

**A CROSS-SECTIONAL STUDY ON THE USE OF TRADITIONAL,
COMPLEMENTARY, AND ALTERNATE MEDICINE AMONGST PREGNANT
WOMEN IN THE ETHEKWINI DISTRICT**

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Technology in fulfilment of the requirements for the Degree of Masters in
Health Science

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December 2025

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DEDICATION

This dissertation is dedicated to my dear husband, Sugan G, as well and my precious children, Braeden and Kyra.

It is also dedicated to my late brother, Brenden, who passed on during my master's study. I will forever cherish the memory of his legacy, which continues to inspire and uplift me.

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ABSTRACT

Traditional, complementary, and alternative medicine (TCAM) is widely used during pregnancy, yet little is known about its scope and determinants within South African contexts. This study examined the frequency, influencing factors, and types of TCAM used by pregnant women in the eThekweni District. Reported usage ranged between 66% and 99%, with natural products such as vitamins, probiotics, and herbs, as well as mind-body practices including massage and meditation, being the most common.

A cross-sectional design was employed, focusing on pregnant women accessing maternal healthcare services within the district. The study analysed predisposing, enabling, and need-related variables shaping TCAM use. Findings revealed that cultural beliefs, spiritual practices, family influence, health-related anxieties, and preferences for autonomy and holistic care were major drivers. Structural challenges within conventional healthcare, including medication shortages, financial barriers, and access difficulties, also contributed to reliance on TCAM. Importantly, TCAM use was observed across socio-demographic groups, including women with higher education, reflecting the persistence of cultural and health beliefs beyond formal training.

The study concludes that while traditional African remedies remain culturally significant, there is an emerging trend towards integrative care models that blend TCAM with biomedical approaches, motivated by safety and holistic concerns. Recommendations include advancing nursing research, incorporating TCAM screening into maternal healthcare, fostering interprofessional collaboration, developing policy frameworks, and raising public awareness to promote safe and informed use.

Keywords: Traditional medicine; Complementary medicine; Alternative medicine; Pregnant women; eThekweni District

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LIST OF ACRONYMS

Acronyms	Full term
ANC	Antenatal care
BANC	Basic antenatal care
HM	Herbal medicine
HILI	Herb-induced liver injury
LMIC	Low- and middle-income countries
PLHIV	People living with HIV
SDG	Sustainable Development Goal
TCM	Traditional Chinese medicine
TM	Traditional medicine
TCAM	Traditional, complementary, and alternative medicine
WHO	World Health Organization

CHAPTER 1: OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Pregnancy is a critical period during which maternal health behaviours significantly influence both maternal and neonatal outcomes (Abuelezam et al. 2020). Pregnancy is defined as the period during which a foetus develops in a woman's womb. A typical pregnancy lasts 40 weeks, usually just over nine months from the last menstrual cycle to delivery. Medical professionals refer to three stages of pregnancy, called trimesters; first trimester from week 1 to week 12, second from week 13 to week 28, and third from week 29 to week 40 (National Institutes of Health 2017).

The general health of women during their pregnancy is known as maternal healthcare. Maternal healthcare is all-inclusive since it covers medical treatment during and after pregnancy as well as social, educational, and nutritional services. There are many reasons why many expectant mothers decide not to use the recommended antenatal care from conventional clinics. Reasons may be cultural or inherited, or connected to advancements in social, political, and economic spheres. This suggests that both biological and social environments influence pregnant women's healthcare-seeking behaviours. Cultural influences have a significant role in deciding how pregnant women use healthcare (Olonade et al. 2019).

Maternal health is a global concern; to promote safe pregnancies and deliveries, the Sustainable Development Goals (SDGs) have been put in place by the United Nations, one of which SDG 3 is to reduce maternal mortality by 7.5% annually between 2016 and 2030 by providing adequate maternal and child health services (United Nations 2015). To meet these global goals, various nations use various health care systems (World Health Organization (WHO) 2023). However, due to high associated costs and the economic status of those receiving care, access to modern healthcare facilities is difficult in many parts of Africa, especially in sub-Saharan Africa (SSA) (Geleto et al. 2018).

Besides biomedical factors, various recognised social, economic, and cultural influences play a significant role in maternal mortality. These non-medical elements

are especially evident in rural areas, where they contribute to a considerable share of maternal deaths. The introduction of user fees in public healthcare facilities has caused numerous women, particularly those from underserved communities, to pursue care from faith-based clinics and traditional healers. Contributing elements include widespread poverty, insufficient or non-existent formal education, dietary limitations, low purchasing capability, and deeply ingrained cultural beliefs and practices that may negatively impact maternal health outcomes (Olonade et al. 2019).

The use of traditional, complementary, and alternate medicine (TCAM) has increased in a number of African nations due to its importance in prenatal care. It could have a positive or negative impact on achieving SDG 3, which emphasises bringing the global maternity death rate down to 70 per 100,000 (Adamolekun et al. 2023). According to Durmaz and Gun Kakasci (2024), more than 88% of pregnant women treat themselves with TCAM at some stage during their pregnancy. The majority of illnesses that affect women, particularly in rural areas, are treated mainly with TCAM. Women look for contemporary medical facilities in the event that the disease worsens. Of all the diseases, complications from problems connected to reproductive health, namely maternal mortality and morbidity, are the main cause of disease burden. Pregnancy's physical and physiological changes can result in a number of ailments, most of which are treatable with self-care. Different management philosophies apply, and as strong medications can harm the developing foetus, only a limited selection of medications should be used to treat conditions that arise during pregnancy. For ailments like morning sickness or insomnia during pregnancy, there are no approved medications, and research from wealthy nations indicates that pregnant women frequently turn to complementary medicine in this regard (Dimene et al. 2020). In Kenya, about 70% of pregnant women rely on TCAM as their primary form of healthcare during pregnancy, rather than attending antenatal care in health facilities. The main reasons for this preference include the perceived effectiveness of TCAM when orthodox medicine fails, personal preference for TCAM over conventional treatments, and the long distance to healthcare facilities. The inability to pay for treatment at the health centre, the unfavourable attitude of the staff at the clinic, and the absence of necessary medications at the facility are among the other major reasons for using complementary medicine (Makhapila, Makalliwa & Mong'are 2022). Concerns about women using complementary medicine during pregnancy are heightened by the paucity of data

supporting TCAM's safety and effectiveness in improving the health of pregnant women and their unborn babies, with a growing body of evidence suggesting that TCAM use can have negative effects on both pregnancy and childbirth. While certain TCAM practices have the potential to result in severe health issues, there are also well-liked and successful approaches that boost the likelihood of normal birth, help prepare for labour, promote psychological well-being, and allow patients to maintain control over their health care. There is, however, little data to support the use of generic complementary medicine for these advantages (James et al. 2018).

Despite numerous global and national efforts to reduce maternal mortality and morbidity (Naranjee et al. 2023), maternal deaths remain high, particularly in SSA and lower- to middle-income countries (McCauley et al. 2022). Naranjee et al. (2023) reported a maternal mortality rate between 800 and 1 780 per 100 000 live births, which was linked to low prenatal visits, ranging from 695 to 895 per 100 000 live births over a decade (2009–2019).

The increasing prevalence of TCAM use during pregnancy, both in developed and developing countries (Makhapila 2024) may contribute to low antenatal care attendance in formal healthcare facilities (Naranjee et al. 2023). This raises concerns about the potential risks and benefits of TCAM in maternal health and its impact on clinical outcomes.

Lack of antenatal care and inability to deliver in a health centre likely delay early detection of pregnancy-related complications during pregnancy and delivery, which in turn increases the risk of maternal mortality (Paulson et al. 2021). As a result, the generally low use of antenatal care (ANC) in KwaZulu-Natal (KZN) may have contributed to high maternal mortality (Naranjee et al. 2023). Many pregnant women in low- and middle-income countries do not have access to ANC services or do not visit ANC regularly enough (more than four visits), and many do not see a professional provider (United Nations 2023). According to a study conducted by Naranjee et al. (2023), improving the coverage and use of ANC services can be an important means of improving outcomes for both mother and baby in the short and long term.

The National Institutes of Health (2020) categorises complementary medicine into three main groups. The first group consists of natural products, which include herbs,

minerals, vitamins, and probiotics; the second group includes mind and body Practices such as massage therapy, yoga, chiropractic care, spinal manipulation, osteopathic manipulation, and meditation; and the third group includes other complementary health approaches for example traditional healers, Chinese medicine, homeopathy, Ayurvedic medicine, and naturopathy (Quzmar et al. 2021).

According to the WHO's Global Report (2019), the term “complementary medicine” or “alternate medicine” refers to a broad set of healthcare practices that are not part of the countries' own conventional medicine and are not fully integrated into the dominant health-care system. They are used interchangeably with traditional medicine (TM) in some countries. The WHO (2019) reported that more than three-quarters of the world's population depend on TCAM. In addition, James et al. (2018) and Öztürk, EmiNov and Ertem (2022), state that it is assumed that TCAM is good enough as a natural and safe method, therefore pregnant women consider this method to be a safe option for health issues during pregnancy. Despite the high rates of TCAM use, Foley et al. (2019) found in their study that obstetricians did not ask about TCAM use during pregnancy, and a third of mothers did not report TCAM use to their obstetricians.

About 80% of the population worldwide uses TCAM, most of which is herbal medicine (HM). The percentage may vary (7% to 55%) among pregnant women depending on their social status, ethnicity, and cultural traditions (Illamola et al. 2020). Furthermore, in South Africa, many pregnant women use HM remedies to treat pregnancy-related problems due to cost-effectiveness and easy access to these products, regardless of the adequate knowledge and evidence of their safety (Thipanyane et al. 2022).

As reported by the WHO (2025), maternal mortality is a significant global concern, with about 287 000 women dying from pregnancy and childbirth complications in 2020. Shockingly, nearly 95% of these deaths occurred in low and lower-middle-income countries, and most were preventable. In the year 2020, SSA and southern Asia were responsible for almost 87% (253 000) of global maternal deaths, with SSA accounting for approximately 70% (202 000) of these deaths and Southern Asia about 16% (47 000). Between 2000 and 2020, Eastern Europe and southern Asia saw notable declines in maternal mortality ratios (MMR), with decreases of 70% (from 38 to 11) and 67% (from 408 to 134), respectively. Although SSA had a high MMR in 2020, it still recorded a significant 33% reduction during this period. Additionally, four other

SDG sub-regions—Eastern Africa, Central Asia, Eastern Asia, Northern Africa and Western Europe—experienced a reduction of MMRs by about half. Overall, the MMR in the least-developed nations fell by nearly 50%. In landlocked developing countries, the MMR dropped by 50% (from 729 to 368), while in small island developing states, it decreased by 19% (from 254 to 206). In SSA, the maternal mortality rate (MMR) represents a grave danger to women, being 47 times higher than that of women in America (United Nations Children’s Fund 2021). Significant progress has been made to improve service quality in many countries around the world.

Healthcare providers have developed guidelines, standards, policies, and strategies designed for standardised practices within healthcare facilities (Hlongwane et al. 2021). Nevertheless, these strategies often overlook the use of TCAM during pregnancy. Research shows that a large number of expectant mothers prefer TCAM to conventional healthcare throughout their pregnancy. Additionally, some pregnant women might choose to combine TCAM with standard medical therapies (Dlamini, Darong & Nkwanyana 2023; James et al. 2018).

Even with advancements in maternal healthcare, current methods do not consider the use of TCAM during pregnancy. Studies reveal that many expectant mothers lean towards TCAM instead of conventional healthcare during their pregnancy, and some may opt to use both TCAM and standard medical treatments. However, there is a shortage of comprehensive research investigating the prevalence, safety, and effectiveness of TCAM use during pregnancy. This lack of knowledge is critical, as unregulated TCAM usage can result in negative health effects for both mothers and their infants. Filling this research void is vital for creating effective guidelines and frameworks that guarantee the safe and informed use of both traditional and conventional medical therapies during pregnancy (Crescioli, Lombardi & Vannacci 2023).

These findings highlight the necessity for inclusive healthcare strategies that incorporate TCAM during pregnancy. By integrating TCAM into antenatal care practices, healthcare professionals can provide better support for expectant mothers, reduce potential risks linked to TCAM, and ultimately enhance maternal and child health outcomes. More research is needed to formulate effective guidelines and

frameworks that ensure the safe and informed application of traditional and conventional medical treatments.

1.2 PROBLEM STATEMENT

The basic antenatal care (BANC) approach was developed as a quality improvement tool based on the idea that good quality prenatal care can reduce maternal and perinatal deaths and improve maternal health. However, a study by Ramulondi, de Wet and Ntuli (2022), which examined pregnant women's justifications for missing antenatal visits in the Limpopo Province, South Africa, Bohlabele district, highlighted the importance of traditional treatments for South African women. Despite free health care systems, women still heavily rely on TCAM since it is more easily accessible. It is culturally acceptable throughout most of Africa to use TM as the main source of treatment during pregnancy. Despite recognising that healthcare providers at the institution under study do not consistently assess patients for the use of TCAM, the researcher notes that TCAM is not included in the antenatal screening protocol. Furthermore, there is no specific assessment tool for TCAM within the maternal assessment booklet. As a result, pregnant women are not routinely questioned about their use of TCAM.

Many pregnant women do not report their TCAM usage to their obstetricians or healthcare professionals (Quzmar et al. 2021). This situation leads to the concurrent use of both conventional and TM, which may result in adverse events due to drug interactions and therapeutic failures of conventional treatments. Consequently, there may be an increase in maternal morbidity and mortality rates. Amadi and Orisakwe (2018) describe liver damage caused by TCAM as 'herb-induced liver injury' (HILI), which is frequently underestimated due to limited patient disclosure. There is growing concern about the potential dangers associated with herbal products, as many of these treatments lack regulation and standard measures (Amadi and Orisakwe 2018). Many adverse effects related to TCAM likely remain unreported by pregnant women who do not communicate their TCAM usage to healthcare providers. As a result, diagnosing herbal toxicity can be challenging. Although only a few negative reactions have been recorded concerning TCAM, particularly when used alongside conventional medications (Ozioma Ezekwesili-Ofili and Okaka 2019), there is currently no standardised protocol for healthcare providers to routinely inquire about TCAM usage

during antenatal appointments. As a result, crucial information is often overlooked, which may negatively affect the health of pregnant women. Despite advancements in maternal healthcare, a significant gap remains in understanding the use of TCAM during pregnancy. Many expectant mothers prefer TCAM or combine it with conventional medical therapies. However, there is a lack of comprehensive research focusing on the prevalence, safety, and effectiveness of TCAM during pregnancy. This lack of information is critical because the unregulated use of TCAM can lead to harmful health consequences for both mothers and their infants. Furthermore, many pregnant women often conceal their TCAM use from their healthcare providers, and practitioners commonly do not inquire about TCAM usage during antenatal visits. Addressing this research gap is essential to develop effective guidelines and frameworks that facilitate the safe and informed integration of both traditional and conventional medical practices during pregnancy. Therefore, this study aimed to explore the use of TCAM among pregnant women in the eThekweni district.

1.3 AIM OF THE STUDY

This study aimed to investigate the prevalence, factors influencing, and potential impact of TCAM use among pregnant women in the eThekweni district

1.4 STUDY OBJECTIVES

The objectives of the study were to:

- Determine the factors influencing the use of TCAM among pregnant women in the eThekweni district.
- Identify the types of TCAM commonly used by pregnant women attending antenatal clinics in the eThekweni district.
- Assess the potential benefits and risks associated with TCAM use during pregnancy.
- Recommend the inclusion of TCAM screening in the antenatal assessment booklets.

1.5 MAIN RESEARCH QUESTION

The study sought to address the following questions:

- What are the factors influencing the use of TCAM among pregnant women in the eThekweni district?
- What types of TCAM are commonly used by pregnant women attending antenatal clinics in the eThekweni district?
- What are the potential benefits and risks associated with TCAM use during pregnancy?
- What TCAM-related screening questions can be incorporated into antenatal assessment booklets

1.6 SIGNIFICANCE OF THE STUDY

1.6.1 Nursing Practice

The consideration of TCAM use during pregnancy is crucial for reducing foetal morbidity and mortality. Research indicates that many women are unaware that foetal organogenesis occurs during the first trimester, the most critical stage of pregnancy Dhar et al. (2020). The use of certain herbal remedies, which lack scientific validation, may have unintended consequences such as foetal distress, preterm birth, foetal growth restriction, reduced foetal survival, and congenital defects (Dlamini, Darong and Nkwanyana 2023).

Midwives play a vital role in identifying TCAM use among pregnant women and providing maternal health education. Educating pregnant women on the potential risks and benefits of TCAM empowers them to make informed healthcare decisions for both themselves and their unborn babies. This, in turn, promotes safe pregnancies and positive birth outcomes.

Furthermore, identifying the predisposing, enabling, and need-based factors influencing TCAM use will help senior healthcare management implement strategies to improve service delivery. Encouraging midwives to fulfil their roles as assessors and educators can help address barriers to proper antenatal care. The study's findings may contribute to policy recommendations aimed at enhancing maternal health education, ultimately improving maternal health outcomes. Strengthening midwifery-led health

education can also contribute to reducing the MMR and achieving SDG-3, which focuses on ensuring good health and well-being for all (United Nations 201).

1.6.2 Nursing Research

Nursing programmes incorporate both national and international guidelines to enhance nursing education and improve clinical skills. Developing an assessment tool focused on TCAM use in pregnancy and integrating it into the nursing curriculum in KZN would be beneficial. Nurse educators can utilise this tool to train student nurses in conducting comprehensive assessments of pregnant women, ensuring a holistic approach to antenatal care.

Additionally, incorporating TCAM-related content into the nursing curriculum will enhance student nurses' understanding of alternative healthcare practices, equipping them with the knowledge necessary to provide culturally competent and evidence-based care.

1.6.3 Nursing Policies

The findings of this study could assist antenatal unit managers and policymakers in recognising the prevalence and implications of TCAM use among pregnant women. This recognition may lead to the revision of maternal health assessment policies, ensuring alignment with both international and national maternal healthcare guidelines (South Arica 2016; WHO 2015).

By integrating knowledge about TCAM into antenatal care, healthcare providers will be better equipped to educate pregnant women on safe and effective healthcare options. This may contribute to the development of a more comprehensive and standardised maternal health assessment programme within antenatal clinics.

1.6.4 Community

The results of this study may provide insights into how communities can be engaged in the dissemination of information regarding the risks, benefits, and potential adverse effects of TCAM use during pregnancy. Community-based health initiatives can help raise awareness and encourage the utilisation of formal antenatal healthcare services.

Additionally, understanding the barriers that prevent pregnant women from attending antenatal clinics will allow for targeted interventions aimed at improving antenatal attendance and ensuring that women receive adequate maternal healthcare support.

1.6.5 Nursing Education

This study will contribute to the academic field by generating new knowledge on TCAM use in pregnancy, thereby enriching existing nursing literature. The findings may serve as a foundation for developing practical guidelines for assessing and managing TCAM use among pregnant women.

Furthermore, universities and nursing colleges may incorporate TCAM-related content into their curricula, enabling nursing students to gain a deeper understanding of alternative and complementary medicine. This will enhance their ability to conduct holistic maternal health assessments and provide comprehensive antenatal care.

1.6.6 Benefit to Patients

The findings of this study will have several benefits for pregnant women, particularly those who use TCAM during pregnancy. These benefits include:

- Pregnant women will gain a better understanding of the potential benefits and risks associated with TCAM use. This knowledge will empower them to make informed choices regarding their health and the well-being of their unborn babies.
- Midwives and other healthcare providers will be better equipped to educate pregnant women about TCAM use, ensuring they receive evidence-based information and guidance on safe antenatal practices.
- By identifying harmful TCAM practices and promoting safe alternatives, the study's findings may contribute to reducing complications such as foetal distress, congenital abnormalities, preterm birth, and other pregnancy-related risks.
- If findings support safe TCAM use, recommendations could be made for its appropriate incorporation into antenatal care. This would ensure that women who prefer traditional and complementary medicine receive proper guidance from healthcare professionals.

Addressing the factors that influence TCAM use and understanding the barriers to formal antenatal care can lead to strategies that encourage more women to attend antenatal clinics regularly, improving maternal and foetal health outcomes.

1.6.7 Benefits to Policymakers, Government, and Maternal Health Institutions

The findings of this study will provide valuable insights for policymakers, government agencies, and maternal health institutions, contributing to the development and improvement of maternal health policies and practices.

1.6.7.1 Policymakers

The study's findings will provide data-driven insights into the use of TCAM in pregnancy, informing policy decisions on maternal healthcare.

Results may lead to the revision of existing antenatal care guidelines to include education on TCAM, ensuring that pregnant women receive comprehensive, culturally sensitive, and evidence-based healthcare.

Policymakers can use the findings to implement measures for monitoring, regulating, and standardising TCAM products to ensure safety and efficacy for pregnant women.

1.6.7.2 Government

The research is in accordance with both national and international objectives for maternal health by aiding government initiatives aimed at decreasing maternal mortality and morbidity, thus contributing to SDG-3: "Promoting good health and well-being for everyone" (United Nations 2015). The results may assist in the creation of national programmes that incorporate TCAM education into maternal healthcare services, ensuring that midwives and healthcare professionals are equipped to evaluate and inform pregnant women about the use of TCAM. Furthermore, the government could utilise the findings of the study to initiate targeted health promotion campaigns that focus on educating expectant mothers regarding the advantages and disadvantages of TCAM, promoting safer practices during pregnancy.

1.6.7.3 Maternal Health Institutions

Healthcare organisations can integrate TCAM-related evaluations into maternal health records, enabling midwives and healthcare professionals to monitor and guide expectant mothers effectively. Organisations can leverage the research findings to

create training programmes that enhance the understanding of TCAM among midwives and nurses, preparing them to deliver culturally sensitive and comprehensive care. When possible, maternal health facilities can encourage collaboration between biomedical healthcare practitioners and traditional healers to promote a well-rounded approach to maternal care, endorsing safe practices while discouraging harmful ones.

By influencing policies, government strategies, and institutional practices, this study has the potential to enhance maternal healthcare services and improve pregnancy outcomes in South Africa.

1.7 CONCLUSION

This chapter has outlined the background and significance of the study, identified the key research problem, and stated the main objectives and research questions guiding the investigation. The rationale for exploring the use of traditional, complementary, and alternative medicine by expectant mothers has been clearly established. Additionally, the study's significance has been explained. Chapter 2 presents the literature review to contextualise the study and identify existing gaps in knowledge.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

A literature review functions as a systematic and critical synthesis of available research on a specific subject, with the goal of providing context for a research issue (Polit and Beck, 2017). According to Gray, Grove, and Sutherland (2017), it represents a structured and interpretive narrative of the academic work that the researcher has reviewed. The main aim of a literature review is to identify and showcase the most up-to-date and pertinent information regarding a specific phenomenon. This chapter presents a review of the available literature and previous research on the use of complementary medicine, with a particular focus on TCAM among pregnant women during the antenatal period. The review explores patterns of TCAM use, underlying motivations, perceived benefits and risks, as well as the socio-cultural and healthcare factors influencing these choices. By critically examining existing evidence, this chapter aims to provide a comprehensive understanding of how and why pregnant women incorporate TCAM into their antenatal care.

2.1.1 Key words guiding literature search

The literature review was directed by the research aims and objectives, which concentrate on examining the prevalence, influencing factors, and possible effects of TCAM usage among pregnant women in the eThekweni district. The issue statement emphasises the ongoing use of TCAM by pregnant women, even with the provision of free antenatal care services (Ramulondi, de Wet and Ntuli 2022). This dependency is primarily attributed to its cultural acceptance and availability. Nevertheless, healthcare professionals frequently do not ask about TCAM usage, and it is often not recorded, resulting in potential hazards such as interactions between herbs and medications, as well as adverse pregnancy outcomes (Quzmar et al. 2021; Amadi and Orisakwe 2018). Additionally, the lack of standardised evaluation tools in antenatal care protocols worsens the risk of missing crucial information on TCAM use (Ozioma Ezekwesili-Ofili and Okaka 2019).

To facilitate an in-depth examination of pertinent literature, a search strategy was crafted around the key concepts arising from the research aim, objectives, and problem statement. These concepts encompassed TM, complementary medicine, alternative medicine, and pregnancy. Various synonyms, related terms, and equivalent phrases were employed to expand the search parameters and include all pertinent studies, especially those emphasising cultural practices and maternal healthcare within African settings.

Keywords and search terms included:

Traditional medicine, complementary medicine, alternative medicine, traditional, complementary and alternative medicine, TCAM, herbal medicine, indigenous medicine, integrative medicine, pregnancy, pregnant women, expectant mothers, antenatal care, maternal health, herb-drug interaction, and cultural health practices.

2.1.2 Literature Search Engines

The current research involves a comprehensive literature review utilising a wide range of databases, including Academic Search Complete on EBSCO web, EBSCO Host, Google Scholar, Wiley online library, DUT open scholar, Medline with full text, SA e-publications, South African e-publications via Sabinet and WHO. The search indicated that a few studies have already been conducted on the use of complementary medicine amongst pregnant women, so they are reviewed and presented in the literature review.

2.1.3 Structure of the Literature Review Chapter

This literature review is designed to offer a thorough and coherent transition from broad concepts to specific themes concerning the application of TCAM in antenatal care, particularly focusing on pregnant women in South Africa eThekweni district. The chapter is segmented into several primary themes and sub-themes as outlined below:

Section 2.1 begins the chapter by emphasising key search terms and the search engines utilised in the literature review process. This lays the groundwork for comprehending the extent and methodology of the literature selection.

Section 2.3 starts with a general introduction to antenatal care, establishing its significance and relevance.

In Section 2.4, the main subject of TCAM is introduced and categorised into traditional medicine, complementary and alternative medicine, and HM.

Section 2.5 presents an historical overview of TCAM usage, charting its development and significance over time.

Section 2.6 provides both a global and regional perspective on TCAM utilisation, encompassing global trends and regional patterns across the western Pacific, Europe, eastern Mediterranean, the Americas, and Africa.

Section 2.7 refines the focus to SSA and South Africa, highlighting contextual significance.

Section 2.8 discusses the WHO's traditional medicine strategy, offering a policy-level context.

In Section 2.9, how pregnant women seek information and make decisions regarding TCAM use is explored.

Sections 2.10–2.11 analyse the involvement of TM in antenatal care and the various factors influencing TCAM utilisation, including sociocultural influences, accessibility and affordability, dissatisfaction with conventional medicine, and the impact of acculturation.

Section 2.12 examines the potential risks associated with TCAM use during pregnancy, addressing a broad spectrum of side effects and complications.

Sections 2.13–2.15 evaluate the attitudes and perceptions held by both pregnant women and healthcare professionals regarding TCAM use, incorporating issues of disclosure and communication.

Section 2.16 investigates the economic advantages of TCAM use for both individuals and the healthcare system.

Section 2.17 offers in-depth insights into the use of various TCAM modalities during pregnancy, which include yoga, meditation, acupuncture, massage therapy,

chiropractic and osteopathy, naturopathy, aromatherapy, Chinese medicine, and Herbal therapy.

Sections 2.18–2.19 explore the popularity of certain TCAM types among pregnant women and their effectiveness in addressing mental health issues during pregnancy.

Section 2.20 pertains to the safety, efficacy, and quality of TM, with subtopics on herbal formulation, toxicity and side effects, regulation and quality control, and drug-herb interactions

Section 2.21 concludes with a summary of the chapter.

2.2 ANTENATAL CARE

The WHO (2016) defines ANC as a being a measure of access to and use of ANC. Pregnant women may receive procedures during the prenatal period that may be vital to their health and that of their unborn child. Successful maternal health interventions during childbirth are more likely if the pregnant women have at least four antenatal clinic visits during the pregnancy. One of the main indicators of health services in general health is one of the indicators of the monitoring framework of the Global Strategy for Women, Children, and Adolescent Health (2016-2030) (WHO 2016).

ANC provides an essential platform for women to access healthcare services. These services are designed to prevent, identify, and manage conditions that lead to maternal and/or perinatal morbidity, which, if untreated, may result in or contribute to maternal mortality, stillbirth, and neonatal death. Pregnant women account for the largest group of users of healthcare services worldwide, with more than 83% of women visiting a healthcare facility at least once during their pregnancy and 64% attending four or more times. Therefore, enhancing and improving the availability and quality of these services presents a valuable opportunity to increase the uptake of crucial care and improve health outcomes. ANC is a fundamental service offered at the primary care level, making it a significant element of the agenda for renewed emphasis on primary healthcare aimed at achieving universal health coverage (UHC). The delivery of ANC is a key indicator used to assess progress toward UHC (WHO 2019).

In terms of ANC provision, the focus has frequently been on the timing (specifically within the first trimester) and frequency of visits or contacts rather than the specific content of the ANC care package. While the prior strategy aimed for a minimum of four

ANC visits during pregnancy as part of 'Focused ANC,' the updated WHO guidelines now recommend at least eight visits or 'contacts'. However, without the appropriate content, these contacts may turn out to be predominantly 'missed opportunities'. Although minimum content and signal functions have been established for care packages like emergency obstetric and newborn care, which have been effectively used to monitor the availability and quality of care, there is currently no agreed-upon minimum set of essential interventions and signal functions that can inform the monitoring and evaluation of the content and quality of ANC (McCauley et al. 2021).

According to the Department of Health (South Africa 2017), the BANC framework was established as a quality improvement mechanism, grounded in the belief that high-quality prenatal care can lower maternal and perinatal mortality rates and enhance maternal health. The BANC initiative in South Africa is a structured approach focused on improving health outcomes for mothers and infants. It emphasises providing essential care to pregnant women at primary healthcare facilities. The programme includes clinical assessments, tracking foetal development, screening for infections and congenital conditions, offering counselling, and making referrals when required. BANC has evolved into BANC Plus, which emphasises quality improvement and includes additional resources like handbooks, training materials, and protocols for managing obstetric emergencies. This initiative aims to raise the number of antenatal visits from five to eight, ensuring comprehensive care throughout the pregnancy.

According to the Department of Health Guidelines for Maternity Care in South Africa (South Africa 2016), South Africa's maternity care framework is organised into various tiers to guarantee that expecting mothers receive suitable care according to their requirements:

Primary Level: This encompasses clinics and community health facilities where essential antenatal and postnatal services, as well as uncomplicated births, are handled. Midwives typically serve as the main caregivers in this tier.

Secondary Level: District hospitals are included in this category. They cater to more intricate cases needing specialised attention, such as caesarean deliveries or the management of complications during pregnancy. At this level, obstetricians and gynaecologists are available.

Tertiary Level: These consist of regional or academic hospitals that are equipped to handle high-risk pregnancies and offer advanced medical treatments. They have access to neonatal intensive care units (NICUs) and specialised personnel.

This tiered structure aids in the efficient allocation of resources and ensures that women receive care tailored to their individual needs.

2.3 TRADITIONAL, COMPLEMENTARY AND ALTERNATIVE MEDICINE

The World Health Organisation Fact Sheet (WHO 2023) defines TM as the sum total of the knowledge, skill, and practices. It is based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not. It is used in the maintenance of health as well in the prevention, diagnosis, improvement, or treatment of physical and mental illness. 'Complementary medicine' or 'alternate medicine' refers to a broad set of healthcare practices that are not part of the countries' own tradition or conventional medicine and are not fully integrated into the dominant healthcare system. They are used interchangeably with TM in some countries. Complementary and alternative medicine, which was used as an official form of medicine in many ancient societies, is expected to be more and more integrated into the current medical system. Various medical practices and treatments that are used in addition to or instead of mainstream medicine are called complementary and alternative medicine (James et al. 2018: 1).

2.3.1 Traditional Medicine

According to the World Health Organisation Fact sheet (WHO 2023), TM has a long history. It is the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness.

2.3.2 Complementary Medicine and Alternate Medicine

The terms 'complementary medicine' or 'alternative medicine' refer to a broad set of healthcare practices that are not part of that country's tradition or conventional medicine and are not fully integrated into the dominant healthcare system. They are used interchangeably with TM in some countries (Lee et al. 2022).

2.3.3 Herbal Medicine

According to Builders (2019), HM serves as a crucial aspect of complementary and alternative medicine and is experiencing a rise in global acceptance and incorporation into conventional healthcare systems. Its utilisation encompasses a wide range of demographics and geographical areas, contributing to a swiftly expanding market valued at nearly \$62 billion each year. The increasing popularity of HM is influenced by factors like cost-effectiveness, availability, perceived safety, and its efficacy in managing various health issues. HM mainly comprises herbal concoctions but can also incorporate products derived from fungi and bees, as well as minerals and occasionally animal by-products. Although HM presents significant health advantages, it also carries risks, especially due to the pharmacological effects of secondary metabolites. Misunderstandings and misuse of herbal medicines frequently stem from gaps in knowledge among both the public and healthcare providers.

The growing use of HM underscores the necessity for thorough research, regulations, and quality control measures to guarantee their safety and effectiveness. Certain herbal medicines have been associated with negative consequences, such as cardiovascular, neurological, and renal toxicities. Furthermore, concerns such as contamination and potential interactions with standard medications necessitate stringent regulation and initiatives to raise public awareness (Builders 2019).

2.4 HISTORICAL VIEW ON THE USE OF TRADITIONAL, COMPLEMENTARY AND ALTERNATE MEDICINE

Although the use of TCAM is widely recognised throughout SSA, most research has focused on countries such as Nigeria, South Africa, Ghana, and Uganda (James et al. 2018). According to Mechaala, Bouatrous and Adouane (2021), Africa is a biodiverse continent with 40 000 to 45 000 species of plants, of which 5 000 are used medicinally. The history of the use of TM goes back to the Stone Age (Ozioma and Chinwe 2019). Long before the arrival of conventional medicine TM was used worldwide to treat various diseases and most people still use it for their medical needs (Mothibe and Sibanda 2019). Although most Africans were already used to conventional medicine, TM became normalised as most countries moved to democracy to preserve their cultural heritage (Kendi 2024). TM, complementary, and alternate medicine are reported to offer enormous financial benefits (James et al. 2018).

2.4.1 Use of Traditional, Complementary and Alternate Medicine Globally

According to the WHO (2019), at least 80% of the world's population uses TCAM as a primary source of health care, indicating the widespread use of TCAM worldwide. TCAM is widely used among pregnant women, ranging from 12% to 90.3% (James et al, 2018). In all regions (developing and industrialised countries), the use of TCAM has increased, and TCAM is often preferred over the use of conventional medicine (Quzmar et al. 2021). The use of TCAM is widespread in the general population, with an estimated prevalence of 76% to 80%. TCAM is particularly popular in Africa. As a result, research centres have been established, and university curricula in nations like Ghana, Nigeria, and South Africa have been introduced to study these approaches.

TCAM use is especially prevalent among people with long-term medical conditions. Since the development of antiretroviral drugs, the diseases known as human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) have become much less common and are now considered chronic illnesses. TCAM use is known to be relatively high among people living with HIV (PLHIV), with an average prevalence of 50% to 95% worldwide (Denu et al. 2024).

TCAM has consistently maintained its global appeal. The literature currently in publication indicates that between 5% and 76% of adults in certain developed nations use TCAM (Misawa et al. 2019). Youn et al. (2022) carried out a cross-sectional online survey in Korea that showed 16.7% of Americans participate in TCAM practices. Furthermore, TM serves an important function in primary healthcare for Latin Americans. In North America, there is a growing trend of using TCAM in conjunction with allopathic medicine, especially for managing and treating chronic illnesses (Shim 2018).

2.4.2 Regional Patterns on the use of TCAM

According to the WHO (2019), the use of TCAM varies significantly across regions, reflecting cultural and historical practices as well as healthcare system structures:

2.4.2.1 Western-Pacific Region

According to the WHO (2020), TCAM is extensively utilised for addressing various health concerns, ranging from minor illnesses to chronic conditions. Its prominence is particularly notable in underserved and remote areas where access to conventional

medical services may be limited. TCAM serves as a critical component of primary healthcare systems and is often the initial treatment choice for many communities, underscoring its historical and cultural significance. Furthermore, TCAM is important for maternal health, especially during pregnancy. Numerous women in the area depend on herbal treatments and traditional methods to alleviate pregnancy-related symptoms, promote foetal well-being, and prepare for delivery. In various countries in this region, TCAM is incorporated into ANC, with practitioners providing advice on safe and effective traditional therapies. However, there are ongoing concerns about the safety and regulation of specific TCAM practices during pregnancy, emphasising the necessity for additional research and policy development (Mudonhi and Nunu 2022).

2.4.2.2 European Region

According to the WHO (2019), TCAM plays a substantial role in healthcare, with widespread use in managing chronic illnesses and preventive care. Herbal remedies are among the most frequently employed TCAM modalities, reflecting their accessibility and integration into health practices. However, Savona-Ventura and Mahmood (2022) conducted a study examining the role of TCAM practices and identified that acupuncture in ANC, particularly in the management of miscarriage, is a significant concern in the European region. Acupuncture is frequently recommended as an intervention for both threatened and habitual miscarriage, with treatments designed to stimulate specific acupoints, either individually or in combination, to enhance physiological responses. Additionally, moxa therapy is often incorporated to optimise therapeutic effects. Given the limited availability of conventional medical options for managing threatened miscarriage or recurrent pregnancy loss, acupuncture is increasingly explored as a supportive therapy to improve maternal health and pregnancy outcomes.

2.4.2.3 Eastern Mediterranean Region

According to the WHO (2019), the use of TCAM is common in the treatment of chronic illnesses and in enhancing general health. Herbal remedies are one of the most commonly used TCAM products. Furthermore, several countries in this region have incorporated TCAM into their national healthcare systems and established policies and regulations to ensure its safe and effective application. Quzmar et al. (2021) carried

out a study in Palestine that explored the use of TCAM among women. The results showed that all 400 participants (100%) had tried at least one type of CAM during their lives, demonstrating a high level of adoption of these practices. Additionally, 355 women (91.5%) indicated they had used at least one TCAM method while pregnant, underscoring its prevalence as an adjunct to conventional maternal healthcare in the region.

2.4.2.4 Region of the Americas

As stated by the WHO (2019), TCAM is extensively used for treating chronic conditions and enhancing general well-being, with herbal treatments being the most prevalent type. Many countries have integrated TCAM into their national healthcare frameworks and have implemented policies and regulations to promote its safe use. Additionally, structured educational and training programmes for TCAM practitioners exist in several countries within the region. The National Institutes of Health indicates that over 33% of Americans utilise complementary and alternative medicine for particular health issues or general wellness, with most of them being women of reproductive age. The adoption of complementary and alternative medicine among Americans is increasing, with more women opting for these practices during their pregnancies. Although the advantages of using complementary and alternative medicine during pregnancy are recognised, the current extent of its use in the United States is not thoroughly documented (Babbar, Williams and Maulik 2016).

2.4.2.5 African Region

As per the WHO (2019), TCAM is widely used to manage chronic diseases and enhance general well-being. Herbal remedies are particularly prevalent in the African region. Numerous countries have integrated TCAM into public healthcare systems, and several have established formal educational and training initiatives for TCAM practitioners, ensuring the continuity and reliability of traditional health practices. Mudonhi and Nunu (2022) found that there has been a rise in interest regarding the significance and application of TCAM. Pregnant women turn to TM for a variety of reasons: difficulties with foetal positioning, overdue pregnancies, breech presentations, false labour, nausea in the morning, abdominal discomfort, constipation, heartburn, concerns about a 'dirty' or over-inflated uterus, sexually transmitted infections, and elevated blood pressure. TCAM's application in maternal

health is varied. Its purposes differ based on personal cultural beliefs and the natural resources available in the environment. The use of TCAM is influenced by numerous practices, methods, knowledge, and beliefs regarding the incorporation of plant, animal, and mineral medicines, as well as spiritual treatments, to promote health and address, diagnose, or avert illness. However, some studies (for example, REFERENCE) have indicated that the growing reliance on TCAM by pregnant women may pose risks, many of which remain unexamined and could interfere with conventional medications, leading to potential complications.

2.5 USE OF TCAM IN SUB-SAHARAN AFRICA AND SOUTH AFRICA

The WHO (2018) reports that a significant proportion of the population in SSA uses complementary and alternative medicine. Complementary medicine is used by between 12% and 90.3% of women throughout pregnancy, childbirth, and abortion; however, the TCAM rate is significantly greater during periods of infertility, enhanced libido, and sexually transmitted diseases (Ezekwesili-Ofili and Ogbonna 2022).

In the African context, TCAM includes indigenous medical methods such as traditional bone setting, locally produced herbal medications or goods, and imported complementary and alternative medicine practices and products (such as chiropractic or acupuncture). James et al. (2018:1) state that a significant portion of the people in SSA have long been thought to depend on TCAM to preserve their health or prevent and treat both communicable and non-communicable diseases, making it one of the regions in the world where it is widely used. The growing number of TCAM services around the continent in recent decades has caught the interest of researchers, politicians, and medical professionals (James et al. 2018; Ezekwesili-Ofili and Ogbonna 2022).

According to James et al. (2018), the WHO regional office for Africa has worked over the last 20 years implement a regional strategy to increase the role of TCAM in African health systems. This strategy was adopted in Lusaka, Zambia at the Fiftieth Session of the WHO Regional Committee for Africa in 2000 (WHO AFRO. 200; James et al. 2018). Since the regional strategy was adopted, 36 countries have formed policies and promoted research, including the creation of TCAM research facilities in several nations like South Africa, Ghana, and Nigeria (James et al. 2018). The inclusion of TCAM courses in the curricula of healthcare training institutes in nations throughout

the continent has also been encouraged by the regional plan. For example, certain universities in Ghana and South Africa have implemented TCAM courses as part of this initiative (James et al. 2018). Furthermore, James et al. (2018:2) stated that along with encouraging the local production and cultivation of medicinal plants and the training of TCAM practitioners, it has also helped a few countries create intellectual property rights for TM knowledge.

Notwithstanding these advancements, African nations still struggle with a lack of TCAM policy or its application, a lack of infrastructure for TCAM research, and a lack of regulation of TCAM procedures and goods (James et al. 2018). In addition to adding to the strain already placed on healthcare systems by the high incidence of infectious diseases, a constant increase in the prevalence of chronic non-communicable diseases is a major contributor to the disease burden in Africa (James et al. 2018). Given the great prevalence of TCAM use for chronic illnesses outside of Africa, it is assumed that TCAM will be crucial to the health and well-being of those with chronic illnesses in Africa (James et al. 2018). In the context of limited access to basic health services, particularly among the impoverished in rural areas, TCAM's function in primary healthcare provision is acknowledged in the health policy documents of many SSA nations (James et al. 2018). Given the widespread use of TCAM in SSA, policymakers, researchers, and medical professionals must acknowledge the importance of TCAM healthcare practices in population health-seeking and create a successful response that protects their health and well-being (James et al. 2018). An in-depth understanding of the nature of TCAM use, including the characteristics of TCAM users and the factors that encourage and restrict their use, is necessary to develop appropriate policies and practices in response to the growing use of TCAM (James et al. 2018). The use of TCAM in developing countries has increased since the 1990s. South Africa is classified as a mix of both developing and developed countries. Like other African countries, South Africa has a pluralistic health system where modern medicine works together with other non-conventional health systems. These include various indigenous systems based on traditional practices and beliefs (Mothibe and Sibanda 2019).

2.6 THE WHO TRADITIONAL MEDICINE STRATEGY

According to the WHO Traditional Medicine Strategy (2013–2024) (WHO 2013), TCAM is either the cornerstone or an adjunct to modern healthcare delivery systems worldwide. TCAM is a significant but frequently underappreciated aspect of medical care. Nearly every nation globally has access to TCAM, and demand for its services is rising. The objective of guaranteeing that everyone has access to care is aided by TM, which has been shown to be high-quality, safe, and effective. Today, many nations understand the importance of creating a unified and integrative approach to healthcare that enables governments, medical professionals, and most significantly, patients receiving treatment, to access TCAM in a courteous, safe, economical, and efficient manner (Nsagha et al. 2020).

According to the WHO's Traditional Medicine Strategy (2025–2034) (WHO 2025), countries hoping to establish a proactive policy towards this significant, frequently dynamic, and growing aspect of health care will benefit from a global plan to promote its proper integration, regulation, and supervision. Since the 2002 publication of the previous global plan (WHO 2025), a lot has changed. Over time, more nations have come to recognise the value of TCAM for improving people's health and well-being as well as the comprehensiveness of their healthcare systems. Governments and consumers are starting to look at features of traditional and Chinese medicine (TCM) practices and practitioners, and whether or not they should be incorporated into the delivery of health services, beyond only herbal medicines. The two main objectives of the strategy are to assist member states to utilise TCAM's potential benefits for health, wellness, and person-centered healthcare, and to encourage the safe and efficient application of TACM by regulating practitioners, goods, and practices. Three strategic objectives will be put into practice to achieve these goals: 1) Developing the body of knowledge and creating national policies; 2) Enforcing regulations to improve safety, efficacy, and quality; and 3) Advocating for universal health coverage by incorporating self-care and TCAM services into national health systems.

2.7 SEEKING INFORMATION DURING THE PROCESS OF MAKING DECISIONS ON THE USE OF TCAM

A study conducted by Barnes et al. (2019) has identified that when women are considering whether to try a TCAM, they looked for information from three main

sources: healthcare practitioners, their own and others' experiences, and published research. They primarily sought information from their most trusted healthcare practitioners (HCPs), such as midwives, naturopaths, and integrative general practitioners who combined conventional biomedicine and evidence-based TCAM. However, for some TCAM practices, they sought a second opinion from other HCPs like pharmacists, naturopaths in pharmacies, and HCP staffing or hospital medication helplines. Few women mentioned seeking obstetric care, but they did not consider their obstetricians as primary sources to obtain TCAM information. After being recommended to use specific TCAM practices by their most trusted HCP and given assurance of its safety, some women opted to take the TCAM right away.

However, if the recommendation was more general (such as taking a pregnancy multivitamin), women sought out additional information. This involved seeking second opinions from other HCPs, discussing TCAM practices with other women, and researching published studies and other written materials online and in books. Often, the search for more information included comparing similar TCAM practices to identify the best quality product, while always considering safety. Women also mentioned receiving information about TCAM or recommendations to use them from other sources, including family, friends, and their own reading or background knowledge, and they used the same strategies to find more information. Around half of the participants mentioned intuition as a factor in decision-making, especially for TCAM practices not specifically recommended by their trusted HCP. These women shared that they relied on their instincts in the final stages of decision-making after gathering information from multiple sources, checking the safety of TCAM practices, and evaluating the credibility of their information sources (Barnes et al. 2019).

Similarly, a study conducted by James et al. (2018) identified that patients tend to prefer TCAM because it allows them more independence and a greater role in making decisions about their healthcare. This is in stark contrast to conventional care, where healthcare providers typically dominate the decision-making process, resulting in patients feeling less involved in their health journey. The ease of access to TCAM and its focus on patient-centred care make it a compelling option for individuals looking to have more control and engagement in overseeing their health.

Hill et al. (2019) conducted a study in Malawi and found that cultural norms play a crucial role in the prevalence of TCAM, serving as major enablers of its common use. Participants noted the widespread application of TCAM and the wealth of knowledge about its elements within their communities. It was noted that older adults frequently incorporate TCAM into their healthcare choices, reflecting established traditions. In rural regions, approximately 75% of the population favoured TM, demonstrating a deep understanding of local herbal remedies. Parents often endorsed TCAM, especially when its treatments were believed to effectively remedy particular health issues. Furthermore, many individuals were convinced that specific ailments can only be treated by traditional healers, consequently relying solely on TCAM practices. Therefore, the act of gathering information for decision-making regarding TCAM usage is closely connected to cultural norms that influence and maintain its practices. Recognising these cultural factors is crucial for understanding the reasons behind the adoption of TCAM and its essential role in healthcare decision-making.

2.8 THE ROLE OF TRADITIONAL MEDICINE IN ANTENATAL CARE AMONG SOUTH AFRICAN WOMEN

A study by Ramulondi, de Wet and Ntuli (2021) investigated pregnant women's justifications for missing antenatal visits in the Bohlabelo district, Limpopo province (South Africa) and highlighted the importance of traditional treatments for South African women. Despite free healthcare systems, women still heavily rely on TM since it is more easily accessible. It is culturally acceptable throughout most of Africa to use TM as the main source of treatment during pregnancy.

2.9 FACTORS INFLUENCING THE USE OF TCAM AMONGST PREGNANT WOMEN

2.9.1 Sociocultural Influences

A worldwide research project by Tangkiatkumjai, Boardman and Walker (2020) identified various factors affecting the adoption of TCAM in different regions of the world. These factors encompass the perceived advantages and safety of TCAM, its accessibility and practicality, as well as the impact of cultural traditions, family, friends, and media. A notable factor influencing the utilisation of TCAM was the dissatisfaction with conventional medical treatments. The research underscored the crucial impact of patients' social circles, particularly the expectations set by family members. For

instance, in Eswatini, some individuals living with HIV expressed feeling compelled by relatives or community members to seek alternative treatments instead of antiretroviral therapy (ART).

Moreover, TCAM is frequently employed to improve overall health, such as enhancing immunity, stimulating appetite, and alleviating fatigue. Reports from South Africa included the desire to raise CD4 counts and attempt to cure HIV, although the majority of participants noted that their use of TCAM was for reasons unrelated to their HIV condition. In various ways, TCAM is seen as a superior option, offering greater privacy, care, and support, personal control over health, and trust (Tangkiatkumjai, Boardman and Walker 2020; Peltzer et al. 2008). Finally, some practical benefits are highlighted, including affordability and improved accessibility. Molemans et al. (2023) conducted a mixed-methods study to investigate the reasons behind TCAM usage among individuals living with HIV who are on antiretroviral therapy and to compare the rates of disrupted HIV care between those who use TCAM and those who do not.

Mohanty et al. (2020) conducted a study in Malaysia and found that the largest source of information about TCAM was family or friends (87.38%), followed by newspapers or magazines, health facilities, radio, and television (14.56%). Those who had previously used TCAM during pregnancy or after delivery gave recommendations to over half of the respondents (68.93%). The application of herbal remedies in Malaysia is founded on observations, first-hand knowledge, and customs derived from socio-religious beliefs that have been passed down through the generations. In addition to being advantageous during pregnancy, these Malay customs are said to be significant for overall health and well-being.

Similarly, a study by Molemans et al. (2023) in Eswatini found that the motivations for utilising TCAM are varied. Factors such as sociocultural, religious, and spiritual beliefs about health and illness influence these choices. In a “test-and-treat trial” conducted in KZN, participants relied on both medical systems for different purposes, seeking out traditional healers for issues that the biomedical system could not resolve. This concept, that the biomedical system and TCAM address distinct needs, is also evident in three additional studies where participants similarly indicated using TCAM for specific health problems, primarily those perceived to have a spiritual origin.

A study conducted in Uganda by Muteebwa et al. (2021) found that alternative medicine is used for many reasons, such as fear or resentment of modern medicine, availability, affordability, desire to improve, patients with chronic irritations that are difficult for anyone to treat successfully, curiosity, social pressure from friends, family, and traditional healers, and positive past experiences that may have been placebo-induced or effective. In addition, the use of alternative medicine can delay the receipt of special medical care, which increases the risk of complications of the disease (Akhtar, Akhtar and Rahman 2018). Important factors influencing TCAM usage include age, gender, socioeconomic status, education level, and religion/spirituality. Research indicates that higher income and education levels, female gender, and single or unmarried status are associated with increased TCAM usage.

2.9.2 Availability and Affordability

Economic factors are the main determinants of TCAM use, although social, medical, and cultural considerations explain why people in every country choose complementary medicine over conventional treatments. The main factor is the cost of complementary medicine, which is significantly cheaper than the cost of using traditional medical services. Others include convenience, ease of use, and choice of a trusted traditional healer. Although people with higher incomes also tend to use complementary medicine for various reasons, complementary medicine use is more common among the poor. Payment terms are negotiable and often based on credit, work exchange, or results (Ezekwesili-Ofili and Ogbonna 2022). A study conducted by Mwaka et al. (2016) in Northern Uganda found that the main reason for using traditional treatment methods was the lack of biomedical treatment. Obstacles included: health-related barriers such as lack of medication and long travel times to medical facilities; problems related to health workers, such as their unfavourable attitude towards patients and demands for bribes; related to the patients themselves, such as their inability to pay for medical care; and sociocultural beliefs about the superiority of traditional medicines and greater privacy when visiting traditional healers. Although community views about the effectiveness of traditional medicines and barriers to biomedicine support the use of traditional medicines in therapy, they can also make it difficult for people to seek help from biomedical institutions.

A study conducted in Lesotho by Mokhesi and Modjadji (2022) identified problems such as long distances to medical facilities, lack of medicines, difficulties, and inequalities in obtaining treatment, unfavourable attitudes of medical professionals, long waiting times, invasive procedures, and fear of misdiagnosis. The inability of conventional medicine to treat their illnesses or manage their symptoms is another factor that encourages the use of complementary and alternative medicine.

Patel et al. (2021) report that in India, TCAM is extensively utilised, particularly in low- and middle-income countries such as India, where access to biomedical healthcare is often limited. In these regions, TCAM and the contributions of its practitioners play a significant role in the health system, promoting health, preventing diseases, and treating patients.

The ongoing crisis in human resources for health is a major concern for health systems worldwide, especially in low- and middle-income countries like India (WHO 2004). In the Indian healthcare system, government health facilities provide free outpatient and inpatient care but are severely under-resourced. The majority of the population lacks any form of health insurance, and many people pay out-of-pocket for private medical care (Commonwealth Fund 2020). In 2017, there was one biomedical doctor (either general practitioner or specialist) per 1,285 people in India (World Bank 2018), while the WHO's (2016) standard for good quality healthcare is a biomedical doctor-to-population ratio of 1:600. Consequently, TCAM is often preferred over biomedical care in such settings.

According to Yi, Jang and Liang (2024) Asian immigrants frequently encounter obstacles such as a lack of health insurance, which makes TCAM a more attainable option. Language difficulties can obstruct access to traditional healthcare, prompting Asian Americans to pursue TCAM services where linguistic and cultural familiarity are more pronounced. Many Asian Americans might perceive the United States healthcare system as complicated and challenging to navigate, rendering TCAM, particularly when offered by practitioners from similar ethnic or cultural backgrounds, a more comforting choice. Reduced access to healthcare, including being uninsured and having urgent medical needs, plays a role in the reliance on TCAM. The connection between satisfaction with the United States healthcare system and the usage of TCAM

is still debated. Some research indicates that dissatisfaction with the healthcare system boosts TCAM consumption.

2.9.3 Dissatisfaction with Conventional Medicine

A study in Thailand by Tangkiatkumjai, Boardman, and Walker (2020) found that the impact of friends, family, and mass media, along with dissatisfaction with conventional medicine, are key factors driving the adoption of TCAM practices. Similarly, a systematic review involving various countries in SSA by James et al. (2018) uncovered that dissatisfaction with conventional healthcare—arising from factors such as limited accessibility, cost, and cultural mismatch—compels clients to favor TCAM. Additionally, a study focused on cancer patients in SSA by Adam, Bangalee and Oosthuizen (2024) also indicated that dissatisfaction with conventional treatments influences the preference for TCAM practices. Moreover, a global systematic review of national studies by Lee et al. (2022) showed that discontent with conventional medicine contributes to the use of TCAM in various international settings. This review further emphasised that it is common for individuals not to disclose their use of TCAM to conventional healthcare providers. In support of this, James et al. (2018) found that between 55.8% and 100% of TCAM users in SSA did not inform conventional healthcare professionals about their TCAM usage. This is concerning because there is evidence suggesting that certain TCAM products and treatments can lead to negative side effects, particularly when they are used alongside conventional medical treatments.

2.9.4 Influence of Acculturation

According to a study conducted in the United States by Yi, Jang and Liang (2024), when compared to other minority racial and ethnic groups in the United States, Asian Americans demonstrate a notable tendency to utilise TCAM, although their usage rates differ significantly. This trend is influenced by several factors. Many immigrants bring their cultural practices and health beliefs with them when they move. TCAM is a well-recognised and practical choice for Asian Americans since its practices are embedded in the healthcare systems and cultures of numerous Asian countries. Cultural beliefs and acculturation play a significant role in the utilisation of TCAM. A significant portion of Asian Americans resonate with TCAM's holistic approach, which focuses on patient-centred care. The results regarding acculturation, influenced by

factors such as years in the United States, proficiency in English, and foreign-born status, can be inconsistent. For instance, Chinese Americans who have limited or no English proficiency tend to use TCAM more frequently, while those who have resided in the United States for over ten years tend to use it less. Conversely, Korean Americans who have experienced greater acculturation show higher TCAM usage. Asian Americans experiencing poor health conditions, such as pain, chronic illnesses, and low subjective health perception, are more likely to utilise TCAM.

2.10 RISKS ASSOCIATED WITH TCAM USE IN PREGNANT WOMEN

2.10.1 Neurological Side Effects

A study conducted by Mokhesi and Modjadji (2022) identified that consistent use of TCAM products has been associated with documented side effects such as headache, dizziness, and lethargy. In addition, Ezekwesili-Ofili and Ogbonna (2022) identified frequently reported adverse reactions, including allergic responses, dizziness, headaches, and overall discomfort, with the potential risk of death.

2.10.2 Gastrointestinal Side Effects

According to Mokhesi and Modjadji (2022) nausea, vomiting, diarrhoea, and abdominal pain have also been identified due to the use of TCAM products. Similarly, a study by Ezekwesili-Ofili and Ogbonna (2022) identified that herbs can be toxic and lead to interactions with medications because they contain compounds that can exert strong pharmacological effects. Frequently reported adverse reactions include allergic responses, nausea, vomiting, diarrhoea, abdominal discomfort,

2.10.3 Pregnancy-Related Complications linked to Traditional Medicine

In South Africa, especially in rural areas, the use of TM is linked to a higher occurrence of pregnancy-related complications, including excessive uterine contractions, foetal distress, a high rate of caesarean deliveries, and abortions. The mother and the child may suffer lifelong harm or even death from these complications, just like with any other pregnancy-related issue (Dlamini, Darong and Nkwanyana 2023). Heydari, Mirzaee and Mirzaee (2025) indicate that consuming certain herbs like liquorice, barberry, and fennel during pregnancy may lead to uterine contractions, whereas herbs such as senna, castor oil, and rhubarb could cause foetal abnormalities.

2.10.4 Hazards of Complementary, Alternative, and Traditional Medicine use During Pregnancy

A study conducted in Saudi Arabia by Alkhamaiseh and Aljofan (2020) noted that pregnant women were aware of the hazards associated with utilising TCAM during their pregnancy. These dangers were assumed to include birth deformities, miscarriage, early labour, stillbirth, and negative long-term impacts on the mother's health, although they were not explicitly mentioned. Large dosages of fenugreek during pregnancy have been identified to increase milk production, yet also cause miscarriage, early labour, or uterine contractions.

2.10.5 Risks of Herb-Induced Liver Injury and Heavy Metal Contamination in TCAM Use

Liver impairment resulting from the use of herbal medicines is known as herb-induced liver injury (HILI), according to Amadi and Orisakwe (2018). Although TCAM practices have been associated with HILI in SSA, research regarding the liver-toxic effects of commonly used herbs and their role in liver disease in this area is limited. Documenting HILI proves to be more difficult than recording drug-induced liver injury mainly due to the prevalent use of non-conventional, TCAM products and the hesitation of patients to reveal their use (Amadi and Orisakwe 2018). While TCAM products are often regarded as natural and safe by default, research has disproved this notion, showing numerous instances of hepatotoxicity (Amadi and Orisakwe 2018). Furthermore, certain TCAM products have been discovered to contain dangerous heavy metals, such as lead, mercury, cadmium, or arsenic, often included as adulterants under the false belief that they improve the effectiveness of the products. It is particularly troubling that these heavy metals are frequently not disclosed on product labels (Frenzel and Teschke 2016).

2.10.6 Drug-Induced Interaction

Balbontín et al. (2019) estimated that around 2.5% to 20.3% of pregnant women also utilise herbal medicinal products. The simultaneous use of herbal remedies alongside prescribed medications raises concerns about potential herb–drug interactions that could negatively affect both the mother and foetus. Due to various factors, such as the absence of adequately designed and sufficiently powered studies, low reporting rates, poor regulatory oversight, and the common perception that herbal products are natural

and therefore safe, the actual prevalence of adverse effects and interactions related to herbal product use remains unclear. Given the documented occurrences of serious adverse events like perinatal stroke, severe hyponatremia, and lead poisoning, it is crucial to investigate the frequency of these and other negative outcomes.

2.11 ATTITUDES AND PERCEPTIONS OF PREGNANT WOMEN TOWARDS TCAM USE

Pregnant women base their opinions on TCAM therapies used during pregnancy on their own experiences. Additional alternative treatments, according to expectant mothers, gave them more control over their bodies. Some people, including pregnant women, believe that TCAM promotes a holistic approach to health and is a better preventive measure than conventional medical treatment. Some pregnant women consider evidence of effectiveness crucial when choosing complementary and alternative therapies. Some pregnant women felt that obstetricians and healthcare providers should be able to advise their patients regarding the effects of TCAM that they use regularly. In contrast, others argued that their personal experience of the benefits of TCAM was more important than clinical evidence (Quzmar et al. 2021). TCAM has become increasingly popular among pregnant women. Barnes et al. (2018) conducted a study that found that this trend has emerged as a way for women to take control of their health, as well as the health of their unborn child. By utilising TCAM, they can assume more responsibility and autonomy in their healthcare choices.

A study in Kenya by Makhapila (2024) found three main explanations for using TCAM during the antenatal period. Pregnant women "preferred TCAM over orthodox medicine for this ailment" (31.4%), "Orthodox medicine had not worked for me" (20.1%), and "Long distance to the healthcare facility" (9.1%). The inability to pay for treatment at the health center, the unfavourable attitude of the staff at the clinic, and the absence of necessary medications at the facility were among the respondents' other major reasons for using TCAM. The majority of expectant mothers think that herbal remedies are "natural" and "safe" in contrast to pharmaceutical ones (Muteebwa et al. 2021). A study conducted by Illamola et al. (2020) identified that pregnant women regularly use herbal medicines to maintain their health or treat non-life-threatening illnesses, as they consider them a safe and natural alternative to conventional medicines.

2.12 ATTITUDES AND PERCEPTIONS OF HEALTH PROFESSIONALS TOWARDS TCAM USE BY PREGNANT WOMEN

A study in New Zealand by Liu et al. (2021) discovered that health professionals were largely supportive of TCAM use, although they expressed concerns about the scientific evidence, regulation, safety, and financial costs of TCAM and called for more regulation of TCAM. According to Liu et al. (2021), research has shown that 82.3% of family physicians refer patients to TCAM physicians, approximately 25% of family physicians practice TCAM, 37.3% of midwives treat pregnant women with TCAM, and 48.4% of physical therapists recommend TCAM. Acupuncture is a TCAM technique that general practitioners find most helpful. Up to 66.7% of doctors support the idea that TCAM should be included in medical curricula and up to 58% of doctors and Plunket nurses wanted to know more about TCAM (Liu et al. 2021). A study done by van Rensburg, Razlog and Pellow (2020) has shown over 77% of the nurses did not fully understand the benefits and drawbacks of complementary medicine treatments, but 66% of the nurses had positive opinions about these treatments. When discussing complementary medicine with their patients, many of the nurses seemed uneasy. Healthcare professionals are especially concerned about the safety and potential health problems associated with the use of TCAM and are more concerned that people may encounter pharmacokinetic and pharmacodynamic interactions when using conventional medicine and complementary and alternative therapies (Makhapila, Makalliwa and Mong'are 2022). A study conducted Thipanyane et al. (2022) discovered that the absence of scientific backing for TM is one of the many reasons why mainstream physicians refuse to recommend patients to complementary health practitioners: they do not share the same degree of respect and trust in these practitioners.

2.13 PREGNANT WOMEN'S DISCLOSURE OF THE USE OF TCAM TO HEALTH PROFESSIONALS

Vardanjani et al. (2023) in their study conducted in Iran found that 67.8% of participants did not tell the healthcare practitioner they were using TCAM. The most common patient excuse for nondisclosure was that they "didn't feel comfortable disclosing complementary alternate medicine information". A study by Mokes and Modjadji (2022) in Lesotho found that very few healthcare users disclosed their usage of TCAM

to their healthcare professionals. The non-disclosure rate of complementary and alternative medicine to healthcare professionals in SSA was found to be between 55.8% and 100%, with an average of 83.0%. Patients in this study did not disclose their use of complementary medicine for the following reasons: poor communication, fear of healthcare staff, and being warned not to use complementary medicine. The primary motivation for not informing their healthcare practitioner about their supplemental use status has been identified as fear of receiving substandard care. The negative attitude of conventional medicine practitioners and their perceived lack of understanding and support contributed to the stigma and mistrust of conventional providers in South Africa and Nigeria, which in turn led to the non-disclosure of alternative medicine use. Patients in other nations, such as Ethiopia, claimed that not disclosing their use of complementary medicine was due to the traditional healthcare personnel's ignorance of the field. Patients also mentioned that healthcare providers had not asked questions concerning the usage of alternative medication. In order to maximise patient care, healthcare practitioners must be aware of the use of complementary and alternative medicines due to the possibility of negative responses and drug interactions. Therefore, as part of history and clinical assessments, health professionals should be educated about this and asked about TCAM use in ANC (James et al. 2018; Gumede, Nkosi, and Sibiya 2024).

2.14 BENEFITS OF THE USE OF TCAM FOR THE ECONOMY

TCAM is constantly increasing, especially when it comes to things purchased online or in person. Nowadays, the TCAM industry is important to the growth of many nations' economies. However, using TCAM for illness prevention, self-care, and health promotion may save healthcare expenses given the current global financial limits (James et al. 2018).

In South Africa, the trade in traditional medicines is a significant and growing industry (Mothibe & Sibanda, 2019). About 27 million people use TM, and the national economy earns 2.9 billion Rands from the trade in these medicines. Rather than seeing it as a substitute for Western medicine, many South Africans believe that TM is desirable and necessary for the treatment of many health problems that Western medicine cannot effectively treat. Based on data from 2006, the South African market for raw medicinal

plant resources was estimated to be worth R520 million annually (Mander et al. 2007; Street & Prinsloo, 2013).

The traditional medicinal plant trade in South Africa, including prescriptions by traditional healers, is estimated to be worth around R2.9 billion each year. This includes an additional R2.6 billion from traditional plant remedies. A substantial part of this trade contributes to the nation's Gross Domestic Product (GDP), even though it may not be formally recorded in the market (Rasethe, Semanya and Maroyi 2019).

At the above prices, the annual value of South Africa's herbal trade is equivalent to 5.6% of the national health budget, the entire Mpumalanga health budget, or the KZN provincial hospital budget (Mander et al. 2007).

Trade in traditional medicinal herbs and commodities creates at least 133 000 jobs in South Africa (Kloos 2024).

2.15 USE OF TCAM IN PREGNANCY

TCAM is widely used globally and within South Africa by antenatal women (James et al. 2018). The various types of TCAM are discussed below.

2.15.1 Yoga and Meditation Practice in Pregnancy

Yoga may help pregnant women stay calm during labour to pay attention to the body and breathe. The incidence of intrauterine growth retardation, premature birth, low birth weight babies, pregnancy complications, and reported sleep disturbances can all be reduced by practicing yoga (Corrigan et al. 2022). Body–mind-based TCAM practices such as yoga, meditation, exercise, mindfulness, music, dance, imagination, prayer/spirituality, and hypnosis are commonly utilised in various contexts to enhance pelvic floor muscle strength, address urinary incontinence, avert pelvic organ prolapse, lessen urinary and anal incontinence, alleviate anxiety related to gynecological examinations, and improve communication and satisfaction between postpartum mothers and their infants (Gurkan 2022).

2.15.2 Acupuncture and Associated Treatments in Pregnancy

The possibility of instrumental management or postpartum pharmaceutical analgesia can be reduced with acupuncture. During pregnancy, acupuncture can reduce mood disorders and nausea. Moxibustion may assist women with breech presentation or

require induction/augmentation of labour. Acupressure uses the thumbs or fingers to apply pressure to specific points on the body, while acupuncture inserts tiny needles into specific points on the body. Both have been used to soften and dilate the cervix when labour contractions begin. They may offer a way to reduce labour discomfort by avoiding medical induction with other techniques such as prostaglandins (Yang et al. 2022). Savona-Ventura and Mahmood (2022) state that acupuncture is recommended for "reinforcing the pregnancy" in the treatment of threatened and recurring miscarriages. Several acupoints are treated individually or in combination, and moxa treatment may be used to reinforce the effects. Women experiencing a threatened miscarriage or those who have experienced multiple miscarriages currently have little to gain from conventional medical management. Progestogen use, anticoagulant medications, and bed rest have not yet been shown to have a clear management role in Cochrane systematic reviews. According to the 2021 NICE Guidelines, women who are at risk of miscarriage may take 400 mg of vaginal micronised progesterone twice a day off-label until 16 weeks of pregnancy. The function of physical TCAM modalities in the treatment of these conditions was not mentioned. The use of acupuncture to treat threatened miscarriages is the subject of relatively few randomised controlled trials. According to the research that is currently available, women who were at risk of miscarriage and received acupuncture or acupressure treatment demonstrated statistically significant differences in pregnancy outcomes, as evidenced by pregnancy loss or complications (Betts et al. 2016).

Despite the low to moderate level of evidence, acupuncture has long been promoted as an effective treatment for gastrointestinal disorders. Numerous clinical and animal investigations have indicated that physical TCAM modalities impact gastrointestinal motility. In the early stages of pregnancy, nausea and vomiting are very common symptoms. The illness could worsen and result in hyperemesis gravidarum, which could have serious side effects. Acupressure wristbands, acustimulation, and acupuncture are physical TCAM modalities that have been reported effective in managing symptomatology. Acupressure is a non-invasive type of acupuncture in which continuous pressure is applied to particular points or regions, usually the P6 Neiguan point, which is situated on the medial inner aspect of the forearm close to the wrist. On the other hand, auricular acupressure has also been promoted as beneficial.

Other distal acupoints and upper abdominal acupoints are suggested as alternatives for treating nausea and vomiting (Savona-Ventura and Mahmood (2022).

2.15.3 Massage Therapy in Pregnancy

Back pain is the most frequently reported discomfort among pregnant women during the third trimester. One of the non-drug methods to alleviate discomfort in this stage of pregnancy includes prenatal massage and exercise specifically designed for pregnant women. Prenatal massage consists of techniques that involve gentle rubbing and pressure applied in a way that avoids triggering contractions, helping to minimise pain (Dewiani, Purnama and Yusanti 2022). Numerous women utilise massage to address various pregnancy-related health issues, including depression and anxiety (Santi et al. 2021). Although these studies employed restricted experimental designs, the findings indicate that massage might provide particular advantages for pregnant women experiencing mental health issues (Hall et al. 2020). A recent review of 20 randomised controlled trials analysing the impact of complementary therapies on maternal anxiety and depression during pregnancy indicated that acupuncture, bright light therapy, and massage might help lessen antenatal depression, although the evidence quality was low (Smith, Armour and Dahlen 2017). Consequently, there remains a need for definitive evidence. It is possible that massage can serve as a satisfactory and effective approach to enhance a pregnant woman's mental health without the risks associated with some pharmacological treatments. Gurkan (2022) conducted a study in Turkey and reported that various manipulative body-based traditional and complementary medicine practices (such as acupressure, massage, reflexology, hydrotherapy) are utilised to alleviate labour pain, decrease anxiety during childbirth, shorten the duration of labour, enhance labour satisfaction, manage symptoms like nausea, vomiting, and pain, and improve the quality and duration of sleep for mothers in the postpartum period.

2.15.4 Chiropractic and Osteopathy in Pregnancy

Although there is a lack of methodological rigor in the current body of research on chiropractic and osteopathic medicine, some benefits have been identified, such as a reduction in lower back discomfort during pregnancy (Weis et al. 2020). A study by Sheraton, Streckfuss and Grace (2018) has identified that a healthy pregnancy, labour, and recovery after delivery were all facilitated by osteopathic treatment. Participants

frequently sought osteopathic treatment for musculoskeletal pain relief and pain prevention during pregnancy. The most frequently reported complaints were pain and discomfort in the lower back and pelvis. Numerous women also reported experiencing neck pain, especially following prior pregnancies, linked to breastfeeding, co-sleeping, and stooping to change their infant. According to reports, the baby's position in utero was linked to rib discomfort. Participants reported that osteopathic treatment aided in their bodies' adjustment to the changes that came with pregnancy. Participants said their osteopathic treatments helped them feel more at ease and allowed them to carry on with their regular activities, such as exercising. Because they believed that osteopathic care was gentle and involved only mild spinal manipulations, if any, the participants preferred it to other manual therapies. Participants thought that receiving osteopathic care during pregnancy would facilitate childbirth and aid in their postpartum recuperation. Participants explained the mechanism by which this would happen, such as assisting in "opening" the pelvic structure, lowering tension in the muscles and ligaments, and preserving "normal alignment". After giving birth, several of the participants also received osteopathic treatment for their infants (Sheraton, Streckfuss and Grace (2018).

2.15.5 Naturopathy in Pregnancy

According to a study done by Steel et al. (2022), naturopathy is a form of TM that may contribute to addressing the gap in reproductive health care. In Australia, naturopaths rank among the most sought-after health care professionals who operate outside the conventional health system. However, they are not part of the National Registration and Accreditation Scheme and depend on a voluntary, independent register for self-regulation. Despite their marginal role within the regulatory framework of Australian health services, women often seek the support of naturopaths during the preconception and perinatal stages.

Naturopaths are involved in the modern provision of maternal and child health services in Australia. According to their reports, naturopaths often address relevant topics concerning maternal and infant health in line with global health recommendations; however, it remains uncertain how accurately they convey information. Additional research is necessary to determine if naturopaths can effectively support women in seeking care during preconception and pregnancy, and to assess how representative

these findings are of naturopathic practices in other countries, considering that women are already reaching out to naturopaths for help with health issues throughout the childbirth continuum (Steel et al. 2022).

2.15.6 Aromatherapy in Pregnancy

According to Karaahmet and Bilgiç (2023), aromatherapy is a prominent method of complementary and alternative medicine that is popular worldwide and is a subset of phytotherapy. It is utilised to promote both physical and emotional well-being by leveraging the concentrated essential oils and aromas derived from plants through distillation, tapping into their therapeutic benefits. Aromatherapy can directly influence the cerebral cortex via pathways that connect to the limbic system and hypothalamus, utilising scent (Ghiasi et al. 2019; Sánchez-Vidaña et al. 2017). The scents that reach the cortex induce spiritual, physical, and behavioural responses in individuals. The pleasant fragrances of essential oils and other scents are used to support women during childbirth. Common practices in aromatherapy during labour include massage, bathing, and inhalation (Smith et al. 2020). Despite pregnancy and childbirth being natural processes, the pain experienced from uterine contractions is among the most intense and is a significant source of anxiety for many expectant mothers. Thus, managing labour pain is a primary objective in the care provided to women in labour. While scientific research has not fully established its efficacy, there is a belief that aromatherapy can influence the brain and nervous system similarly to medication. It is thought that aromatherapy may help alleviate pain and promote relaxation by enhancing neurotransmitter levels and decreasing the amounts of epinephrine and norepinephrine in the bloodstream (Tabatabaeichehr & Mortazavi. 2020; Waqas et al. 2022).

2.15.7 Chinese Medicine

Pregnancy-related illnesses have long been treated naturally and safely with Chinese herbal medicine (CHM). In different nations, the reported prevalence of using medicinal herbs when pregnant varies from 12% to 58%. Thirty-four percent of pregnant Taiwanese women take at least one kind of CHM. Women often use CHM as an alternative treatment in clinical settings for a range of pregnancy-related conditions, including hypertension, miscarriage, and vomiting during pregnancy (Wen et al. 2020). The treatment with TCM is an alternative to Western medicine. The use

of CHM to prevent miscarriages and premature births has a long history. According to a review of pertinent research, using TCM and Western medicine tocolytic treatments together produces better outcomes and fewer side effects than using Western medicine alone. The most commonly used formula, "Shou Tai Pill", is believed to improve the function of the kidneys and regulate the body's "Qi" which benefits the foetus and improves the health of the mother (Shen et al. 2022).

2.15.8 Herbal Therapy

Global estimates place the prevalence of women using herbal medicine during pregnancy and childbirth at 60% in Western nations and between 34 and 80% in SSA. Variations in cultural practices, economic standing, and availability of conventional medicines and healthcare services are the reasons for the proportionate differences observed. Women frequently employ a variety of herbal medicines, including plant parts, plant components, or combinations of these, when they are pregnant or giving birth (Makombe et al. 2023).

In South Africa, in the Zulu culture, a variety of traditional medicines are utilised for various purposes during pregnancy. The most often used cures are imbiza (a traditional African herbal concoction made from a blend of indigenous herbs and plants), isihlambezo (herbal decoction), and inembe (traditional herbal tonic). Imbiza herbal mixture is supposed to help with pregnancy by getting the uterus ready to receive the growing foetus. As a result, during pregnancy, it is usually employed in the cleaning process. Only the final three months of pregnancy should be spent on isihlambezo to promote a smooth delivery and robust foetal development. Inembe is only taken after labour pains start since it is said to induce contractions of the uterus and speed up labour. It is typically employed when labour proves to be challenging. Some ladies feel that combining isihlambezo and inembe makes them more potent. These traditional medicines are made with a number of tightly guarded substances, and the exact ingredients rely on a number of circumstances, including the location, the tribe, the traditional healer consulted, and the woman's overall health (Ramulondi, de Wet and Ntuli 2022).

2.16 TYPES OF TCAM THAT GAINED THE MOST POPULARITY AMONGST PREGNANT WOMEN

James et al. (2018) and Heydari, Mirzaee and Mirzaee (2025) identified that herbal therapy/medicine is the most frequently used complementary medicine used in pregnancy. Herbal medicine refers to a collection of medical procedures that are provided outside of the conventional healthcare system, whether they are imported or indigenous. Herbal medicines are more affordable and readily available in Africa, and more and more pregnant women are turning to them for pregnancy-related problems, although there is a lack of research and information on their safety. In urban health care in SSA, approximately 30% to 70% of women use herbal medicines during pregnancy, childbirth, or the postpartum period Muteebwa et al. (2021). Illamola et al. (2020:2) note that herbal medicine is used during pregnancy to improve the health of the mother and/or the unborn child or to help reduce nausea and vomiting, treat inflammation, relieve gastrointestinal problems, speed up labour, ease labour pain, or prepare for childbirth.

Pregnant women use herbal medicines as part of their care because they believe they are safer than conventional medicine. Women often use TCAM, including herbal medicines, during pregnancy for various reasons, such as to reduce pregnancy-related illnesses such as nausea and vomiting, to treat non-pregnancy symptoms such as the flu, to increase food intake, or to improve general health. or the functioning of the immune system. Additionally, they choose TCAM because it is more readily available than conventional treatments and because they have cultural beliefs about TM (Vardanjani et al. 2023). Hassen et al. (2022) identified that herbal supplements are frequently used during pregnancy to treat infections, ease gastrointestinal issues, decrease nausea and vomiting episodes, enhance the mother and/or baby's wellness, and speed up or lessen labour pains. Epilepsy and asthma are two pre-existing diseases that can enhance the risk of herb-drug interactions in pregnant women. In addition, there are theoretical worries regarding the teratogenic or embryotoxic properties of several plants.

2.17 THE ROLE OF HERBAL MEDICINE IN MANAGING MENTAL HEALTH DISORDERS (MDS) DURING PREGNANCY

There is limited information regarding the management of mild mental disorders and/or symptoms (MDS) during pregnancy. Many treatments for MDS can lead to side effects in the mother and have the potential to cross the placenta, affecting the foetus. There are concerns regarding their tolerability, teratogenic risks, and influence on neonatal outcomes (Gantner et al. 2021; Yonkers et al. 2017). However, a study done by Gantner et al. (2021) in Switzerland, found that pregnant women in need of these medications face a dilemma between taking synthetic drugs and steering clear of them. Therefore, it's understandable that numerous women dealing with mild MDS opt for herbal treatments, which are frequently considered safe. However, Gantner et al. (2021) identified that the overwhelming majority of pregnant women (89.9%) reported taking herbal remedies of some kind during their pregnancy, either as teas or as pharmaceutical/clinical medications. Of these, 272 participants (83.7%) used pharmaceutical herbal products, with the most common ones being iron-rich herbs (12.3%), chamomile (27.2%), lavender (22.0%), bryophyllum (37.8%), ginger (49.2%), and raspberry leaf (42.7%). The vast majority of participants (86.5%) who said they had used herbal remedies before their current pregnancy also reported using them during their pregnancy. Women who reported having MDS were more likely than the other women to use pharmaceutical herbal medicines. MDS affected nearly 60% of women who took herbal pharmaceutical drugs (59.6%), which is much higher than the corresponding percentage for non-users. MDS was reported by 53.6% of the women who used teas, herbal preparations of any kind, and pharmaceutical herbal medicines. The groups with and without MDS differ in several ways. Additionally, compared to women without MDS, pregnant women with MDS reported using integrative and complementary medicine medications more frequently (Gantner et al. 2021).

A study by Gantner et al. (2021) reports that herbal medicine is primarily used to treat mood disorders, stress, and restlessness. Reports have shown that 2.3% of pregnant women use it at some point during their pregnancy. Three out of eight women reported having very good tolerability, while one out of eight reported having poor tolerability. Seven out of eight women thought it was very effective.

2.18 SAFETY, EFFICACY, AND QUALITY OF TRADITIONAL MEDICINES

Balkrishna et al. (2024) identified that the demand for herbal medicine worldwide reached unprecedented levels during the COVID-19 pandemic, surpassing pre-pandemic levels. This surge was driven by the increasing recognition of the side effects of conventional medications and the advantages of herbal alternatives. Furthermore, the growth of the global population and the prevalence of chronic diseases are contributing to market expansion. However, this heightened demand has also resulted in a rise in fraudulent activities, such as the substitution of herbal materials and the inclusion of synthetic compounds (Balkrishna et al. 2024; Kaur et al. 2025). Consequently, ensuring standardisation and quality control has become essential. Adverse effects may not only be attributed to adulteration, contamination, or misidentification of plant species but also to the inherent toxicity of certain plants. The importance of conducting thorough toxicological assessments is underscored by the presence of potential safety concerns.

Furthermore, external pollutants such as pesticide residues, heavy metals, and microbiological agents can lead to negative effects. These aspects underscore the significance of implementing strict safety measures. While the historical use of herbal medicines demonstrates their promise, the modern scientific community emphasises the necessity for in-depth safety and effectiveness evaluations. Unlike pharmaceutical drugs, herbal products often do not have standardised dosages and can have interactions with other medications. Adverse events linked to specific herbal preparations emphasise the need for comprehensive clinical trials and toxicological assessments. Regulatory authorities are increasingly prioritising the quality, safety, and effectiveness of herbal products to safeguard public health. Scientific advancements have resulted in the isolation and production of potent plant compounds, which serve as the foundation for contemporary medications. Despite this, the comprehensive nature of herbal medicine, which frequently incorporates various plant components, continues to hold significance. The phyto-preparations sector has expanded notably in recent years, providing a diverse selection of items utilised in alternative and supplementary healthcare. With growing consumer interest, there is mounting scrutiny regarding product effectiveness and safety verification (Balkrishna et al. 2024; Yadav et al. 2023).

2.19 EVALUATION OF THE SAFETY OF HERBAL MEDICINES

2.19.1 Formulation of Herbal Medicines

Various parts of plants, including aerial sections, flowers, fruits, leaves, seeds, stems, roots, bulbs, tubers, and rhizomes, are used in traditional medicinal herbal remedies (Coopoosamy et al. 2023; Mothibe and Sibanda 2019). These plant materials are available in raw, fresh, dried, and extract forms, with occasional use of entire dried plants. They play a significant role in international trade and offer considerable clinical, economic, health, and pharmaceutical value globally. The increasing acknowledgment of their benefits, whether justified or not, is contributing to a steady expansion of the market. However, there is limited comprehensive data on the quality, safety, and effectiveness of many plants, their extracts, preparations, and active compounds. It is essential to ensure their quality to guarantee their safety and efficacy (Balkrishna et al. 2024; Ramdas et al. 2024).

2.19.2 Safety and Possible Toxicity of Herbal Treatments

The concept of 'toxicity' varies based on individual perspectives. Many common foods contain elements that could cause allergies or be considered toxic under certain conditions. For example, alpha-gliadin in gluten from wheat, oats, and rye; cyanogenic glycosides in some fruit seeds; thiocyanates in Brassica vegetables; alkaloids in Solanaceae plants; and lectins in certain legumes like soy and red kidney beans are all found in foods generally deemed safe globally (Balkrishna et al. 2024). Similarly, even essential substances like water and oxygen can be deadly if consumed in excessive amounts, highlighting the importance of dosage. From a safety perspective, herbs can be categorised into three groups. The initial category comprises several herbs containing elevated levels of potentially harmful substances, resembling pharmaceutical medications. These should only be utilised by individuals with proper herbal training or in homeopathic formulations because these are highly diluted (Balkrishna et al. 2024).

The second group comprises herbs that have potent effects and may sometimes lead to symptoms such as nausea or vomiting. These herbs are safe if used appropriately. Instances are Lobelia and Eonymus species. Interestingly, these herbs' regulations differ from country to country; for example, Ephedra is prohibited in the UK but is accessible in the USA, likely for valid reasons. The third group consists of herbs with

specific toxicity types, which is supported by scientific evidence. For instance, plants containing pyrrolisidine alkaloids like Comfrey (*Symphytum*) are recognised for their liver toxicity. Additional examples include *Dryopteris* (Male Fern), *Viscum* (Mistletoe), and *Corynanthe* (Balkrishna et al. 2024).

The level of toxicity of a substance is influenced by various factors. When it comes to herbal medicine, different herbs have different levels of toxicity and associated risks. It is important to be cautious, follow recommended usage instructions, and seek professional advice before using herbs, especially those in the first and third categories, to ensure safety and minimise potential harm. Many countries introduce and widely distribute herbal medicines and their derivatives without compulsory safety or toxicological assessments, and oversight of manufacturing practices and quality standards is often inadequate. Consequently, these herbal products are easily accessible to consumers without requiring prescriptions. Unfortunately, the overlooked potential dangers of low-quality herbal products present significant risks (Balkrishna et al. 2024).

2.19.3 Adverse Effects and Toxicities

According to Balkrishna et al. (2024), effects and toxicities are common in the herbal medicine and dietary supplements field when there is improper use. These problems can stem from incorrect application, improper preparation, excessive dosages, or prolonged use of herbs and supplements. Therefore, physicians must remain vigilant when patients disclose a history of such usage, as it could indicate potential toxicities. For instance, excessive vitamin D intake, often due to over-fortification in milk, has been linked to hypercalcemia. Similarly, prolonged and excessive consumption of vitamin A can result in adverse effects such as osteoporosis and liver toxicity. The main goal of herbal medicines is to preserve the body's equilibrium rather than deliver quick relief from symptoms. Therefore, healthcare professionals should be careful when products promise fast symptom relief, as this could signal the presence of pharmaceutical substances. Mixing in pharmaceutical substances can lead to complications and toxic reactions. These altered products are usually found as consumable items or sometimes as topical end products.

2.19.4 Regulation and Quality Control

Balkrishna et al. (2024), along with the WHO (2007), highlight the significant role of the WHO in setting guidelines and standards for herbal medicine production. Importantly, the WHO has created documents such as the “Guidelines for Assessing Quality of Herbal Medicines with Reference to Contaminants and Residues” (WHO 2007) and the “Guidelines on Good Agricultural and Collection Practices (GACP) for Medicinal Plants” (WHO 2003), which establish crucial frameworks for quality assurance and cultivation practices. The purpose of these guidelines is to encourage worldwide adherence to safety and effective standards in the field of herbal medicine. Unlike pharmaceutical drugs, which undergo thorough premarket testing, herbal products often lack consistent standardisation and quality due to variations in cultivation, harvesting, processing, and storage. Regulatory measures are necessary to tackle these challenges and safeguard consumer health. The variability in phytochemical constituents is affected by factors such as climate, soil composition, and geographical location, making standardisation a challenge.

Ensuring the safety and efficacy of herbal drugs is often compromised by issues such as adulteration and substitution, which are also associated with increased deforestation. Obtaining authentic herbal drugs presents challenges such as adulteration, substitution, and a lack of skilled personnel. It is crucial to implement advanced quality control techniques and standards to guarantee the quality of medicinal herbal products. The WHO (2007) has established guidelines for the standardisation of herbal drugs, which include the assessment of organoleptic properties, ash values, moisture content, microbial contamination, and chromatographic and spectroscopic evaluations. The global acceptance of traditional herbs and Ayurvedic products relies on the use of modern analytical techniques. Assessing traditional herbs and Ayurvedic products with thorough and accurate pharmacognostical evaluation is essential for determining their quality scientifically. Authentication and standardisation require organoleptic tests, physicochemical studies, and pharmacognostic schemes to be performed (Balkrishna et al. 2024).

2.19.5 Drug-Herb Interactions

The safety and effectiveness of patient treatment can be greatly affected by the way herbal remedies interact with conventional medications. Prescription drugs'

effectiveness can be reduced or adverse effects can be caused by certain herbs' ability to change the way the drugs work or are processed in the body. Public health concerns about the safety and effectiveness of herbal remedies are raised due to their widespread use. It is difficult to estimate the risks because of misunderstandings, inadequate communication, poor-quality products, and fake supplies. Making sure that herbal medicines are safe is extremely important. The combination of herbs and medications can either strengthen or weaken the effects of each substance. It can also complicate long-term drug administration by enhancing therapeutic effects. Fewer than 40% of patients disclose their use of herbal supplements to their doctors, and many healthcare professionals are not knowledgeable about the potential harmful effects of interactions between herbs and drugs. Both the underreporting of negative side effects and interactions and the generally harmless nature of the plants used contribute to the underreporting of these incidents (Balkrishna et al. 2024).

2.20 CONCLUSION

This chapter summarised the results of a comprehensive literature search related to the objectives of this study. The reviewed literature emphasised the utilisation of TCAM by pregnant women both in South Africa and globally. The search also identified potential complications associated with TCAM use during pregnancy. Additionally, the literature was examined to understand the dialogue between healthcare workers regarding TCAM use among pregnant women, and various reasons for non-disclosure were explored.

The following chapter elaborates on the theoretical frameworks considered for this study and identifies the specific framework selected by the researcher to guide the study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 INTRODUCTION

The previous chapter discussed the literature evaluated in connection with the aims of this research. This chapter constitutes the second phase of the literature review, focusing on the idea of a theoretical framework and its influence on a research study. The researcher examined several theoretical frameworks and outlined the relevant considerations along with the framework most appropriate for this research.

3.2 THE ROLE OF A THEORETICAL FRAMEWORK IN RESEARCH

A study's theoretical framework serves as its cornerstone, supporting the construction of knowledge and assisting with the aim, objectives, significance, literature review, data collection, and analysis (Grant and Osanloo 2014), providing context for a study and firmly establishing theoretical notions as its foundation. A theoretical framework improves a study's rigour and empiricism while also encouraging research to expand knowledge (Adom, Hussein and Joe 2018: 438). According to Brink, van der Walt, and van Rensburg (2018), a theoretical framework helps to organise a study and offers a context in which the researcher can analyse issues and analyse data.

The researcher recognised that the chosen theoretical framework needed to be appropriate for directing the accomplishment of the study's goals and objectives. This study could have been guided by a variety of theoretical frameworks, but two seemed most appropriate: Andersen and Newman's framework of health services utilisation, and the health belief model.

3.3 ANDERSEN AND NEWMAN FRAMEWORK OF HEALTH SERVICE UTILISATION

The Andersen and Newman framework of health service utilisation is a comprehensive model developed in the 1960s and refined over time to analyse the factors influencing individuals' access to and use of healthcare services. This framework remains relevant in understanding healthcare utilisation patterns across diverse populations and contexts (Tesfaye et al. 2018: 3).

3.3.1 Components of the Andersen and Newman Framework

An individual's access to and use of healthcare services is influenced by three key characteristics as laid out below.

3.3.1.1 Predisposing Factors

These are socio-cultural characteristics that exist before illness such as:

- *Social structure*: Education, occupation, ethnicity, social networks, social interactions, and culture.
- *Health beliefs*: Attitudes, values, and knowledge about the healthcare system.
- *Demographic factors*: Age and gender.

3.3.1.2 Enabling Factors

These are logistical aspects of obtaining healthcare services which are:

- *Personal/Family*: Access to financial resources, health insurance, a regular source of care, transportation, and the quality of social relationships.
- *Community*: Availability of healthcare personnel and facilities, as well as waiting times.
- *Possible additions*: Genetic predispositions and psychological characteristics.

3.3.1.3 Need Factors

These factors are the most immediate cause of healthcare service utilisation, based on functional and health problems that create the necessity for medical care:

- *Perceived Need*: How individuals assess their own health status, symptoms, and whether their condition is serious enough to seek medical attention (Andersen 1995).
- *Evaluated Need*: Professional assessment of an individual's health status and their need for medical care (Andersen 1995).

Figure 3.1 illustrates the Anderson and Newman framework.

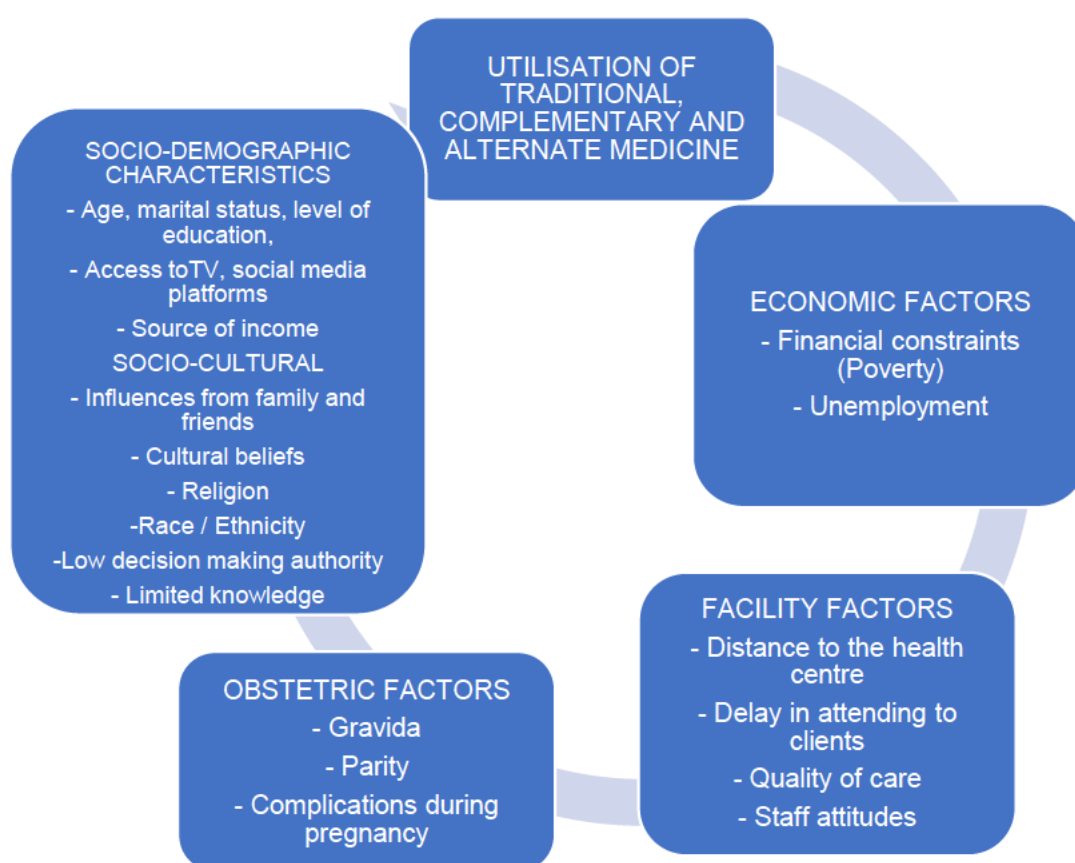


Figure 3.1: Modifiable predisposing, enabling and need factors associated with the use of traditional, complementary and alternative medicine based on the Anderson-Newman Framework of Health Service Utilisation (Anderson 1995)

3.4 EXPLANATION OF FIGURE 3.1 AND ITS RELEVANCE TO THE STUDY

Figure 3.1 presents a visual model that categorises the factors influencing healthcare-seeking behaviour into three main groups: predisposing factors, enabling factors, and need factors. These components work together to explain why individuals, especially pregnant women in this study, choose to use specific healthcare services such as TCAM during pregnancy.

3.4.1 Predisposing Factors

Predisposing factors relate to socio-demographic and cultural traits that influence an individual's likelihood of using health services before any actual health issues emerge. These include:

- Demographic traits like age, gender, and marital status.

- Social structures, including education level, employment status, and cultural background.
- Health beliefs consist of attitudes, values, and understanding regarding both conventional and alternative healthcare systems.

In this research, predisposing factors help explain why some pregnant women prefer TCAM. For example, women with strong cultural or traditional beliefs may be more likely to use herbal remedies or traditional methods during pregnancy.

3.4.2 Enabling Factors

Enabling factors refer to the logistical and resource-based conditions that facilitate access to healthcare services. These encompass:

- Personal and family resources, such as income, health insurance, transportation, and access to health information.
- Community-level aspects, including the availability and accessibility of healthcare providers and facilities, both conventional and traditional.

In the context of this study, enabling factors assess how easily pregnant women in the eThekweni district can access TCAM services. For example, women who cannot afford private healthcare or live far from formal clinics may turn to local traditional healers or herbalists, who are more accessible within their communities.

3.4.3 Need Factors

Need factors reflect the immediate reasons for seeking healthcare services. These include:

- Perceived need is the individual's personal assessment of her health status and whether she considers it necessary to seek medical help.
- Evaluated the need for the assessment made by healthcare professionals regarding the individual's health condition.

In this study, need factors are examined to identify pregnancy-related symptoms or conditions that lead women to seek TCAM, for example, drinking herbal teas to relieve nausea or using traditional remedies to stimulate labour.

Figure 3.1 is crucial in the research framework, providing a structured, theory-based perspective to explore TCAM use among pregnant women. It informs the development

of the questionnaire by ensuring all three domains, predisposing, enabling, and need factors, are thoroughly integrated into the data collection tool. Each research objective aligns with these objectives, as follows:

- *Objective 1* (factors influencing TCAM utilisation) covers all three categories.
- *Objective 2* (types of TCAM used) is primarily linked to enabling factors, such as access and availability.
- *Objective 3* (incorporating TCAM history into antenatal evaluation) relates to need factors, highlighting the healthcare system's responsiveness to both actual and perceived needs.

3.5 APPLICATION OF THE THEORY TO THE CURRENT STUDY

The Andersen-Newman health utilisation model serves as the theoretical framework guiding this study. This model is particularly suitable as it provides a structured approach to understanding the determinants of healthcare utilisation, specifically TCAM.

By categorising influencing factors into three domains: predisposing, enabling, and need factors, the framework allows for a systematic analysis of the motivations behind TCAM use during pregnancy. Understanding these factors is crucial for addressing systemic challenges and improving patient care.

In this study, the Andersen and Newman model guided both data collection and analysis. The questionnaire design was informed by literature-based insights into the determinants of TCAM use during pregnancy, ensuring that key factors were systematically examined.

In the current study, the framework was used to explore factors leading to the use of TCAM amongst pregnant women. The Anderson and Newman model guided the collection and analysis of data. The design and inclusion of questions in the data collection tool were guided by factors that influence the utilisation of TCAM, with a specific focus on three contributing factors related to TCAM use during pregnancy, which were gathered through the literature review in Chapter 2 (Figure 3.2, Table 3.1).

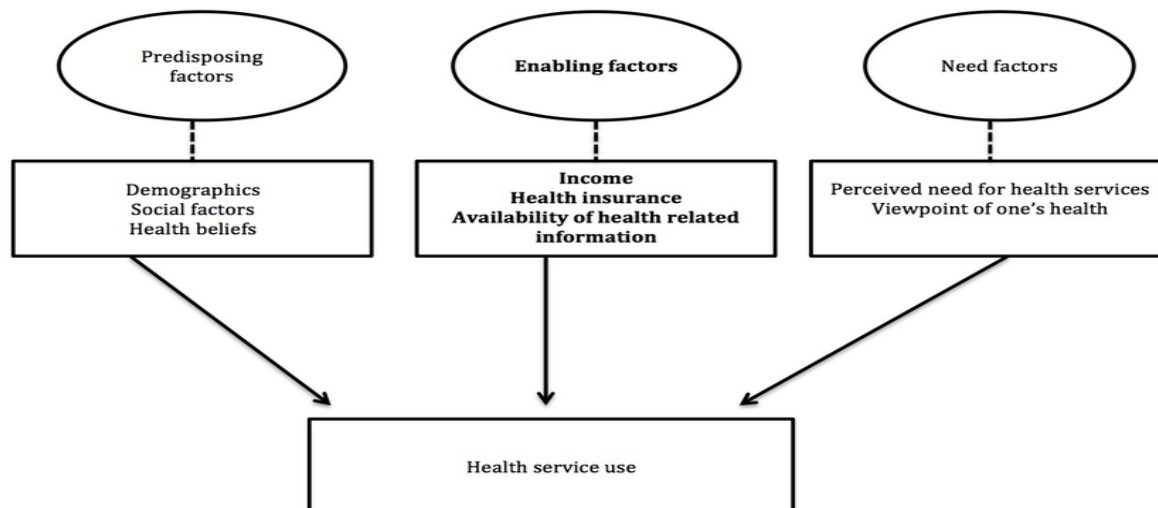


Figure 3.2: The influence of predisposing, enabling, and need factors on healthcare service utilisation

Table 3.1: Alignment of health service utilisation to the study

Research Objectives	Research Questions	Study Framework	Questionnaire Items
To determine the factors influencing the use of TCAM during pregnancy in the eThekwini district.	What are the factors influencing the use of Traditional, Complementary, and Alternative Medicine (TCAM) among pregnant women in the eThekwini district?	Predisposing factors: Demographics; Enabling factors: Income, health insurance, access to healthcare information.	Identification of predisposing, enabling, and need factors influencing TCAM use during pregnancy.
To identify the types of TCAM used by pregnant women at antenatal clinics in the eThekwini district.	What types of TCAM are commonly used by pregnant women attending antenatal clinics in the eThekwini district?	Enabling factors	Assessment of the different TCAM types used by pregnant women.
To recommend the inclusion of TCAM history-taking in antenatal assessment booklets.	What TCAM-related screening questions can be incorporated into antenatal assessment booklets?	Need factors	Strategies for incorporating TCAM history into antenatal assessment.

3.6 THE APPLICATION OF HEALTH SERVICE UTILISATION TO THE STUDY

The Andersen and Newman framework was chosen for this research to offer a systematic way to examine the various factors that affect the use of TCAM among pregnant women. This framework categorises influencing factors into three main

domains: Predisposing Factors, Enabling Factors, and Need Factors, which guided the development of the study's objectives, research questions, and items for the questionnaire.

3.6.1 First Point of Integration

Objective: To identify the factors that affect the use of TCAM during pregnancy in the eThekweni district.

Research Question: What factors impact the use of Traditional, Complementary, and Alternative Medicine (TCAM) among pregnant women in the eThekweni district?

Framework Application: This objective was influenced by all three domains of the framework, particularly:

- Predisposing Factors such as age, level of education, marital status, religious and cultural beliefs, previous experiences with TCAM, and general attitudes toward care during pregnancy.
- Enabling Factors such as income level, employment status, having medical insurance, access to health information, and the presence of TCAM services in the community.
- Need Factors such as perceived physical discomforts or pregnancy-related conditions that women feel can be better addressed through TCAM methods.

Purpose in Framework: To thoroughly investigate the reasons why pregnant women choose TCAM, by understanding their background (predisposing), capability for access (enabling), and specific health drivers (need).

Questionnaire Items: The questionnaire comprised demographic questions (age, education, cultural background), inquiries about resource access (transportation, insurance, closeness to clinics versus traditional healers), and perception-based questions (beliefs about the effectiveness of TCAM, previous usage, and perceived health needs).

3.6.2 Second Point of Integration

Objective: To identify the types of TCAM utilised by pregnant women at antenatal clinics in the eThekweni district.

Research Question: What varieties of TCAM are frequently used by pregnant women who visit antenatal clinics in the eThekweni district?

Framework Application: This objective is primarily related to the Enabling Factors aspect of the framework. The types of TCAM used are often affected by:

- The availability and accessibility of herbalists, traditional healers, or aromatherapy services within the local community.
- Affordability for the individual or their family, and the level of information or education regarding these methods.

Purpose in Framework: To assess the range and diversity of TCAM practices within the population and understand which services are supported by environmental and personal resource availability.

Questionnaire Items: Questions aimed to investigate the specific TCAM practices used (e.g., herbal medicine, acupuncture, massage therapy, aromatherapy, prayer, spiritual healing, etc.), how often they are used, sources of recommendations (family, traditional healer, media), and perceived effectiveness.

3.6.3 Third point of Integration

Objective: To suggest the incorporation of TCAM history-taking into antenatal assessment booklets.

Research Question: Which TCAM-related screening questions could be included in antenatal assessment booklets?

Framework Application: This objective is most closely linked to the Need Factors. The need factors specifically linked are:

- *Perceived Need:* Women may not disclose their TCAM usage unless they deem it important or necessary for their health.
- *Evaluated Need:* Healthcare providers might overlook crucial information if they do not review the woman's complete care history, including TCAM.

Purpose in Framework: The goal is to connect perceived need (what women acknowledge as vital for their care) and evaluated need (what professionals view as significant). By recommending the addition of TCAM screening, ANC can become more comprehensive, safe, and centred on the patient.

Questionnaire Items: Questions examined whether women disclosed their TCAM usage to healthcare providers, reasons for not divulging this information, their beliefs about the necessity of disclosure, and their suggestions for questions to be included during antenatal visits.

3.6.4 Summary of the Study Framework's Purpose

The objective is to connect the discrepancy between what women perceive as essential for their care and what professionals regard as significant. By suggesting the incorporation of TCAM screening, ANC can evolve into a more comprehensive, secure, and patient-focused approach.

Utilising the Andersen and Newman Framework, the research was able to:

- Thoroughly investigate the reasons for TCAM usage during pregnancy.
- Spot deficiencies in existing ANC records concerning alternative health practices.
- Offer practical suggestions for incorporating TCAM history into standard maternal care.

This theoretical basis not only strengthened the study's scientific credibility but also guaranteed that data gathering and analysis were rooted in a reliable and flexible model of health service utilisation.

3.7 CONCLUSION

This chapter discussed the theoretical framework that underpins the study. After evaluating potential frameworks, including the health belief model, the researcher adopted the Andersen and Newman framework of health service utilisation due to its suitability in examining factors influencing healthcare utilisation. The chapter provided a detailed discussion of the framework's components and its application to the study, ensuring alignment with the research objectives.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

Chapter 4 details the research methodology that was employed in this study, encompassing the research design, setting, sampling process, data collection methods and data analysis techniques. It also addressed the ethical considerations pertinent to this study.

4.2 RESEARCH APPROACH

The methodology of research is determined by the overarching paradigms chosen for the investigation. The term “research approach” encompasses the conceptual frameworks and procedural steps that extend from overarching theories to the specific techniques used for gathering, analysing, and interpreting data, as outlined by Creswell and Creswell (2018). In a similar vein, Saunders, Lewis and Thornhill (2023) highlight that a research approach encompasses not just design and data gathering techniques, but also the philosophical viewpoint and reasoning behind theory development that steer the complete research process.

The study used a quantitative approach. In quantitative research, the researcher chooses the research object, formulates precise and limited (closed) questions, collects numerical data, and analyses the data using statistics impartially and objectively (Polit and Beck 2024). The researcher in this study chose a quantitative approach as quantitative research methods typically involve statistical analysis of numerical data which is collected from a large sample size. This allows for results that are more likely to be generalisable to the broader population.

According to Grove, Gray and Burns (2017), quantitative studies often use standardised instruments and measures which can reduce bias and increase the objectivity of the findings. The use of numerical data enables researchers to compare findings across different groups, locations, or periods. Large datasets allow for the identification of patterns, trends, and correlations that might not have been visible in smaller samples or qualitative studies. Quantitative data provides a solid evidence

base for policy-making and decision-making in healthcare, in this case, including the integration of TCAM into mainstream healthcare systems.

The selection of a quantitative research approach for this study was motivated by its ability to provide objective, numerical data that could be systematically analysed using statistical methods. This approach was particularly advantageous for its capacity to produce generalisable findings and test hypotheses, which was essential for the rigorous examination of the use of TCAM among pregnant women at antenatal clinics. The high volume of patients and the quantifiable nature of the data made quantitative methods the most suitable for capturing a clear and accurate picture of TCAM usage patterns, preferences, and potential impacts on health outcomes.

4.3 RESEARCH DESIGN

A cross-sectional descriptive research design was used in this study. Cross-sectional research aims to examine a phenomenon at a certain moment by gathering data concurrently from multiple groups (Setia 2023). Therefore, a cross-sectional design was effective for this study since the primary aim was to identify the use of traditional, complementary, and alternative medicine amongst pregnant women. Furthermore, this study design was cost-effective for the budget of the study.

Data were collected using a questionnaire from participants during their antenatal visits. The questionnaire consisted of demographic factors, factors that led to the use of TCAM, explored the use of TCAM among pregnant women, and the types of TCAM used. The data on TCAM were analysed in terms of variables that affected its use, such as low socioeconomic status, family practices, culture, religion, and dissatisfaction with conventional medicine.

Thereafter, deductions were made about the use of TCAM by pregnant women in general in the antenatal period.

4.4 RESEARCH METHODS

4.4.1 Study Setting

According to Polit and Beck (2017: 744), the setting is the research environment where the research is conducted. The study was conducted at a selected tertiary hospital in eThekweni. The researcher selected this setting because it was a referral hospital for

all of KZN and parts of Eastern Cape health facilities. This gave the researcher a chance to gather data from participants coming from different parts of the region.



Figure 4.1: Nine provinces of South Africa
Source: Nations Online Project (2024)

Figure 4.1 is a map showing the nine provinces of South Africa and establishes the geographic context of the research, which took place in the eThekweni District in KZN. The map additionally marks the position of the Eastern Cape province, which is where some participants came from, thereby demonstrating the wider regional diversity within the sample.

4.4.2 Research Population

According to Polit and Beck (2017), a population is a collection of examples with similar characteristics that interest the researcher. In this study pregnant women attending ANC at a clinic in a provincial hospital in the eThekweni district were the population.

The population was an average of 1 687 (N = 1 687) per month and an average of 84 per day. The entire group meeting the sampling criteria was called the target group (Grove, Gray and Burns 2017). The target group for the intended study was pregnant women aged 18 to 45 years and pregnant women in all trimesters attending antenatal

clinics. Only English and isi-Zulu-speaking pregnant women participated in the study, as the majority of the population attending the antenatal clinic under study was English and isi-Zulu-speaking.

The researcher included pregnant women over the age of 18 years, as those 18 years of age and below are considered to be a vulnerable group and are minors so require a parent or guardian's consent to participate in the study. Their inclusion would have added extra steps and complexities to the recruitment process.

The researcher included pregnant women in all trimesters as TCAM is used by pregnant women throughout pregnancy.

4.4.3 Sampling and Sample Size

According to Gray, Grove and Sutherland (2017: 352), sampling is the process of selecting a small number of participants for a study that together reflect the entire population. Simple random sampling is a selection strategy that ensures that each member of the study population has a known chance of being selected during the sampling process (Gray, Grove and Sutherland 2017). The randomness of the selection process means that selection is made without prejudice or predetermination. This was the method used by this study for selection of the sample.

The researcher approached all pregnant women in the antenatal clinic who met the inclusion criteria and informed them about the study. Subsequently, a distinctive number was assigned to each member of the population. Finally, a random selection process was conducted until the desired sample size was achieved for each day that data was collected.

4.4.3.1 Inclusion Criteria

- All pregnant women between the ages of 18 to 45 years who attended the antenatal clinic at a provincial hospital in the eThekweni district.
- Pregnant women who could read and write in English and isiZulu.

4.4.3.2 Exclusion Criteria

- Teenage pregnant mothers were excluded as they were viewed as a vulnerable age group.
- Mentally challenged pregnant women were excluded.

- Pregnant women who did not speak English or isi-Zulu were excluded.

The sample size was determined using the Roasoft calculator (2004). The population for the intended provincial hospital was an average of 1 687 (n =1687) per month. Assuming a margin of error of 5% and a confidence interval of 95%, given an estimated monthly population of 1 687 (n = 1 687), the estimated sample size was 314 (n = 314).

Table 4.1: Showing the description of the sample size

Description	Value
Monthly population (n)	1687 pregnant women
Data collection days	20 days (Monday–Friday, 4 weeks)
Daily population approx.	84 women per day
Total sample size (n): 314 women	Daily sample target: 16 women per day

4.4.4 Recruitment of Research Sample

Ethical clearance was obtained from the Durban University of Technology's Institutional Research Ethics Committee (IREC), ethical clearance number IREC 044/25 (Annexure A), and gatekeeper permission was sought from the National Health Research Database (NHRD) Committee (Annexure B) and the executive management of the participating hospital to conduct research at the chosen hospital (Annexure D). The researcher set up a meeting with the hospital manager of the participating hospital and provided a letter requesting gatekeeper permission, along with a letter of provisional ethical clearance from DUT/IREC, a copy of the research proposal, and its relevant appendices.

Upon receipt of gatekeeper permission from the participating hospital and only after full ethical clearance was received from IREC, the researcher approached participants to arrange for data collection. The researcher personally addressed the pregnant women to participate in the study while they were attending their ANC. All participants were informed about the study prior to commencement via an information letter (Annexure E), and they were given an opportunity to read the information letter. Written consent (Annexure F) was given to participate in the study on the day of their antenatal visit, while in the waiting room, waiting to see the doctor, as the waiting time ranged from one to three hours. Therefore, the pregnant women had sufficient time to complete the questionnaire (Annexure G and H).

The researcher aimed to address language proficiency in both English and isiZulu, with the assistance of an isiZulu-speaking assistant. The researcher inquired with pregnant women if they would participate in the study. If they responded affirmatively, they were directed to a designated room specifically allocated for participants to complete the data collection tool. Information letters and the consent form were attached to the data collection tool.

4.4.5 Data Collection

4.4.5.1 Development of the Questionnaire

The questionnaire used in this study was self-developed and was neither adapted nor adopted from any existing instrument. Its development was guided by findings from an extensive literature review on the use of TCAM among pregnant women. The literature review informed the selection of relevant variables, factors, and types of TCAM to include in the questionnaire, ensuring that the tool was aligned with the study objectives. It comprised five sections:

- Section A gathered demographic information;
- Section B explored predisposing factors influencing the use of TCAM;
- Section C focused on enabling factors contributing to the utilisation of TCAM;
- Section D examined needs-related factors prompting TCAM use; and
- Section E identified the various types of TCAM used among pregnant women.

4.4.5.2 Pilot Study

A pilot study was conducted prior to the main study to establish the reliability and validity of the data collection instrument and to determine whether any refinements were needed in the methodology or data collection procedures. The pilot followed the same study principles, setting, and data collection techniques as the main study.

Ten pregnant women attending the antenatal clinic at the selected hospital in eThekweni participated, with five completing the questionnaire in English and five in isiZulu. Participants were asked to provide feedback on the clarity, comprehensibility, and applicability of the questions, as well as the effectiveness of instructions and the time required to complete the questionnaire.

The purpose of the pilot study was to identify and resolve any potential ambiguities or biases in the questionnaire. Participants in the pilot study were randomly selected and

excluded from the main study sample. The principal investigator collected the data, and the responses were captured to form a dataset for review. Feedback from the pilot confirmed that all questions were clear, easily understood, and suitable for the target population. No further modifications to the questionnaire were necessary before proceeding with the main study.

4.4.5.3 Data Collection Method

Data collection is the systematic process of obtaining information relevant to the research problem (Polit and Beck, 2017:725). In this study, data were collected using a structured, closed-ended questionnaire designed to capture demographic information and assess the frequency, types, and factors influencing the use of TCAM during pregnancy.

The questionnaires were answered by the participants after informed consent had been obtained. To ensure linguistic inclusivity and maintain high academic standards, the researcher was supported by a research assistant during the data collection process. This assistant is a qualified academic lecturer, holding a Master's degree, and possesses professional-level fluency in both English and isiZulu. For participants who were not able to read English, the Zulu-speaking assistant read the questions aloud. The assistant's role was strictly limited to reading the questions, without providing any interpretation or explanation, to maintain the objectivity and standardisation of responses. Participants then selected their answers independently.

Completed questionnaires were placed in secure collection boxes to ensure anonymity and confidentiality. This method allowed for efficient collection of structured, comparable data from a large sample, supporting statistical analysis and the study objectives.

4.4.5.4 Data Collection Process

Creswell (2014) defines a questionnaire as a compilation of written questions presented in a single document, wherein respondents select answers from predefined options. One of the key advantages of questionnaires is that participants can complete them independently, without requiring the presence of the researcher.

For this study, the questionnaire was administered to a sample of 314 pregnant women during their antenatal visits. The entire process comprised three main steps:

administration of the questionnaire, collection of the questionnaire, and safekeeping of the questionnaire.

- **Administration of Questionnaires**

Data was collected using a structured questionnaire in English for English-speaking participants and in isiZulu for those who spoke isiZulu. These were handed to the pregnant women who met the inclusion criteria and signed the consent form. The researcher gave the participants a verbal explanation as to how to answer the questionnaires. The researcher ensured that an interpreter who was fluent in isiZulu was readily available in the event of translation or any explanation that was needed. The questionnaires did not have spaces for participants to write their personal details.

The researcher addressed all pregnant women attending the antenatal clinic and provided an explanation of the study's purpose and benefits, the value of their participation, and their rights. The researcher ensured that at each data collection session, an interpreter for isiZulu-speaking pregnant women was available. After a clear explanation of the study was given to the pregnant women, a written letter of information was handed out to each participant, in English for those who spoke and understood English and in isiZulu for those who spoke and understood isiZulu. The English version of the questionnaire, letter of information, and consent had been translated into isiZulu by an isiZulu-speaking expert. Written informed consent was obtained prior to data collection.

The researcher requested a private room from the hospital where data collection was conducted, in order to ensure privacy. The researcher provided the data collection tool only to participants who had consented to participate in the study, and this distribution occurred in a private room that was made available to the participants of the study.

During the completion of the questionnaire, the researcher and the isiZulu-speaking assistant remained present in the designated room to provide procedural support and translation assistance as required, while maintaining a professional distance to allow participants to answer independently. The questionnaire took 5 – 10 minutes to complete per participant.

Collection of Questionnaires

Upon the completion of the data collection process, the researcher supplied two distinct boxes for the participants, one allocated for the submission of questionnaires and the other designated for the collection of consent forms. The participants were guided to place their filled-out questionnaires in the first box and their consent forms in the second one. This was arranged to prevent linking the questionnaires with the consent forms in order to ensure anonymity. As the researcher was present during this stage, participants were specifically guided to place their own documents into the respective boxes to uphold the principles of anonymity.

Data acquisition occurred over a span of four weeks, from Monday, July 7, 2025, to Thursday, July 31, 2025, during the hours of 07:00 to 16:00. Each day, a total of 16 data collection instances were carried out until the target number of questionnaires was achieved.

- **Safekeeping of Questionnaires**

All raw data was stored under lock and key in the researcher's office until it was captured by the researcher on a password-locked computer; thereafter, the hard copies were scanned to a universal serial bus (USB) and will be subsequently shredded. The USB was retained under lock and key by the supervisor and will be kept for five years, then all information will be deleted.

All responses to the questionnaire were assigned codes to protect the anonymity of participants. The coded information will be kept safely in a locked cabinet for five years, after which it will be permanently destroyed by shredding to ensure confidentiality is upheld. All information on the computer and online will be deleted, and the recycle bin will be emptied.

4.5 VALIDITY AND RELIABILITY

Grove, Gray and Burns (2020: 410) describe validity as the degree to which a tool accurately assesses the construct being studied. Similarly, Polit and Beck (2021) highlight that validity relies on producing reliable, impartial, and thoroughly substantiated evidence. The next section provides a detailed discussion on the validity of the data collection instrument.

4.5.1 Face Validity

Face validity is based on the opinions of people who are considered experts in the field (Neuman 2012). A subjective assessment, usually by an expert, verifies that a measurement instrument appears to match the content it seeks to measure (Grove, Gray and Burns 2017). The data collection instrument used in this study was scrutinised by:

- Experts in the formulation of questionnaires
- A statistician
- The Departmental Research Committee and the Research for Higher Degrees Committee of Durban University of Technology
- The Research Ethics Committee of Durban University of Technology.

Suggestions made by the Research Ethics Committee of Durban University of Technology were incorporated into the research instrument. The questionnaire featured different types of TCAM commonly utilised during pregnancy, including herbal remedies, massage therapy, acupuncture, homeopathy, spiritual healing, and Ayurvedic practices. Experts in the field and survey design reviewed the draft instrument, assessing the clarity, relevance, and comprehensiveness of each question. Feedback from these experts was incorporated into the final version of the questionnaire. For instance, it was suggested that the researcher simplify the explanations of TCAM treatments, as some participants might not be acquainted with terms like acupuncture or Ayurvedic medicine. Consequently, brief explanations were included in Section E of the questionnaire to improve participant comprehension.

4.5.2 Content Validity

Content validity refers to the extent to which a data collection tool accurately assesses the variables needed to evaluate a specific hypothesis (Middleton 2023; Creswell 2018). In this study, which focused on the use of TCAM by pregnant women, content validity was ensured by developing a questionnaire grounded in an extensive literature review on TCAM practices among this population.

A systematic, multi-phase approach was followed. First, a thorough literature review identified essential variables and themes related to TCAM utilisation, guiding the creation of questionnaire items that accurately represented relevant practices, beliefs,

and motivations. The draft instrument was then evaluated by specialists in maternal health, TCAM, and survey design, who assessed the clarity, relevance, and comprehensiveness of each item. Based on their feedback, minor modifications were made to enhance clarity and better align the questionnaire with the study objectives.

Finally, a pilot study was conducted with ten participants representative of the target population, who were excluded from the main study. The pilot confirmed that the questionnaire was clear, comprehensible, and suitable for use, and no further revisions were necessary.

4.5.3 Study Validity

Study validity pertains to the accuracy and authenticity of claims made. It serves as the essential basis for generating reliable evidence to enhance practices (Grove, Burns and Gray 2013). Validity is divided into two main types.

4.5.3.1 Internal Validity

This refers to how well the study's results truly represent reality, without interference from unrelated factors (Grove, Burns and Gray 2013). In this study, all data gathered on the use of TCAM by pregnant women is viewed as an accurate reflection of their actual practices. To promote honesty and ensure reliability, participants were specifically encouraged to respond truthfully and were guaranteed anonymity and confidentiality.

4.5.3.2 External validity

As noted by Grove, Burns and Gray (2013), external validity pertains to how well the results of a study can be applied to different settings and groups (in other words, whether the outcomes observed in one situation are relevant in another). A study achieves external validity when its sample accurately represents a wider population and when the research environment mirrors other contexts.

In this study, the research took place at a public institution that offers ANC to a large and varied community, which includes patients from nearby hospitals, clinics, and different areas of the Eastern Cape. On average, this antenatal clinic caters to around 1 687 pregnant women each month. Therefore, the results derived from this

environment not only reflect the study population but also have implications for other public healthcare facilities in KZN.

4.5.4 Reliability

Reliability refers to the dependability and uniformity of a measurement tool, ensuring it yields comparable results under the same conditions (Creswell and Creswell, 2018; Polit and Beck 2021). In quantitative research, reliability is typically determined through statistical techniques, such as Cronbach's alpha, which assesses the internal consistency of items within a scale.

In this research, reliability was assessed through a pilot test, in which the questionnaire was given to ten patients from an antenatal clinic at the chosen facility in the eThekweni district. These participants were chosen based on the inclusion criteria but were not part of the final sample. While statistical reliability measures (such as Cronbach's alpha) were not computed due to the limited size of the pilot sample, the pilot study contributed to establishing procedural reliability, making sure the questionnaire was clearly understood, consistently applied, and suitable for the intended audience.

The feedback from the pilot participants indicated that all items in the questionnaire were clear, straightforward, and easy to understand. Consequently, no amendments were needed. This approach helped guarantee that the questionnaire would produce consistent results during the main phase of data collection.

4.6 DATA ANALYSIS

The main objective of data evaluation is to convey the outcomes of the study in a clear and understandable way (Polit and Beck 2012). For this investigation, data were analysed descriptively using Statistical Package for the Social Sciences (SPSS) version 17, under the direction of a statistician.

A range of statistical methods was utilised to assess the data:

- Descriptive statistics, mean values, and standard deviations were computed as necessary, and frequency distributions were summarised through tables and visual diagrams.
- Chi-square, goodness-of-fit Ttst were used on categorical variables to ascertain if the observed frequencies are significantly different from those expected by chance.

- Chi-square Test of independence was employed in cross-tabulations to determine if a statistically significant association exists between paired categorical variables.
- The binomial test is applied when assessing whether the proportion of respondents choosing one of two options differs significantly from what would be expected by chance. This test was also adapted for dichotomised versions of variables that originally had more than two categories.
- A one-sample t-test was utilised for items assessed on agreement scales to test if the mean score varies significantly from a predetermined reference (scalar) value.
- Analysis of variance (ANOVA) was used to compare means among more than two groups defined by categorical variables.

To determine whether the factors clustered into coherent and reliable groupings, factor analysis was applied. In order to explore the structure of the data, when several constructs are each measured using multiple items and are reduced to a small number of latent variables, factor analysis with promax rotation is applied to the sets of items in the constructs.

During the process, some items may be dropped either because they do not load strongly enough onto any factor or because they cross-load onto multiple factors. The reliability of combining items into a single latent variable is tested using Cronbach's alpha. An alpha value of at least 0.7 is considered adequate. If items do not correlate strongly enough with the other items in the construct and negatively affect the reliability, they may be dropped.

The factor extraction is deemed to be successful if the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) exceeds 0.6 and Bartlett's test of sphericity is significant.

Chapter 5 provides an in-depth presentation of the data analysis carried out in this research.

4.7 ETHICAL CONSIDERATIONS

Ethical principles guided researchers in safeguarding participants and maintaining the integrity of their studies throughout the research process (Bradshaw, Atkinson and Doody 2017).

4.7.1 Obtaining approval and permission to conduct the study

Ethical clearance (IREC 044/25) for the study was obtained from the Durban University of Technology's Institutional Research Ethics Committee (Annexure A). Written permission (KZ_2025_023) was also granted by the Provincial Department of Health (Annexure B). Gatekeeper permission was sought and obtained from the management and ethics committee of the participating hospital, which allowed the researcher to access the facility and conduct the study with the proposed participants (Annexure C).

4.7.2 Right to Self-Determination

Gray et al. (2016) noted that the moral precept of respect for individuals served as the foundation for the right to self-determination. This principle maintains that people need to be seen as autonomous agents with the freedom to live their lives as they like, without interference from other forces, since they are capable of self-determination, or making their own decisions. In this study, the participants were encouraged to make their own decisions; they were not coerced, and informed consent was taken from them after the researcher fully explained the objectives of the study. The research also advised the participants that they could withdraw from the study at any time. Confidentiality was maintained at all times by having a designated room for the research participants, not disclosing any information about the participants, and not writing personal details on the data collection tool. During data collection, participants were able to fill in the questionnaire, and confidentiality was maintained as it was between the participant and the researcher.

4.7.3 Justice

Justice, according to Polit and Beck (2017), included the participants' right to equitable treatment. Participant selection had to be based on study requirements. Random sampling was utilised, which ensured that all pregnant women who met the criteria had a fair and equal chance of participating in the research by informing all pregnant women who met the inclusion criteria about the study.

4.7.4 Privacy

Privacy was defined as the right of participants to have their personal information maintained with the utmost confidentiality, as asserted by Polit and Beck (2017). Each participant was assigned a unique identifier rather than being recognised by name to

ensure anonymity. Furthermore, a private room was provided for participants to fill out the data collection tool.

4.7.5 Informed consent

Gray, Grove and Sutherland (2017: 259) define consent as a participant's choice to participate in research, while participant information refers to information shared by a researcher with a potential participant. According to Gray, Grove and Sutherland (2017: 206), potential participants have to understand the information they are being offered, and the researcher has to understand what information is being asked of them and participants' right to refuse. The researcher personally approached and addressed the pregnant women to participate in the intended study while they were attending their ANC. All participants were informed about the study prior to commencement via an information letter. Participants were given an opportunity to read the information letter. Thereafter, written consent was given to participate in the study on the day of their antenatal visit, while in the waiting room, awaiting to see the doctor, as the waiting time ranged from one to three hours. Therefore, the pregnant women had sufficient time to complete the questionnaire. The pregnant women were addressed, and consent was obtained prior to the distribution of the questionnaire.

4.7.6 Confidentiality and Anonymity

Confidentiality pertained to the responsibility of researchers to prevent the disclosure of acquired information, whereas anonymity involved safeguarding the identity of the sources of that information (Gray, Grove and Sutherland 2017). The researcher ensured data confidentiality by restricting access. Electronic data was securely stored in a password-protected OneDrive, accessible only to the researcher and supervisors. Completed permission forms were scanned into PDF format and stored on the same secure OneDrive, while paper copies were shredded. No identifying information was collected from participants on the permission forms or data collection tool. The right to autonomy and privacy was upheld in data management to prevent improper associations. All information was treated with the utmost discretion and used solely for the research study. Discretion was maintained, and participants submitted consent forms anonymously.

Data collection occurred individually and in a private room. Only the researcher and the assistant were granted access to the data collection tool. The study's design did

not expose participants to any physical harm. The researcher-maintained vigilance for potential risks. The data tool was securely stored in a locked cupboard and accessed only when needed. Electronic PDF data was safeguarded within a password-protected OneDrive and will be deleted after a five-year retention period. Hard copies were shredded once scanned into PDF format and stored on OneDrive.

4.8 CONCLUSION

Chapter 4 outlined the methodology that was adopted for this study. It detailed the selection of the research design, including the context, population, sampling methods, data collection procedures, and data collection tools. It also covered the data analysis methods and measures taken to ensure trustworthiness. The chapter described the participants, the sampling process, and the inclusion and exclusion criteria. Additionally, the research settings were discussed. Ethical considerations and the application of various ethical principles guiding the study were also addressed.

The next chapter provides a detailed overview of the data gathered and the analysis conducted.

CHAPTER 5: PRESENTATION OF FINDINGS

5.1 INTRODUCTION

This chapter outlines the results of the research, featuring a comprehensive examination of the collected data. The main objective of the study was to investigate the utilisation of TCAM among expectant mothers in the eThekweni district. Information was collected through a self-created questionnaire, crafted based on various pertinent resources. A total of 314 individuals participated in the research. This chapter outlines the findings derived from the data collection method. A statistician assisted in analysing the gathered data using SPSS version 17, ANOVA, binomial test, and sample t-test. Key findings are summarised and illustrated using tables and graphs.

5.1.1 The Data Collection Instrument

The data collection instrument consisted of items for pregnant women over the age of 18 years old. The instrument was divided into five sections, namely:

- *Section A:* Demographic data
- *Section B:* Predisposing factors leading to the use of TCAM
- *Section C:* Enabling factors leading to the use of TCAM
- *Section D:* Needs factors leading to the use of TCAM
- *Section E:* Types of TCAM Used among pregnant women

5.2 PRESENTATION OF RESEARCH FINDINGS

5.2.1 Section A: Demographic Data

Grasping the demographic features of the study group is crucial for placing the findings in context and understanding behavioural patterns within the community. This section provides a summary of key demographic factors, including religion, income, employment status, education, location, number of children, marital status, age, and race (Table 5.1). These elements provide important insights into the social and economic landscape that affects the participants, which subsequently influences their health-seeking behaviours and access to resources. The data indicate a largely youthful, economically disadvantaged population with a variety of socio-cultural backgrounds, predominantly residing in semi-urban areas.

Table 5.1. Participants' Demographic Data

Variable	Category	n= 314	%
Religion	Christian	269	85.7
	Hinduism	8	2.5
	Islam	1	0.3
	Other	35	11.1
	Unspecified	1	0.3
Income	No income	143	45.5
	≤ R2 000	55	17.5
	R2 001–R5 000	54	17.2
	R5 001–R10 000	44	14.0
	> R10 000	8	2.5
Employment Status	Unemployed	154	49.0
	Full-time	96	30.6
	Self-employed	36	11.5
	Part-time	27	8.6
Education	Secondary	170	54.1
	Tertiary	110	35.0
	Primary	21	6.7
	No formal education	7	2.2
Location	Township	163	51.9
	Suburb/Town	83	26.4
	Rural	48	15.3
	Informal settlement	18	5.7
Number of Children	1–5	230	73.2
	None	70	22.3
	>5	12	3.8
Marital Status	Single	236	75.2
	Married	65	20.7
	Divorced/Separated	7	2.2
	Widowed	3	1.0
Age (years)	25–35	148	47.1
	18–24	89	28.3
	36+	74	23.6
Race	Black	283	90.1
	Indian	13	4.1
	Coloured	12	3.8
	White	6	1.9

5.2.1.1 Religion

A large proportion of the participants identified as Christian (85.7%, $n = 269$), indicating a predominantly homogeneous religious environment. Minority religions accounted for a small percentage of the sample, with Hinduism at 2.5% ($n = 8$), Islam at 0.3% ($n = 1$), and various “Other” beliefs comprising 11.1% ($n = 35$). Cases of unidentified religious affiliation were minimal at 0.3% ($n = 1$).

5.2.1.2 Income

A significant portion of the participants reported having no income, 45.5% (n = 143), suggesting a considerable level of economic insecurity. The remaining respondents were distributed across lower to moderate income brackets: 17.5% (n = 55) earned up to R2 000, 17.2% (n = 54) earned between R2 001 and R5 000, and 14.0% (n = 44) earned between R5 001 and R10 000. Only 2.5% (n = 8) reported earnings above R10 000, indicating limited prospects for economic advancement.

5.2.1.3 Employment Status

The unemployment rate is alarmingly high, 49.0% (n = 154), highlighting the financial uncertainty experienced by the population. Only 30.6% (n = 96) were in full-time jobs, 11.5% (n = 36) were self-employed, and 8.6% (n = 27) worked part-time. This scenario aligns with the significant number of respondents who reported having no income.

5.2.1.4 Education

The overall level of educational attainment is relatively high, with 54.1% (n = 170) having achieved some level of secondary education and 35.0% (n = 110) completing tertiary education. A small segment has only completed primary education, 6.7% (n = 21), or has received no formal education, 2.2% (n = 7), signifying generally good access to education despite prevailing economic hardships.

5.2.1.5 Location

More than half of the respondents reside in townships, 51.9% (n = 163), while 26.4% (n = 83) live in suburbs or towns. Rural inhabitants represent 15.3% (n = 48), and 5.7% (n = 18) live in informal settlements. This pattern indicates that a majority reside in semi-urban environments, which may offer better access to services and job opportunities but still reveal underlying socio-economic difficulties.

5.2.1.6 Number of Children

A significant proportion of respondents report having between 1 and 5 children, 73.2% (n = 230). Those with no children comprise 22.3% (n = 70), whereas only 3.8% (n = 12) report having more than five children, indicating that families of moderate size are common.

5.2.1.7 Marital Status

The majority of respondents are single, 75.2% (n = 236), which may reflect a younger demographic or various social and economic factors influencing marriage trends. Only 20.7% (n = 65) are married, with divorced/separated individuals 2.2% (n = 7) and widows 1.0% (n = 3) making up a relatively small group.

5.2.1.8 Age

The age distribution shows that the largest segment of respondents is between 25 and 35 years, 47.1% (n = 148), followed by those aged 18 to 24, 28.3% (n = 89), and individuals aged 36 and older, 23.6% (n = 74). This suggests that the population is primarily youthful, likely in the early to mid-stages of their careers.

5.2.1.9 Race

The racial composition is overwhelmingly Black, 90.1% (n = 283), with smaller groups identifying as Indian, 4.1% (n = 13), Coloured, 3.8% (n = 12), and White, 1.9% (n = 6). This demographic profile likely reflects the specific socio-geographic context of the study, situated in a predominantly Black community.

5.2.2 Section B: Predisposing Factors and Perceptions of TCAM Use During Pregnancy

Grasping individuals' views and cultural attitudes toward TCAM is essential for understanding its use, particularly during sensitive times like pregnancy. Perceptions regarding the safety, efficacy, cultural relevance, and confidentiality of TCAM can greatly affect decision-making, especially in communities where both biomedical and traditional healing practices are present. This section examines participants' views on TCAM through a set of Likert-scale statements, shedding light on how cultural norms, perceived health advantages, and societal expectations influence the utilisation of traditional health practices in pregnancy (Figure 5.1). The results help to illustrate the degree to which TCAM is accepted or questioned within this demographic and provide significant insights for incorporating traditional health practices into maternal healthcare systems.

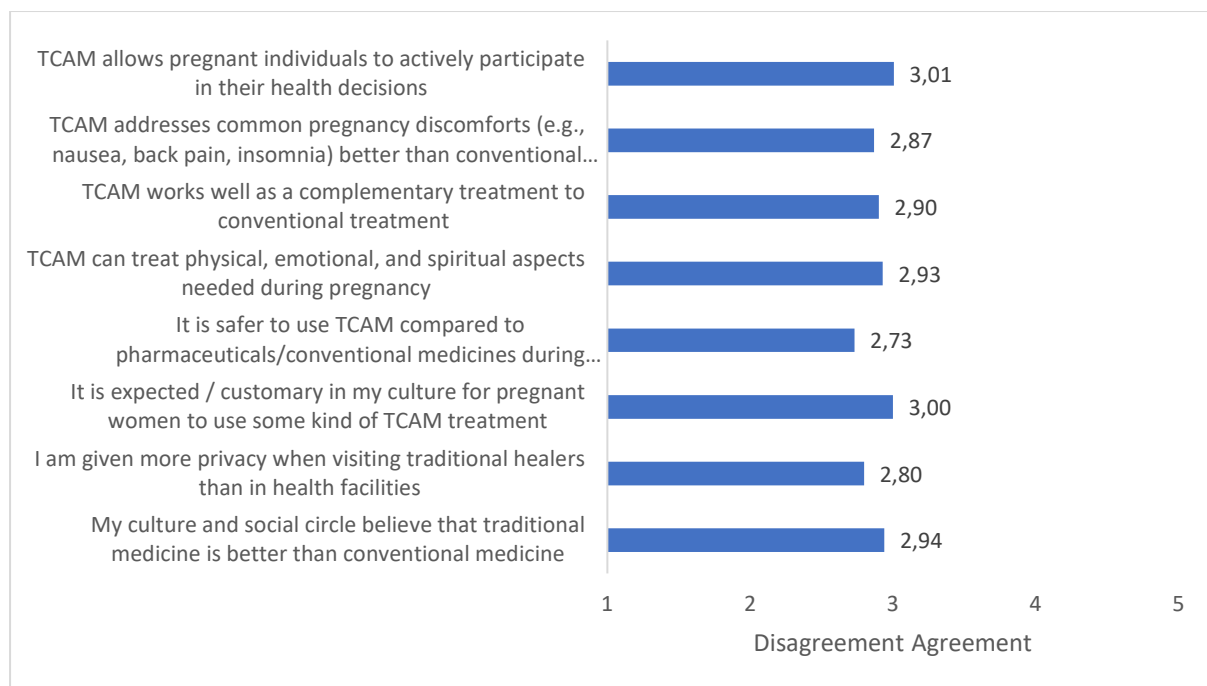


Figure 5.1: Perceptions of TCAM use during pregnancy (n = 314)

5.2.2.1 Predisposing Factors Leading to the Use of TCAM

To evaluate attitudes towards TCAM in pregnancy, participants rated their agreement with various statements using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). A one-sample t-test was performed for each statement against the neutral midpoint score of 3 to analyse whether the average responses reflected significant agreement or disagreement.

Among the eight statements assessed, three items indicated statistically significant disagreement, while the other five did not show significant differences from the neutral score, implying no clear consensus.

Participants significantly disagreed with the assertion that "TCAM is more effective in addressing common pregnancy discomforts (e.g., nausea, back pain, insomnia) compared to conventional treatments" ($M = 2.87$).

There was also significant disagreement with the notion that "TCAM can effectively treat the physical, emotional, and spiritual needs during pregnancy" ($M = 2.93$).

Furthermore, significant disagreement was noted regarding the belief that "TCAM can effectively address the physical, emotional, and spiritual needs during pregnancy" ($M = 2.93$).

Additionally, the statement "I experience more privacy when visiting traditional healers than in health facilities" was rated significantly below the neutral point ($M = 2.80$), indicating a perceived lack of privacy benefits associated with TCAM.

These findings suggest that while TCAM may be frequently accessed, it is not strongly viewed as superior to conventional medicine for managing pregnancy-related concerns or providing holistic support, nor is it typically considered more private.

The other five statements received average scores near 3.00 and did not exhibit statistically significant deviations from neutrality:

- TCAM enables pregnant individuals to take an active role in their health decisions ($M = 3.01$).
- TCAM serves well as an additional treatment alongside conventional medicine ($M = 2.90$).
- It is considered safer to utilise TCAM compared to pharmaceuticals or conventional medications during pregnancy ($M = 2.73$).
- In my culture, it is common/customary for pregnant women to engage in some form of TCAM treatment ($M = 3.00$).
- My cultural background and social circle support the idea that traditional medicine is superior to conventional medicine ($M = 2.94$).

The absence of significant agreement or disagreement on these items suggests that participant's perspectives are neutral or mixed, reflecting uncertainty or diversity in beliefs regarding the role of TCAM during pregnancy. Cultural norms and perceptions of effectiveness and safety do not appear to be strongly affirmed or rejected within the sample.

The findings indicate a cautious and measured perspective on TCAM among the participants surveyed. While some cultural and participatory aspects of TCAM are recognised, there is no overwhelming support for its effectiveness, safety, or cultural expectations. Additionally, key areas such as addressing pregnancy discomforts, holistic support, and privacy reveal significant disagreement, pointing to skepticism

regarding TCAM's practical and personal advantages during pregnancy. These results highlight the necessity for further education, integration, or assessment of TCAM within maternal healthcare environments.

5.2.2.2 Perceptions of TCAM Use During Pregnancy

To evaluate attitudes towards TCAM in pregnancy, participants rated their agreement with various statements using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). A one-sample t-test was performed for each statement against the neutral midpoint score of 3 to analyse whether the average responses reflected significant agreement or disagreement.

Among the eight statements assessed, three items indicated statistically significant disagreement, while the other five did not show significant differences from the neutral score, implying no clear consensus.

Participants significantly disagreed with the assertion that "TCAM is more effective in addressing common pregnancy discomforts (example, nausea, back pain, insomnia) compared to conventional treatments" ($M = 2.87$).

There was also significant disagreement with the notion that "TCAM can effectively treat the physical, emotional, and spiritual needs during pregnancy" ($M = 2.93$).

Furthermore, significant disagreement was noted regarding the belief that "TCAM can effectively address the physical, emotional, and spiritual needs during pregnancy" ($M = 2.93$).

Additionally, the statement "I experience more privacy when visiting traditional healers than in health facilities" was rated significantly below the neutral point ($M = 2.80$), indicating a perceived lack of privacy benefits associated with TCAM.

These findings suggest that while TCAM may be frequently accessed, it is not strongly viewed as superior to conventional medicine for managing pregnancy-related concerns or providing holistic support, nor is it typically considered more private.

The other five statements received average scores near 3.00 and did not exhibit statistically significant deviations from neutrality:

- TCAM enables pregnant individuals to take an active role in their health decisions ($M = 3.01$).

- TCAM serves well as an additional treatment alongside conventional medicine ($M = 2.90$).
- It is considered safer to utilise TCAM compared to pharmaceuticals or conventional medications during pregnancy ($M = 2.73$).
- In my culture, it is common/customary for pregnant women to engage in some form of TCAM treatment ($M = 3.00$).
- My cultural background and social circle support the idea that traditional medicine is superior to conventional medicine ($M = 2.94$).

The absence of significant agreement or disagreement on these items suggests that participant's perspectives are neutral or mixed, reflecting uncertainty or diversity in beliefs regarding the role of TCAM during pregnancy. Cultural norms and perceptions of effectiveness and safety do not appear to be strongly affirmed or rejected within the sample.

The findings indicate a cautious and measured perspective on TCAM among the participants surveyed. While some cultural and participatory aspects of TCAM are recognised, there is no overwhelming support for its effectiveness, safety, or cultural expectations. Additionally, key areas such as addressing pregnancy discomforts, holistic support, and privacy reveal significant disagreement, pointing to scepticism regarding TCAM's practical and personal advantages during pregnancy. These results highlight the necessity for further education, integration, or assessment of TCAM within maternal healthcare environments

5.2.3 Section C: Enabling Factors Leading to the Use of TCAM

This section examines the factors that facilitate the usage of TCAM during pregnancy. The focus of the analysis is on participant's views regarding the accessibility of both conventional healthcare services and TCAM, considering aspects such as cost, availability, and social support. A one-sample t-test was utilised to determine if responses to particular items significantly diverged from a neutral midpoint (test value = 3.0), indicating either agreement or disagreement. Gaining insight into these enabling factors is vital for recognising the structural, financial, and cultural elements that serve as facilitators or obstacles influencing healthcare-seeking behaviours among pregnant women in the study context. Table 5.2 shows the enabling factors which lead to the use of TCAM based on the data provided in Table 5.2 and Figure

5.2. The chart shows the mean scores for each enabling factor, allowing for a quick comparison of agreement levels.

Table 5.2: Enabling factors leading to the use of TCAM

Questions	N	Mean	Std. Deviation	Std. Error Mean
C2.1 Health facilities often don't have the treatment that I need	313	2.61	1.193	.067
C2.2 There is a lack/shortage of medication available at the health facilities	308	2.98	1.225	.070
C2.3 It takes me too long to travel long distances to health facilities	309	2.90	1.194	.068
C2.4 I am unable to pay for medical care from the health facility	305	3.11	1.233	.071
C2.5 I have access to good TCAM practitioners near where I live	303	2.86	1.244	.071
C2.6 I have access to a good conventional medical clinic/hospital near where I live	307	3.28	1.155	.066
C2.7 I can afford to pay personally for TCAM	305	2.50	1.030	.059
C2.8 Family, friends, and community members encourage me to use TCAM during my pregnancy	311	2.86	1.149	.065
C2.9 I have health insurance/medical aid which covers the cost of TCAM	311	2.24	1.157	.066

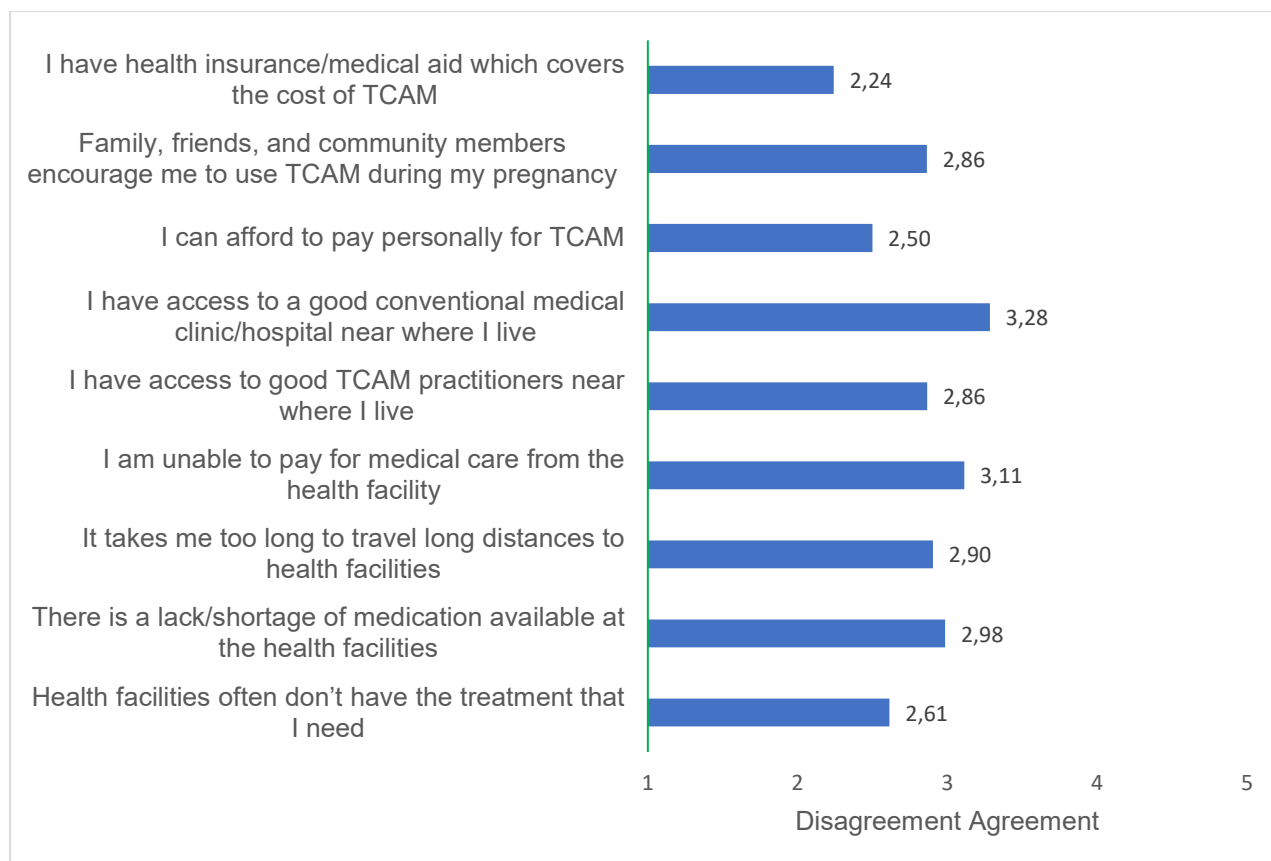


Figure 5.2: Enabling factors which lead to the use of TCAM

5.2.3.1 Enabling Factors Leading to the Use of TCAM

This section aimed to evaluate perceptions regarding access to healthcare services and TCAM. A one-sample t-test was utilised to determine if the average responses to each item significantly differed from a neutral value (test value = 3). This analysis helps identify areas where respondents showed considerable agreement or disagreement.

Question C2.6 – “I have access to a good conventional medical clinic/hospital near where I live.”

Participants showed significant agreement with this statement ($M = 3.28$, $p < 0.001$), indicating that most respondents perceive conventional healthcare infrastructure as accessible.

Question C2.1 – “Health facilities often don’t have the treatment that I need.” Participants significantly disagreed with this statement ($M = 2.61$, $p < 0.001$), reflecting a general belief that healthcare facilities offer sufficient treatment options.

Question C2.7 – “I can afford to pay personally for TCAM.” The mean response was significantly below 3 ($M = 2.50$, $p < 0.001$), suggesting that many respondents feel financially hindered when it comes to accessing TCAM services.

Question C2.8 – “Family, friends, and community encourage me to use TCAM during pregnancy.”

There was significant disagreement ($M = 2.86$, $p = 0.035$), indicating a lack of social or cultural support for using TCAM during pregnancy.

Question C2.9 – “I have health insurance/medical aid which covers the cost of TCAM.”

Respondents strongly disagreed ($M = 2.24$, $p < 0.001$), underscoring a significant gap in insurance coverage for alternative and traditional care.

For the following items, responses did not significantly deviate from the neutral point (3.0):

Question C2.2 – Shortage of medication at facilities ($M = 2.98$, $p = 0.816$). The mean response (2.98) is nearly at the neutral value of 3.0, and the high p-value (0.816) shows that there is no statistically significant difference from neutrality. This implies that participants expressed neither agreement nor disagreement regarding a shortage of medication at health facilities. In general, they held a neutral stance on this matter.

Question C2.3 – Travel time to facilities ($M = 2.90$, $p = 0.154$). The average response is just under neutral, with a p-value of 0.154 that exceeds the conventional significance level of 0.05. This suggests that respondents leaned somewhat towards disagreement, though not to a significant extent. Consequently, the participants were mostly neutral regarding whether travel time posed a barrier to healthcare access.

Question C2.4 – Ability to pay for regular medical care ($M = 3.11$, $p = 0.115$). The average score is just above the neutral line, indicating a slight inclination toward agreement, but the p-value (0.115) reveals that this difference is not statistically significant. Most participants were neutral, exhibiting a minor but inconsequential tendency to agree that they could afford regular medical treatment.

Question C2.5 – Access to good TCAM practitioners ($M = 2.86$, $p = 0.059$). The average response is lower than neutral, indicating that participants generally disagreed with the statement concerning access to quality TCAM practitioners. Even though the

p-value (0.059) is near the 0.05 cutoff, it remains statistically insignificant. Consequently, although there is a tendency among participants to disagree, this finding is insufficient to confirm a significant perception of inadequate access.

These neutral or borderline findings suggest varied experiences or perceptions among participants.

The results indicate strong access to conventional healthcare; however, significant financial and social barriers exist concerning the use of TCAM, notably during pregnancy. While healthcare facilities are generally regarded as trustworthy and perceived as adequate in terms of treatment offerings, challenges related to affordability and insurance coverage pose considerable obstacles for those interested in utilising TCAM. Additionally, support from the community and family for TCAM appears to be minimal, reflecting a lack of cultural encouragement for its use.

5.2.4 Section D: Needs Factors Influencing the Use of TCAM

Factors based on needs refer to individuals' perceived health status and their beliefs regarding the effectiveness of various healthcare options, including TCAM, in fulfilling their requirements. Here, “need” encompasses not just physical health issues but also emotional, spiritual, and cultural expectations experienced during pregnancy. This section examines how pregnant women's self-evaluation of their health, their level of concern for their well-being, and their perspectives on different TCAM methods such as herbal treatments, energy therapies, and holistic approaches affect their inclination to explore these options. By utilising a one-sample t-test, the responses of participants were compared to a neutral midpoint to determine whether there was significant consensus or dissent, thereby providing insights into their motivations or reservations about utilising TCAM during pregnancy.

Table 5.3 presents the detailed statistical breakdown for each factor, including sample size, mean scores, standard deviations, and standard errors. This data is then visually synthesised in Figure 5.3 which illustrates the average level of agreement for each need factor, offering a clear and immediate understanding of their relative impact.

Table 5.3: Enabling Factors Leading to the Use of TCAM

Questions	N	Mean	Std. Deviation	Std. Error Mean
D3.1 I consider my overall health to be satisfactory	301	3.49	1.015	.059
D3.2 I rate my health as being less than optimal	301	2.86	1.056	.061
D3.3 I worry about my health	299	3.70	1.133	.066
D3.4 I prefer to use herbal or other alternate remedies over synthetic drugs when pregnant	305	2.51	1.220	.070
D3.5 I like the holistic view of TCAM that treats physical, emotional, and spiritual aspects	308	2.87	1.154	.066
D3.6 I would like to have control of my well-being by using self-care treatments of alternate medicine	310	3.13	1.215	.069
D3.7 I think TCAM treatments should be used to complement treatment prescribed by a conventional doctor	309	3.06	1.207	.069
D3.8 Pregnant women should seek relief for pain and discomfort through TCAM modalities	310	2.97	1.243	.071
D3.9 Energetic or spiritual approaches like acupuncture, yoga or meditation are helpful during pregnancy	306	3.42	1.166	.067
D3.10 I trust TCAM to be effective in treating issues during pregnancy	309	3.04	1.193	.068

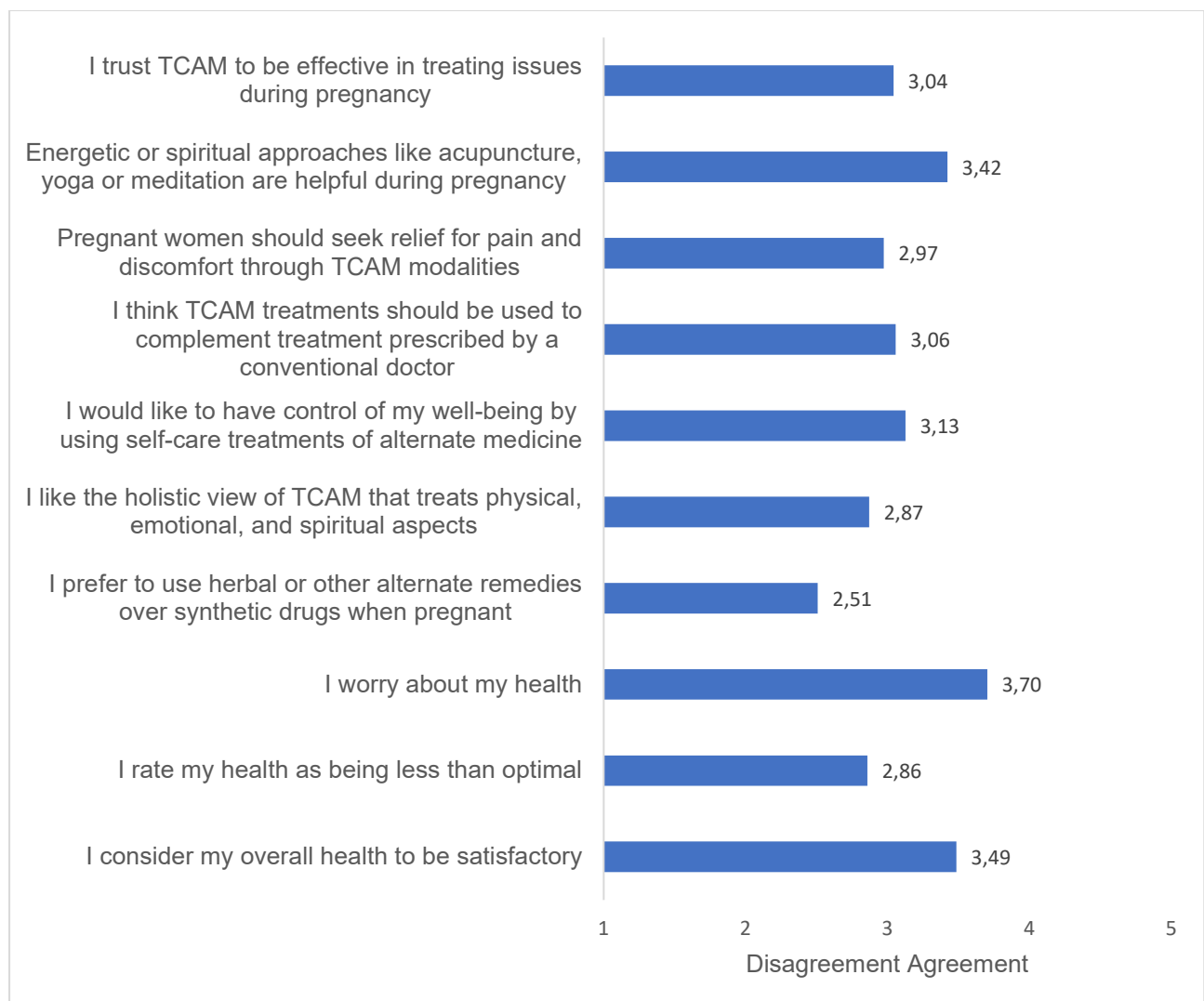


Figure 5.3: Need factors leading to the use of TCAM

5.2.4.1 Need Factors Leading to the Use of TCAM

This section outlines the outcomes of a one-sample t-test conducted to assess pregnant women's views on their health and their perception of TCAM. Responses were gauged using a Likert scale, and the average scores were compared to a neutral benchmark value of 3. Items that showed significant differences from this midpoint are elaborated on below.

The following items demonstrated statistically significant agreement, with mean scores considerably exceeding 3, signifying consensus among participants.

Question D3.1 – "I regard my overall health as satisfactory" (Mean = 3.49, $t(300) = 8.289$, $p < .001$).

Respondents substantially agreed with this statement, indicating that a majority of pregnant women view their health as generally satisfactory.

Question D3.3 – "I have concerns about my health" (Mean = 3.70, $t(298) = 10.719$, $p < .001$).

Despite their positive health perceptions, participants conveyed significant worry or anxiety regarding their health throughout pregnancy.

Question D3.9 – "Energetic or spiritual methods such as acupuncture, yoga, or meditation are beneficial during pregnancy" (Mean = 3.42, $t(305) = 6.325$, $p < .001$).

There was strong consensus that spiritual or energy-oriented TCAM approaches are regarded favourably and considered helpful during pregnancy.

The following items exhibited statistically significant disagreement, with mean scores considerably lower than 3, indicating overall disagreement among participants.

Question D3.2 – "I assess my health as below optimal" (Mean = 2.86, $t(300) = -2.346$, $p = 0.020$).

Participants generally disagreed with this statement, reinforcing the earlier observation that most believed their health to be good.

Question D3.4 – "I prefer to rely on herbs or other alternative treatments rather than synthetic medications while pregnant" (Mean = 2.51, $t(304) = -7.042$, $p < .001$).

Respondents significantly disagreed with this statement, indicating a greater inclination towards conventional or synthetic medications over herbal or alternative remedies during pregnancy.

Question D3.5 – "I appreciate the holistic perspective of TCAM that addresses physical, emotional, and spiritual dimensions." (Mean = 2.87, $t(307) = -1.975$, $p = 0.049$).

This suggests scepticism or limited endorsement of the holistic concept of TCAM, although the result was marginally significant.

The findings reveal a complex relationship between personal health perception and the utilisation of TCAM among pregnant women:

Most women viewed their overall health positively and disagreed with the notion that their health was poor. Yet, they still expressed concern or anxiety, likely due to the distinct physical and emotional challenges posed by pregnancy. There is clear endorsement for spiritual and energy-based practices (example, yoga, meditation), indicating that certain TCAM modalities are more culturally or personally acceptable. Conversely, the preference for herbal or traditional remedies over conventional medicine was minimal, and the general holistic philosophy of TCAM saw limited support, suggesting a cautious or selective acceptance of alternative strategies.

Factor analysis with Promax rotation was applied to these 27 items across the three constructs: predisposing, enabling, and needs. Items C2.5, C2.6, D3.1 – D3.4, and D3.9 were dropped because they did not load strongly enough onto any factor. Four factors were extracted, accounting for 60.26% of the variance in the data. A KMO of .927 and a significant Bartlett's test indicated that the data were adequate for successful and reliable extraction. Rotation converged in 5 iterations.

The extracted factors and the item loadings are summarised in Table 5.4.

Table 5.4: Predisposing, Enabling and Needs factors_Factor loadings

	Factor			
	1	2	3	4
B1.4 It is safer to use TCAM compared to pharmaceuticals/conventional medicines during pregnancy	.830			
B1.3 It is expected / customary in my culture for pregnant women to use some kind of TCAM treatment	.808			
B1.1 My culture and social circle believe that traditional medicine is better than conventional medicine	.791			
B1.7 TCAM addresses common pregnancy discomforts (example, nausea, back pain, insomnia) better than conventional treatments	.761			
B1.6 TCAM works well as a complementary treatment to conventional treatment	.739			
B1.8 TCAM allows pregnant individuals to actively participate in their health decisions	.733			
B1.5 TCAM can treat physical, emotional, and spiritual aspects needed during pregnancy	.730			
B1.2 I am given more privacy when visiting traditional healers than in health facilities	.725			
D3.8 Pregnant women should seek relief for pain and discomfort through TCAM modalities		.951		
D3.6 I would like to have control of my well-being by using self-care treatments of alternate medicine		.822		
D3.10 I trust TCAM to be effective in treating issues during pregnancy		.783		
D3.7 I think TCAM treatments should be used to complement treatment prescribed by a conventional doctor		.708		
D3.5 I like the holistic view of TCAM that treats physical, emotional, and spiritual aspects		.655		
C2.2 There is a lack/shortage of medication available at the health facilities			.837	
C2.1 Health facilities often don't have the treatment that I need			.778	
C2.3 It takes me too long to travel long distances to health facilities			.654	
C2.4 I am unable to pay for medical care from the health facility			.642	
C2.9 I have health insurance/medical aid which covers the cost of TCAM				.700
C2.7 I can afford to pay personally for TCAM				.510
C2.8 Family, friends, and community members encourage me to use TCAM during my pregnancy				.355

Details of the extracted factors are shown in Table 5.5.

Table 5.5: Predisposing, Enabling and Need Factors

Factor	Construct	Items included	Variance extracted	Cronbach's alpha
1	Predisposing factors (PF)	B1.1-B1.8	43.52	.925
2	Needs factors (NF)	D3.5-D3.8, D3.10	8.82	.900
3	Enabling-HCF factors (EHCF)	C2.1-C2.4	4.77	.796
4	Enabling-TCAM (ETCAM)	C2.7-C2.9	3.15	.617

The values achieved for Cronbach's alpha above, indicate that there is adequate to good internal consistency among the items on each factor, and the composite variables formed by calculating the average of the agreement scores for all items included in a variable are reliable.

Table 5.6 summarises the factors that influence the use of TCAM.

Table 5.6: Factors influencing the use of TCAM

Factors influencing the use of TCAM	<i>n</i>	Mean	Standard deviation	<i>t</i>	df	<i>p</i> -value
Predisposing factors (PF)	314	2.90	.930	-1.998	313	0.047
Needs factors (NF)	314	3.01	1.013	.214	313	0.831
Enabling-HCF factors (EHCF)	314	2.90	.954	-1.829	313	0.068
Enabling-TCAM (ETCAM)	314	2.53	.835	-9.958	313	< .001

There is significant disagreement that predisposing factors and enabling-TCAM (support and affordability of TCAM) factors exist.

5.2.5 Section E: Types of TCAM Used

This section investigates the degree to which different types of TCAM are utilised by pregnant women within the study group. TCAM includes a wide range of health practices and products that are not typically included in standard medical treatment but are frequently employed for holistic health management. For analytical purposes,

TCAM modalities were categorised into four primary groups: Natural Products, Mind and Body Practices, Complementary Health Approaches, and African Traditional Medicine. A mix of frequency analysis and binomial testing was used to evaluate the prevalence and statistical significance of usage trends across these categories. This methodology offers a detailed understanding of which TCAM types are most frequently adopted, their level of acceptance, and the potential cultural or health-related reasons for their use during pregnancy (Figure 5.4 and Table 5.7).

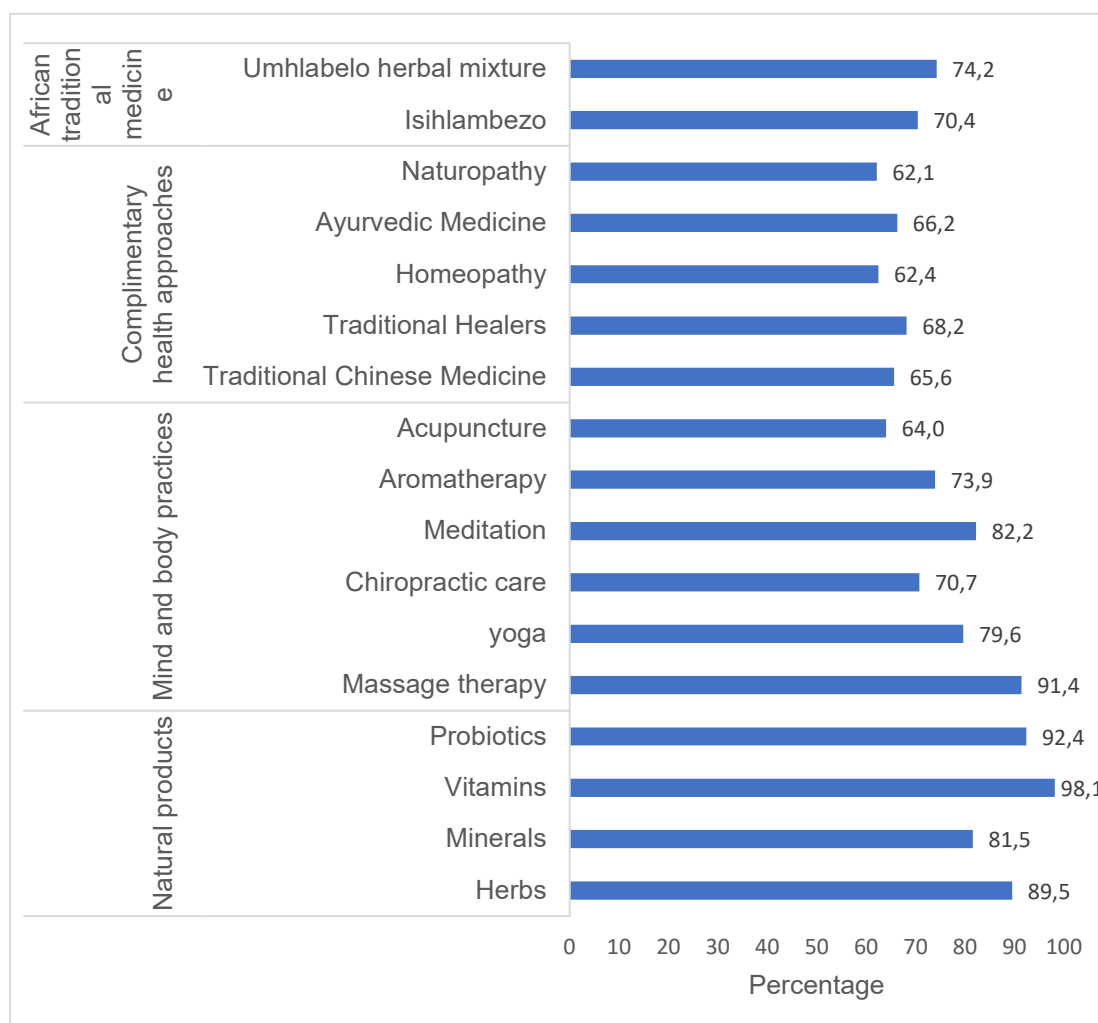


Figure 5.4: The percentage of respondents who used each practice/treatment

Table 5.7: The reported usage percentages of different types of TCAM

TCAM treatment	Frequency (%)		<i>n</i>	<i>p</i> -value
	Yes	No		
Natural products				
Herbs	281 (89)	33 (11)	314	<.001
Minerals	256 (83)	54 (17)	310	<.001
Vitamins	308 (99)	4 (01)	312	<.001
Probiotics	290 (93)	21 (07)	311	<.001
Mind and Body practices				
Massage therapy	287 (92)	24 (08)	311	<.001
Yoga	250 (80)	61 (20)	311	<.001
Chiropractic care	222 (71)	92 (29)	314	<.001
Meditation	258 (83)	52 (17)	310	<.001
Aromatherapy	232 (75)	79 (25)	311	<.001
Acupuncture	201 (66)	102 (34)	314	<.001
Complementary Health Approaches				
Traditional Chinese Medicine	108 (34)	206 (66)	314	<.001
Traditional healers	100 (32)	214 (68)	314	<.001
Homeopathy	118 (38)	196 (62)	314	<.001
Naturopathy	195 (66)	102 (34)	297	<.001
African Traditional Medicine				
Isihlambezo	93 (30)	221 (70)	314	<.001
Umhlabelo herbal mixture	81 (26)	233 (74)	314	<.001

5.2.5.1 Natural Products (Most Used Category)

Natural products were identified as the most frequently utilised category:

- Vitamins (98.1%) ranked as the most commonly used method overall.
- Probiotics (92.4%), massage therapy (91.4%), and herbs (89.5%) displayed significant usage.
- Minerals (81.5%) also saw considerable adoption.

The widespread use of natural products indicates a strong inclination toward nutritional supplements and natural therapies during pregnancy. These are likely viewed as safer,

accessible, and beneficial for foetal and maternal health. The nearly universal consumption of vitamins aligns with standard prenatal care recommendations.

5.2.5.2 Mind-Body Practices

- Meditation (82.2%), yoga (79.6%), and massage therapy (91.4%) ranked highly in popularity.
- Aromatherapy (73.9%), chiropractic care (70.7%), and acupuncture (64.0%) were also commonly practiced.

This strong engagement with mind-body practices suggests that many expectant mothers appreciate non-pharmacological methods for dealing with stress, pain, and emotional well-being. The use of therapies like meditation and yoga may symbolise self-care and empowerment strategies throughout pregnancy.

5.2.5.3 Complementary Health Approaches

Traditional healers (68.2%), Ayurvedic medicine (66.2%), traditional Chinese medicine (65.6%), and naturopathy/homeopathy (62%) exhibited moderate usage rates.

These findings indicate a moderate dependence on established alternative medical systems, such as Ayurvedic and Chinese medicine. These approaches likely attract those who favour holistic care models or have had beneficial past experiences with such practices.

The most commonly utilised modalities include vitamins, probiotics, massage therapy, herbs, and meditation. The prevalence of natural products and mind-body practices suggests that they are seen as safe, effective, and easily accessible. Cultural beliefs and practices play an important role, reflected in the high adoption of African traditional remedies. A diverse range of holistic and integrative approaches is utilised from both local and global traditions, showcasing a varied method of pregnancy-related care.

5.2.5.4 African Traditional Medicine

The umhlabelo herbal mixture (74.2%) and isihlambezo (70.4%) were reported with considerable frequency.

These results emphasise the substantial cultural impact on health practices. The reliance on traditional African remedies reflects a well-rooted belief in their

effectiveness and cultural suitability during pregnancy. Such practices may be inherited across generations and integrated into community standards.

The findings from the binomial tests indicate that a notably high percentage of participants indicated using all specified TCAM treatments ($p < .001$ in each instance). Among this group, natural products and mind-body practices are the most frequently utilised forms of TCAM, implying a high level of acceptance and potentially better accessibility. While a considerable number of individuals also utilise complementary health strategies and African traditional medicines, their usage shows greater variation.

5.2.5.5 Natural Products (NP)

A significant portion of the respondents, 73.9% ($n = 158$), indicated that they utilised all four categories of natural products. A lesser percentage employed three 16.9% ($n = 36$), two 6.1% ($n = 13$), or just one 3.2% ($n = 7$) natural product. These results demonstrate a notably high adoption rate of natural products, with the majority of participants practicing multi-modal usage, implying a robust trust or dependence on natural health methods throughout pregnancy (Table 5.8).

Table 5.8: Natural Products (NP) total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	3.2	3.2	3.2
	2	19	6.1	6.1	9.2
	3	53	16.9	16.9	26.1
	4	232	73.9	73.9	100.0
	Total	314	100.0	100.0	

5.2.5.6 Mind and Body practices (MBP)

A little more than half of the participants (53.5%) indicated that they engaged in all six mind and body practices evaluated. Additionally, 29% utilised between 2 and 5 practices, while merely a small percentage (4.1%) did not employ any. This trend implies a significant degree of involvement with a variety of mind-body interventions,

showing that these practices are broadly embraced and incorporated into prenatal care routines by the majority of respondents (Table 5.9).

Table 5.9: Mind and Body Practices (MBP) total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	13	4.1	4.1	4.1
	1	20	6.4	6.4	10.5
	2	20	6.4	6.4	16.9
	3	24	7.6	7.6	24.5
	4	35	11.1	11.1	35.7
	5	34	10.8	10.8	46.5
	6	168	53.5	53.5	100.0
	Total	314	100.0	100.0	

5.2.5.7 Complementary Health Approaches (CHA)

A significant percentage of participants (35.4%) indicated that they utilised all five Complementary Health Approaches during their pregnancy. Furthermore, 43.1% employed between 1 and 4 approaches, whereas only 10.5% stated they did not engage in any CHA. These results imply that CHA modalities are commonly used and incorporated into maternal care practices within the study group, albeit somewhat less frequently than natural products or mind-body techniques (Table 5.10).

Table 5.10: Complementary Health Approaches (CHA) total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	33	10.5	10.5	10.5
	1	35	11.1	11.1	21.7
	2	42	13.4	13.4	35.0
	3	27	8.6	8.6	43.6
	4	66	21.0	21.0	64.6
	5	111	35.4	35.4	100.0
	Total	314	100.0	100.0	

5.2.5.8 African Traditional Medicine (ATM)

The majority of respondents, 67.8% ($n = 213$), reported using both African traditional medicine treatments during pregnancy, with a smaller proportion, 8.9% ($n = 28$), using only one. Notably, nearly a quarter, 22.9% ($n = 72$) of participants did not use any form of ATM. This indicates that while ATM remains a significant component of maternal care among the population, its usage is somewhat less universal compared to other TCAM modalities such as natural products or mind-body practices (Table 5.11).

Table 5.11: African Traditional Medicine (ATM) total

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	72	22.9	23.0	23.0
	1	28	8.9	8.9	31.9
	2	213	67.8	68.1	100.0
Total		313	99.7	100.0	
Missing	System	1	.3		
Total		314	100.0		

5.2.6 Application of TCAM Types: Results from Binomial Testing

A binomial test was performed to assess whether the proportion of users for each of the four primary types of TCAM significantly varied from a test proportion of 0.5 (or 50%).

The outcomes demonstrated that a statistically significant majority of participants reported utilising each of the TCAM types:

Natural Products (NP): 100% of respondents ($n = 314$), $p < .001$, Mind and Body Practices (MBP): 96% ($n = 301$), $p < .001$, Complementary Health Approaches (CHA): 89% ($n = 281$), $p < .001$, African Traditional Medicine (ATM): 77% ($n = 241$), $p < .001$.

These results suggest that all four TCAM modalities were extensively used, with Natural Products and Mind and Body Practices being the most frequently employed among pregnant individuals in the sample. The use of African Traditional Medicine, while somewhat lower, remains significant.

5.2.7 DV = Natural Products

Multiple stepwise regression was done to determine which, if any, of these four factors were significant predictors of the use of natural products (Table 5.12).

Table 5.12: Showing MODEL 1

IV	R ²	F	df1; df2	p-value	B (regression coefficient)	t	p-value
Included variables							
EHCF	.014	4.272	1; 312	.040	.090	2.067	0.040
Excluded variables							
PF					.013	.218	0.827
NF					.011	.190	0.849
ETCAM					.063	1.095	0.274

DV – NP-total

Results from a stepwise regression show that EHCF accounts for 1.4% of the variance in NP-total ($F(1, 312) = 4.272, p = 0.040$) and is the only predictor of usage of natural products, $\beta = 0.090$. An increase in agreement that there are negative issues with using health care facilities results in a higher use of natural products.

5.2.8 DV = Mind and Body Practices

Multiple stepwise regression was done to determine which, if any, of these four factors were significant predictors of the use of mind and body practices (Table 5.13).

Table 5.13: Showing MODEL 2

IV	R ²	F	df1; df2	p-value		B (regression coefficient)	t	p-value
Included variables								
EHCF	.061	20.197	1; 312	<.001		-.480	-4.494	< .001
Excluded variables								
PF						.009	.145	0.884
NF						.050	.861	0.390
ETCAM						.036	.633	0.527

DV – MBP-total

Results from a stepwise regression show that EHCF accounts for 6.1% of the variance in MBP-total ($F(1, 312) = 20.197, p < .001$) and is the only predictor of usage of mind

and body practices, $\beta = -.480$. An increase in agreement that there are negative issues with using health care facilities results in a decrease in the use of mind and body practices.

5.2.9 DV = Complementary Health Approaches

Multiple stepwise regression was done to determine which, if any, of these four factors were significant predictors of the use of complementary health approaches (Table 5.14).

Table 5.14: Showing MODEL 3

IV	R ²	F	df1; df2	p-value	B (regression coefficient)	t	p-value
Included variables							
EHCF	.083	14.076	2; 311	<.001	-.550	-5.142	< .001
PF					.331	3.021	0.003
Excluded variables							
NF					.072	.956	0.340
ETCAM					.029	.472	0.637

DV – CHA-total

Results from a stepwise regression show that EHCF and PF account for 8.3% of the variance in CHA-total ($F(2, 311) = 14.076, p < .001$) and are predictors of usage of complementary health approaches, $\beta = -.550$ and $.331$, respectively. An increase in agreement that there are negative issues with using health care facilities results in a decrease in the use of complementary health approaches; and an increase in agreement that predisposing factors (including cultural beliefs and positive perceptions of TCAM) exist results in an increase in the use of complementary health approaches.

5.2.10 DV = African Traditional Medicine

Multiple stepwise regression was done to determine which, if any, of these four factors were significant predictors of the use of African traditional medicine.

Table 5.15: Showing MODEL 4

IV	R ²	F	df1; df2	p-value	B (regression coefficient)	t	p-value
Included variables							
PF	.095	16.243	2; 310	<.001	.281	5.380	<.001
EHCF					-.186	-3.643	<.001
Excluded variables							
NF					.122	1.615	0.107
ETCAM					.077	1.235	0.218

DV – ATM-total

Results from a stepwise regression show that EHCF and PF account for 9.5% of the variance in ATM-total ($F(2, 310) = 16.243, p < .001$) and are predictors of usage of African traditional medicine, $\beta = .281$ and $-.186$, respectively. An increase in agreement that there are negative issues with using health care facilities results in a decrease in the use of African traditional medicine; and an increase in agreement that predisposing factors (including cultural beliefs and positive perceptions of TCAM) exist results in an increase in the use of African traditional medicine.

5.2.11 Extra Comparisons Among Groups

The average number of natural products used differs significantly across race, Welch ($3, 15.201$) = 4.077, $p = 0.026$. Games-Howell post hoc testing shows that, on average, Indians (mean = 3.92) use significantly more natural products than Blacks (mean = 3.60, $p = 0.008$).

The average number of natural products used differs significantly across age groups, Welch ($2, 167.852$) = 3.461, $p = 0.034$. Games-Howell post hoc testing shows that, on average, the 36+ age group (mean = 3.73) uses significantly more natural products than the 18-24 age group (mean = 3.44), $p = 0.036$.

The average number of complementary approaches used differs significantly across marital status, $F(3, 307) = 3.401, p = 0.018$. Tukey's post hoc testing shows that, on

average, single (mean = 3.36) and widowed women (mean = 4.33) use complementary approaches significantly more than married women (mean = 2.71), $p = 0.043$. and $p = 0.049$, respectively.

The average number of African traditional medicines used differs significantly across marital status, $F(3, 306) = 2.906$, $p = 0.006$. Tukey's post hoc testing shows that, on average, single women (mean = 1.52) use African traditional medicines significantly more than married women (mean = 1.14), $p = 0.007$.

5.3 CONCLUSION

This chapter presented the findings of the study, offering a detailed quantitative analysis of pregnant women's perceptions and usage of TCAM. The results highlighted cautious yet selective acceptance of TCAM, with usage influenced by cultural beliefs, financial barriers, perceived gaps in conventional healthcare, and socio-demographic factors. The analysis further revealed diverse patterns of TCAM engagement, particularly the high uptake of natural products and mind-body practices.

These findings provide a strong empirical foundation for the next chapter. Chapter 6 moves beyond presentation of results to interpret their meaning, situating them within existing literature and theoretical frameworks. It explores the practical and policy implications, limitations, and recommendations for integrating TCAM into maternal healthcare

CHAPTER 6: DISCUSSION OF FINDINGS AND CONCLUSION

6.1 INTRODUCTION

TM continues to be commonly used both worldwide and in South Africa. It is estimated that as many as 80% of people in certain African and Asian nations depend on TM practices, with about 72% of Black South Africans, especially those in rural locales, utilising these remedies during pregnancy (Dlamini, Darong and Nkwanyana 2023). Although TM is often viewed as beneficial, its application during pregnancy poses considerable risks. In South Africa, the use of traditional herbal treatments has been associated with complications such as uterine rupture, obstructed labour, and neonatal asphyxia (Thipanyane et al. 2022). Findings from Malawi also indicate that the use of certain traditional preparations correlates with a 28% increase in maternal morbidity and a 22% rise in neonatal morbidity or mortality (Zamawe et al. 2018). Additionally, a wider review throughout SSA emphasises the possible dangers of herbal remedies that have oxytocic effects, which may lead to negative obstetric outcomes (Muoka et al. 2025). This chapter elaborates on the present study's findings in relation to these established results and is organised around the study's objectives and the feedback received from the questionnaires completed by the participating pregnant women.

6.2 DISCUSSION OF FINDINGS

6.2.1 Demographics

The socio-demographic characteristics of the 314 participants provide critical insights for understanding the use of TCAM during pregnancy. To improve the analysis, information was gathered regarding age, marital status, educational attainment, employment status, income, place of residence (urban or rural), province of origin, and number of children. This data not only aids in comprehending the diversity within the sample but also facilitates the examination of relationships between demographic factors and the use of TCAM.

6.2.1.1 Economic Constraints and Unemployment

Almost half of the participants in the current study reported having no income, and the unemployment rate stands at 49%, indicating significant financial difficulties. This economic instability is consistent with other comparable trends that have been observed throughout the region. A comprehensive review of 20 studies encompassing over 11 800 African women indicated that low-income pregnant women were more inclined to depend on TM, especially where access to formal healthcare was restricted (Thipanyane et al. 2022). Likewise, in Tanzania's Kigoma region, research conducted by Fukunaga et al. (2020) found that women from the lowest income tercile had 1.4 times greater odds of utilising local herbs during their most recent pregnancy or labour. In Ethiopia, women who were illiterate—serving as a proxy for lower socioeconomic status—were nearly three times more likely to resort to traditional medicinal plants during pregnancy (Wondemagegn and Seyoum 2023). A study conducted in Zimbabwe corroborates these findings: qualitative interviews indicated that individuals who frequently used TM during ANC were often from low-income backgrounds and lacked formal education (Mudonhi and Nunu 2021).

6.2.1.2 Education and Age

Of the respondents, 35% had completed tertiary education, yet the use of TM persists, implying that higher educational attainment does not necessarily lessen reliance on TM. In the Lesotho study, education level significantly affected TM use: women with primary education utilised TM the most, while those with tertiary education utilised it the least (Chesetsi and Ross 2025). This trend is reflected in additional research conducted throughout SSA and beyond. An extensive multilevel study involving 32 African nations found that women without formal education were significantly more likely to seek assistance from TM practitioners for childhood ailments than those with higher educational backgrounds (Muchie et al. 2023). In a similar vein, a systematic review examining TM usage among 11 858 African women across 12 nations found that lower educational attainment was consistently linked to a greater dependence on conventional medicine, especially in contexts related to maternal care (Amzat, Boukari-Yabara and Abd. Hamid 2017).

This trend is also observed in various studies within Africa and among African diaspora populations. The aforementioned systematic review on TM among 11 858 African

women across 12 countries discovered that women lacking formal education were notably more likely to utilise TM, particularly in maternal health scenarios (Amzat, Boukari-Yabara and Abd. Hamid 2017).

Additionally, a mixed-method study focused on African migrant women in Sydney found that those with lower educational levels were significantly more inclined to depend on TM during pregnancy (Shewamene, Dune and Smith 2020). Similar results were recorded in Zambia, where pregnant women employing herbal treatments generally had no formal education, low income, and limited access to conventional healthcare (Yang, Jin and Wang 2023). These consistent results indicate a robust inverse relationship between women's educational levels and their use of TM, particularly regarding maternal health. The variations between these findings may indicate cultural influences or the relative accessibility of modern healthcare services in urban compared to rural areas.

Age also played a role in TM usage among Basotho women. The research in Lesotho identified a strong correlation between age and TM use, with older women showing increased use ($p < 0.01$) (Chesetsi and Ross 2025). Although the majority of the sample was young (25–35 years, 47.1%), this pattern suggests that prolonged exposure to cultural traditions over time may enhance the use of TCAM.

6.2.1.3 Geographic Location and Accessibility

More than half of the participants reside in townships, while smaller percentages live in suburbs, rural regions, and informal settlements. This semi-urban backdrop corresponds with observations among Basotho women, where living in rural areas and having limited transportation options heightened TCAM usage (Chesetsi and Ross 2025). The usage of TCAM in this sample may similarly reflect restricted access to formal healthcare and the relative convenience of visiting traditional healers.

6.2.1.4 Geographic Location and Accessibility

Over half of the respondents identified as living in townships, with smaller fractions in suburbs, rural areas, and informal settlements. This semi-urban setting aligns with findings among Basotho women, indicating that rural living and limited transportation options contributed to increased TCAM usage (Chesetsi and Ross 2025). Consequently, the prevalence of TCAM use in this sample likely mirrors difficulties in

accessing formal healthcare and underscores the relative convenience of reaching traditional healers.

6.2.1.5 Cultural and Social Influences

The predominantly Black, Christian community was likely rooted in strong cultural traditions. This aligns with qualitative research from Mthatha (Eastern Cape), where traditional health practitioners (THPs) frequently served as the initial point of contact for expectant mothers, catering to both their physical and spiritual needs and offering services that formal healthcare facilities typically didn't provide (Thipanyane et al. 2022). In northern KZN, 79% of women turn to TM during childbirth, demonstrating its ongoing relevance even with the availability of free healthcare (Ramulondi, de Wet and Ntuli 2022). Focus group studies conducted in the King Sabatha Dalindyebo sub-district in the Eastern Cape revealed similar insights: pregnant women supported traditional practices such as herbal remedies and holy water, largely influenced by family customs (Thipanyane et al. 2022).

6.2.2 Predisposing Factors Influencing TCAM Use During Pregnancy

The analysis of the data reveals various crucial beliefs that make pregnant women more inclined toward TCAM:

6.2.2.1 Empowerment in Health Decisions

Numerous women expressed that TCAM empowered them to engage more actively in their healthcare, highlighting a wish for independence and authority over their pregnancy management. Likewise, a review of literature in developed nations showed that expectant mothers frequently turn to TCAM as it provides options they view as safer, enhances their control over the experience of childbirth, and corresponds to their holistic health perspectives (Hall, Griffiths, and McKenna 2011). However, recent research consistently indicates that numerous women resort to TCAM during pregnancy because it provides them with a sense of empowerment in managing their health. A cross-sectional study from Palestine conducted in 2021 revealed that a significant number of expectant mothers viewed TCAM as a means of gaining greater control over their bodies, with 62.5% reporting that it offered them increased health autonomy and 58.8% recognising its holistic approach to wellness (Quzmar et al.

2021). In line with this, a multi-country qualitative study from 2022, carried out across various Middle Eastern countries, showed that women often utilised herbal remedies not only due to cultural acceptance but also because they perceived them as safer alternatives to pharmaceuticals and appreciated the ability to self-manage their pregnancies (Hasan et al. 2022). Furthermore, a systematic review from 2022 investigating the use of complementary therapies such as yoga, aromatherapy, and massage during pregnancy and childbirth found these techniques effective in alleviating pain, anxiety, and depression, benefits that likely enhance women's sense of empowerment and control over their maternal health experiences (Jerez-Roig et al. 2022). Together, these recent findings highlight that TCAM continues to be a favoured option among pregnant women, as it promotes their autonomy, aligns with their personal and cultural health beliefs, and is often perceived as a safer, more natural choice.

6.2.2.2 Holistic Relief of Discomforts

TCAM was seen as a solution for alleviating common pregnancy discomforts such as nausea, back pain, and insomnia, while also addressing physical, emotional, and spiritual needs beyond just physiological symptoms. Recent studies indicate that pregnant women are increasingly relying on TCAM to relieve common issues like nausea, back pain, and insomnia, while also addressing their broader physical, emotional, and spiritual needs. For example, a qualitative study conducted in rural South Africa in 2022 revealed that expectant mothers frequently used herbal decoctions, African mahogany bark, and holy water not just to ease labour pain but also to protect against evil spirits, underscoring the interconnectedness of physical and spiritual care (Thipanyane, Boardman and Walker 2022). In a similar vein, research from Ghana highlighted the use of religious and faith-based practices such as anointing, prayer, holy water, and blessed oils and objects, during pregnancy for spiritual protection, emotional comfort, and preparation for labour (Thipanyane, Boardman and Walker 2022). An integrative review of clinical TCAM practices further emphasises that approaches like acupuncture, massage, yoga, aromatherapy, and reflexology are viewed as not only providing relief from back pain but also promoting emotional, mental, and spiritual well-being through enhanced overall health and better sleep (Da Silva Fernandes et al. 2021).

6.2.2.3 Cultural Normativity

There was a notable perception that the use of TM during pregnancy was a cultural norm or tradition, deeply embedded in longstanding practices. Likewise, a systematic review conducted by Shewamene, Dune, and Smith (2017) found that the prevalence of TCAM use during pregnancy in Africa could reach up to 80%, with its application strongly linked to low income, restricted access to conventional maternity services, and local cultural norms. In Lesotho, the use of TM among Basotho women was markedly connected to their beliefs in its effectiveness, parental advice, and cultural customs, illustrating how community and generational expectations influence health behaviours (Chesetsi and Ross 2025).

6.2.2.4 Relative Privacy

Women appreciated the privacy offered by traditional healers, likely valuing the confidentiality and less exposure in comparison to formal healthcare facilities. Likewise, research conducted in Southern Ghana revealed that traditional birth attendants and healers were favoured for their caring nature, cultural sensitivity, and greater accessibility, often being chosen over public health facilities, which were occasionally seen as impersonal or unsympathetic (Dako-Gyeke et al. 2013).

6.2.2.5 Holistic Cultural Support

TCAM was frequently regarded as more culturally or socially advanced than conventional medicine, particularly within their own communities or social groups. Research conducted by Shewamene, Dune and Smith (2017) highlighted that remedies such as isihlambezo are profoundly rooted in culture, perceived as ancestral gifts, and thought to safeguard pregnancy and the unborn child, reflecting significant communal and familial impact.

6.2.3 Enabling Factors Leading to the Use of TCAM

The analysis of factors that may facilitate the use of TCAM presents a complex relationship between obstacles within the conventional healthcare system and factors that promote the use of TCAM. Participants indicated a moderate level of agreement that conventional healthcare facilities often do not meet their needs, mentioning issues

such as medication shortages (mean = 2.98), long travel times (mean = 2.90), and the inability to afford care (mean = 3.11), which may drive patients towards alternative options. While access to conventional medical services is relatively good (mean = 3.28 for clinic proximity), both affordability and insurance coverage favoring TCAM are significantly low (with means of 2.50 and 2.24, respectively). The presence of social encouragement (mean = 2.86) and the availability of TCAM practitioners (mean = 2.86) indicate moderate factors that encourage this trend, rooted in cultural and community contexts. Collectively, these results illustrate a push-pull model, wherein limitations within the conventional healthcare system drive individuals towards TCAM, while social, cultural, and access-related factors draw them towards its use. Shewamene, Dune and Smith (2017) conducted a study in SSA that identified enablers such as affordability, accessibility, alignment with cultural practices, trust in traditional healers, and social endorsements; while barriers included dissatisfaction with conventional healthcare, like distance, lack of medication, negative attitudes from providers, and extended wait times. However, another study involving East and West Africa revealed that stakeholders noted insufficient access to quality primary healthcare, staff absenteeism, medication shortages, high costs, and insurance difficulties; these challenges led to an increased reliance on herbal and TM (Ameh et al. 2021).

6.2.4 Needs Factors Leading to the Use of TCAM

The results from the needs factor leading to the use of TCAM, shed light on the factors related to needs that affect the adoption of TCAM during pregnancy. The concern for personal health received the highest mean score ($M = 3.70$, $SD = 1.133$), indicating that health anxiety is a key driver for the use of TCAM. This supports the findings of Nafi et al. (2021), which revealed that 65.3% of pregnant women in Palestine utilised TCAM because they perceived it as safe and beneficial for both themselves and their babies, underscoring how health concerns and perceived safety influence the uptake of TCAM. In the current study, participants also expressed a relatively high level of satisfaction with their overall health ($M = 3.49$, $SD = 1.015$). They demonstrated an openness to spiritual or energetic practices like yoga and meditation ($M = 3.42$, $SD = 1.166$). This is consistent with Hall, Griffiths and McKenna (2011), whose systematic review highlighted that women frequently seek TCAM to enhance emotional and spiritual well-being during pregnancy.

Furthermore, the present study reveals a moderate inclination for autonomy and self-care with alternative medicine ($M = 3.13$, $SD = 1.215$), aligning closely with Ben-Arye et al. (2024), who found that women are drawn to TCAM because it fosters self-determination and aligns with their natural health beliefs. Likewise, the moderate support for integrating TCAM with conventional medicine ($M = 3.06$, $SD = 1.207$) is backed by Ben-Arye et al.'s (2024) conclusion that women often prefer integrative care approaches rather than relying solely on one method. However, the lesser inclination to completely replace synthetic drugs with herbal or alternative treatments ($M = 2.51$, $SD = 1.220$) indicates a careful approach toward forgoing conventional therapies entirely, a sentiment shared by Hall, Griffiths and McKenna (2011), who noted that TCAM is generally employed to complement rather than replace biomedical care. Overall, these results imply that pregnant women are predominantly motivated by concerns for health, safety, emotional wellness, and a wish for autonomy while exercising caution about entirely substituting conventional medical treatments.

6.3 THE DIFFERENT TYPES OF TCAM APPROACHES USED AMONGST PREGNANT WOMEN

The different types of TCAM approaches demonstrated a significant prevalence of TCAM use among expectant mothers, particularly in the areas of natural products and mind–body practices. The most commonly utilised options included vitamins (98.1%), probiotics (92.4%), massage therapy (91.4%), herbs (89.5%), and meditation (82.2%). These results are consistent with a growing international body of literature that showcases similar TCAM usage patterns during pregnancy. For instance, a recent cross-sectional study carried out in Türkiye revealed that 77.8% of pregnant women reported using at least one type of TCAM, highlighting massage therapy, yoga, meditation, chiropractic treatment, and homeopathy as some of the most frequently employed practices (Ayaz et al. 2023).

In the same vein, Ben-Arye et al. (2024) observed a strong correlation between the use of herbal remedies and mind–body techniques with beliefs in natural health methods and a desire for independence in making pregnancy-related choices. The high utilisation rates of herbs, probiotics, and mineral supplements in this study indicate a perception of these therapies as safe, supportive, and complementary to conventional medical care. This notion is supported by research conducted in

Catalonia, Spain, where pregnant women often turned to herbal products like ginger, chamomile, thyme, and raspberry leaf, driven by the belief that these alternatives are safer compared to synthetic drugs (García-Merino, San-Jose, and San-Martin 2025).

Additionally, the considerable use of yoga (79.6%), chiropractic care (70.7%), and aromatherapy (73.9%) in this study aligns with findings from the United Kingdom, where similar practices were widely embraced by pregnant women to enhance relaxation and physical well-being (Duggan et al. 2013). Interestingly, the comparatively lower adoption of African traditional medicines such as isihlambezo (30%) and umhlabelo (26%) could indicate a growing caution among pregnant women regarding the safety and effectiveness of indigenous treatments, despite their cultural importance. Overall, these findings suggest that while expectant mothers continue to appreciate TCAM methods for their integrative and non-invasive qualities, there is a distinct preference for options perceived as effective and low-risk, often used alongside conventional medical treatments rather than as replacements.

6.4 OVERVIEW OF RESULTS

The current research investigated the occurrence, trends, and influences of TCAM usage among expectant mothers, showcasing a complex relationship among cultural beliefs, personal health needs, restrictions in the healthcare system, and socio-demographic factors. The results indicate a significant prevalence of TCAM utilisation, especially in the form of natural products (such as vitamins, herbs, and probiotics) and mind–body practices (including massage, meditation, and yoga), with usage rates between 66% and 99%. These findings underscore the increasing global movement towards incorporating TCAM into maternal healthcare, not as a substitute for biomedical treatment, but as a supplementary strategy that addresses the holistic and individual needs of pregnant women.

A primary factor driving TCAM use in this research was the worry about personal health, with the highest average score ($M = 3.70$) associated with participants' health concerns. This result corresponds with prior research by Nafi et al. (2021), which found that over 65% of pregnant women in Palestine utilised TCAM due to apprehensions about maternal and neonatal well-being. Moreover, a strong tendency for self-directed care and independence was observed ($M = 3.13$), corroborating studies by Ben-Arye et al. (2024) and Jerez-Roig et al. (2022), which emphasised empowerment, self-

determination, and a preference for natural health alternatives as vital components of TCAM participation during pregnancy.

The findings also indicated that cultural customs significantly influence healthcare choices. Although merely 30% and 26% of participants acknowledged using isihlambezo and umhlabelo, respectively, these statistics reflect the cultural importance of African traditional medicine, albeit moderated by increasing safety concerns. This is consistent with the observations made by Thipanyane, Boardman and Walker (2022), who highlighted associations between traditional herbal usage and adverse pregnancy outcomes such as uterine rupture and neonatal asphyxia in South Africa. Thus, even though cultural adherence remains robust, knowledge of medical risks seems to be prompting a more cautious approach towards indigenous remedies.

Socio-demographic variables such as income, education, and geographic location also played a role in influencing TCAM utilisation. Nearly half of the participants reported having no income, with unemployment rates at 49%, illustrating financial barriers that may render TCAM more accessible than traditional healthcare. These results align with studies conducted in Lesotho and among Basotho women, where lower income and living in rural areas were significantly linked to higher TCAM usage (Chesetsi and Ross 2025; Thipanyane, Boardman and Walker 2022). However, contrary to earlier research suggesting that lower education levels correlated with increased TCAM use, this study found that participants with tertiary education also engaged in TCAM, indicating that cultural beliefs and holistic health ideologies may take precedence over formal medical training.

Moreover, systemic challenges within the conventional healthcare framework, such as lengthy distances to healthcare facilities, inadequate insurance coverage, and medication shortages, were recognised as factors that encourage women to turn to TCAM. This aligns with findings from Ameh et al. (2021) and Shewamene, Dune and Smith (2017), who pointed out that discontent with formal healthcare often motivates the transition to traditional and complementary methods. Despite these challenges, a notable portion of participants ($M = 3.06$) endorsed the idea of integrating TCAM with conventional treatment, illustrating a preference for a pluralistic healthcare system that merges the strengths of both approaches.

6.5 RECOMMENDATIONS

6.5.1 Enhancing Nursing Research on TCAM in Pregnancy

Nursing research ought to be pivotal in improving comprehension and the secure incorporation of TCAM within maternal healthcare. A crucial measure is the creation and validation of a standardised assessment tool specifically aimed at evaluating the use of TCAM during pregnancy. This instrument should gather information on the types, frequency, motivations for use, and any possible interactions with conventional medications, facilitating consistent records and prompt identification of drug-herb interactions across clinical and research environments.

Moreover, there is an urgent requirement for empirical studies to investigate the safety, effectiveness, and pharmacological characteristics of widely used TCAM therapies, particularly herbal and mind-body practices. Such investigations would assist in transitioning from anecdotal evidence to evidence-based practices and inform clinical guidance, especially in areas where TCAM is culturally entrenched.

It is also vital to investigate culturally sensitive nursing models that incorporate TCAM practices while ensuring patient safety is not compromised. These models should encourage mutual respect between healthcare providers and patients, fostering culturally competent care that acknowledges diverse health beliefs and practices.

Finally, longitudinal studies are crucial for assessing the long-term effects of TCAM usage on maternal and neonatal health outcomes. By monitoring outcomes from pregnancy through the postpartum period, such studies can shed light on the correlations between TCAM use and complications, recovery, or infant health. Collectively, these research priorities will foster a more holistic, culturally considerate, and evidence-focused approach to maternal healthcare.

6.5.2 Enhancing Antenatal Assessment and Clinical Practices

To improve the quality and safety of ANC, it is vital to adopt a more inclusive and well-informed approach regarding the use of TCAM during pregnancy. This can start with the routine inclusion of TCAM screening in standard antenatal evaluations. Recording TCAM use in maternal health records allows healthcare providers to detect potential interactions with conventional medications and make better clinical choices.

Furthermore, nursing and midwifery education programmes should integrate in-depth training on TCAM, covering its various types, cultural importance, mechanisms of action, and associated risks. Refreshing continuing professional development initiatives to align with current TCAM trends will better prepare practitioners to meet the needs of diverse populations.

To enhance patient-provider communication, culturally competent communication skills should be included in clinical training, equipping nurses and midwives to facilitate open and respectful dialogues concerning TCAM practices. Many pregnant women may hesitate to share their TCAM use out of fear of being judged, so fostering a non-judgmental environment is crucial for ensuring openness and safety in care.

Finally, patient-centred decision-support tools such as culturally relevant educational resources, brochures, or digital applications should be created in collaboration with both conventional and traditional practitioners. These materials would empower women to make informed decisions about their care, assess the risks and benefits of TCAM usage, and engage more actively in their pregnancy experience.

6.5.3 Enhancing Policy and Public Health to Diminish Maternal Morbidity and Mortality

To effectively reduce maternal morbidity and mortality, it is essential to consider the prevalent utilisation of TCAM among expectant mothers. This begins with incorporating TCAM into national policies regarding maternal health, ensuring that clinical guidelines provide clear instructions for healthcare providers on how to safely evaluate, record, and manage TCAM usage. By formalising this care aspect, healthcare systems can establish uniform practices across various facilities and better safeguard maternal and neonatal health.

To support these initiatives, a national system for surveillance and reporting adverse events should be put in place to track complications associated with TCAM, such as herbal toxicity or interactions with medications. Accurate reporting will facilitate early identification of risks and aid in the formulation of safety regulations and evidence-based public health approaches.

Additionally, fostering collaborative relationships between conventional healthcare providers should be encouraged via organised referral networks, joint training

sessions, and shared care models. Such collaboration has the potential to fill knowledge gaps, enhance the continuity of care, and honour cultural beliefs while ensuring clinical safety.

Lastly, public health education initiatives and campaigns aimed at improving health literacy must be implemented to heighten community awareness about the safe usage of TCAM during pregnancy. These initiatives should focus on the significance of informing healthcare providers about TCAM use, attending antenatal appointments, and recognising the potential dangers linked to unregulated remedies. Culturally relevant messages shared through local leaders, clinics, community radio, and digital platforms will increase outreach, particularly in underserved or rural regions.

6.6 LIMITATIONS OF THE STUDY

Although this research offers important insights into the use of TCAM among pregnant women in the eThekweni District, several limitations must be acknowledged:

6.6.1 Self-Reported Data

The research depended on information provided by participants themselves, which could be influenced by recall bias or the desire to present oneself favourably. Some participants might have either underreported or overreported their TCAM usage, particularly if they were concerned about being judged or disapproved of by healthcare providers.

6.6.2 Underreporting due to Cultural Sensitivity

Certain participants may have chosen not to disclose their TCAM usage for cultural or spiritual reasons, fear of criticism, or distrust in the research methodology, resulting in potential underreporting and gaps in the data.

6.6.3 Areas for Further Research

While this research has offered significant insights into the use of TCAM by pregnant women in the eThekweni District, several key areas remain inadequately studied and deserve additional academic exploration. Future research initiatives should concentrate on the following:

- ***Longitudinal Studies on Maternal and Neonatal Outcomes***

There is a critical need for longitudinal studies that monitor TCAM usage throughout pregnancy and the postpartum period to evaluate its direct effects on maternal and neonatal health outcomes. Such research could help establish causal relationships between specific TCAM practices and birth results, including preterm labour, low birth weight, and postpartum complications.

- ***Pharmacological Interactions and Safety of Herbal Remedies***

Considering the widespread use of herbal and natural products, additional pharmacological investigations are necessary to examine the safety profiles, appropriate dosages, and possible interactions of these remedies with conventional treatments. This is especially essential for widely utilised substances such as Isihlambezo, raspberry leaf, and chamomile, which may possess uterotonic or sedative effects.

- ***Perspectives of Healthcare Providers on TCAM Integration***

Research should also look into the knowledge, attitudes, and willingness of nurses, midwives, and obstetricians to engage with and support TCAM practices. Gaining insight into their viewpoints could aid in the creation of training programmes and guidelines for the safe incorporation of TCAM into ANC.

- ***Comparative Studies across Regions and Cultural Groups***

Future studies should perform comparative assessments between urban and rural communities, as well as across various cultural or ethnic groups within South Africa. Such research could uncover regional variations in TCAM utilisation trends, safety perceptions, and health outcomes, facilitating more tailored public health interventions.

6.7 CONCLUSION

This chapter examined the motivations for and factors influencing the use of TCAM among pregnant women in the eThekweni District, specifically focusing on natural products, mind-body practices, and culturally significant traditional remedies. The results clearly indicate that the use of TCAM during pregnancy is prevalent, with reported usage rates between 66% and 99% for various modalities, particularly vitamins, probiotics, herbal treatments, massage, and meditation.

The analysis indicated that a complex mix of predisposing, enabling, and need-related factors influences the utilisation of TCAM. Strong motivators included cultural practices, spiritual beliefs, and family influences, while structural limitations in the conventional healthcare system, such as cost, accessibility issues, and a perceived lack of compassion, further propelled the reliance on TCAM. Significantly, women indicated that they sought TCAM to enhance their autonomy, address pregnancy-related discomforts holistically, and feel empowered during their maternal health journey.

Socio-demographic factors such as low income, unemployment, and semi-urban living environments were found to correlate with higher TCAM usage, reflecting similar patterns observed in neighbouring SSA regions. However, an unexpected observation was the significant TCAM use reported by women with tertiary education, suggesting that cultural beliefs and personal health ideologies may be more influential than formal medical education in shaping healthcare decisions during pregnancy.

In spite of a deep cultural connection to traditional practices, there appears to be a gradual shift toward safer, more integrative methods, as indicated by moderate support for the combination of TCAM with conventional medical care. This pluralistic approach was mirrored in participants' cautious perspectives towards certain African traditional medicines, such as isihlambezo and umhlabele, likely due to an increasing awareness of the health risks they may pose.

In conclusion, the chapter highlights the necessity for a culturally sensitive, integrative maternal healthcare framework that honours women's traditional beliefs while prioritising their health and that of their infants. It advocates for improved research, policy updates, professional training, and public awareness to ensure that TCAM usage during pregnancy is both informed and safe. The findings provide a basis for future initiatives aimed at bridging the divide between conventional maternity services and traditional healthcare systems in South Africa and beyond.

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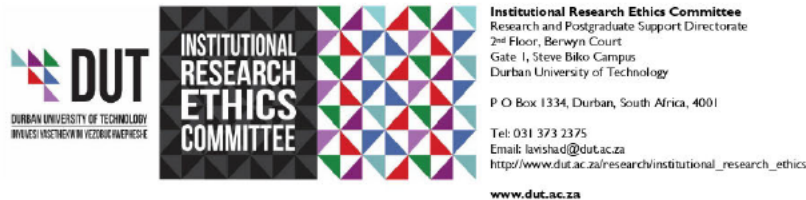
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ANNEXURES

Annexure A: Ethics Clearance



25 June 2025

Ms C L M Steele
116 Saffron Drive
Chultern Heights
Shallcross
4093

Dear Ms Steele

A cross-sectional study on the use of traditional, complementary and alternate medicine amongst pregnant women in the eThekweni district
Ethical Clearance number IREC 044/25

The DUT-Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the DUT-IREC acknowledges receipt of your gatekeeper permission letters.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely

Prof P Mashau
Chairperson: DUT-IREC

Annexure B: Permission Letter from NHRD



KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

DIRECTORATE:

Physical Address: 330 Langatbalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za

Health Research & Knowledge
Management

NHRD Ref: KZ_202505_023

Dear Ms CLM Steele
(DUT)

Approval of research

1. The research proposal titled 'A cross-sectional study on the use of traditional, complementary and alternate medicine amongst pregnant women in the eThekweni district' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at Victoria Mxenge Hospital.

2. You are requested to take note of the following:
 - a. **Kindly liaise with the facility manager BEFORE your research begins.**
This is to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.
 - b. All research conducted in KwaZulu-Natal must comply with government regulations relating to Covid-19. These include but are not limited to: regulations concerning social distancing, the wearing of personal protective equipment, and limitations on meetings and social gatherings.
 - c. Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.
 - d. Provide an interim progress report and final report (electronic and hard copies) when your research is complete to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za
 - e. Please note that the Department of Health shall not be held liable for any injury that occurs as a result of this study.

For any additional information please contact Mr. X Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge
Chairperson: Provincial Health Research Committee
Date: 26 May 2025

GROWING KWAZULU-NATAL TOGETHER

Annexure C: Letter requesting Permission from the Gatekeeper

116 Saffron Drive
Chiltern Heights
Shallcross
4093

5 May 2025

THE CEO: Mr B.M Shezi

Victoria Mxenge Hospital
Private Bag X02
Congella
4013

RE: REQUEST FOR GATE-KEEPER PERMISSION TO CONDUCT RESEARCH AT VICTORIA MXENGE HOSPITAL

Dear Ethics Committee and Mr BM Shezi

My name is Chrissandra L.M. Steele, a Master of Nursing Degree student at the Durban University of Technology, student number 22384791. The research I wish to conduct for my Master's thesis is entitled: The Use of traditional, complementary, and alternate medicine amongst pregnant women in the eThekwin District.

I am hereby seeking your consent and assistance to contact Pregnant women attending Antenatal clinic at Victoria Mxenge Hospital in the eThekwin District of KZN. I would like to enquire if they would voluntarily participate in my research. If they consent to participating, they would be required to fill out a questionnaire while waiting to see the doctor. The questionnaire will take 5 – 10 minutes in duration.

I have provided you with a copy of my proposal, which includes copies of the data collection tools, letter of Information, and consent to be used in the research process, as well as a copy of the provisional approval letter, with the Ethical Clearance number IREC 044/25. which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me on 074 815 2603 or megansteele25@gmail.com. Thank you for your time and consideration in this matter.

Yours sincerely,

Ms CLM Steele
Durban University of Technology

Annexure D: Letter from the Gatekeeper Granting Permission



KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

OFFICE OF MEDICO – LEGAL & RESEARCH
Victoria Mxenge Hospital

Corner of Sydney and Rieck Tunnar Roads, Umbilo, Durban
Private Bag 102, Congella 4015
Tel: 031-380-3854
www.kznhealth.gov.za

Ref.: VMH (06/04/2025)
Research Programming

02 June 2025

Ms C L M Steele
116 Saffron Drive
Chiltern Heights
Shallcross4093

Dear Ms C L M Steele

PROTOCOL REFERENCE NO: IREC 044/25.

Protocol: "A cross-sectional study on the use of traditional, complementary and alternate medicine amongst pregnant women in the eThekweni district"

Your request to conduct research at Victoria Mxenge Hospital has been approved.

Please ensure the following:

- That Victoria Mxenge Hospital receives full acknowledgment in the study on all

Publications and reports including presentation of a copy of the publication and or report on completion.

Before commencement:

- * Discuss your research project with our relevant Clinical Head/Assistant Nursing Manager
- * Sign an indemnity form at Room 3, CEO's Complex, Admin Block.

The Management of Victoria Mxenge Hospital reserves the right to terminate the permission for the study should circumstances so dictate.

Yours faithfully

SUPPORTED/NOT SUPPORTED

DR. DL Emmanuel
MEDICO-LEGAL, RESEARCH & ETHICS

02/06/2025
DATE

GROWING KWAZULU-NATAL TOGETHER

Annexure E: Information Letter (English and isiZulu)



LETTER OF INFORMATION

Title of the Research Study: The Use of Traditional, Complementary, and Alternate Medicine amongst Pregnant Women in the eThekweni District

Principal Investigator/s/researcher: Ms CLM Steele (BACur)

Co-Investigator/s/supervisor/s: (Name/s, qualifications)

Dr. N Naranjee (Doctorate Nursing): Supervisor

Dr. XL Mhlongo (PhD): Co-Supervisor

Brief Introduction and Purpose of the Study: There are numerous efforts in place within South Africa and around the world to reduce maternal mortality and morbidity. However, maternal deaths continue to be high, particularly in sub-Saharan Africa and lower- to middle-income nations. This is associated with extremely low prenatal visits. The prevalence of the use of traditional, complementary, and alternate medicine (TCAM) in pregnancy is increasing globally in developed and developing countries as it is their first choice of treatment while there remains a low antenatal attendance in health facilities. Therefore, the study aims to determine the use of Traditional, Complementary, and alternate medicine amongst pregnant women in the eThekweni District.

Greetings: Dear Participant, I trust you are well. I am grateful to you for showing interest in my study.

Introduce yourself to the participant: I am Chrissandra Steele, a student at DUT doing research for my Master of Health Sciences in Nursing.

Invitation to the potential participant: I would like to invite you to participate in the research titled_The Use of Traditional, Complementary, and Alternate Medicine amongst Pregnant Women in the eThekweni District.

What is Research: Research is a systematic search or enquiry for generalized new knowledge

Outline of the Procedures: Permission to conduct the study will be obtained by the researcher from the Durban University of Technology Ethics Research Committee. Permission from the heads of the Department of Health will be obtained to recruit participants for the study. Permission letters will be sent to the facility manager. The researcher will only recruit pregnant women who meet the inclusion criteria. The researcher will inform participants about the study and participants will be required to read the information letter which will be in English for English-speaking participants and isiZulu for isiZulu-speaking participants. Participants will be required to provide informed consent if they agree to participate in the study. Once informed consent is obtained the researcher will hand out the questionnaire for the participant to fill in which will take approximately 10-- 15 minutes.

Risks or Discomforts to the Participant: You will not experience any risk or discomfort because you will be completing a questionnaire for me and you may withdraw from the study at any time.

Explain the reasons why the subjects may withdraw from the study:

You have the right to refuse to partake in the research at any stage of the study. The researcher may withdraw participants from the study due to non-compliance, an adverse event, or the event of participant being ill and cannot complete the questionnaire.

Benefits: there are no real benefits to you, except that you will be assisting in providing information that may help other pregnant mothers to prevent complications in pregnancy.

Remuneration: There will be no remuneration to participants for partaking in the study

Costs of the Study: There are no costs to participants for participating in the study

Confidentiality: The questionnaire is completely anonymous and cannot be traced back to you. All information gathered will be kept confidential and used only for the purpose of the research.

Results: The findings of the study will be utilised to make future recommendations to prevent complications and maternal illness and will be published in a research report in the form of a dissertation.

Research-related Injury: None

Storage of all electronic and hard copies including tape recordings: The data tool will be securely stored in a locked cupboard in the researcher's office and accessed only when needed. Electronic PDF data will be safeguarded within a password-protected OneDrive and deleted after a 5-year retention period. Hard copies will be shredded once they are scanned into PDF format and stored on OneDrive.

Persons to contact in the Event of Any Problems or Queries: Please contact the researcher Megan Steele tel no. 0748152603, my supervisor: Dr. N Naranjee tel no. **031 373 2036** or the DUT-Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Acting Director: Research and Postgraduate Support on researchdirector@dut.ac.za.



INCWADI YOLWAZI

KuMhlanganyeli

Siyabonga ngokuvuma ukuba ingxenye yalolucwaningo ngokuphosa igalelo esilithokozelayo kakhulu.

Isihloko salolucwaningo: Ukusetshenziswa kwaMakhambi eNdabuko, Imithi eHambisanayo, neminye Imithi kubantu Besifazane Abakhulelwe eSkhungwini saseThekwini.

Umphenyi Omkhulu/aba/umcwaningi: Nkz CLM Steele (BACur)

Isekela Mhloli/ama/umphathi/aba: Dr. N Naranjee (D Nursing)

Dr. XL Mhlongo (PhD)

Isengeniso esifushane ne Njongo yocwaningo: Lolucwaningo luhlose ukubheka ukusetshenziswa kwamakhambi endabuko, imithi ehambisanayo, kanye neminye imithi kubantu besifazane abakhulelwe. Ukusetshenziswa kwemithi yendabuko, imithi ehambisanayo, Kanye neminye imithi kubantu besifazane abakhulelwe ayinikezwa ithuba kuphinde kube nemibuzo ngabantu besifazane abakhulelwe uma behamba umtholampilo wabantu besifazane abakhulelwe. Ngalokho, umphenyi ufuna ukuthola ngokusetshenziswa kwalemithi kubantu besifazane abakhulelwe esikhungwini saseThekwini. Ucwaningo luzokwenziwa ngokusetshenziswa kwephepha elinamahlelo emibuzo ahleliweyo elizonikezwa abesifazane abakhulelwe abaphakathi kohlu olufunwa ucwaningo nabahamba umtholampilo wabesifazane abakhulelwe emtholampilo wabesifazane abakhulelwe wasesibhedlela sase King Edward VIII.

Intsha ekhulelwe angeke ibandakanywe nocwaningo kanjalo nobumfihlo babahlanganyeli balolucwaningo lizoqikekelwa ngezikhathi zonke.

Uhlaka Lwezinqubo: Imininingwane izoqowa kusetshenziswa iphepha elinamahlelo emibuzo ehleliwe ezobe inikezwa abantu besifazane abakhulelwe abahamba umtholampilo wabesifazane Abakhulelwe esibhedlela saseKing Edward VIII.

Izingozi noma Ukungaphatheki kahle kwabahlanganyeli: Lolucwaningo angeke lize lifake abahlanganyeli encupheni yobungozi noma ukungaphatheki kahle.

Izinzuzo: Lolucwaningo lizosiza ekuhlolweni ngokuphelele kanye nokunakekeleka kwesiguli, ukuze kube nokubeletha okuhle nokuphephile nokwehliswa kokushona kwabantu besifazane ababelethayo.

Isizathu/izi sokuba uMhlanganyeli ahoxe kuCwaningo: Abahlanganyeli bengahoxa noma inini ocwaningweni ngaphandle kokuhlawuliswa.

Iholo: Akuzukuba neholo ngokuzibandakanya ocwaningweni.

Izindleko zoCwaningo: Abahlanganyeli angeke bethwale zindleko ngocwaningo.

Imfihlo: Kuzosetshenziswa ikhodi ukuze kugcinwe futhi kuvikelwe ubunikazi. Uhlu olukhulu lwabahlanganyeli, amakhodi, kanye namarekhodi kuzogcinwa kuphinde kuvalelwe iminyaka engange siHlanu (5) emva kwalesoskhathi kuzobe sekuyabhubhiswa ngokuba kuhlikhlwe. Nedatha yocwaningo ezobe igcinwe ezintweni zikagesi izosulwa.

Ukulimala okuhlangene noCwaningo: Alukho

Abantu Okungaxhunyanwa nabo uma Kukhona Inkinga eqhamukayo noma Imibuzo Persons to Contact in the Event of Any Problems or Queries:

Sicela uxhumane noMcwaningi uNkz CLM Steele (inamba yocingo. 0748152603), umphathi wami –Dr. N Naranjee (inamba yocingo.) noma umlawuli weZimiso Zokuziphatha ZoCwaningo zesiKhungo ku 031 373 2900. Izikhalazo zingadluliselwa kuDVC: Acting Director: Research and Postgraduate Support on researchdirector@dut.ac.za

Annexure F: Consent Form (English and isiZulu)



CONSENT

Full Title of the Study: The Use of Traditional, Complementary, and Alternate Medicine amongst Pregnant Women in the eThekweni District

Names of Researcher/s: Chrissandra Lorell Megan Steele

Statement of Agreement to Participate in the Research Study:

- ☐ I hereby confirm that I have been informed by the researcher,
Chrissandra Steele
about the nature, conduct, benefits, and risks of this study - Research Ethics Clearance
Number IREC 044/25,
- ☐ I have also received, read, and understood the above-written information (Participant
Letter of
Information) regarding the study.
- ☐ I am aware that the results of the study, including personal details regarding my sex,
age, date of birth, initials, and diagnosis will be anonymously processed into a study report.
- ☐ In view of the requirements of research, I agree that the data collected during this study
can be processed in a computerised system by the researcher.
- ☐ I may, at any stage, without prejudice, withdraw my consent and participation in the
study.

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

☐ 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 / Right

Thumbprint

I, Chrissandra (name of researcher) herewith confirm that the above participant has been
Steele 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



□ Nginyaqonda ukuthi okubalulekile okusha okutholakele okuthuthukisiwe ngenkathi kwenziwa ucwaningo okungenzeka kuhlangane nokubamba iqhaza ngizokwaziswa ngakho.

**Amagama aphelele oMcwaningi
/Isithupha Kwesokudla**

Usuku

Isikhathi

Isiginesha

Mina, Chrissandra Steele

(igama lomcwaningi) ngalokhu ngiyaqinisekisa ukuthi lo ongaphezulu umcwaningi wazisiwe ngokugcwele ngesimo, ukuziphatha nezingozi zocwaningo olungaphezulu.

Amagama Aphelele OmcwaningiUsuku

Isiginesha

Amagama Aphelele Ofakazi

(Uma bekhona)Usuku

Isiginesha

Amagama Aphelele Womgcini

Wezemthetho (Uma ekhona) Usuku

Isiginesha

Annexure G: Data Instrument Tool (English)

QUESTIONNAIRE

Research Topic:

A cross-sectional study on the use of traditional, complementary and alternate medicine amongst pregnant women in the eThekweni district.

Please Note:

Information obtained in this questionnaire will be kept confidential and will not be used to identify the respondents. Therefore, please **do not** write your name or ID number on this questionnaire.

For each question, select the ONE response option that best applies to you.

SECTION A: DEMOGRAPHICAL INFORMATION

1. What is your race group?

Black	Coloured	Indian	White

2. In which age category do you fall under?

18-24	25-35	>35

3. What is your marital status?

Single	Married	Divorced / separated	Widowed

4. Indicate the number of Children (Excluding the current pregnancy)

None	1 - 5	>5

5. In which area do you live?

Rural	Informal settlement	Township	Suburb/Town

6. What is your highest level of education completed?

No formal education	Some/ all primary	Some / all Secondary	Tertiary

7. What was your employment status?

Unemployed	Self-employed	Employed fulltime	Employed part-time

8. What is your monthly income?

No income	Up to R2000	R2001-R5000	R5001-R10000	> R10000

9. What is your religion?

Christian	Islam	Hinduism	Other – Specify

10. In which region do you live?

KwaZulu-Natal	Eastern Cape

SECTION B: Predisposing factors leading to the use of TCAM

1 Indicate your level of agreement with the following statements:

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.1	My culture and social circle believe that traditional medicine is better than conventional medicine					
1.2	I am given more privacy when visiting traditional healers than in health facilities					
1.3	It is expected / customary in my culture for pregnant women to use some kind of TCAM treatment					
1.4	It is safer to use TCAM compared to pharmaceuticals/conventional medicines during pregnancy					
1.5	TCAM can treat physical, emotional, and spiritual aspects needed during pregnancy					
1.6	TCAM works well as a complementary treatment to conventional treatment					
1.7	TCAM addresses common pregnancy discomforts (e.g., nausea, back pain, insomnia) better than conventional treatments					
1.8	TCAM allows pregnant individuals to actively participate in their health decisions					

SECTION C: Enabling factors leading to the use of TCAM

2 Indicate your level of agreement with the following statements:

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
2.1	Health facilities often don't have the treatment that I need					
2.2	There is a lack/shortage of medication available at the health facilities					
2.3	It takes me too long to travel long distances to health facilities					
2.4	I am unable to pay for medical care from the health facility					
2.5	I have access to good TCAM practitioners near where I live					
2.6	I have access to a good conventional medical clinic/hospital near where I live					
2.7	I can afford to pay personally for TCAM					
2.8	Family, friends, and community members encourage me to use TCAM during my pregnancy					
2.9	I have health insurance/medical aid which covers the cost of TCAM					

SECTION D: Needs factors leading to the use of TCAM

3 Indicate your level of agreement with the following statements:

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.1	I consider my overall health to be satisfactory					
3.2	I rate my health as being less than optimal					
3.3	I worry about my health					

3.4	I prefer to use herbal or other alternate remedies over synthetic drugs when pregnant					
3.5	I like the holistic view of TCAM that treats physical, emotional, and spiritual aspects					
3.6	I would like to have control of my well-being by using self-care treatments of alternate medicine					
3.7	I think TCAM treatments should be used to complement treatment prescribed by a conventional doctor					
3.8	Pregnant women should seek relief for pain and discomfort through TCAM modalities					
3.9	Energetic or spiritual approaches like acupuncture, yoga or meditation are helpful during pregnancy					
3.10	I trust TCAM to be effective in treating issues during pregnancy					
Section E: Types of TCAM Used among pregnant woman						

4 Indicate which of the following TCAM treatments you are using during your pregnancy **(Tick all that apply)**

		YES	NO
	Natural products		
4.1	Herbs: Herbs are special plants that people use to make food taste better, and help us stay healthy example Mint, Rosemary, and Basil		
4.2	Minerals: Inorganic substances found naturally on the earth, and elements found in food needed to lead a healthy lifestyle example salt, Gold, and Quarts		
4.3	Vitamins: Help us grow big and strong, stay healthy, and even fight off sickness Examples are folic acid, iron, calcium, vitamin D, B vitamins, and vitamin C		
4.4	Probiotics: Good bacteria that help our stomach feel good and healthy, for example, Yoghurt and Kefir.		

	Mind and body practices		
4.5	Massage therapy: A way to make their body feel good and relaxed, examples Gentle Strokes: Long, gliding strokes along the arms, legs, and back, and Kneading: Gentle, rhythmic kneading of muscles.		
4.6	Yoga: Where you move your body into different shapes, to feel strong, happy, and calm, while also learning to breathe deeply. Examples are Tree Pose, Mountain Pose, and Warrior Pose		
4.7	Chiropractic care: Chiropractic care is similar to providing a check-up for your muscles and bones. Example Adjustments: Chiropractors use their hands or specialized instruments to gently manipulate the spine to correct misalignments.		
4.8	Meditation: Is like giving your brain a little break and a chance to calm down, helping you focus and feel good.		
4.9	Aromatherapy: Using special plant scents, like those from flowers or herbs, to make you feel good and happy, or even help you relax or sleep better. Examples are Lavender, Eucalyptus, Chamomile, and peppermint.		
4.10	Acupuncture: Acupuncture is a gentle way to help make your body feel better, using very thin needles to stimulate specific points.		
	Complimentary Health Approaches		
4.11	Traditional Chinese Medicine: This is a very old and wise way of helping people feel better. Example Herbal Medicine: Using plants, roots, and seeds to make teas or medicines that help the body heal. Tai Chi: A gentle kind of exercise that looks like slow dancing, helping people feel calm and strong. Cupping: Putting small cups on the skin to help muscles feel better like giving the body a special hug		
4.12	Traditional Healers: Traditional healers are like special helpers in communities who know how to use nature and		

	ancient knowledge to make people feel better. Examples are Herbalists, Spiritual Healers, and Diviners.		
4.13	Homeopathy: Homeopathy is a type of medicine that uses very, very small amounts of things, like plants, minerals, or even things that can cause a problem, to help your body get better. Examples Arnica and Onions.		
4.14	Ayurvedic Medicine: Uses things from nature, like plants and herbs, to help people feel their best. Examples are Abhyanga (oil massage), Herbal teas, and Yoga and breathing exercises.		
4.15	Naturopathy: Naturopathy takes a holistic approach to wellness. Naturopathy supports a person to live a healthy lifestyle.		
	African Traditional Medicine		
4.16	Isihlambezo: Special traditional medicine made from plants and herbs. It is used by pregnant women to help make giving birth easier and less painful. Example Some women use it close to the time of giving birth to make sure everything goes smoothly and quickly.		
4.17	Umhlabele herbal mixture: Umhlabele is a special traditional medicine made from plants and herbs. It is often used to help people feel better when they have sore muscles, broken bones, or other injuries. Examples It can be made into a drink by boiling the roots or leaves in water. This drink helps with things like back pain. Sometimes, it is used as a cream or ointment to rub on sore muscles or injuries.		

4.17 Please indicate any OTHER TCAM treatment (not listed above) that you have used/are using during your pregnancy.

Thank you for your time and information provided; your participation is highly appreciated.

Annexure H: Data Instrument Tool (isiZulu)

IMIBUZO

Isihloko soCwaningo:

Ucwaningo lwesigaba esiphambanayo kokusetshenziswa kwamakhambi endabuko, imithi ehambisanayo kanye neminye imithi kubantu besifazane abakhulelwe esifundeni saseThekwini.

Ngicela Uqaphele:

Ulwazi oluzoqoqwa kulemibuzo luzogcinwa ngokuyimfihlo futhi angeke lusetshenziswe ukuthola abaphendulayo. Ngalokho, uyacelwa ukuba **ungabhali** igama noma inombolo yomazisi wakho kuleli phepha mbuzo.

Umbuzo ngamunye, khetha impendulo Ngayinye oyibona ifanelwe nguwe.

ISIQEPHU A: ULWAZI LWEZIBALO ZABANTU

2. Lithini iqembu lakho lobuhlanga?

Umnyama	Ikhaladi	Indiya	Umhlophe

2. Uwela ngaphansi kwasiphi isigaba seminyaka yobudala?

18-24	25-35		>35

3. Siyini isimo sakho somshado?

Awushadile	Ushadile	Bahlukanisile / bahlukene	Umfelokazi

4. Bonisa inombolo Yezingane (Ngaphandle kokukhulelwa kwamanje)

Lutho	1 - 5	>5

5. Uhlala kuyiphi indawo?

Emakhaya	Ukuhlala emijondolo	Ilokishi	Indawo engaphansi/Idolobha

6. Iliphi izinga eliphezulu lemfundo oyiqedile?

Ayikho imfundo ehlelekile	Abanye/ konke okuyisisekelo	Abanye / bonke Secondary	Phezulu

7. Sasinjani isimo sakho sokuqashwa?

Abangasebenzi	Ngiyazisebenza	Kuqashwe ngokugcwele	Kuqashwe itoho

8. Ingakanani imali oyitholayo ngenyanga?

Ayikho imali engenayo	Kufika ku-R2000	R2001-R5000	R5001-R10000	> R10000

9. Iyiphi inkolo yakho?

UmKrestu	Islam	UbuHindu	Okunye - Cacisa

10. Uhlala kusiphi isifunda?

iKwaZulu-Natali	Empuma Koloni

ISIQEPHU B: Izici eziholela ekusetshenzisweni kwe-TCAM

1 Bonisa izinga lakho lokuvumelana nalezi zitatimende ezilandelayo:

		Angivumi neze	Angivumi	Ukungath athi	Vuma	Ngivume kakhulu
1.1	Isiko lami kanye nenkundla yezenhlo ikholelwa ukuthi imithi yendabuko ingcono kunemithi evamile					
1.2	Nginikezwa ubumfihlo obuningi uma ngivakashela izinyanga kunezikhungo zezempilo					
1.3	Kulindeleke / kuyisiko kusiko lami ukuthi abesifazane abakhulelwe basebenzise uhlobo oluthile lokwelashwa kwe-TCAM					
1.4	Kuphephe kakhudlwana ukusebenzisa i-TCAM uma kuqhathaniswa nemithi/imithi evamile phakathi nokukhulelwa					
1.5	I-TCAM ingakwazi ukwelapha izici ezingokomzimba, ezingokomzwelo nezingokomoya ezidingekayo ngesikhathi sokukhulelwa					
1.6	I-TCAM isebenza kahle njengokwelashwa okuhambisanayo ekwelashweni okuvamile					
1.7	I-TCAM ibhekana nokungakhululeki okuvamile kokukhulelwa (isb., isicanucanu, ubuhlungu beqolo, ukuqwasha) kangcono kunokwelashwa okuvamile.					
1.8	I-TCAM ivumela abantu abakhulelwe ukuthi babambe iqhaza ngenkuthalo ezinqumweni zabo zezempilo					

ISIQEPHU C: Ukunika amandla izici eziholela ekusetshenzisweni kwe-TCAM

2 Bonisa izinga lakho lokuvumelana nalezi zitatimende ezilandelayo:

		Angivum i neze	Angivum i	Ukungat hathi	Vuma	Ngivume kakhulu
2.1	Izikhungo zezempilo ngokuvamile azinakho ukwelashwa engikudingayo					
2.2	Kukhona ukushoda/ukushoda kwemithi etholakala ezikhungweni zezempilo					
2.3	Kungithatha isikhathi eside ukuhamba amabanga amade ngiya ezikhungweni zezempilo					
2.4	Angikwazi ukukhokhela ukunakekelwa kwezempilo esikhungweni sezempilo					
2.5	Ngiyakwazi ukufinyelela odokotela abalungile be-TCAM eduze kwalapho ngihlala khona					
2.6	Ngiyakwazi ukufinyelela umtholampilo/isibhedlela esijwayelekile esiseduze nalapho ngihlala khona					
2.7	Ngingakwazi ukukhokhela i-TCAM mathupha					
2.8	Umndeni, abangani, namalungu omphakathi bangikhuthaza ukuthi ngisebenzise i-TCAM ngesikhathi ngikhulelwe					
2.9	Nginomshuwalense wezempilo/usizo lwezokwelapha oluhlanganisa izindleko ze-TCAM					

ISIQEPHU D: Izinga izici eziholela ekusetshenzisweni kwe-TCAM

3 Bonisa izinga lakho lokuvumelana nalezi zitatimende ezilandelayo:

		Angivumi neze	Angivumi	Ukungath athi	Vuma	Ngivume kakhulu
3.1	Ngibheka impilo yami iyonke njengegculisayo					
3.2	Ngikala impilo yami njengengaphansi kokulungile					
3.3	Ngikhathazeke ngempilo yami					
3.4	Ngincamela ukusebenzisa amakhambi noma amanye amakhambi kunezidakamizwa zokwenziwa lapho ngikhulelwe					
3.5	Ngithanda umbono ophelele we-TCAM ophatha izici ezingokomzimba, ezingokomzwelo nezingokomoya					
3.6	Ngingathanda ukulawula inhlalakahle yami ngokusebenzisa izindlela zokuzinakekela zeminye imithi					
3.7	Ngicabanga ukuthi ukwelashwa kwe-TCAM kufanele kusetshenziselwe ukuhambisana nokwelashwa okunqunywe udokotela ojwayelekile					
3.8	Abesifazane abakhulelwe kufanele bafune ukukhululeka ngobuhlungu nokungakhululeki ngokusebenzisa izindlela ze-TCAM					
3.9	Izindlela ezinamandla noma ezingokomoya ezifana ne-acupuncture, i-yoga noma ukuzindla ziwusizo ngesikhathi sokukhulelwa					
3.10	Ngiyethemba ukuthi i-TCAM izosebenza ngempumelelo ekwelapheni izinkinga ngesikhathi sokukhulelwa					

Isigaba E: Izinhlobo ze-TCAM ezisetshenziswa kwabesifazane abakhulelwe

4 Khombisa ukuthi iyiphi kulezi ezilandelayo zokwelapha ze-TCAM ozisebenzisayo phakathi nokukhulelwa kwakho (**Thikha konke okusebenzayo**)

		YEBO	CHA
	Imikhiqizo yemvelo		
4.1	Amakhambi-Izitshalo ezikhethekile abantu abazisebenzisayo ukuze ukudla kube mnandi, futhi zisize sibe nempilo, isibonelo i-Mint, Rosemary, ne-Basil		
4.2	Amaminerali-Izinto ezingokwemvelo ezitholakala emhlabeni, kanye nezinto ezitholakala ekudleni ezidingekayo ukuze uphile impilo enempi, isibonelo usawoti, Igolide, ne-Quartz		
4.3	Amavithamini-Asisiza ukuba sikhule sibe mkhulu futhi siqinile, sibe nempilo, futhi sikhuphule izifo. Izibonelo zifaka i-folic acid, i-iron, i-calcium, i-vitamin D, amavithamini B, kanye ne-vitamin C		
4.4	Ama-Probiotics-Amabhaktheriya amahle asiza isisu sethu ukuba sizwe kahle futhi sibe nempilo, isibonelo, i-Yoghurt ne-Kefir. Imikhuba yengqondo nomzimba		
	Izimo zengqondo nomzimba		
4.5	Ukwelashwa ngokubhucungwa-Indlela yokwenza umzimba wabo uzwe kahle futhi uphumule, izibonelo Zokuthambisa: Ukuthambisa okuthambile, okude, okuhamba phezulu ezandleni, emilenzeni, nasemva, kanye Nokugaya: Ukugaya okuthambile, okujwayelekile kwemisipha.		
4.6	i-yoga-Lapho uhambisa umzimba wakho ube sezimweni ezahlukene, ukuze uzwe uqine, ujabule, futhi uphumule, ngenkathi ufunda futhi ukuphefumula kahle. Izibonelo zifaka i-Tree Pose, i-Mountain Pose, kanye ne-Warrior Pose		
4.7	Ukunakekelwa kwamaThambo-Ukunakekelwa kwe-Chiropractic kufana nokuhlinzeka ngokuqinisekiswa kwemisipha namathambo akho. Isibonelo Izilungiselelo: Abachiropractor basebenzisa izandla zabo noma		

	amathuluzi akhethekile ukuze baphathe kahle umgogodla ukuze balungise izikhala.		
4.8	Ukuzindla-Kufana nokunikeza ubuchopho bakho ukuphumula okuncane nethuba lokuthula, kukusiza ugxile futhi uzwe kahle.		
4.9	Ukwelashwa ngephunga elimnandi-Ukusebenzisa amakha akhethekile ezitshalo, njengezivuno noma izitshalo, ukuze uzizwe kahle futhi ujabule, noma ngisho ukusiza ukuthi uphumule noma ulale kangcono. Izibonelo zifaka phakathi iLavender, iEucalyptus, iChamomile, kanye nepeppermint.		
4.10	iAcupuncture-I-Acupuncture iyindlela ethambile yokusiza umzimba wakho uzizwe ungcono, isebenzisa imikhono emincane kakhulu ukuheha amaphuzu athile.		
	Izindlela Zezempilo Ezihambisanayo		
4.11	Imithi Yendabuko YaseShayina-Le yindlela endala kakhulu futhi enolwazi yokusiza abantu bazizwe bengcono. Isibonelo Semithi Yezitshalo: Ukusebenzisa izitshalo, imizi, kanye nezithelo ukwenza itiye noma imithi esiza umzimba uphumelele. Tai Chi: Uhlobo oluthambile lokuzivocavoca olubukeka njengokudansa kancane, lusiza abantu bazizwe bekhululekile futhi beqinile. Cupping: Ukubeka izinkomishi ezincane esikhumbeni ukuze kusize imisipha izizwe kahle njengokunikeza umzimba umphumela ophawulekayo.		
4.12	Abelaphi Bendabuko-Abaphilayo bendabuko bafana nezinsiza ezikhethekile emiphakathini abazi kahle indlela yokusebenzisa imvelo nolwazi lwesikhathi esidlule ukuze benze abantu bazizwe bengcono. Izibonelo zifaka phakathi Abalimi Bezitshalo, Abaphilayo Ngemimoya, kanye Nabahluleli.		
4.13	Ukwelapha ngeHomeopathy-I-Homeopathy iyindlela yemithi esebenzisa izinga elincane kakhulu lezinto, njengezitshalo, imithombo, noma ngisho nezinto ezingadala inkinga, ukusiza umzimba wakho		

	uphumelele. Izibonelo zifaka phakathi iArnica kanye neOnion.		
4.14	Imithi ye-Ayurvedic-Isebenzisa izinto ezivela emvelweni, njengezitshalo nezitshalo, ukusiza abantu bazizwe bephakeme. Izibonelo zifaka phakathi iAbhyanga (ukuthambisa ngophethiloli), itiye lezitshalo, neYoga kanye nezivocavoca zokuphefumula.		
4.15	ukwelashwa ngokwemvelo-I-Naturopathy ithatha indlela ebanzi yokuphila kahle. I-Naturopathy isekela umuntu ukuba aphile impilo enemphilo.		
	Imithi Yesintu Yase-Afrika		
4.16	Isihlambezo-Imithi yendabuko ekhethekile eyenziwe ezithelweni nasezithombeni. Isetshenziswa ngabesifazane abakhulelwe ukusiza ukwenza ukuhlinzwa kube lula futhi kungabi nobuhlungu. Isibonelo, abesifazane abathile bayisebenzisa eduze kwesikhathi sokubeletha ukuze baqinisekise ukuthi konke kuhamba kahle futhi ngokushesha.		
4.17	Umhlabele ingxube yamakhambi-Umhlabele iyimithi yendabuko ekhethekile eyenziwe ezithelweni nasezithombeni. Ivame ukusetshenziswa ukusiza abantu bazizwe bekhula uma benemisipha ebuhlungu, amathambo aphukile, noma ezinye zokulimala. Izibonelo, ingakhiqizwa ibe yiphuzo ngokupheka izimpande noma amaqabunga emanzini. Leli phuzo lisiza ngezinto ezifana nobuhlungu bomqolo. Kweminye imihla, isetshenziswa njengokhukhamba noma i-ointment yokugaya emisipheni ebuhlungu noma zokulimala.		

4.17 Sicela ubonise noma yikuphi OKUNYE ukwelashwa kwe-TCAM (okungabaliwe ngenhla) okusebenzisile/okusebenzisa ngesikhathi ukhulelwe.

Siyabonga ngesikhathi sakho nolwazi olunikeziwe; ukuhlanganyela kwakho kwaziswa kakhulu.

Annexure I: Ethics Certificates



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[REV : 20240830]

Annexure J: Editing Certificate

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EDITING CERTIFICATE

Re: Chrissandra Lorell Megan Steele

For editing DUT master's thesis: **A CROSS-SECTIONAL STUDY ON
OF TRADITIONAL, COMPLEMENTARY, AND ALTERNATE MEDICINE
AMONGST PREGNANT WOMEN IN THE ETHEKWINI DISTRICT**

I confirm that I have edited this dissertation and the references and language. I returned the document to the author with track changes. The correct implementation of the changes and clarifications requested in the text and references is the responsibility of the author. I am a freelance editor specialising in proofreading and editing academic documents. I hold a tertiary degree which I obtained at the University of Cape Town with English as a major and I went on to complete an H.D.E. (Homeopathy) with English as my teaching subject. I was a part-time lecturer in the Department of Homoeopathy at the Durban University of Technology for 13 years and supervised many master's degree dissertations over this period.

Steele-A CROSS-SECTIONAL STUDY ON THE USE OF TRADITIONAL, COMPLEMENTARY MEDICINE

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