Venda

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