

**ADOPTING A COST ACCOUNTING MODEL TO FACILITATE DECISION
MAKING IN AFRICAN COMPLEMENTARY AND ALTERNATIVE
MEDICINE PRACTICE IN SOUTH AFRICA**

By

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THESIS

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QUOTATIONS

Education is the passport to the future, for tomorrow belongs to those who prepare for it today. – Malcolm X

“Every act of conscious learning requires the willingness to suffer an injury to one’s self-esteem. That is why young children, before they are aware of their own self-importance, learn so easily.”–Thomas Szasz

“Education is the best friend. An educated person is respected everywhere. Education beats the beauty and the youth.”–Chanakya

“Proper teaching is recognised with ease. You can know it without fail because it awakens within you that sensation which tells you this is something you have always known.” —Frank Herbert

“By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.”–Confucius

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DEDICATION

To my Father, **Phatane Mafotha Taba**,

who departed peacefully on the eve of
Monday, 17 May 1999

and

To my mother, **Makgale Magdalene Taba**

who also departed peacefully on the eve of
Saturday, 09 April 2016.

who both played a special parental care role in my educational success.

To my lovely wife, **Linet Mathabathe Taba**

Special dedication to my three daughters,

**PhethegoTaba, PuseletsoTaba and Dimpho
Taba,**

My Grand Children

**OratileTaba, Leano Taba and Bonolo
Taba**

“May God and the Ancestral Spirit Bless Them
All”

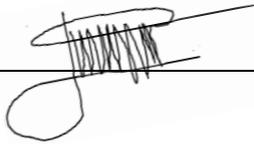
DECLARATION

I certify that this thesis, **ADOPTING A COST ACCOUNTING PRACTICE MODEL TO FACILITATE DECISION MAKING IN THE COMPLEMENTARY AND ALTERNATIVE MEDICINES PRACTICE IN SOUTH AFRICA** which I now submit for examination for the award of **Doctor of Commerce in Accounting**, is entirely my own work and has not been taken from the work of others save for and to the extent that such work has been cited and acknowledged within the text of my work.

The thesis was prepared according to the regulations for postgraduate study by research of the University of Limpopo and has not been submitted in whole or in part for an award at any other institution or university.

The work reported on in this thesis conforms to the principles and requirements of the institute's guidelines for ethics in research. The institute has permission to keep, to lend or to copy this thesis in whole or in part, on condition that any such use of the material of the thesis is duly acknowledged.

Signature _____



Date 16 June 2021



Taba Makomane Lucas

ABSTRACT

This research aimed to develop a costing model for the African Complementary and Alternative Medicines (ACAM) health practitioners to improve their products and services' decision-making process. This research aim drew support from fundamental objectives, which includes amongst others, the identification of the current product and service costing approaches used by the ACAM practitioners and how this supports their decision-making, the development, and adoption of a costing model for ACAM practitioners to capture products and services' cost information for improved health care service delivery. Furthermore, it sought to understand the challenges faced by ACAM practitioners in adopting the proposed costing model.

The research applied a qualitative action research method. Data collection was through interview method from twenty-six ACAM health practitioners in six ACAM health care facilities. Data were collected after two research cycles in the field study through action research procedures. The participants were drawn from five South African provinces. The main data was gathered through face-to-face semi-structured interviews, documentation, and direct observation to enhance the research validity and reliability. The data were analysed systematically using thematic analysis

The findings reveal that the study succeeded in providing more accurate cost data for each product and assist in the planning, control and decision making for the ACAM practitioners. The research contributes academically and to practice by successfully narrowing the gap between ACAM researchers and cost accounting researchers by providing a practical costing model based on solid practical and academic foundation. The researcher recommends that the South African ACAM facilities need to adopt and implement the ACAM costing model because it will provide them with more accurate cost data for the provision of each service and products and help in making effective and reliable decisions.

Key words:

Cost accounting practice, ACAM health facilities. ACAM health practitioners, ACAM Colonisation, ACAM Healing, Contingency Theory, Production Theory, Cost Elements, Costs Classification. ACAM Production Process

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CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Even though a cost is considered one characteristic of those organisations experiencing dynamic and fast-changing business environments, cost accounting in African complementary and alternative medicines (ACAM) has been given incomplete and imperfect attention by both management and cost accounting academic researchers. Generally, few academic researchers have focused their studies on determining the cost of ACAM (Herman, Craig, & Caspi, 2005; Maclennan, Myers, & Taylor, 2006; Avci, Koc & Saglam, 2012; Taba, 2015; Taba & Fakoya, 2016). These few studies limit the spectrum of cost accounting practice and ACAM practice (Bierer & Götze, 2012; Lotfi & Mansourabad, 2012; Fatah & Mat-Zin, 2013; Kidane, van Andel, van der Maesen & Asfaw, 2014; Street, Kabera & Connolly, 2015; Amaechi, 2015; Dippenaar, 2015; White, 2015). Additionally, many authors claim that CAM combines CAM practices and medicine to provide efficient health care service (Merriam & Muhamad, 2012; Sorsdahl, Stein & Flisher, 2013; Baniya, 2014). Despite the few studies on partial cost accounting practices in CAM, its application should extend beyond the private, public and non-profit organisations.

Costing is regarded as the process where monetary values of inputs are estimated, which is necessary to deliver products and services (Effiong, 2012; Fatah & Mat-Zin, 2013; Hankey & Hanover, 2014). Cost accounting practices have been the exclusive preserve of the private, public and non-profit organisations focusing on achieving the business goal of profitability through lower production costs for competitiveness (Vinciguerra & Lafond, 2011; Rasamanie & Kanapathy, 2011; Zarzycka, 2012; Gangadhar, García-Unanue, Luis & Gallardo, 2015). A review of the extant literature suggests that cost accounting should be implemented beyond the private, public and non-profit organisations (Rasamanie & Kanapathy, 2011; Vinciguerra & Lafond, 2011; Zarzycka, 2012; García-Unanue, Luis & Gallardo, 2015). Although the study of cost accounting has flourished in private, public and non-profit organisations in the world of business; its adoption in the traditional businesses such as ACAM is insignificant (Furlan et al., 2012; Martin et al., 2012; Abbott, 2014). There is a possibility that by adopting the cost accounting practice system in ACAM in South Africa and around the world, ACAM practitioners would be able to cost the products and services and

increase profitability as there are similarities regarding the manufacturing process and the recording of income and expenditure.

The literature suggests that despite cost accounting and ACAM differing in some respects, similarities regarding the manufacturing process and the recording of income and expenditure render a sound platform for cost accounting to be embedded in ACAM (Dannemann et al., 2008; Benzie & Wachtel-Galor, 2011; Furlan et al., 2012; Kutch, 2016). The cost accounting practice was presented as being able to provide procedures, tools and concepts for businesses to enable the unit cost of produced services offered by the organisational unit to ascertain production control of the expenses for profitability assessment and business efficiency (Vinciguerra & Lafond, 2011; The Institute of Cost Accountants of India (ICAI), 2016). Modern cost accounting takes the perspective that a broad focus should not be used in cost reduction, as control and planning of the expenses are inextricably linked with profit and income planning such as advertising, additional costs, and modifications of the products, to enable revenue and profitability (Jovanović, Janjić & Janković, 2014). The similarities of the manufacturing process that exist in ACAM can provide a suitable platform for the cost accounting model to be used in the ACAM.

However, the field of cost accounting in complementary and alternative medicines is yet to be considered (Gutteridge & Burns, 2012 and Wei, Wang, Li, Gao, Yu, Feng, & Zhu, 2015). There have been arguments that ACAM indulges in some secret activities that cannot be measured or quantified (Liu, Mahmoudi, Almasi, Lorzadeh & Khansari, 2015); hence, the use of cost accounting in ACAM is replete with different competing and unregulated cost accounting practices (Sorsdahl, Stein & Flisher, 2013). Since traditional medicines have been used for a number of years and several cultures rely on these indigenous medicines for primary health care purposes, the traditional health practitioners were not having any reason to determine the pricing of the ACAM medicines (Street & Prinsloo, 2013; Suchacz & Wesolowski, 2013; Zondi & Ntshangase, 2013; Stanifer et al., 2015).

Many scholars have concentrated on ACAM studies which focus on general areas such as CAM medicine used during childbirth and child diarrhoea (Herman, Craig & Caspi, 2005; Eteng, Mitchell, Garba, Ana, Liman & Cockcroft, 2014), trends and challenges of CAM medicine (Abdullahi, 2011; Flint, 2015), and the popularity of CAM medicine (Sato, 2012) without focusing on developing a costing model for the services

and products. It is, therefore, necessary to develop a cost accounting model specifically for ACAM practices to assist practitioners in cost-related decisions. Taba and Fakoya (2016) note that there is a need for additional study and further intensive academic studies to develop a costing model for the ACAM facilities to cost the products and services of the ACAM practitioners effectively. ACAM provides primary and secondary health care services to ascertain various political and social roles in communities, using emotional healing of physical, spiritual illnesses, divination, direct birth rituals, protecting warriors, finding lost cattle, counteracting witches, myths, cosmology, and narrating the history, of CAM (Chitindingu, George & Gow, 2014; Ibrahim, Mohammed, Isah & Aliyu, 2014). Taba (2015) and Taba and Fakoya (2016) further note that the literature has not thoroughly and fully discussed the role of cost accounting in ACAM. Most of the studies have focused on emphasising ACAM as a health care provider with unsubstantiated payments and partial usage of cost accounting practices (Pesek, Helton & Nair, 2006; Kayne, 2009; Hankey & Hanover, 2014). Hence, having a cost accounting system may likely enable ACAM practitioners to substantiate payments based on the products and services cost of the ACAM and can determine profit or loss for a period.

Moreover, the subject of cost accounting has been studied for many decades. However, there is a need to understand more about the various aspects of cost accounting, especially on costing the products and services of the ACAM. Theoretical and empirical investigations on cost accounting practices in ACAM in developed and developing countries have remained limited except when mentioning the transaction price of medicinal species (Dannemann et al., 2008; Benzie & Wachtel-Galor, 2011); particularly on the African continent (Krippner, Bova, Budden & Gallante, 2011; Kuunibe & Domanban, 2012; Mahomoodally, 2013; Sherra, Shahda & Khalil, 2017) but also around the world (Aderibigbe, Agaja & Bamidele, 2013; Flint, 2015; Martin et al., 2012). It is only in South Africa where to date only two formal studies by Taba (2015) and Taba and Fakoya (2016) examined the cost accounting practices in ACAM. Consulting ACAM practitioners has severe financial implications for vulnerable households. Thus, policymakers need to engage in the development of strategies to effectively protect these poor households in South African households from unregulated health-care providers in the system (Nxumalo, Alabab, Harrisa, Chersicha & Goudge, 2011; Lu, Hernandez, Abegunde & Edejer, 2011). Mapping the possibility of a suitable ACAM cost accounting model, especially in African CAM healing could help to reduce operational costs and improve product and service benefits through

efficient management and controlled practices of overheads in the early stages of cost accounting in ACAM.

Several studies have been undertaken on the financial contribution of ACAM. In the United States, Canter, Coon and Ernst (2006) found that consumers spent between \$22 billion and \$34 billion per year on ACAM therapies as compared to \$11.9 billion which is one-third on western practitioners. Furthermore, Kutch (2016) found that in the United States the non-institutionalised USA population expenditure, which is ACAM customers is based on charges that represent an essential source for non-customers and cost approximately \$141.29 and \$258.58, followed by the costs of the pharmaceuticals of between \$112.30 and \$167.11. The total expenditures for ACAM therapies in the United States have been estimated at US\$14 billion, US\$27 billion and US\$34 billion in 1990, 1997 and 2007, respectively. (Herman, Poindexter, Witt & Eisenberg, 2012). In Thailand, for the cost for the treatment of diabetes through complementary and alternative medicine is estimated for the whole country at \$915,250 to \$1,545,750 per month, which is regarded as relatively high for a small country like Thailand (Moolasarn, Kuessirikiet, Huasary, Sripa, Chechom, Sutawee, Chaisila and Sankan, 2005). Tais and Zoberg (2013) found that in the United Kingdom, revenue from ACAM from 1997 to 2000 was \$27b per annum. The consultation costs in Australia depend on the practitioner's experience and training, which is about \$80 to \$140 per hour, excluding the cost of ACAM remedies, nutritional supplements and essential oils (MacLennan, Myers and Taylor, 2006; Cancer Council, 2015). In Germany, Italia, Brand, Heinrich, Berde, von Berg and Wolfenstetter (2015) found that the homoeopathic drug was €10.14, and the average price for herbal drugs amounted to €13.72. In Turkey, Avci1, Koç, & Sağlam (2012) found that the cost per capita on average cost the patients of ACAM almost US\$288.26. Since there is a need for organisations is to provide more reliable cost accounting data for the social impact of products and services for decision-making, existing cost accounting strategies should be further developed in ACAM for cost allocation and analysis to substantiate payments based on the products and services.

Based on the preceding arguments, this study seeks to develop a costing model that focuses explicitly on ACAM by the ACAM practitioners for strategic cost planning and pricing for their products and services. This study builds upon previous cost accounting studies in ACAM practices (Taba, 2015; Taba & Fakoya, 2016), where respondents suggested that scholars should embark on the development of a reliable costing model

for the ACAM practitioners for effective decision-making. By outlining the present suggestions and concerns in the ontological and epistemological debate regarding research in the field of cost accounting for ACAM practices, and in trying to address different inadequacies and deficiencies of ACAM costing practices. Therefore, the studies demonstrate and provide an understanding of how cost accounting can be adopted in ACAM in South Africa and around the world. It is, therefore, the intention of this study to document experiences in the adoption of a costing model in ACAM practices in South Africa.

1.2. Research problem

While cost accounting practices and cost accounting models have been extensively developed and practised by the private and public sectors, as well as non-profit organisations, it appears that no costing model has been designed for ACAM practitioners to facilitate decision-making processes. This represents an observation made by the researcher during a preliminary study on cost accounting practices in African CAM practices by African CAM health practitioners in South Africa (Taba, 2015; Taba & Fakoya, 2016). Applying a specific costing model to ACAM products and services is still an uncommon practice in the world and South Africa. This is evident in the lack of documented proof and literature about such practices. The role played by ACAM in providing effective health care services in South Africa is critical, given its status as one of the primary public health care service providers. They are patronised by about 80% of the population (Mhame, Busia & Kasilo, 2010; Mbatha, Street, Ngcobo & Gqaleni, 2012; van Niekerk, 2012; Van Rooyen, Pretorius, Tembani & Ten Ham, 2015). Moreover, there is no documented proof yet of a specialised costing model for these critical health sector practices. It is, therefore, significant to fill this knowledge gap by developing a specific costing model to assist practitioners in improving their decision-making process. The strategies to improve the performances of the ACAM practitioners are essential in ensuring that this ACAM sector can meet the increasing demands of the modern health care community services, which has higher health care services. It is also significant to have explicit knowledge of the roles of the factors that influence and shape ACAM and to understand the dynamics of the adopted cost accounting processes.

The focus point in this study is to understand and effectively adapt, develop, and demonstrate a cost accounting model for ACAM healing practices to facilitate ACAM

healing practitioner's decision-making process. The adoption of a cost accounting model in African CAM practices or ACAM in South Africa and around the world requires further development considering the little attempt at integrating costing principles. This research study's main objectives are to narrow the academic vacuum by developing and demonstrating a costing model through a group of selected African CAM practitioners. This study used a participatory action research paradigm to design and demonstrate the successful adoption of a cost accounting model by the African CAM practitioners. This model influences and improves the decision-making process in ACAM or African CAM healing practice to improve the costing of their products and services.

1.3. Literature review

The review of the literature was presented in three parts—first, a brief theoretical framework of the study explaining the theories involving cost accounting practices and ACAM.

1.3.1. Theoretical Framework

The objective of the study is to examine, develop, and demonstrate the adoption of the cost accounting model in ACAM for effective decision making by in South African CAM practitioners. Secondly, to see how the cost of production theory of value and contingency factors can impact the adoption of cost models that suit the environment of the CAM practitioners. This study relies on both the theory of cost of production and contingency theory to examine the relationship of both theories on the use of cost accounting system in African CAM.

1.3.2. Cost accounting practice

Effiong (2012) and García-Unanue et al. (2015) regarded cost accounting practice as a method that accumulates, measures, analyses, interprets, and effectively report essential data that is useful and relevant to both internal and external users. The nature and functioning of business organisations such as in African CAM practices have become very complicated. Thakur (2011) and Jovanović et al. (2014) describe cost accounting as a technique of accounting for cost, earnings and expenditure that relate to the production of goods and services rendered, and also regarded as innovations in management practice which is designed for renovating or modernising

both the private and public organisations. Consequently, the integration of cost accounting in African CAM practices may facilitate and maximise usage of resources and the generation of useful information in the African CAM sector.

Implementing a successful cost accounting system requires the design and installation of software, a cost centre, development of a service item, generating a cost centre level and standard level of the patient, cost reports and reconciliation of the actual cost (Kihuba, Gheorghe, Bozzani, English and Griffiths, 2016). Others include the generation of the product for profitability reports and the reconciliation of these reports to the financial statements; and provision of the capability of an ad hoc reporting (Freedman, 2015; Kihuba et al., 2016). According to Gangadhar et al., 2015; and Özyürek & Yılmaz, 2015, a cost accounting system can be viewed as a series of steps covering the task of establishing goals and objectives of a cost accounting system. These steps include the planning and design of the cost accounting system, evaluation and selection of the cost accounting system, determining how costs are going to be measured, and finally, assessing the reliability of the outcomes of the system. Miller and Power (2013) state that the continued success of implementing a cost accounting system requires that more frequent information is made available to managers for better decision-making. Hence, the availability of appropriate product and services cost data may provide the necessary data for valuable analysis to facilitate sound decisions.

1.3.3. ACAM in South Africa

Since the study focuses on costing the product and services of the African CAM practitioners, an overview of ACAM healing in South Africa is essential to form the context of the study. Mbatha *et al.* (2012) and Al Rawi, Fetters, Killawi, Hammad and Rawi, Fetters, Killawi, Hammad, & Padela (2012) regard traditional healers or ACAM health practitioners as herbalists, birth attendants, and surgeons that are capable of playing an important role in South Africa's primary healthcare services. To effectively perform their duties, the ACAM practitioners derive their income from several sources that include among the training of fellow practitioners, healing the customers, trade of medicines, strengthening of homes and protection against witchcraft, providing love potions', and lastly, 'assisting husbands to forget other women' (Schoonover, Lipkin, Javid, Rosen, Solanki, Shah & Katz., 2014; Tshehla, 2015).

Researchers found that a significant part of the South African population follows and

believes ACAM cultural activities and so this re-affirms the importance of people's life experiences (Mathibela, Egan, Du Plessis & Potgieter, 2015; van Niekerk, 2012). The vulnerability of CAM practitioners has been discussed over and over again by several concerned groups. In June 1997, during a public hearing, the Portfolio Committee on Health in the South African Parliament reiterated the importance of legitimising CAM healing practices (Pretorius, 1999). They recommend that CAM practices be brought into the mainstream health care for improved services, the promotion of cooperation, shared responsibilities, elimination of degrading treatment and the improvement of the standards of the profession through high standards, effective communication, and a feedback system. The recommendations were made by the Committee to enforce high integrity and transparency effectively, as well as to implement a reliable financial management system, enhance participation in programs and undertake efforts that are continuous, in ACAM organisations. Hence, designing a cost accounting model for African CAM healing improves the quality of service delivery in the sector.

Additionally, Nxumalo *et al.* (2011) found that South Africans use two parallel health care systems, the modern medical system and CAM. The people who design policies should be involved in the development of effective policies in protecting impoverished South Africans, as the use of the two systems increases spending from clients that are from low-income households. Furthermore, Pinkoane, Greeff and Koen (2012) argue that the integration of African CAM practitioners with biomedical personnel should be through effective communication and that government should through policy formulation clarify terms and conditions of the integration. Sewani-Rusike and Mammen (2014) and Ngobe (2015) point out that with the expansion of modern medicine, the ACAM practitioners are still celebrated amongst the population, and they command expenses that exceed the average payment of treatment expenses of modern medical practitioners. This study was undertaken and conducted in line with the South African healthcare policy to offer ACAM quality health care to the communities. Consequently, decision-makers and policymakers may likely streamline the quality of primary health care services in the African CAM practice through a cost accounting model. Creating robust and excellent African CAM practice will benefit many parties, including the primary health care sector, taxpayers, stakeholders, and South African citizens. The role of ACAM practitioners in the revitalisation of the present health care system is of critical significance. Hence, this study assumes that the adoption of a cost accounting model in African CAM healing may assist African CAM practitioners to achieve better decision-making about costing products and services.

This section discussed a brief background on the theoretical framework, cost accounting practice and African CAM practice in South Africa where an overview of African CAM practice was discussed.

1.4. Research questions

The following fundamental research questions are addressed in this study

- What are the existing procedures that the ACAM health practitioners use to cost the ACAM services and products, and how do such procedures assist in the costing decision-making?
- What are the prospects and likelihood of successfully developing, adopting, and demonstrating an ACAM costing model for the ACAM practitioners that may effectively assist them to cost their products and services in enhancing ACAM health care services?; and
- What are the deterrent factors that may be encountered in developing, adopting, and demonstrating the proposed ACAM costing model to enhance the costing model effectively?

1.5. Aim of the study

This study seeks to develop and demonstrate the adoption of a costing model for African CAM health practitioners to influence and improve their decision-making process. This research seeks the adoption, development, and demonstration of a useful ACAM cost accounting model for ACAM practitioners to assist in facilitating the costing of the products and services. To effectively understand the importance of placing cost accounting practice in the frame of reference of African CAM healing, that is, the importance of integrating cost accounting practice into African CAM healing has become essential since the practice is given prominence in South African health care service delivery.

1.6. The objectives of the study

These following sub-objectives of the research were addressed in this study

- To ascertain the existing procedures that the ACAM health practitioners used

to cost the ACAM services and products and how such procedures assist in the costing decision-making.

- To successfully develop, adopt and demonstrate the ACAM costing model for the ACAM facilities to successfully cost the ACAM products and services and thus enhance ACAM health care services; and
- To understand the deterrent factors that may be encountered in developing, adopting and demonstrating the proposed ACAM costing model to enhance the current costing model.

By achieving these sub-objectives, this study makes a definite academic addition to the body of knowledge in an ACAM and cost accounting practice's adaptation to the South African health care service delivery.

1.7. Definition of Concepts

The following section defines the terms that relate to the study;

Cost Accounting Practice: Effiong (2012) and García-Unanue et al., (2015), define cost accounting as a procedure and the technique that accumulates, measures, analyses, interprets and reports accumulated costing data that is both useful and applicable to internal and external users. Kludacz (2013) and Jovanović et al. (2014) describe cost accounting as a process of accounting the cost, income and expenditure of manufactured materials, labour and overheads for the products and services designed to reinvent or modernise the public and private sector.

African CAM: According to Gale (2014) and Wei et al. (2015) ACAM is considered as a group of health care systems and medical practices, and those products that are not considered as conventional medicine. African CAM is regarded as the total of self-discipline that involving African spirituality and indigenous medicines that involves the participation of the diviners, herbalists and midwives. ACAM practitioners declare the capability to remedy a variety of diverse conditions (CAM, 2020, 2014; Gale, 2014; & Wei et al., 2015).

African CAM Healing: This is regarded as a holistic approach to the ACAM practice-based totally on the premise of inter-connectedness in places where the diseases are regarded as misalignment of spiritual and social disease that is both internal or external (Eteng et al., 2014; Staniferet et al., 2015; Zondi & Ntshangase, 2013).

African CAM Practitioners: They are regarded as the practitioners who fulfil social roles in communities through advises and the treatment of physical ailments, divination, emotional healing, and services such as finding lost cattle, conducting death rituals, narrating the history, defending warriors, counteracting witches, and myths and cosmology of subcultures (Chitindingu et al., 2014; Ibrahim et al., 2014).

Implementing Cost Accounting System: Kihuba et al. (2016) and Miller and Power (2013) observe that implementing a cost accounting system requires active top management support, not just passive support or acceptance. They claim that the system has to be easy for the manager to use. Further, the data should be accessible to the managers who need it, the information needs to be used for more than just labour costs distribution, and the more frequently the information can be made available to managers, the better. Hence, understanding the term will be valuable to the practitioners in understanding the development, demonstration, evaluation and dissemination of cost accounting in the African CAM healing model.

1.8. Research methodology

This section discusses the overall research approach that includes the research paradigm, research method, research design, data collection, target population, sample, sampling techniques, and data analysis. It also explains bias, reliability and validity, and ethical clearance.

1.8.1. Research Paradigm

The researcher combines the three beliefs about ontology, epistemology and methodology. The thesis includes debates on the development, demonstration and adoption of cost accounting model in complementary and alternative medicines for effective decision making as these inquiry methods originate from how social reality is perceived and understood (Dieronitou, 2014; Uzun, 2016). In ontology the researcher refers to the nature of reality, while epistemology refers to the inter-relationship of the researcher and what is known; while the methodology are the procedures to be followed to gain the required knowledge. The combinations of these three beliefs were use as a guide by the researcher in the development, demonstration and adoption of cost accounting model in complementary and alternative medicines and how it should be understood and studied by the researcher.

1.8.2. Research method

The study used a mixed research method since the researcher uses both research methods, that is, quantitative and qualitative methods, to increase the credibility and the validity of the study. In the social sciences, the mixed-method approach has become popular because using two methods provides the benefits of both methods and overcomes the shortcomings of using one method. The researcher used document analysis and developed a costing model to ensure that the products and services of the African CAM practice are appropriately costed. A mixed research method is applied to overcome biases and problems caused by a single method, single observer and single theory. This mixed-method approach assists to effectively capture the different dimensions of costing products and services in African CAM practice.

1.8.3. Research design

This study employed an action research design as the research design for this study. This action research design is appropriate for this study as the researcher observes and collects data from the African CAM practitioners to understand how they can apply cost accounting principles in ACAM facilities. This action research design follows the following stages: initial reflection, planning, action, observation or developing reflection, and dissemination (Bryman & Bell, 2015; McDonnell & McNiff, 2014). Action research was appropriate because it used a research cycle, which was applied twice to promote the adoption, development, and demonstration of the cost accounting model in African CAM healing in collaboration with the African CAM practitioners.

1.8.4. Data collection approach

Previous studies by Taba (2015) and Taba and Fakoya (2016) found that African CAM health practitioners provide and offer services that involve the use of products. Therefore, data were collected based on the products and services provided by selected African CAM practitioners. Such data were collected based on the information provided by the practitioner regarding the pricing of services and products to develop a cost model based on the direct material used, direct labour hours used and the overhead costs of specimen products and services. This study used collected data to develop, demonstrate and evaluate a cost accounting model for the African CAM practitioners to improve their decision-making. The researcher designed training material on the cost accounting stages for the African CAM healing practitioners to

make it possible for the African CAM practitioners to understand the type of cost elements required by the researcher.

1.8.5. Target population

The researcher's target populations are African CAM practitioners in South Africa. This population has more than 300 organisations in South Africa and about 1.5 million literate and illiterate members that consist of the diviners (*sangoma*), prophets and the herbalists (*inyanga*). The reason for selecting this group of CAM practitioners is because in 1994 there were an estimated 200 000 (Pretorius: 1994) and 400 000 in 2004 (Bateman: 2004) CAM practitioners in South Africa with 25 560 in the Eastern Cape, 45 290 in the Free State, 126 930 in Gauteng, 50 860 in Kwa-Zulu Natal, 14 732 in Limpopo, 115 048 in Mpumalanga, 11 870 in North West, 4 510 in the Northern Cape, and 5 200 in the Western Cape Province.

1.8.6. Sample

The targeted populations are the African CAM practitioners who are literate and have been members of the South African Healers Association (SOAHA) and the South African Traditional Healing Organisation. These CAM healing organisations have a combined membership estimated at 60 000 (sixty thousand) members. The researcher spent six months with the professional training and healing practitioners or tutors (Nkobela) of the CAM practitioners to collect data to be included in the cost accounting model.

1.8.7. Sample techniques

The researcher utilised a purposive sampling technique and chose the CAM practitioners who ultimately assisted in understanding and implementing the cost accounting model and addressed any related questions that arose from its implementation. The researcher selected the African CAM practitioners in terms of section 47(1) and 32 (1) of the African Traditional Healing Act of 2007. In terms of the Act, these ACAM practitioners are known as traditional health tutors who own an accredited training institution where they teach and train the students to become qualified ACAM practitioners. The researcher sampled six ACAM facilities and training organisations as they have more cost-related activities.

1.8.8. Data analysis procedure

The collected data were analysed into the various elements of costs to develop and demonstrate a cost accounting system for use by CAM practitioners. The researcher designed and demonstrated the cost accounting model and addressed the challenges resulting from its implementation and modified the model accordingly to ensure effective utilisation.

1.8.9. Reliability, Validity and Objectivity

The study applied triangulation, namely, in-depth interview questions, documents analyses and observation to increase the credibility, validity, acceptability and trustworthiness of the results. The researcher developed these instruments to support and improve the validity of the study, and so enabled the development and demonstration of the cost accounting model for ACAM practitioners. The researcher identified six CAM health services centres to use to develop the cost accounting related elements and used three research cycles during which the instruments were drawn up to produce a stable and consistent result. The researcher measured the reliability by administering the same test twice over a year with the practitioners. The data and scores from the first research cycle were corrected to evaluate stability over time. After the first reporting period, the results were analysed, and the instrument amended accordingly before Research Cycle Two was administered. In the second research cycle, the researcher followed the same process as in the first research cycle. This was consistent with the research objectives to examine the products and services' costing in the ACAM practice. This resulted in the successful development and demonstration of the cost accounting model in ACAM practice.

1.9. Bias

To avoid data collection and data analyses bias, the researcher made sure that the respondents were ready and willing to be interviewed and participate in the project. In addition, the researcher avoided providing options to the respondents during the in-depth interviews by exercising patience during the questionnaires' administration. The researcher also ensured that questions were clear enough and evaluated the capability of the respondents in answering the questionnaires. The in-depth interviews were conducted in locations away from the hearing distance of others. In-depth

interviews took about 30 minutes. Moreover, respondents were told that the answers provided would not be used against them. The researcher ensured that the selected African CAM practitioners understood the stages used in action research.

1.10. Significance of the study

This study is a pioneering academic study that applies a cost accounting model in the African CAM practice in South Africa and around the world. It makes distinct contributions to the body of knowledge in cost accounting practices in the context of its adaptation to the CAM practices in South Africa. This study is about action research on cost accounting practices in ACAM facilities and provides a specialised cost accounting model for ACAM practices. This study provides detailed insight into the cost accounting practices, which will be valuable for African CAM practitioners in arriving at the most appropriate product and service pricing decisions. This study departs from other studies in that it emphasised the role of cost accounting system in African CAM practice by exploring and developing a costing model for the products and services and achieve reasonable service pricing. Furthermore, the study allowed the indigenous African CAM practitioners with no formal cost accounting systems' knowledge to use and gain experience of a formal cost system for effective cost planning and strategy for improved product and service costing and pricing.

1.11. Ethical considerations

This study adhered to the ethics of scientific research by applying for an ethical clearance certificate from the Ethics Committee at the University of Limpopo before conducting the pilot and actual field study. The researcher received the approval of the study from the Research Ethics Committee on 5 September 2018 with reference no: TREC/139/2018: PG (see Annexure U). The rights, dignity, privacy and confidentiality (Annexure B) (Ketefian, 2015; Akaranga & Makau, 2016) of information disclosed by the participating ACAM practitioners were respected and handled with strict confidentiality (Fouka and Mantzorou, 2011). As evidence of their willingness to participate in the study, respondents were requested to fill in and sign a standard consent form (Annexure B) as designed by the researcher and approved by the University of Limpopo (Annexure U).

1.12. Limitations of the Study

The researcher observed the limitations that were encountered in the study. The following limitations of the study were observed:

- The principal challenge was the availability of financing, as no single organisation sponsored the project to assist in thorough preparation and efficiency of the research finding.
- The researcher took a long time to reach all the ACAM practitioners and ACAM facilities due to the uniqueness of the area of the research study in order to collect quality data. The researcher took about three months (September 2018 to November 2018) to access all the ACAM practitioners and six months to select all the required participants (September 2018 to February 2019).
- This study focused on the products and services provided by CAM practitioners. While individual CAM practitioners may modify the products and services in the health organisation, the health organisation's level response to social health care services is what was examined.
- The researcher originally wanted to maximise the variety of cases by including both males and females and by selecting practitioners from different organisations, the limited number of participants that were willing and able to participate in the study forced the researcher to adjust the selection criteria.
- As reliability and validity concerns often arise in field study research due to its qualitative nature, the use of multiple cases, the triangulation of data, and the employment of qualified practitioners decreased such limitations in the current study.
- The results of this study hope to stimulate a discussion about cost accounting in CAM organisations and therefore anticipate criticism from Christians who feel that discussions of CAM are of non-Christian people.
- The findings of the study cannot be generalised due to the action research nature of the study and the small sample size, which was used by the researcher.

Regardless of the limitations as indicated above, this action research study

provided understanding, a vision, wisdom, and the perception of ACAM practitioners' important representation and perspective on a costing model in ACAM practice. This representation and perspective will, in future, benefit the ACAM facilities and practitioners in the implementation of an effective cost accounting system.

1.13. An outline of the study

Chapter One: Introduction. This chapter provides an overview of the research. It also introduces the research aim and objectives, methodology and chapter development.

Chapter Two: African CAM Practice. This chapter provides an overview of African complementary and alternative medicine (ACAM) in South Africa, starting with the theoretical framework, the development of ACAM, a definition of African CAM, an overview of the ACAM, the ACAM practitioners, production of African CAM, and the application of cost accounting in ACAM to influence and improve the decision-making process as a means of justifying the importance of this study.

Chapter Three: Cost Accounting Practice. In this chapter, the researcher reviews the literature related to cost accounting systems. The first section contains the concepts related to the definition, elements of costs, classification of costs, history of cost accounting systems, and the significance of cost accounting. The second section includes cost accounting systems in the manufacturing service, in the public service, and the African traditional healing sector.

Chapter Four: Research Methodology. In this chapter, the researcher discusses the methodology used in this research. This will include the research philosophy, research strategy, research design, time dimension, data collection methods, sample and population. It also discusses validity and reliability, which are both internal and external quality criteria and concludes by discussing the statistical tools for data analysis.

Chapter Five: Development of the Costing Model for Complementary and Alternative Medicine. This chapter introduces the conceptual research model, to discuss and to understand the challenges of adopting the proposed costing model in complementary and alternative Medicine for further improvement.

Chapter Six: Research Cycle One: Data Presentation and Analysis. This chapter presents and analyses data for Research Cycle One concerning the current

approaches used by the African CAM practitioners to cost their products and services and how it supports their decision-making. This will be done by briefly profiling the six CAM facilities cost elements in South Africa.

Chapter Seven: Research Cycle Two: Data Presentation and Analysis. This chapter presents and analyses the data of research cycle two data concerning the current approaches used by the African CAM practitioners to cost their products and services and how it supports their decision-making. This was done by interviewing the ACAM organisations in South Africa.

Chapter Eight: Conclusion, Recommendations and Future Research. This chapter provides a summary of the key findings of the research; the various contributions to knowledge from this study; the research limitations; the areas suggested for further research, and the recommendations for organisations that arise from the research findings.

1.14. Summary of the chapter

This chapter provided a general introduction to the study through a brief explanation of the importance of costing in ACAM facilities. It also discussed the problem statement and followed the research objectives and the research questions.

The research methodology was briefly discussed in conjunction with the research method, research paradigm, research design, data collection approach, target population, sample, sample techniques, data analysis procedure, reliability, validity and objectivity, and bias.

The chapter concluded by discussing the significance of the study, ethical considerations, the limitation of the study, and the organisation of the study. Hence the research intentionally explored the possibility of adopting, implementing, and demonstrating the ACAM costing model in the ACAM facilities. The following chapter will discuss the relevancy of cost accounting in ACAM facilities.

CHAPTER TWO

AFRICAN COMPLEMENTARY AND ALTERNATIVE MEDICINE (ACAM)

2.1. Introduction

Understanding costing, in general, or cost accounting and cost planning systems, in particular, can no longer be possible without understanding the surrounding environment in which organisations are functioning. This chapter aims to discuss the key characteristics of the African CAM environment and the changes that have taken place. These characteristics are represented as changes in the social, political, and economic environment of the South African society. Consequently, the researcher seeks to investigate the possibility of adopting a cost accounting model in African CAM used in the CAM organisations in the South African environment.

This chapter provides an overview of the South African context. Such information is essential to determine the factors that may play an influential role in the development of the ACAM costing model in South Africa. In this chapter, an overview of the ACAM in South Africa is also provided. It begins by introducing the theoretical framework for this study, the development of ACAM, definition of African CAM, the overview of the ACAM, the ACAM practitioners, production of African CAM, and the application of cost accounting in ACAM. The study focuses on the adoption, development' and demonstration of an ACAM costing model by the ACAM practitioners to enhance and improve the costing process of products and services.

2.2. Theoretical Framework

The purpose of this section is to discuss a conceptual and theoretical framework in this study. The theoretical framework served as a foundation for developing, adoption, and demonstrations of cost accounting practice model in ACAM in South Africa.

2.2.1. The objective of Theoretical Framework

Academic researchers and scholars believe that there is a significant difference

between a document written by journalists and that written by academic researchers. This is because the academic document is well developed and articulated as the researcher will be trying to effectively develop and demonstrate the ACAM costing model (Erjavec and Zajc, 2011; Duffy, 2015). The term theoretical framework comprises of two words which are theory and framework. According to Smith and Lewis (2011) and Lederman and Lederman (2015), a theory is a set of interrelated constructs, definitions, and propositions that present a systematic view of phenomena by specifying relations among variables to explain and predict phenomena. Furthermore, a theory is a statement of predicting which actions will lead to what results and why (Sunday, 2016).

Accordingly, Maatoug (2014) found that theory provides a coherent set of rationally derived principles that serve as a frame of reference for evaluating and developing practice, discussing related concepts, and designing a framework around the structure of these concepts and how they are placed together. This framework should work as a basis for understanding, interpreting and explaining the relationships among cost accounting practice and the complementary and alternative medicines (CAM) that are being investigated and are considered necessary for a particular research study. The researcher also needs a framework to explain the research findings and how they contribute to the development of the topic being examined (Wilson, Gosling, and Graham, 2013; Abbott & McKinney, 2013). Grant and Osanloo (2014) regard theoretical framework as the guide to construct, support and discuss the structure that defines how the study as a whole will be philosophically, epistemologically, methodologically, and analytically approached.

2.3. Theoretical Framework for this Study

The conceptual framework underlying the present study is based on two theories: Contingency and cost of production theories of value to examine, develop, demonstrate and adopt the cost accounting model in ACAM for effective decision making in South Africa by the African CAM health practitioners.

2.3.1. Contingency Theory

According to Betts (2011), in contingency theory, science, technology, and society are considered as the organisation theory as they both have intersecting circles that overlap with each other as in Figure 2.1.

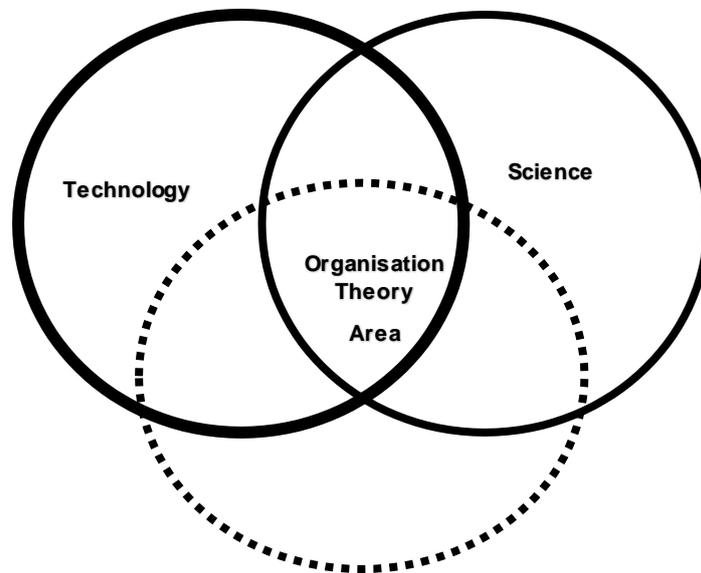


Figure 2. 1: Contingency theory - technology, science and society (Betts; 2011)

This is due to the contingency theory being a part of organisational theory and falls within the intersection.

2.3.1.1. Studies in Contingency Theory

The contingency theory was developed by Woodward in 1958, and it was argued that there is no best way to manage an organisation (Al-Nimer, 2010 & Badara, 2017). Furthermore, Badara (2017) and Ahmed and Leftesi (2014) found that the contingency situation's success plays a significant role in contingency theory as it can measure and identify the conditions under which the contingency theory operates, as indicated in Figure 2.2. The design of effective management accounting systems and cost accounting practice was traced and developed within a contingency framework in the

contingency theory. The contingency theory led to the development and construction of organisational theories, especially during the 1960s (Alsharari, Dixon & Youssef; 2015). Alsharari and Youssef (2017) found that management accounting started in the 1970s and they explained the varieties of management accounting practice.

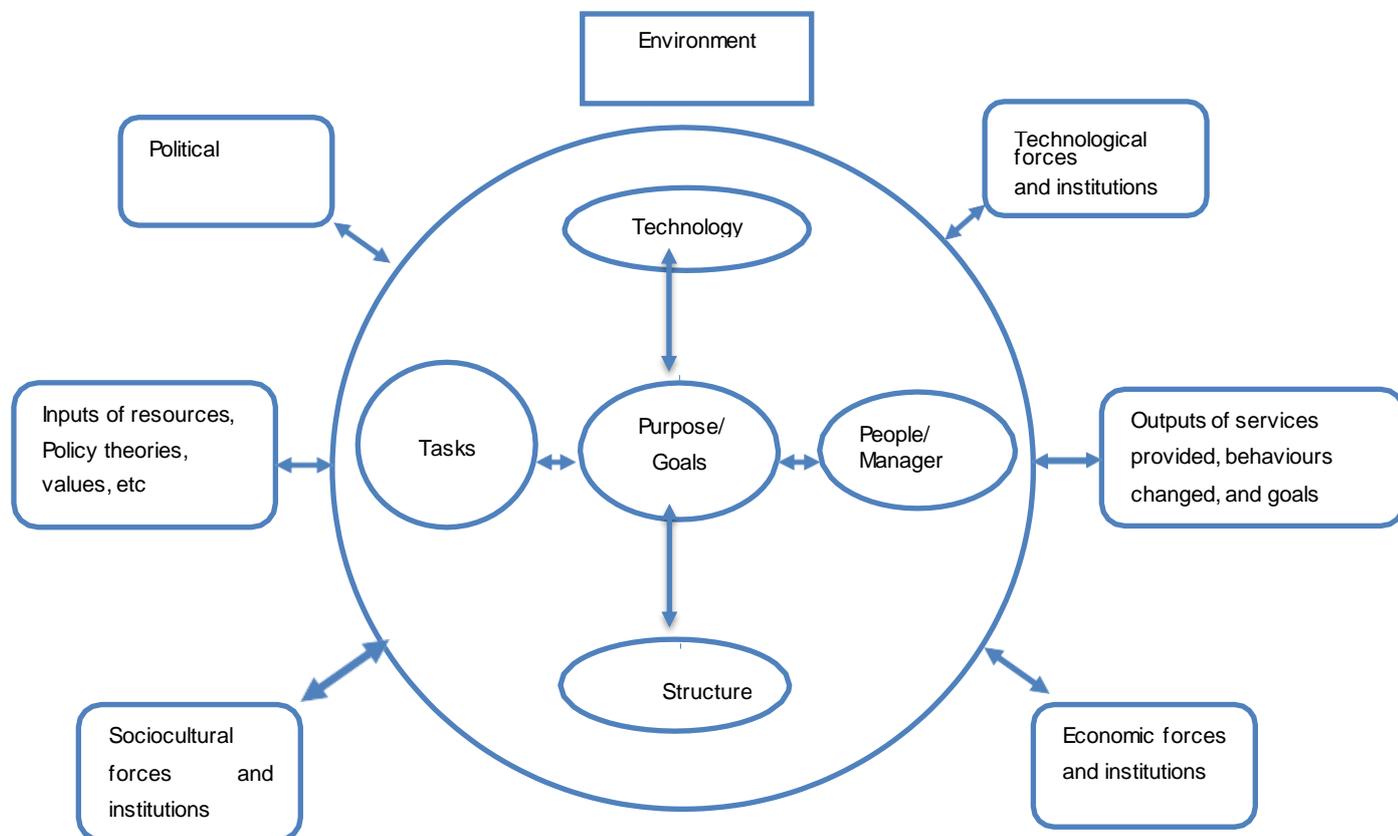


Figure 2. 2: External organisational contingencies (Omoluabi, 2016)

Figure 2.2 shows the effect of the external contingencies such as political forces, socio-cultural policies and economic forces that may affect efficient model development in any organisation where cost accounting is adopted. Hence, Figure 2.2 provides a summary of the external contingencies which may be taken into account and which facilitate cost accounting practice in CAM organisations by the practitioners.

This theory argues that there is no appropriate cost accounting system suitable for all organisations (Armitage, Webb, & Glynn, 2016). Alsharari and Abougamos (2017) found that the contingency theory is considered a dominant, theoretical, rational, open

system model in organisation theory with the assertion that contingency theory considers the environment in which an organisation operates.

Figure 2.3 below shows the contingency factors such as decision style, strategy, environment, structure, technology and other forces that if not taken into account, may affect the organisations. Hence, Figure 2.3 provides a summary of the contingency factors which need to be considered to facilitate the cost accounting practice in CAM organisations.

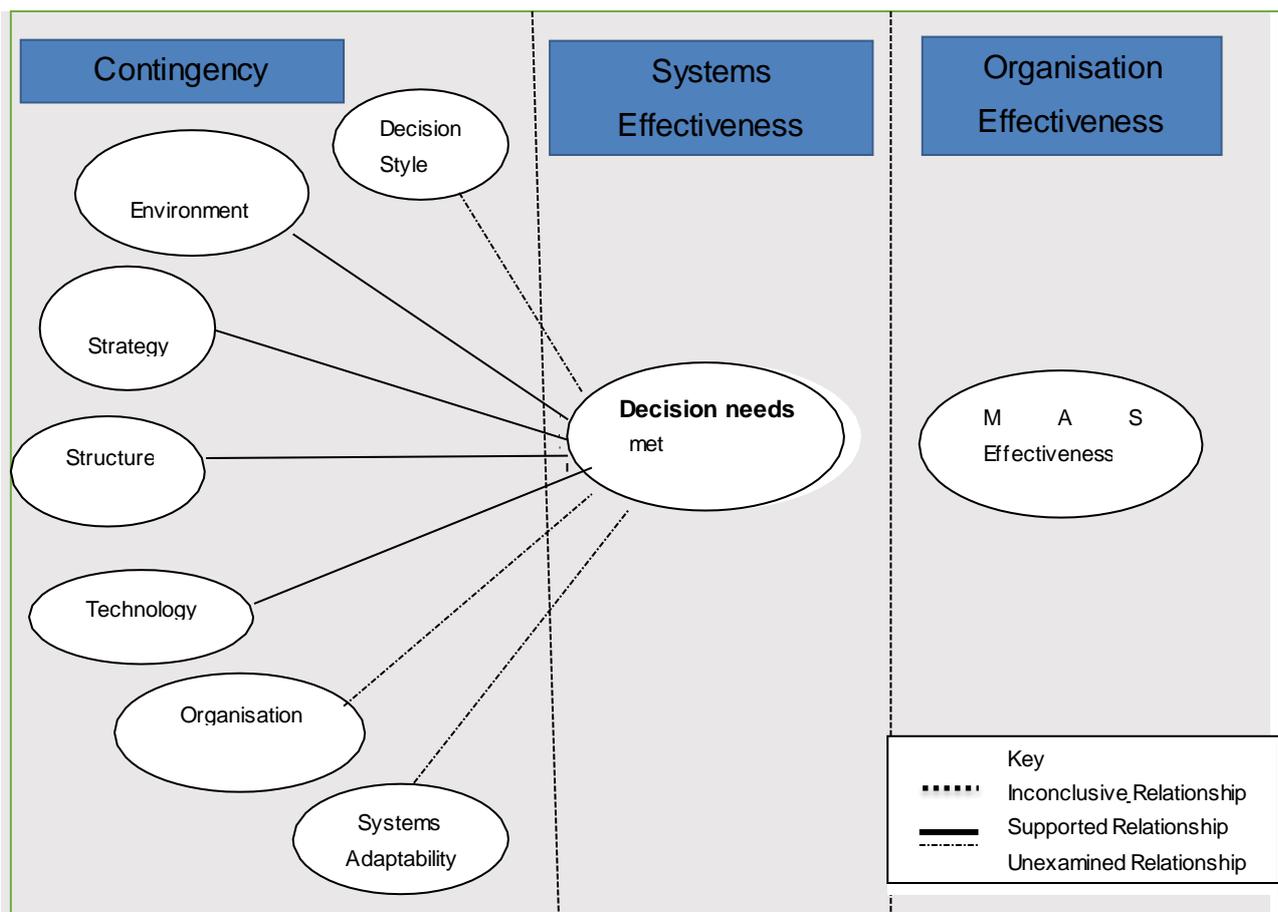


Figure 2. 3: Updated contingency framework (Screekumari, 2015)

Hall (2016) found that contingency theory assumes that the surroundings where the enterprise operates makes corporations realise that the use of an excellent cost accounting system will supply the employer with valuable data to help with effective selection. The contingency idea determines particular factors of the cost accounting

system that relate to described occasions and show an ideal matching (Islam & Hu, 2012; Hall, 2016).

Betts (2011) claimed that organisations will be influenced by internal and external environments and will be supported by different types of cost accounting systems. It is, therefore, advisable for management accounting researchers to identify the appropriate cost accounting methods that are suitable for African CAM healing. The research in contingency theory has had a long relationship in the study of cost management (Fatah, 2013). According to Ivančić, Mencer, Jelenc, and Dulčić, (2017) and Screeumari (2015), the contingent external environmental factors influence the design and the functioning of the organisations as in Figure 2.5. The contingency method to cost accounting is primarily based on the premise that no accounting practice applies equally to all corporations but instead relies on instances in which an organization operates (Otley, 2016).

Piersiala (2017) and Amara and Benelifa (2017) view contingent variables as internal factors such as technology, organizational aspects, and strategy; while the external factors point out the surroundings at the level of commercial enterprise that shapes the operation of the business. Therefore, using contingency theory will allow the researcher to effectively develop and demonstrate the costing model for the ACAM facilities and to enhance and improve the decision-making process.

2.3.2. Cost of Production Theory of Value

According to Ilegbinosa (2012), the cost or price is the worth of a commodity as a result of specific quantities of labour which are immediately or indirectly embodied in it. Rodríguez-Herrera (2014) describes the cost of production theory of value as the ultimate price of products and services. Costanza (2004) explains that value structures are the constellations of norms and precepts that inform human judgment and action. Rodríguez-Herrera (2014) and Costanza (2004) argue that price systems are the normative and moral frameworks that human beings use to assign significance and necessity to the beliefs and actions. Costanza (2004) and Peach (2009) contend that

due to the fact that cost structures structure how humans assign significance to things and activities; that is, they additionally imply internal objectives. De Araujo (2015) and Costanza (2004) found that price structures are thus internal to people; however, they are the result of complicated patterns of acculturation and may also be externally manipulated through, for example, advertising.

The fee of manufacturing idea of cost is one of the three theories first developed by Adam Smith in 1759 (Ormazabal, 2006 and Burns, 2017). Furthermore, because Smith was unable to decide the elements that govern carrier and product cost, he developed three different theories such as the labour price concept of value, the labour command theory of value, and the price of manufacturing concept of cost (Aurora, 2013). Furthermore, Larsen, Nilges, Robinson and Brown (2014) and Ormazabal (2006) determined that Smith's idea is considered as the sum of the natural fees of wages, profits, and hire that should be paid for inputs into the manufacturing of a service. The cost of production is based on the manufactured cost of the products and offering of the service (Rodríguez-Herrera, 2014).

Costanza (2004) and Kurz (2006) consider that the value of manufacturing has a long history in the study of manufacturing strategies of administration accounting. The price of the manufacturing a product or service is calculated through the full cost of assets used to provide the service (Hayes, 2015). Furthermore, according to Hayes (2015), this theory suggests that a suitable accounting machine relies on the situations in which the company operates (Hayes, 2015). Aurora (2013) determined that the cost of manufacturing includes the material, direct wages and salaries, direct expenses, overheads, high-quality control cost, lookup and development cost, packaging fee and the administrative overheads that relate to the production of a carrier or product. In arriving at the cost of the production of the items dispatched for consumption, adjustment for the stock of work-in-process, completed goods, recoveries for sales of scrap, and wastage will be calculated. Furthermore, Aurora (2013) discovered that the cost of production value theory aims to identify an accounting system which is associated with the circumstances of the organisation. The researchers currently have

to design the price of the production by using direct material, direct labour and manufacturing overheads as they attempt to explain the improvement of the fee accounting system practice (Kurz, 2006; Ormazabal, 2006; Ilegbinosa, 2012; Aurora, 2013). For example, Lee (2011) views the cost of manufacturing as the cost-price of producing the outputs and a gross profit margin. Furthermore, Sen (2010) and Chambers (2017) established that the manufacturing fee of cost includes product costing where the labour cost refers to the standardised use of fee accounting which is fundamental to acquiring the objective. Therefore the use of the cost of production idea of value will allow the researcher to efficiently improve and exhibit the ACAM costing model to enhance decision-making. The next section discusses the current research on the development of ACAM.

2.4. The Development of African CAM

This section discusses the origin of African CAM, precolonial centuries of African CAM, colonial centuries of African CAM, and post-colonial centuries of African CAM. This background knowledge is crucial for African CAM practitioners in the development, adoption and demonstration of a cost accounting practice model in African CAM.

2.4.1. The Origin of African CAM

Traditional medicine has been the only accessible and affordable primary and secondary health care service in South Africa and Africa (de Lange; 2017 and Nyundu; 2016) for most of the population. Every region has a form of traditional medicine, whether Chinese, African, Indian or Arabic. Egharevba et al. (2015) and Amoah et al. (2014) indicate that it is referred to as traditional because it is deeply rooted in a specific social-cultural context. In an African context, the resolution to promote the decline in mortality, an increase in life expectancy and the eradication of smallpox are the success stories of traditional medicines (Adamo, 2011 and Mokotso, 2015). Accordingly, the history of using traditional medicine and passing on such experience from generation to generation has demonstrated the safety and efficacy of traditional medicine (WHO, 2015). Furthermore, WHO (2015) found that missionaries and

colonialists have considered traditional knowledge as primitive and illegal in order to destroy and suppress the values and culture of traditional medicine.

2.4.2. The Precolonial Era of African CAM

Before the establishment of science-based medicine, African CAM was the dominant medical system for millions of people in Africa. However, the arrival of the Europeans was a turning point in the history of African CAM tradition and culture (Abdullahi, 2011). Petersen, Reid, Moll and Hockings (2017) discovered that during the pre-colonial centuries, clinics or hospitals were not available in rural areas, and people survived through the usage of traditional medicine. This indicates the importance of traditional medicine. This was the period where CAM practitioners and midwives practised their arts freely and were the sole guardians of the peoples' health. There is historical evidence of the use of ACAM among Africans, regardless of the available history which is unsystematic and incomplete (Adefolaju, 2014; McFarlane, 2015; Adamo, 2011; Mokotso, 2015; Egharevba et al., 2015; Amoah et al., 2014; Mbatha et al., 2012 and Wallace, 2015) discovered that the ACAM life of Africans before colonisation depended on the culture of traditional medicines for healing. During that time, Iseke (2013) and Idaewor (2014) found that there was a diverse culture that was well-kept and controlled and managed by societal and customary ACAM beliefs and culture. The community practice was by then, based on chieftainship administration. The chief allocates the land resources without tax or revenues but could be paid either by cattle or sheep for a title deed (Robbins and Dewar, 2011).

Chirwa (2016) states that before colonialization of African communities, that is, during pre-colonialism, Africa did not have states, but lived in different settlements from powerful nations to a sizeable group held together with similar health care approaches. Furthermore, de Lange (2017) found that illnesses were regarded as bad luck brought about by spiritual misconduct and prosperity. During the pre-colonial era, not adhering to the rules of life was understood to upset the ancestor's spirits (Wallace, 2015 and Chirwa, 2016). According to Chirwa (2016) and Mokotso (2015), this is due to Africans believing in an interaction between the ancestors and family members as only the body is dead and not the person's spirit.

Amoah, Sandjo, Bazzo, Leite and Biavatti (2014) found that these spiritual interactions were also regarded as a medical provider as opposed to herbalists who are non-spiritual. Egharevba, Ibrahim, Kassam and Kunle (2015) and Mokotso (2015) found that to be admitted to these initiation extraordinary capabilities had to be evidence of being capable of communicating with the dead or predicting the events of the future. Therefore, Chirwa (2016) and Nyundu and Naidoo (2016) found that in accessing the spirit of the dead, it means one has access to the superior knowledge of the ancestors. Therefore, one knows what is happening to the living and dead and becomes the watchdog of power, misfortune, bad luck, fate morality of the individuals.

Therefore, understanding the effect of precolonial centuries of ACAM will likely assist the African CAM practitioners to confidently adopt an ACAM costing model to capture the cost information of the services and products effectively.

2.4.3. The African CAM in the Colonial Period

In 1953, in South Africa, the Medical Association of South Africa declared alternative therapies illegal and unscientific. It included provisions in the medical code that prohibited co-operation between western medical practitioners and alternative practitioners. The Witchcraft Suppression Act of 1957 and the Witchcraft Suppression Amendment Act of 1970 was introduced to prohibit of CAM practitioners from practising. According to Adefolaju (2014) and McFarlane (2015), during the colonial era, the practice of traditional medicine was stigmatized and discouraged by religious missionaries and colonial authorities (Adamo, 2011; Mokotso 2015).

Under colonial rule, traditional diviner-healers were outlawed because they were considered to be practitioners of witchcraft and magic and declared illegal by the colonial authorities. Therefore, no investigation was done into legitimate medical practices, as many foreigners believed that the native medical practices were pagan and superstitious and could be fixed by adopting Western methods (Adamo; 2011 and Mokotso; 2015). During times of conflict, the opposition has been particularly vehement as people are more likely to call on the supernatural realm (De Lange, 2017 and Nyundu and Naidoo, 2016). Consequently, westernised practitioners continued to

shun ACAM practitioners despite contributing and playing an essential part in the primary health requirements of the population (Robbins & Dewar, 2011; Mbatha et al., 2012).

Petersen (2017) and Egharevba et al. (2015) indicate that the missionaries were brought in Africa to propagate trade while education, western culture, and medicine were introduced to lay the foundation of colonisation. They argued that the missionaries' significant contribution during pre-colonialism was to end the trading of slaves in Africa, practised effectively during the nineteenth century. Furthermore, Chirwa (2016) regarded this trading of people in Africa as the significant health care disaster and violation of human rights. Amoah et al. (2014) found that the trading of people disrupted family ties and subjected them to inhuman conditions. Those left behind encountered psychological and physical insecurity, social discord and socio-economic hardships. Chirwa (2016) found that Christianity accepted slavery as natural, but the missionaries abolished slavery and established schools and health care centres. Furthermore, De Lange (2017) discovered that education was intended to allow African to move out of traditional customs, beliefs and ignorance while, the health care centers, were designed to replace traditional medicines.

Chirwa (2016) discovered that during colonisation, the European powers came to partition Africa during the years 1884 and 1885 of the Berlin Conference that resulted in dividing Africa into states with no complex formation of political organizations. Adefolaju (2014) also find that colonial law criminalized African medicine by criminalising the practise of traditional healing as witchcraft. Iseke (2013) and Idaewor (2014) found that this colonial law intended to suppress the beliefs of the African and to outlaw the business of ACAM practitioners, and effectively promotes Western medicinal, cultural beliefs. Idaewor (2014) and McFarlane (2015) found that this was achieved by establishing health centres far from local communities on elevated locations that would be difficult to access and through segregating health centres based on race. Adamo (2011) and Mokotso (2015) point out that this resulted in the manifestation of discrimination in the health care services between Western and ACAM facilities. Chirwa (2016) and Nyundu and Naidoo (2016) found it painful that the colonial governments established schools for medicines in Africa and trained Africans

as assistants to European health practitioners but did not impart skills and knowledge that would enable the Africans to practice medicine. Chirwa, (2016) and Nyundu and Naidoo, (2016) discovered that the African practitioners improved their experience and skills, and at the end gained the necessary respect of the colonial medical personnel between the 1940s and 50s.

Therefore, understanding the effect of the colonial period on ACAM will likely assist the ACAM practitioners to confidently adopt an ACAM costing model to capture the cost information of the services and products effectively.

2.4.4. The Post-colonial Period of African CAM

During postcolonial era, especially at the beginning of 1990s, ACAM practitioners were allowed to practice by abolishing Acts such as the South African Health Act 19 of 1974, the Associated Health Service Professions Act 63 of 1982, and the Witchcraft Suppression Act of 1953, which excluded ACAM practitioners from registering and practicing with the South African Medical and Dental Council. During this period, the government acknowledged the practice of traditional health practitioners and were included in the national health care system. Immediately after the 1994 general election, the government started negotiating with the organised association of traditional health practitioners to include them in the health care system (Mokotso, 2015). Even though the South African Government recognised the health care practitioners, the ACAM practitioners are to date unable to claim on medical aid schemes and recognition on issuing of medical illness certificates such that registered ACAM practitioners could benefit similar to the western practitioners on medical insurance schemes.

The independence period brought a gradual change in the use of traditional medicines and the acceptance of the ACAM medicines through recognition, official status, harmonization and collaboration. WHO (2015) reflects that traditional practitioners' practices continued to flourish in rural areas by the upliftment of African traditional medicine. Mafuva and Marima-Matarira (2014) explain that some African states have taken a leading role in conducting African traditional medicine through conferences

and celebrations such as the African Day of Traditional Medicine, which is held every August aimed at informing policy formulation. Developing countries have begun to realise the high costs of modern health care systems and the population's dependence on traditional medicines (De Lange, 2017). This interest in using traditional medicines has recently been expressed in the integration of traditional African medicine into the continent's national health care systems (Petersen et al., 2017). traditional healers in South Africa responded by building a 48-bed hospital in Kwa-Zulu Natal, which combines traditional methods , homoeopathy, iridology, Western healing methods and the traditional Asian medicine (Chirwa, 2016).

Van Wyk (2011) and Siegfried and Hughes (2012) found that few traditional medicines have been adequately researched and it is thus not possible to know which ones have health-promoting potential or regarding its interactions, whether it has a positive or negative effect. Because of this, the government is collaborating with the Medical Research Council and the Council for Scientific and Industrial Research (CSIR) to evaluate traditional medicines. Van Wyk (2011) and Siegfried and Hughes (2012) found that in 2003, the CSIR instituted a reference centre, the Institute for African Traditional Medicines, to screen about 24 000 ACAM medicines. Mafuva and Marima-Matarira, (2014) and Siegfried and Hughes (2012) found that the Traditional Health Practitioners Act of 2007, recognises and regulates CAM practice. Thereafter, as part of an agreement reached in 1999, about 500 plants are being investigated for scientific validation (Mafuva and Marima-Matarira, 2014). Therefore, understanding the effect of the postcolonialism on ACAM will likely assist the African CAM practitioners to confidently adopt an ACAM costing model to capture the cost information of the services and products effectively.

This section discussed the origin of African CAM and precolonial centuries of African CAM. Moreover, it discussed the colonial period of African CAM, as well as the post-colonial era of African CAM, which will be crucial in the development, adoption and demonstration of a cost accounting practice model in African complementary and alternative medicine.

2.5. Definition of African Traditional Healing

According to Mokgobi (2014) and WHO (2015), the definition of traditional healing is:

“the sum total of all knowledge and practices, whether explicable or not, used in diagnosing, preventing or eliminating physical, mental or social disequilibrium and which rely exclusively on past experience and observation handed down from generation to generation, verbally or in writing and health practices, approaches, knowledge, and beliefs that incorporated plant, animal and the mineral-based medicines, the spiritual therapies, the manual techniques and the exercise that are applied in singular or in combination in order to treat, diagnose and prevent illnesses and maintain human well-being”.

The literature related to traditional healing indicates that traditional healing has many meanings, including being a holistic approach to medicine based on the premise of whether the traditional practitioner understands the diseases as a spiritual, social disorder and misalignment and which is found in the internal and external human body (Mbatha et al., 2012). Furthermore, Ndzimande, Sibiyi and Gqaleni (2014) and also Tavares (2016a) found that in traditional healing users are made up of many levels of morality, socially, physically and spiritually, and the absence of these levels results in the person becoming physically ill and suffering spiritually. The ACAM practitioner uses a different manner of diagnosis by observing, questioning as well as divination, dream interpretation, and realigning the patient to the origin of their ailments to rebalance their disorder (Eteng et al., 2014, Staniferet et al., 2015; Zondi & Ntshangase, 2013). Abdullahi, (2011) found that traditional healing is one of the oldest health care systems practised by humans as an ancient and culture-bound method of healing which has been used to cope and deal with various diseases that have threatened their existence and survival.

Researchers and scientists have not been able to determine when traditional healing formally started and agree on its definition. Furthermore, Abdullahi, (2011) found that colonialism, cultural imperialism and the apartheid system in South Africa have generally held back the development of African traditional medicines in particular.

2.6. African Complementary and Alternative Medicines (ACAM)

This part discusses the definition of ACAM, the characteristics of ACAM, the challenges of ACAM and the importance of ACAM which will be crucial in the development, adoption and demonstration of cost accounting practice model in ACAM.

2.6.1. Definition of ACAM

Several terms are used to describe African complementary and alternative medicine. The different terms include holistic medicine, complementary medicine, natural medicine, traditional medicine, natural therapies, natural medicines, traditional healing and alternative medicines. In this study, the term traditional healing and complementary and alternative medicine will be used interchangeably.

Mbada, Adeyemi, Adedoyin et al. (2015) and Tavares (2016b) regard African CAM as inconclusive and that it varies in different contexts. Abdullahi (2011) found that traditional medicine referred to as ethnomedicine, folk medicine, native healing, or African complementary and alternative medicine (ACAM), and it is regarded as the oldest form of health care system that has stood the test of time. African CAM has been described as diagnosis, treatment, and prevention which complement mainstream medicine by contributing to the collective health care and satisfy the demands not met by orthodox medicine, or the conceptual frameworks of medicine (Kutch, 2016). While relatively new in South Africa, it has been officially and partially recognised. African CAM is viewed as an entirely accepted and integrated form of health care in many areas of the world and has existed since antiquity (Kutch, 2016).

Furthermore, Hollenberga, Lytleb, Waljic and Cooley (2013) regard complementary medicine as alternative approaches used in combination with conventional medicine, while alternative medicine is used in place of conventional medicine. Herman, Poindexter, Witt, Eisenberg (2012) pointed out that integrative medicine is viewed as the evolution of ACAM. Ros, Le, McPake and Fustukian (2018) regard traditional medication as a classification that includes a comprehensive traditional medication for middle and lower-income customers. Sarris (2012) found that ACAM in the countries

with high-income promotes a philosophy of the relationship between the patient and the physician as well as utilising evidence-based African CAM therapy in combination with conventional medicine.

Mahomoodally (2013) and Gureje, Nortje, Makanjuola, Oladeji, Seedat and Jenkins (2015) regarded traditional medicine as the sum of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve, or treat physical and mental illnesses. Traditional African medicine includes self-discipline that holistically involves African spirituality through the use of traditional plants by the herbalist's diviners and midwives. Accordingly, Mahomoodally (2013) and Street and Prinsloo (2013) discovered that the practitioners of traditional African medicine claim to cure various and diverse conditions that includes cancers, psychiatric disorders, high blood pressure, cholera, most venereal diseases, epilepsy, asthma, eczema, fever, anxiety, depression, benign prostatic hyperplasia, urinary tract infections, gout, and healing of wounds and burns and even ebola. WHO (2015) regard gives a widely recognised definition for African CAM as a diversified health approach, practices, beliefs, and knowledge that incorporates animals, plants, spiritual therapies, manual techniques, and mineral-based medicines which are applied and combined to prevent, treat and diagnose the illness.

2.6.2. The Characteristics of ACAM

CAM 2020 (2014) developed characteristics for the implementation of complementary and alternative medicines (ACAM) approach. It is pointed out that the attainable characteristics, including a traditional healing practice, depends on seven characteristics: holistic approach; health as a dynamic rather than static state; assisting the person's innate healing capacity; individualised healthcare and treatment; salutogenesis; therapeutic relationships; and prevention, self-care, health literacy and patient empowerment. Moreover, CAM 2020 (2014) finds several characteristics of the African CAM approach to healing. They include:

Holistic approach: Most complementary and alternative medicine practices are based on a holistic or whole-person approach, where the physical, mental, emotional, and spiritual elements of an individual are interconnected to maintain or regain wellness and health (CAM 2020, 2014). Holistic approaches focus on the whole person rather than just on the illness or a diseased part of the body (CAM 2020, 2014). They fully involve the patient in the diagnosis and management of his/her illness (CAM 2020, 2014). Many aspects of a patient's life may influence a health problem, and understanding the 'whole individual environment' helps to develop a successful treatment plan. Holistic therapy aims to restore the harmony of body, mind, and spirit (CAM 2020, 2014).

Health as a dynamic instead of static state: Homeostasis, as currently defined, is an automated process by which biological systems maintain stability while adjusting to changing conditions (CAM 2020, 2014). This concept explains how an organism can maintain more or less constant internal conditions that allow it to survive in the face of a changing and often hostile external environment (CAM 2020, 2014). When confronted with physiological and mental/emotional stress, a healthy organism can mount a protective response, to reduce the potential for harm, and restore an adapted equilibrium (CAM 2020, 2014). If this coping strategy is not successful, an illness may result. This perspective on health and disease is a central approach of the African CAM and has lately gained acclaim in a mainstream medical journal in the face of social, physical, and emotional challenges (CAM 2020, 2014). Rather than health being defined solely as the absence of disease, the focus is on resilience or the capacity to cope, which maintains and restores a person's integrity, equilibrium, and sense of wellbeing (CAM 2020, 2014).

Assisting the person's innate healing capacity: Human beings are considered as a whole, adaptable living systems whose innate constitutional vitality and resistance to disease can be stimulated, supported and strengthened to maintain or regain health (CAM 2020, 2014). African CAM therapies are mainly directed towards reinforcing the resilience, resistance and immune status of the individual concerned, thereby reducing the susceptibility to illness and disease as well as addressing any already existing

disease process (CAM 2020; 2014). African CAM approaches are not limited to merely addressing certain diseases but are universally applicable to patients suffering from all kinds of diseases (CAM 2020; 2014). Such treatment can be used complementary to conventional medical intervention that is more disease-focused (CAM 2020; 2014).

Individualised healthcare and treatment: African CAM therapies vary to suit individual needs instead of being used to treat specific diseases regardless of the individual who is suffering; the focus is on treating the person rather than the condition (CAM 2020, 2014). Taking account of the patient's constitutional nature and social context, as well as the individual response to any affliction, enables the doctor/practitioner to adjust and individualise the treatment strategy throughout treatment for optimum effect (CAM 2020, 2014). A more individualised approach has lately also been acknowledged in mainstream medicine (CAM 2020; 2014). It has become known as 'personalised medicine', which however more narrowly refers to molecular biologic specifications in individuals rather than to a response to individual patient needs as is understood in the concept of person-centred medicine. (CAM 2020; 2014).

Salutogenesis: This is a term discovered by Aaron Antonovsky, who was a professor of medical sociology (CAM 2014). This term describes an approach focusing on factors that support human health and wellbeing, rather than on factors that cause disease. More specifically, the 'salutogenic model' is concerned with the relationship between health, stress, and coping (CAM 2020, 2014). Salutogenesis explore reasons why other people stay healthy in hazardous environment while others with similar pathogenic factors fell ill (CAM 2020, 2014). Thus the ultimate objective of health promotion is to highlight and facilitate the essential prerequisites for maintaining health. While this approach is only applied in a limited fashion, if at all, within the biomedical practice, it is central to the African CAM perspective (CAM 2020, 2014).

The therapeutic relationship: A positive functioning partnership between the patient and the healthcare professional engages the patient's innate healing capacity and provides motivation to make healthy lifestyle changes (CAM 2020, 2014). Such a positive therapeutic relationship should not be dismissed as a 'placebo effect' or a

'good bedside manner'. In their encounter with African CAM providers, citizens particularly value the following. First, empathetic communication in consultations with more time available than in biomedical encounters (CAM 2020, 2014). Secondly, involvement in their care through participation in decision-making about their treatment options and the provision of self-help strategies. Third, a whole-person approach and person-centred healthcare. Lastly, explanatory frameworks within which to explore health and illness, which are frequently congruent with citizens' ideas about health and illness. Patients report a high satisfaction rating from this kind of encounter (CAM 2020, 2014).

Prevention, self-care, health literacy, and patient empowerment: Staying healthy and preventing disease requires the development of personal responsibility and involvement (CAM 2020; 2014). The concept of self-care requires a conscious focus on and understanding of one's physical, mental and emotional state and the ability to take corrective action when necessary (CAM 2020; 2014). Helping patients to develop sufficient levels of self-awareness and the know-how required to change unhealthy patterns of behaviour to improve their health is remarkably empowering for the patient. In the first instance, this will enable a person to self-correct a relatively minor health problem (CAM 2020; 2014). If the condition is considered severe, it may be necessary to consult a healthcare professional who can work with the patient to take the steps required to recover. In this way, the patient is not a passive participant; the patient and healthcare professional cooperate as partners (CAM 2020; 2014).

Therefore, understanding the influence of the characteristics of ACAM will likely assist the African CAM practitioners to avoid the pitfalls of adopting an ACAM costing model to capture the cost information that includes the services and products.

2.6.3. The Challenges of African CAM

To efficiently compete in the global and domestic markets, African traditional healing is encouraged to capitalise on outward investment opportunities, adopt first-class commercial enterprise practices and be extra resilient in the face of higher competition (Bordogna, 2015). African traditional healing has ventured into newly identified

sources of monetary wealth, such as medicinal products and services (Bordogna, 2015; Tavares, 2016a). Since human capital development is expected to spur the development of business startups and increase the supply of skilled and knowledge workers, African traditional healing need to improve on capacity and capability by investing in appropriate technologies and intensifying the ongoing training of human resources (Bordogna, 2015).

In 2006, the South African government took steps to officially recognize and institutionalize the African traditional medicines by establishing the directorate of African traditional medicines. This was done through coordinating and managing the institutionalisation of the African traditional medicines within the department of health and to establish the traditional health practitioner's council. Furthermore, funding for research and development was made available by the government for African traditional medicines in order to control and manage the mortality rate (Department of Health, 2008).

The knowledge of financial management is still regarded as the most crucial need of African traditional healers. The ACAM practitioners have a desire to to be better equipped to understand the financials of ACAM and be aware of available financial options (Zimba, 2014; Bordogna, 2015). In determining the challenges faced by traditional healing practitioners; Zimba, (2014) and Bordogna, (2015) discovered that they faced financial challenges in their practices. The traditional healing practitioners maintained that finances constituted one of the main challenges to their practices and hindered their ability to treat their patients effectively. The financial problems were primarily the result of patients who seek help without having money to pay for treatment. In this research, Zimba (2014) reported that the patients promise to pay later, but once they have money, they do not come back to pay for the treatment. In this study, Zimba (2014) reported that financial problems were not caused only by patients who did not pay for their services. The traditional healing practitioners often lacked the money to buy medicines from chemists or to buy medicinal plants from suppliers of traditional medicines, and this could lead to their having to close their practices owing to financial problems. The African traditional healer faces cash flow

problems because of raw material costs, labour and overhead costs, especially in the manufacturing facilities or organisations (Bordogna, 2015).

Sarris (2012) and Tavares (2016a) identified the following essential challenges found in ACAM.

- One crucial challenge is the intensive research required in ACAM, to balance communication and appraisal in the ACAM environment (Sarris, 2012 and Tavares 2016a).
- Sarris, (2012) and Tavares, (2016a) found that the current challenges for the clinicians and the public are to accept the ACAM evidence in selective potential publications with the results that indicate differences in product quality and standardisation, and other medicinal organisation's claims that are not substantiated (Sarris, 2012 and Tavares, 2016a).
- Sarris (2012a) reveals that the other challenge is the improvement of confidence among the community in the ACAM industry where companies must publish all results and make claims that are capable of being substantiated. Additionally, the provision of protection of the intellectual property to the ACAM companies will encourage more critical investment in research where it is more critical as additional accountability of the research results is necessary (Sarris, 2012; Tavares, 2016a).

Furthermore, Mander et al. (2007) and Bussmann (2013) discovered that despite these challenges, ACAM healers proceed to invest and enlarge operations in the health care offerings in South Africa and around the world. The steady elimination of market distortions by African governments and proper functioning of markets would incentivise ACAM to move up the value chain and be better organized to face, institutionalisation, globalisation and liberalisation and grow to be more competitive (Mander et al., 2007; Bussmann, 2013). In conclusion, the South African Government has been supporting and continues to support and effectively develop ACAM to be a more robust and recognisable health care service.

Mander et al. (2007) and Bussmann (2013) identified future challenges of ACAM specifically in South Africa to traditional medicine consumers, traditional medicine traders, pharmaceutical manufacturers, Laissez-faire manufacturers, and Western health care practitioners. The challenges in the ACAM industry are described below.

Traditional medication consumers: Mander et al. (2007) and Bussmann (2013) found that about 27 million customers of traditional medication will have diminishing access to relatively valued plants and regular treatments. Those searching for better and more merchandise will have little alternative but to purchase packaged traditional medicines over-the-counter with questionable efficacy and safety (Mander et al. 2007; Bussmann, 2013).

Traditional medicinal traders: There is likely to be less trade-in high-value plants with a declining market share, and more people will be trading lower value plants. There will be more international imports of highly valued plants from neighbouring countries, such as Mozambique, Zambia and Swaziland (Mander et al. 2007 and Bussmann, 2013).

Pharmaceutical manufacturers: Mander et al. (2007) and Bussmann (2013) found that one of the ACAM challenges is that large producers are unlikely to be engaged in research and development of the trading of plants and other medications while they remain unsure of the security of the intellectual property of their research findings. They will also be unlikely to strengthen products and markets of the usual drugs for fear of litigation around dangerous products. They may also shift manufacturing to neighbouring international locations like Botswana and Swaziland, which have more favourable CAM manufacturing rules (Mander et al. 2007; Bussmann, 2013).

Laissez-faire manufacturers: According to Mander et al. (2007) and Bussmann, (2013) This group will probably proceed to multiply while they operate without research and development costs with little concern of litigation of unproven claims (Mander et al., 2007; Bussmann, 2013).

Western health care practitioners: Mander et al. (2007) and Bussmann (2013) found

that there is little improvement in the current industry or the standard remedy practice. Western practitioners will have to learn to work with the positive or negative impacts of ACAM medicines. Additionally, Mander et al. (2007) and Bussmann, (2013) discovered that to engage with the possible changes in CAM remedy practice, especially the exchange in over-the-counter drug treatments with unknown quality and disbursed by using uneducated ACAM practitioners (Mander et al. 2007; Bussmann, 2013).

WHO (2015) and Bussmann, (2013) observed that in maximising the viability of ACAM medicines as a source of health care, the following challenges need to be addressed: policy, safety, efficacy and quality, access, and rational use.

Policy: Few nations have developed a policy on ACAM drug treatments. The purpose of such policies is to outline the role of standard drugs in national health care delivery, making sure the regulatory and legal mechanisms are created for promoting and preserving a quality practice. This entails getting honest admission, and that the authenticity, safety and efficacy of treatment options are assured (WHO 2015; Bussmann, 2013). Those policies also make individual satisfactory provision of monetary sources for research, schooling and training (WHO 2015; Bussmann, 2013). Many of the developed countries are issuing insurance policies on the protection and first-class standard of medicines, and present licensing, training, and research. The need for a countrywide coverage that governs the ACAM drug treatments is needed urgently, as the creative international locations have built-in the ACAM drug treatments in the countrywide health care system (WHO 2015; Bussmann, 2013). These countrywide policies will have the benefit of facilitating the improvement and implementation of internationally prevalent norms and requirements for research into the safety and efficacy of standard drugs, which are sustainable medicinal plants. The policies offer protection and fair use of the indigenous and ACAM remedies (WHO 2015; Bussmann, 2013).

Safety, efficacy and quality: The ACAM drug practices have been developed within different cultures alongside the parallel development of standards and methods (World Health Organisation, WHO, 2015; Bussmann, 2013). The ACAM's effectiveness, and

safety cannot be easily recognised due to lack of research in ACAM medicines, resulting in limited data and inadequate methodology (WHO 2015; Bussmann, 2013). Although many ACAM medicines have potential and are increasingly used, the majorities are untested and not monitored (WHO 2015; Bussmann, 2013). After that, the expertise of side-effects is confined and makes identification of a safe, effective remedy extra challenging and promotion of rational use (WHO 2015; Bussmann, 2013).

Access. Many people in developed and developing countries depend closely on ACAM medicines to help meet their health care wishes even though unique statistics are lacking (WHO 2015; Bussmann, 2013). Research to verify the access financially and geographically in order to free it from the constraints of extending the accessibility of typical drugs is continuing (WHO 2015; Bussmann, 2013). The center of attention has to be on redress for those illnesses which represent the considerable burden on poor households and provide access based on primarily individual products and therapies (WHO 2015; Bussmann, 2013). Raw substances for ACAM medicines are on occasion over-harvested from wild plant populations with a significant challenge being the intellectual property and patent rights (WHO 2015; Bussmann, 2013). The monetary advantages that can be accrued from the large-scale application of ACAM treatments information can be substantial to the benefit of ACAM practitioners (WHO 2015; Bussmann, 2013). The questions of how best these benefits can be shared between innovators and the holders of ACAM medicines information have not been resolved (WHO 2015; Bussmann, 2013).

Rational use: The rational use of common traditional drug treatments entails components such as the qualification and licensing of providers; appropriate use of products of a certain quality; good communication between drug treatment providers, allopathic practitioners and patients; and the provision of scientific data and practice for the public (WHO 2015; Bussmann, 2013). The challenges in education and training are two-fold. Firstly, through making sure that the knowledge, skills, training and coaching of ACAM medicine providers are adequate, and secondly, the usage of education to make sure that standard drug providers and ACAM medical practitioners understand and respect the complementary kinds of health care on offer (WHO 2015;

Bussmann, 2013). The improper use of these conventional medicines causes more significant dangers and risks related to ACAM medicine such as natural medicines (WHO 2015; Bussmann, 2013). The legislation and registration of natural drugs are no longer well developed in many countries resulting in the quality of herbal products bought not being assured. More work is needed to elevate the awareness of the use of ACAM medicines, and if not advised, the motives for using ACAM products become essential (WHO 2015; Bussmann, 2013).

Hence, concerning the services mentioned above, there is an indication that applying cost accounting in the manufacturing and service processes as applied by both private and public sector will improve ACAM product and services costing and pricing. The next section will briefly discuss the definition of African traditional healing before examining the structure of the African traditional healing sector in South Africa.

Therefore, understanding the challenges of African CAM is likely to assist the ACAM practitioners to understand the benefits of adopting an ACAM costing model to capture the costing data of the services and products. The next section will briefly talk about the importance of African CAM in South Africa

2.6.4. The importance of African CAM

According to WHO (2015) and Ekor (2013), African CAM constitutes a variety of organisations in developed countries and creates economies around the world. On average, this industry comprised over 80% of the population in both developed nations and developing countries. For example, its utilisation is 48% of the population in Australia, 31% in Belgium, 70% in Canada, 49% in France and 42% in the USA (WHO, 2013; Ekor, 2013). Similarly, in Africa, ACAM restoration by the utilization of medicinal products accounts for more than 80 per cent of the populace (WHO, 2015; Ekor, 2013).

WHO (2015) and Ekor (2013) further revealed that the large numbers of African standard healing in several countries is to be expected as it offers a range of advantages in primary health care. Pathak and Das (2013) and White (2015) recognise that the following are the most significant contributions to the recovery of illnesses.

White (2015) and Pathak and Das (2013) also discovered that the first and the most crucial contribution of ACAM is the availability; it is inexpensive and used amongst low and middle-income users. White, (2015) and Pathak and Das (2013) further found that the intensive survey carried out in 1998 revealed that in Ghana, Mali, Nigeria and Zambia, almost 60% of children with high fever are treated with ACAM medicines at home with no adverse effect (White, 2015; Pathak & Das. 2013).

White (2015) and Pathak and Das (2013) found during their studies that various contributions of ACAM healing procedures concern security and effectiveness, and are based totally on pharmacopoeias, ACAM therapies, and a scientific journey through which knowledge has been accrued over hundreds of years ago. An increasing number of scientific studies assist the use of specific African CAM therapies such as treatment for pain; the resulting comfort having been proven through medical trials and laboratory experiments (Ekor, 2013; White, 2015). Another instance is artemisinin, a new antimalarial medicine which is purified from a historically used medicinal plant and different treatments prescribed for reducing signs of benign prostate hyperplasia (White, 2015; Pathak & Das,2013).

White (2015) and WHO (2013) discovered that ACAM therapies cause fewer harmful activities than conventional therapies such as remedies of ACAM medicines. The consensus issued by the institutes of health panel on acupuncture assertion that the incidence of adverse consequences is shallow and frequently decrease than for ACAM remedies (White, 2015; WHO, 2013).

Ekor (2013) and WHO (2013) ascertained that the reason patients turn to ACAM for complementary care is the increasing cases of continual and debilitating ailments for which there is no cure, such as HIV/AIDS and cancer. As a result, the United Nations on AIDS advocates an effective collaboration with ACAM practitioners in AIDS prevention and care in sub-Saharan Africa (WHO, 2013).

Pathak and Das (2013) regard the benefits of ACAM as including diversity, flexibility; availability and affordability in many parts of the world; its tremendous acceptance in low- and middle- earnings countries; its comparatively low cost; and the enormously

low degree of technology. Furthermore, Pathak and Das (2013) view ACAM treatment being able to contribute to a better health care system in many countries around the world. However, there is a need for amplified research to improve the evidence regarding the efficacy of most ACAM therapies (Pathak & Das, 2013). The measures that are necessary to facilitate research efforts consist of the recognition of ACAM, an increase in funding for research, development of necessary research techniques for evaluating some of the ACAM therapies, and the improvement of systems for intellectual property rights safety (White, 2015).

Therefore, given the importance of the African CAM sector and as by it is attracting interest from policymakers and governments, the African CAM practitioner's adoption of costing practice is likely to improve both the services and product pricing.

2.7. African CAM Health Practitioners in South Africa

This section discusses the definition of African CAM health practitioners, types of African CAM health practitioners, and services provided by the African CAM practitioner in South Africa. As such, appropriate pricing of services of African CAM practitioners which will be crucial in the development, adoption and demonstration of the cost accounting practice model in African complementary and alternative medicine.

2.7.1. Definition of African CAM Health Practitioners

ACAM Health Practitioners exist in all cultures, and their widespread presence in developing countries is well documented (Merriam & Muhamad, 2014). Tshela (2015) defines a CAM Health Practitioner as a person who is registered by this Act in one or more of the categories of ACAM health practitioners. African Traditional Practitioners who, fulfils one-of-a-kind social, monetary and political roles in the community. These include divination, restoration of physical well-being, treating emotional and spiritual illnesses, directing birth or death rituals, finding lost cattle, protecting warriors, counteracting witches, and narrating the history, cosmology, and myths of their tradition. Chitindingu et al., 2014; Ibrahim et al., 2014). There are two essential types of CAM Health Practitioners within the Nguni, Sotho, Tswana and Tsonga people such

as the diviners or sangomas, and the herbalist or inyanga

2.7.2. Types of African CAM Health Practitioners

According to Tshehla (2015), there is the possibility that the actual numbers of ACAM Health Practitioners in South Africa were underestimated. Chitindingu et al. (2014), Ibrahim et al. (2014) and Sibley, Sipe, Brown, Diallo, McNatt and Habarta (2007) indicate that CAM Health Practitioners are categorized into four exclusive kinds of functions performed.

Diviners: Diviners are the most vital intermediaries between human beings and the supernatural. Unlike herbalists, no one can become a diviner through non-public choice. The ancestors name them, and they regard themselves as servants of their ancestors. According to Ibrahim et al. (2014), the diviners concentrate on diagnosing the unexplainable by analysing the reasons for particular occasions and interpret the messages of the ancestors. They use divination objects, and they explain the mysterious use of their specific mediumistic powers. Their vocation is commonly that of divination; however, they regularly additionally provide the medication for a specific case they have diagnosed. Obinna (2012) discovered that diviners treat illness primarily through facilitating the direct intervention of the spiritual world. Asamoah-Gyadu (2014) explains that whilst herbal healers use flora to deal with diseases, diviners seek input from the spiritual world to understand the reason for the sickness and prescribe a cure.

Herbalists: Ibrahim et al. (2014) contend that the herbalists are regular people who have obtained a good knowledge of magical techniques. They diagnose and prescribe medicines for illnesses, and stop or alleviate misfortune and evil by protecting consumers against witchcraft and misfortune, and prescribe or give them something which carries prosperity and happiness. In the healing practices of herbalists, empirical knowledge plays an important role, as they can diagnose certain illnesses with certainty and prescribe 'restoration' herbs for those illnesses. According to Chitindingu et al. (2014), the traditional herbalist's understanding of healing includes preventive and prophylactic treatments, rituals and symbolism as well as preparations for luck

and constancy; whilst others treat solely one disorder and turn out to be experts on that disease

Prophets or belief healers: In their prognosis and therapy of a patient, prophets and faith healers use prayers, lit candles or water as treatment and the affected person automatically becomes a member of the church to which the belief healer belongs. The prophets or faith healers use a combination of herbs, treatments and holy water in their cure while their restoration device is mounted on the sangoma group sample where the afflicted stay for months and every so often years, at the prophet's dwelling (Chitindingu et al., 2014)

Traditional birth attendants: Traditional birth attendants serve the communities placed in remote and faraway areas. The place where they are consulted is a matter of necessity due to the unavailability of Western health care services. They also render their offerings in urban or semi-urban communities, which, despite their exposure to Western health care services, might also still select ordinary beginner attendants. Although the information on the popularity of usual delivery attendants in South Africa is currently not available; nevertheless, they form a massive human aid element in the health and well-being sector. Chitindingu et al. (2014) determined that usual delivery attendants no longer require a fee for their services; however, donations in the shape of items are usually given, and they are invited to be guests of honour when, for example, the baby is named. However, some authors argue that the customary time for attendants to commence with their services is usually later in their lives; they are commonly old and non-literate. They can attend about 120 births per 12 months and entice consumers through word-of-mouth and acquire some remuneration for their services (Sibley et al., 2009; Tshehla, 2015).

Therefore, understanding and knowing the different types of African CAM practitioners will likely assist in adopting an ACAM costing model to capture the costing data of the services and products.

2.7.3. Services of the African CAM practitioner in South Africa

White (2015) ascertained that African traditionalists consider that there is solely one

Supreme God and also believe in ancestral spirits, with the trust that all are intertwined and in constant relationship with human beings. Furthermore, White (2015) determined that these spirits demand worship and possess supernatural powers with which they punish or reward their worshippers. Mbiti (2012) determined that in African traditional healing, the view about God is influenced by way of geographical location, culture, language, social and political factors. Accordingly to Obinna (2012), God is the healer but works through spirits, herbs and deities with the help of ties deities with the help of traditional healers they recognize the healing method as holistic. This implies that the healer offers help to the whole person and offers a remedy for physical, psychological, spiritual and social symptoms. According to White (2015), the usual health practitioners do not separate the herbal or supernatural from the non-secular and physical and address illness issues as non-secular and physical troubles as discussed below. This implies that the healer offers help to the whole person and offers a remedy for physical, psychological, spiritual and social symptoms. According to White (2015), the usual health practitioners do not separate the herbal or supernatural from the non-secular and physical and address illness issues as non-secular and physical troubles as discussed below.

2.7.4. Spiritual issues

White (2015) and Mokgobi (2014) recognised spiritual-based issues as one of the offerings that are furnished by way of ordinary practitioners. It is carried out through spiritual protection, sacrifices, spiritual cleansing, appeasing the gods, exorcism, pouring of libation. The pouring of libation consists of 3 phases: invocation, supplication and conclusion.

Spiritual protection: This type of service is furnished once the typical healer observes the cause of the disorder to be an attack from evil spirits on the community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). When this happens, the individual would be covered with the aid of a talisman, or charm, and through the spiritually organized black powder to search for body marks. Amulets and non-secular are used in order to force the evil spirits away from the community (White, 2015; Robbins & Dewar, 2011; Kajawu 2017). These practices are used to chase off evil, unsafe

powers, spirits and other factors in order to remove or leave behind the evils or risks that may also have already taken root in a household or community (White, 2015; Robbins & Dewar, 2011). Kajawu (2017) observed that customers pick a traditional remedy over a current medicinal drug because traditional healers understand the culture, witchcraft, and other underlying supernatural causes.

Sacrifices: This is provided at the request of the spirits, gods, and ancestors through the slaughtering of animals or burying them alive (Obinna, 2012; Zuma, 2016). This can also be accomplished through the slaughtering of puppies or cats or burying them alive in the middle of the night to stop the family soul of the one at the threshold of death (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Dogs and cats are used to exchange the life of people because they believe that the spirit of such animals is potent for such a purpose (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). There is the additional view that because they are domestic animals and are very near to the people, they have the spiritual gift to sense when any person very close to them is about to die, and thus they give their lives for that man or woman (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). In such cases, the animal would die mysteriously, and it is therefore interpreted as someone was about to die, and the animal took that person's place in the community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017).

Furthermore, rituals are carried out in order to sanctify or consecrate herbs. Rituals consecrate these traditional African herbal medicines. If they are not consecrated, they are viewed as meaningless by African communities (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Therefore, the divine and ancestral sanctions are regarded as essential during the preparation and application of these medicines. (Robbins & Dewar, 2011; Tshehla, 2015).

Spiritual cleansing: In this type of service, the herbs are prepared for the person to bath in at unique instances for a variety of days (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Sometimes it can also be carried out through the slaughtering of an animal, and the blood would be poured on the head and foot of the sick person, and this blood serves as a way of cleansing (Robbins & Dewar, 2011; Tshehla, 2015).

Appeasing the gods: In this service, the diviner appeases the ancestors, spirits or the gods in accordance with the severity of the case, by sacrificing an animal or by the pouring of libation (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). In some instances, the man or woman would be informed to purchase the ritual articles for the process, as mentioned through the gods or the spirit community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). These rituals typically include for this purpose animal that is spotless or colourless such as doves, cats, dogs, goats, and fowl, or else traditional liquor or regular beer, or calico or fabric which may be red, white or black; every so often eggs and cola nuts are used (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). After the rituals, these articles are left at the required vicinity to rot, or they are thrown into a river as required by the god or the spirits community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). They are occasionally positioned on a four-way junction or the outskirts of the community, depending on the reason for the ritual (Robbins, & Dewar, 2011; Tshehla, 2015).

Exorcism: This service is completed in order to expel the demons or evil spirits from people or places that are possessed or are in danger of possession (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The person needs special religious authority to perform this ritual. It will be a priest or shaman in the community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The practise was common in historical societies and was once based totally on the application of magic. Some cultures would make a clay or wax image of a demon and destroy it in a ritual intended to destroy the actual demon in the community (White, 2015; Robbins & Dewar, 2011, Kajawu, 2017). Such rituals or rites were frequently practised in Egypt and Greece. Many religions in quite a number of parts of the world practise the ritual of exorcism' (Tshehla, 2015; Van Rooyen et al., 2015). This ritual is also performed for those who are mentally challenged. For instance, in Ghana, many of the traditional communities are of the view that evil spirits in general, cause intellectual illness (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). It is believed in this practice that until the possessed person is delivered from the strength of that evil spirit, the person will not have his or her freedom (Zuma, 2016; White, 2015).

Pouring of libation: This practice is a ritual where a liquid, often alcoholic liquid, is poured on the ground or occasionally on objects. This is followed by the chanting or reciting of prayer-like verses or utterances. The practitioner and his/her community regard these as prayers (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The liquid may be water, wine, whisky, schnapps or gin whilst some cultures use palm wine, palm oil, and coconut water (Robbins & Dewar, 2011; White 2015).

Invocation: With this service, the practitioners invoke the presence of the almighty God, through saying phrases such as “Almighty God, we show you drink; however, we do not give you drink ” (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). This is done because there is the assurance that all things on earth belong to God. Hence, there is no need for God to drink, whether water or alcohol, provided by a man or the community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Therefore, mother earth is offered a drink, and the ancestors are invited to come for a drink. The practitioners offer drink because, in African traditions, visitors or travellers are first welcomed with water or a drink. Accordingly, the practitioner’s libation pouring by offering a drink is a way to bid welcome to the ancestors and spirits (van Niekerk, 2014; White, 2015).

Supplication: In this phase of the service, the practitioners of libation requests the invoked spirits, gods or ancestors to work on their behalf and be merciful to them and their community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). They also ask the ancestors and the spirits to forgive all offenders of taboos, and they plead for spiritual cleansing of individual persons or the community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The purpose of the occasion for the pouring of libation determines the content of the prayer (Tshehla, 2015; van Rooyen et al., 2015).

Conclusion: Finally, at the end of the libation pouring event, the practitioners thank the invoked ancestors and spirits. After this, curses are invoked on those who wish them evil or failure (Obinna, 2012; White 2015). When offering up the prayer, it is imprudent to ask for the welfare of one's enemy (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Therefore, those who wish for evil things, witches, and people with evil

spirits, must fall and die (Obinna, 2012; White 2015). At this point, the man or woman pouring the libation would be pouring the liquid on the ground and reciting the prayers. At the end of each sentence uttered by the pourer, those attending would respond with “amen” (White, 2015; Mokgobi, 2014).

2.7.4.1. Physical issues

White (2015) and Mokgobi (2014) identified the following as some of the restoration offerings when the case or health problem is deemed to have physical causes. Those offerings are the prescription of herbs, the application of clay and herbs and lastly, counselling.

Prescription of herbs: This service, prescribing specific herbs, relies upon on the type of disease the individual presents with when consulting the practitioner (White, 2015; Robbins & Dewar, 2011). These prescriptions will provide particular guidelines on the preparation of the herbs, the dose and the timeframe (White, 2015; Robbins & Dewar, 2011).

Application of clay and herbs: In this service, the standard healer prepares white clay with several herbs for the ailing man or woman to paint or rub on their body for a few days (White, 2015; Robbins & Dewar, 2011). This is prescribed mainly for those with skin ailments with the view that the human physique is made out of the dust, and therefore, if the body has a problem, it has to return to the place it came from in order to fully restore the body (White, 2015; Robbins & Dewar, 2011). According to White (2015), this could be traced to Genesis 2:7, John 9:6 and Mark 8:22, where Jesus Christ blended spit and clay for healing. The use of clay and herbs is used as a preventative measure through distinctive herbs. The ailing person’s application of this distinctive herb mixed with clay on their body prevents the spirits behind the illness from striking down the affected person (White, 2015; Robbins, & Dewar, 2011).

Counselling: In this practice, the ailing individual is recommended on how to live life, the kind of food the individual needs to eat or which to avoid because it is classified as a taboo. Eating it would be deemed a violation of a taboo (van Rooyen et al., 2015; Van Niekerk, 2014). In addition, van Rooyen et al., (2015); and van Niekerk, (2014)

discovered that the ailing person is also advised during counselling to be well-behaved and practice African culture by participating in non-secular rituals and practices, and showing respect for families, neighbours and the community. White (2015) and Mokgobi (2014) recognise spiritual-based issues such as spiritual protection, sacrifices, spiritual cleansing, appeasing the gods, exorcism, pouring of libation, invocation, supplication and conclusion are provided through the practitioner, but God does the healing.

Spiritual protection: This type of service is provided once the typical healer observes the cause of the disorder to be an attack from evil spirits in the community (White, 2015; Robbins & Dewar, 2011). When this takes place, the individual would be swathed with the aid of the talisman or charm, through the spiritually organized black powder for body marks, amulets, and a non-secular tub in order to pressure the evil spirits away community (White, 2015; Robbins & Dewar, 2011). These are finished to chase away evil, unsafe powers, spirits and factors in order to take away the evils or risks that may also have already taken root in a household or community (White, 2015; Robbins & Dewar, 2011). Kajawu (2017) observed that customers pick traditional remedy over current medicinal drug due to the fact traditional healers understand the culture, witchcraft and other underlying supernatural causes.

Sacrifices: This provider is supplied at the request of the spirits, gods, and ancestors by slaughtering of animals and burying other animals alive (Obinna, 2012; Zuma, 2016). This can also be accomplished via the slaughtering of puppies or cats and buried alive at the middle of the night to shop the family soul of the one at the factor of death community (White, 2015; Robbins & Dewar, 2011). Dogs and cats are used to exchange the lifestyles of people, due to the fact of the trust that the spirit of such animals is more potent for such purpose community (White, 2015; Robbins & Dewar, 2011). There is additionally the view that, because they are domestic animals and are very close to the people, they have the religious gift to pick out that any person very close to them is about to die and provide their lives for that man or woman to live community (White, 2015; Robbins & Dewar, 2011, Kajawu, 2017). In such cases, the animal would die mysteriously and is therefore interpreted as someone was about to

die, and the animal took that person's place community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Furthermore, rituals are carried out in order to declare some herbs where these rituals will declare these traditional African drugs as medicinal drug besides declaring these African cultures as a meaningless community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Therefore, the divine and ancestral sanctions are regarded as integral earlier than and at some stage in the coaching and software of remedy (Robbins & Dewar, 2011; Tshehla, 2015).

Spiritual cleansing: In this type of service, the herbs are prepared for the person to bathe at the unique instances for a variety of days community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Sometimes it can additionally be carried out through slaughtering an animal, and the blood would be poured on the head and foot of the sick person, and this blood serves as a way of cleansing (Robbins & Dewar, 2011; Tshehla, 2015).

Appeasing the gods: In this service, the diviner appeases the ancestors, spirits or the gods in accordance to the severity of the case, by sacrificing an animal or by using pouring of libation community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). In some instances, the man or woman would be informed to purchase the ritual articles for the process, as mentioned through the gods or the spirits community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). These rituals typically used for this purpose are spotless or colourless animals such as dove, cat, dog, goat, and fowl, schnapps, akpeteshie or regular bear, calico which will be red, white or black and every so often use eggs and cola nuts community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). After the rituals, these articles are once in a while left at the required vicinity to rot or thrown into a river as required by the god or the spirits community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). They are occasionally positioned on a four-way junction or the outskirts of the community, relying on the reason for the ritual (Robbins, & Dewar, 2011; Tshehla, 2015).

Exorcism: In this service, it is completed in order to expel the demons or evil spirits from people or places that are possessed or are in danger of possession them community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). A character usually

performs this carrier with different on secular authority, such as a priest or shaman community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The practice used to be frequent in historical societies and was once based totally on the exercise of magic the place is performed to spoil a clay or wax image of a demon in a ritual intended to spoil the real demon community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Such service is frequent in Egypt and Greeks. Many religions in quite a number parts of the world proceed the exercise of exorcism'. (Tshehla, 2015; van Rooyen et al., 2015). This service is also performed for those who are mentally challenged. In Ghana, many of the traditional communities are of the view that evil spirits in general cause intellectual illness community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). It is believed in this practise that till the possessed person is delivered from the strength of that evil spirit, the character will not have his or her freedom (Zuma, 2016; White, 2015).

Pouring of libation: This practice is a rite by which a liquid, water or an alcoholic liquid, is poured on the floor or now and again on objects followed by the chanting or reciting of phrases which are regarded a form of prayer via the practitioners' community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The liquid should be water, wine, whisky, schnapps or gin whilst different cultures use palm wine, palm oil, and coconut water (Robbins & Dewar, 2011; White 2015).

Invocation: In this service, the practitioners invoke the presence of the almighty God, through saying phrases such as "Almighty God, we exhibit you drink; however, we do not provide you drink community" (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). This is carried out because there is a faith that all things on earth belong to God; hence, there is no want for God to drink alcohol supplied with the aid of man community (White, 2015; Robbins & Dewar, 2011). Therefore, mom earth is presented drink and call on the ancestors to come for a drink. The practitioners offer drink because in African traditional, each time there is a visitor, the traveller is first welcomed with water or a drink. Accordingly, the practitioner affords the ancestors and spirits drink in order to welcome the traffic (van Niekerk, 2014; White, 2015).

Supplication: In this service, the practitioners of libation through pouring existing the requests to the invoked spirits, gods or ancestors to act on their behalf and to have mercy on their community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The practitioners ask the ancestors and the spirits to forgive offenders of taboos and to be seeking for spiritual cleaning in the neighbourhood or individual's community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). The content material of the prayer depends many times on the motive of the occasion for the pouring of libation (Tshehla, 2015; van Rooyen et al., 2015).

Conclusion: At the end of the libation pouring, the practitioners thank the invoked ancestors and spirits by invoking the curses on those who want them evil or failure: In the procedure of the prayer, it is consequently unwise to be seeking for the welfare of one's enemy community (White, 2015; Robbins & Dewar, 2011; Kajawu, 2017). Therefore, those who wish evil such as enemies, witches, and humans with evil powers must fall and die (Obinna, 2012; White 2015). In this service, the man or woman pouring the libation would be pouring the liquid on the ground and recite the prayers. Moreover, those present would maintain responding "amen" at the quit of every sentence (White, 2015; Mokgobi, 2014). Failure to comply with these behavioural recommendations may also result in the suitable spirits withdrawing their blessing and protection and opens doors for illness, death, drought and other misfortunes (Robbins & Dewar, 2011).

Therefore, understanding the services of the African CAM practitioner in South Africa will assist the CAM practitioner in adopting an ACAM costing model to capture the costing data of the services and products.

2.7.5. Payment of Services of African CAM Practitioners

Traditional healers, like any other profession, are rewarded for their services. In African societies, the fee for therapy depends on its efficacy. The African CAM Practitioners do not request a fee until the therapy is given. This is another reason why many people prefer African CAM Practitioners to western medical doctors who require payment before the patient has been assessed or treated (Sarris, 2012; Gureje et al., 2015).

The payment techniques have changed over time, with many practitioners now asking for monetary payment, specifically in urban areas, as a substitute for receiving goods in exchange, as was the custom in precolonial centuries (van Rooyen et al., 2015; Gureje et al., 2015). White (2014) ascertained that clients of ACAM Practitioners make extra payments depending on the success of treatment.

The economic context in which the services of complementary and alternative medicines are sought in high-income countries is different from that of low and middle-income countries (van Rooyen et al., 2015; Zuma, 2016). Treatment received from ACAM Practitioners is generally regarded as more affordable with precise payment schedules which can often be flexible (van Rooyen et al., 2015; Zuma, 2016). The employment of outcome contingency contracts between patients and complementary and ACAM medicine providers may be an added incentive to seek care from the latter (van Rooyen et al., 2015; Zuma, 2016). Moreover, the main reason that people in the community choose African CAM Practitioners above allopathic medicine practitioners is for specific medical conditions (Gureje et al., 2015).

Therefore, understanding the payment of services of ACAM practitioner in South Africa will likely assist the ACAM practitioner in adopting an ACAM costing model in capturing the costing data of the services and products.

2.8. Production of African CAM

This section discusses the African CAM Expenditure in South Africa and African CAM medicinal land in South Africa. Besides, it discusses the traditional African CAM production processes, which are crucial in the development, adoption and demonstration of the cost accounting practice model in African complementary and alternative medicine.

2.8.1. African CAM Expenditure in South Africa

During the pre-colonial period, CAM in South Africa and Africa was the primary health care system before the advent of modern medicines (Masango, 2010). In supporting this view, (Kajawu, 2017) found that before the use of science-based practice, ACAM

was the dominant medical system, the majority of people in Africa. In South African consumers spent approximately R4 billion on traditional medicines while the worldwide traditional healing industry is worth over US\$ 83 billion annually, as estimated in 2008 (Health24, 2012).. South Africa subsidises CAM with billions of rands; the national treasury has spent about R30 million on the traditional healing council (Health24, 2012).

The global market for herbal products is estimated to be \$5 trillion by 2020 (Masango & Mbarika, 2015; Masango, 2010). Furthermore, Masango and Mbarika (2015) found that four out of ten people in the USA are using alternative medicine, even though all the costs are not covered by medical insurance. The sale of herbal products is almost 21 billion US dollars. In recent years, the increased demand for pharma products in Japan has tripled, whereas, for herbal products, the growth in demand is over 15-fold (Yen, Chang and Lin, 2013). Similarly, in the European Union, sales of herbal products rose from \$US1.6 billion to 3.3 billion in 1998. China and India are significant sources of medicinal plants, whereas China's sale of herbal products is 25 000 crore while India holds 1% of the global market of 500 crores (Masango, and Mbarika, 2015; Masango, 2010).

Mpinga, Kandolo, Verloo et al. (2013) observed that the economic contribution in ACAM in South Africa is estimated to be 2.9 billion rands which are about \$US 320 million per year, representing 5.6% of the national health budget. With 27 million consumers, the market for alternative medicine is widespread. Furthermore, Mpinga et al. (2013) determined that there are at least 133,000 men and women employed in this trade, specifically rural girls for whom this can signify an income, which in the long term may benefit their families' health, albeit indirectly. According to Mpinga et al. (2013), the out-of-pocket expenditure in Australia is about \$AU 4.13 billion per year; in the US, it is between \$US 27.0 billion and \$US 34.4 billion whilst the expenditure in England has been about £450 million. Sifferlin (2016) indicates that families spend typically about \$25,000 and about \$435 each year on ACAM health, while others spent about \$100,000 or more than \$590,000. Sifferlin (2016) further observed that spending on complementary medication nevertheless forms a small portion of U.S. health care

spending of 1%; while the out-of-pocket charges to Americans are large

Therefore, understanding the African CAM Expenditure in South Africa against a global background will likely assist the CAM practitioner to understand the importance of adopting an effective ACAM costing model in capturing the costing of the services and products.

2.8.2. African CAM Medicinal Land in South Africa

The trade of these drug treatments contributes R2.9 billion to the financial system, representing 5,6% of the countrywide healthcare industry in 2006, whilst CAM contributes 80% of the health care in South Africa (South African Customs Union, 2017). South Africa's economic system was estimated at R4 billion in 2015, in contrast to R3, 8 billion in 2014 (Yeld, 2013 and South African Customs Union, 2017). Gcabashe (2017) points out that South Africa is regarded as “the third most bio-diverse country with only 2% of the world’s land area”; and it has 10% of the world’s plants. In addition, it has a rich heritage of traditional medicine. South Africa’s rating among international locations that trade and produce regular drug treatments is forty-third in terms of imports of nonconventional remedies (Gcabashe, 2017). South Africa is a country of about fifty-five million people of numerous origins, cultures, languages, and religions (Stats SA, 2011). Accordingly, the Agricultural Research Council (ARC) (2017) has indicated that South Africa is surrounded in the south by approximately 1,220,813 km² of coastline, stretching along the South Atlantic and Indian Oceans whilst on the north bordered by Namibia, Botswana, and Zimbabwe and on the east and northeast by Mozambique and Swaziland, and surrounds the kingdom of Lesotho. ARC (2017) indicates that South Africa is the largest country in Southern Africa and the 25th biggest in the world by land location and the 24th-most populous nation in the world. Furthermore, the ARC (2017) states that the land use in South Africa is divided into the land-cover, agricultural production systems, livestock manufacturing and stocking densities.

Land Cover: Land use influences the productivity and situation of the land, as well as its biodiversity integrity (South African Customs Union, 2017). The land-cover change,

which displays an underlying exchange in land use, is a quintessential indicator of the situation of terrestrial ecosystems (South African Customs Union, 2017).

Agricultural production systems: Although 80% of South Africa's land surface is used for agriculture and subsistence livelihoods, 69% is used for grazing in Mpumalanga and Gauteng (South African Customs Union, 2017). The land cover map indicates large areas in the drier parts of South Africa is cultivated with such as in the south-western Free State, the western components of the Eastern Cape, and the North West Province. However, these are no longer categorised as being workable for arable agriculture (South African Customs Union, 2017). Repeated crop failure and subsequent abandonment of these lands have sizeable penalties of soil erosion and land degradation (ARC, 2017). Therefore, the 69% used for grazing can additionally be of cost in identifying CAM medicinal drug and help practitioners. The area planted with the maize and wheat has declined notably since 1987 (South African Customs Union, 2017).

The area under maize cultivation declined from about 4.1 million ha to about 2.9 million hectares, that is, about 1.2 million ha or 29% (South African Customs Union, 2017). In comparison, under wheat cultivation declined from about 1.9 million ha to about 0.9 million hectares, that is, with the aid of 1.0 million ha or 53% (ARC, 2017). There have been no principal long-term shifts for different area plants (ARC, 2017).

Figure 2.4 indicates the land cover classes such as indigenous forests, mining areas, cultivated areas, bushland areas, wetlands and wooded area plantation, and herb land areas. Hence, Figure 2.4 affords a summary of the woodland plantation, cultural areas and herb land which shows that about 65% of the area can be used for CAM and help towards the dedication of the product price in CAM organisations (ARC, 2017).

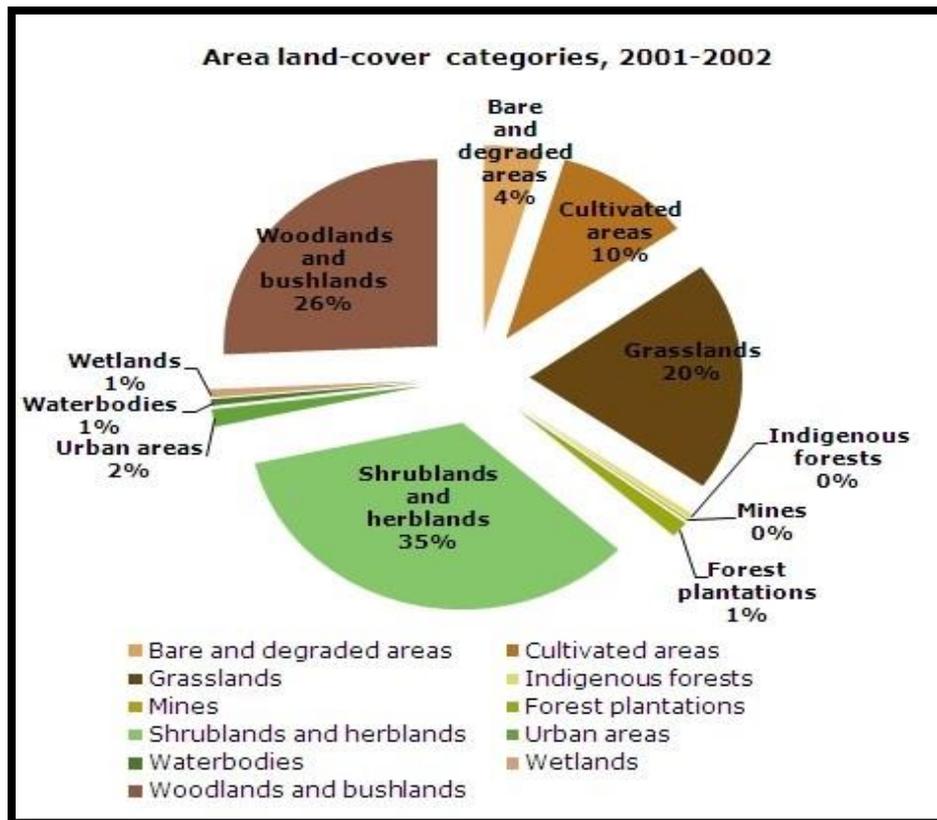


Figure 2. 4: Area land cover categories (ARC, 2017)

Livestock production: Approximately 69% of agricultural land in South Africa is used for grazing because it is unsuitable for intensive uses (ARC, 2017). Animal production has been increasing, given that since 1975. Areas used for grazing declined in the 1990s owing to expanding human settlements and farming activities such as planting of crops, forestry, conservation, and mining (ARC, 2017). This decline anticipated in Gauteng and the Western Cape, with their high quotes of urbanization, but communal districts should not see a decline in grazing lands. The long-term grazing capacity of South Africa, based on thirteen years of satellite data, is proven in the map below. Grazing capacity is associated with rainfall, for example, with an east-west reduction in grazing capability throughout South Africa (ARC, 2017).

Stocking densities: Stocking densities in all provinces exceed the long-term grazing capability of the veld (ARC, 2017). This is important, considering that one of the principal drivers of desertification is long-term herbivory at greater levels than the

productivity of the landscape can support (ARC, 2017). Cattle numbers had multiplied by nearly 1 million head from 12.6 million in 1994 to 13.5 million in 2004. Except for the Limpopo Province, the Northern Cape, and the Western Cape, stocking density has multiplied or remained identical in all provinces in South Africa since 1994 (ARC, 2017). There are, however, enormous differences in stocking prices between communal lands and commercial farming areas. Overstocking is commonly most evident in provinces with giant areas of communal rangelands, such as the Eastern Cape, North-West, KwaZulu-Natal, Limpopo, and Mpumalanga (ARC, 2017).

Petersen, Reid, Moll and Hockings (2017) researched Cape Town on the views of wild medication harvesters from Cape Town. They discovered that South Africa is a fast-growing cityscape in the Cape floristic vicinity in South Africa with 24 formally included conservation areas. These web sites have been included and managed as quintessential web sites for neighbourhood biodiversity, representing one-third of all flora species of the Cape floristic region and 18% of South Africa's plant diversity. The study by Petersen et al. (2017) reveals that the Cape Floristic Region has substantial financial and cultural roles, mainly in wild remedy harvesting and trade. Semanya and Potgieter (2014) claim that some plant life is located on private land, making the collection of medicinal plant life too impracticable for women.

Therefore, understanding the available medicinal land in South Africa will likely assist the ACAM practitioner to effectively utilise the costing model and capture the correct pricing of the products and services for improved health care service delivery.

2.8.3. Traditional African CAM Production Processes

The Department of Agriculture, Forestry and Fisheries in South Africa (DAFF, 2013) and Balogun, Tshabalala, and Ashafa, (2016) have pointed out that the medicinal plant life that is used in herbalism has extracts and compounds in the leaves, stems, flora and fruit that can be used for medicinal purposes. DAFF (2013), Balogun et al. (2016) and Street and Prinsloo (2013) identified and selected six medicinal plants in South Africa that are used by practitioners to treat specific ailments. These are Aloe ferox, African ginger, cancer bush, African potato, wild garlic, and moringa.

Aloe ferox: Aloe Ferox is scientifically known as bitter aloe, tap aloe, cape aloe, and red aloe. It is a plant that reaches an average height of 3m and has a perennial, muscular and fibrous root system. It is a robust, single, unbranched woody-stemmed plant (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It has large leaves that are dull-green to greyish in colour but turn reddish during drought stress. It also has bright red or orange flowers. It is produced and distributed from the southern KwaZulu-Natal, Eastern Cape, the south-eastern section of the Free State and Western Cape (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is cultivated from seeds (collected in winter or spring) and stem cuttings for production purposes. The plant is susceptible to the following diseases: aloe cancer, leaf spots, bacterial infections and aloe rust. It is typically prepared for harvesting after 18 months of cultivation, and ten to fifteen of the lower leaves of the adult plant are harvested once a year using a sickle. Aloe Ferox leaves are used to treat stomach complaints, arthritis, eczema, conjunctivitis, hypertension, stress and also to treat skin irritations and bruises (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013).

African ginger: The African ginger is scientifically termed *Siphonochilus aethiopicus*, but commonly known as Natal ginger, African ginger, wildegemmer, indungulo, and isiphephetho (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is a herbaceous perennial plant found growing on the forest floor flowers are pink and white and largely funnel-shaped. It has heart-shaped leaves of light-green which grow on the end of stem-like leaf bases. These stems grow to more than two metres. Its thick roots are whitish or buff- coloured (off-white) in appearance (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is produced and dispensed in Limpopo and Mpumalanga. Its propagation is by way of seeds, rhizomes or tissue culture. It is best planted throughout spring and summertime. It is threatened by numerous bugs and pests which include nematodes, aphids, caterpillars, leaf-miner, leaf spots and mites (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). Plant diseases found on African ginger include damping-off, powdery mildew, rust and leaf spot. The plants can be harvested manually by rotary cutter (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). When harvested, it is dug up, and the plant is cut off about 10 cm below the crown or it can be lifted by hand and then breaking off the green leaves,

stem and roots. (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The fresh roots or rhizomes of the plant can be chewed to treat influenza. It can also be used to treat colds, asthma, and malaria and also used for menstruation, sedative and appetite suppressant (DAFF, 2013 and Balogun et al., 2016; Street, and Prinsloo, 2013).

Cancer bush: The scientific term for the Cancer bush is *Sutherlandia frutescens*. It has numerous common names: sutherlandia, cancer bush, turkey flower, balloon pea, umnwele, unwele, kankerbossie, blaasbossie, blaasertjie, eendjies, gansiekeurtjie, klappers, hoenderbelletjie, phetola, mokakana, lerumo-lamadi, musa-pelo, and motlepelo (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). Growing up to three metres tall, the soft-wooded cancer bush is a hardy perennial shrub with a reedy stem. Its leaves are pinnately compound, and the flowers are large orange-red and about 3cm long (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is produced and dispensed in the Northern Cape, Mpumalanga province, the Eastern Cape, Western Cape and KwaZulu-Natal (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The cancer bush prefers full sun, well-drained soils with the region receiving enormous moisture. It is propagated from seeds and cuttings and needs to be planted in spring or autumn (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The seeds must be sown one meter apart in groups of three to five. It can be harvested in spring and early summer with a guide or mechanical cutting. The practitioners use the leaves and younger stems. The leaves are used to treat fever, poor appetite, indigestion, gastritis, peptic ulcers, dysentery, cancer, diabetes, colds and flu, cough, asthma, persistent bronchitis, kidney and liver conditions, rheumatism, heart failure, urinary tract infections and stress and anxiousness (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013).

The African potato: The African potato is scientifically known as *Hypoxis hemmerocallidea*, but commonly known as the yellow star, celebrity lily, sterretjie, afrika-patat, inkomfe, ilabatheka, inongwe; moli kharatsa, lotsane (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is a perennial geophytic herb which is very pleasing as a garden plant and grows to a height of 100 to 500mm. The plant has an unbranched stem, and an underground rootstock called the corm. The leaves

of the African potato are deciduous; they are 30cm x 3,2cm in width. The flora is yellow and star-shaped (DAFF, 2013). The plant is produced and dispensed in the Eastern Cape, KwaZulu-Natal, Mpumalanga, Limpopo, Gauteng, North-West and Free State provinces. For medicines, the practitioners use the corm, leaves and bulbs. The plant prefers full daylight and grows in warm and cold subtropical areas and prefers well-drained soil. The African potato is planted in different soils as the best-suited soil for planting has not yet been established (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is propagated from seeds, tissue cultures and bulbs; while the seeds are sown in early spring and planted 1mm deep. In contrast, the one-year-old corms have to be planted 10cm apart in rows, and 20cm between the rows and three-year-old corms have to be planted 20 cm apart in rows and 50 cm between rows (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The following insects attack the African potato: the American bollworm, termites, spotted maize beetle, stink bug and grasshopper (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The African potato can be harvested in the summertime by hand. The cultural uses of the plant include using it as a talisman against lightning, thunder, and storms and as an emetic for fearful dreams. Further, the tuber of the African potato has been traditionally used for benign prostate hypertrophy, urinary tract infections and testicular tumours (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). They can additionally be used to deal with dizziness, coronary heart weakness, nervous and bladder sickness as well as melancholy (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013).

Wild garlic: The *Tulbaghia violacea* is the scientific name for what is commonly known as wildeknoflok, perswilde knoffel, isweli-lezinyoka and isihaqa (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is a perennial, fast-growing, bulbous plant that reaches a height of 0,5m and has a long, narrow, grey-green strap-shaped leaves and fat tuberous roots. Its long flower stalk is orange-brown, purple, pink or white (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It grows and is produced in the rocky grasslands of the Eastern Cape, Limpopo province and KwaZulu-Natal. It can survive in cold wintry weather (nights of 20 °C) because of its healthy rhizomes, leaves, bulb and flowers., It requires warm summer days with moist, fertile, well-drained loam soil that incorporates plenty of compost. It is propagated from seeds or by dividing

large clumps (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It is planted in spring in groups of four or five 30cm apart and 5mm deep. Wild garlic seldom falls prey to pests and diseases; however, slugs and snails can cause considerable harm to the foliage. Rust is the only disease that can affect the plant (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The pests that do affect wild garlic are whiteflies and aphids. Other diseases that affect it are Pythium and Phytophthora root rot, blight, fungi and leaf spots. All the leaves should be cut from one clump close to the ground. The rhizomes and leaves are used to treat fever, rheumatism, allergies and constipation (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The fresh bulbs can be boiled in water, and the decoctions are taken orally to clear up coughs and colds. Wild garlic can also be used as a treatment for pulmonary tuberculosis and to destroy intestinal worms. In addition, its leaves can be used to deal with most cancers of the oesophagus (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013).

Moringa: The Moringa is scientifically named *moringa oleifera*. This commonly referred to as drumstick tree, horseradish, oil tree, pepperwort boom. It is a fast-growing, small, hardy tree producing a tuberous taproot (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). It has an open umbrella-shaped crown and feathery leaves, green to dark green in colour and 1 to 2 cm long. It has a straight trunk of 10cm to 30cm thick with whitish bark (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The flowers of the Moringa are white to cream-coloured, while the immature pods are green or reddish in colour.

In South Africa, it is produced in Limpopo Province, Free State, Mpumalanga, KwaZulu-Natal and Gauteng (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The practitioners use the leaves, roots, bark and immature pods for medicinal treatment. During harvesting, *Moringa oleifera* prefers well-drained soils in the neutral pH range vary and grows well in heavy clay soils. It can be propagated with the aid of cuttings and seeds. Cuttings should be planted up to 2m apart while the seeds up to 2,5cm. The seeds should be planted 2cm apart and 1cm deep (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The plant can be harvested when it reaches a

height of 1m through by cutting off the top of the plant and leaving the rest of the plant 30 cm high (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013). The *Moringa oleifera* is used for medicinal purposes; to remedy many ailments such as headaches, wounds or insects' bites, bacterial or fungal skin complaints, gastric ulcers, diarrhoea and to treat liver and spleen problems, pains of the joints and malnutrition (DAFF, 2013; Balogun et al., 2016; Street & Prinsloo, 2013).

Therefore, understanding the ACAM production processes in South Africa should assist the ACAM practitioners to capture the correct costing information of the products and services.

2.9. The Requirements in the Application of Costing in ACAM

To make a variety of decisions in the commercial enterprise environment, the expertise of cost accounting is needed. Cost accounting systems assist in making the appropriate decision or choice, choosing the most worthwhile alternative from the accessible alternatives. Taba and Fakoya (2016) stated that cost accounting gives useful cost statistics to African standard restoration businesses to support them in making comparisons between the year's prices and the year's earnings and to use these comparisons to set estimated budgets. African regular restoration organizations can use cost facts to set products' costs and determine the cost of each product and offering separately; in addition, the comparable price data will be used to put together financial statements precisely.

As for manufacturing organisations, the cost factors in African traditional healing facilities consist of three elements: substance costs, labour costs, and overhead costs. African traditional healing companies in South Africa are producing traditional remedies for ailments such as continual diarrhoea, liver disorders, amoebic dysentery, constipation, cough, eczema, ulcers, hypertension, diabetes, malaria, mental health, and HIV/AIDS to enhance people's access to medicines (White, 2015). Components such as chopped bark, leaves, seeds/fruit, stems, bulbs, rhizomes and roots are used in these remedies. South African regular healing businesses differentiate between the substances used to produce flora, and these used to produce services.

Rautenbach (2011) observed that, in fact, it is said that there are more people employed in the traditional health care system than in the public health care system. Figures published in 2006 show that African traditional medicine contributes an estimated R2.9 billion annually to South Africa's economy. This figure represents 5.6% of the national health budget. The fact that there are at least 133 000 people, mostly rural women, employed in the medicinal plants trade also illustrates the economic importance of traditional medicine. However, Van Der Beck (2010) and Kludacz (2012) found that the cost accounting information system is designed to permit the determination of unit prices and total product costs. Horngren et al. (2006), Kuchta and Zabek (2011) and Alex (2012) maintain that cost accounting has assisted groups to confirm the cost of products, methods and services and helped them in planning future operations.

By comparison, Gqaleni et al. (2007) found that the market for complementary medicines and health products at customer price degree is about R1.9 billion with the total medicine expenditure by using scientific schemes of R8.6 billion. Similarly, Krige (2009) states that the standard drugs are administered orally as liquid, powder, washing solution, inoculations, inhalations and as smoking agents. In the similar vein, Nxumalo et al. (2011) found that given the use of two parallel health-care systems, policy-makers must develop strategies to shield poor South Africans from out-of-pocket payments for health care as utilisation of these systems absorbs expenditure from low-income households.

Paruk, Blackburn, Friedman and Mayosi, (2014) asserted that the combined economic turnover of individuals of the traditional healing industry was R881million in 1996, while in 2013 it increased to R1.348 billion representing an increase of 53%. It increased to R8 billion a year by 2015. Rautenbach (2011) states that there are more remarkable human beings employed in the traditional health care system than in the public health care system. Hence the necessity to enhance and reveal the cost accounting practices in order to improve product and service pricing in African traditional healing.

The truth is that a large proportion of the population believes, and practices traditional

cultural activities, and this confirms that it is a much-valued part of people's lives (Van Niekerk, 2012). Van Der Beck (2010) and Kludacz (2012) indicate that statistics produced through a cost accounting system gives a foundation for determining product costs and selling prices. This is in all likelihood makes cost accounting in traditional healing an essential tool for costing their products and in deciding the pricing of their services. Implementing price accounting in their practice will provide correct cost data that assist decision-makers in making good managerial decisions. For instance, it will help set aggressive costs or compare the product costs between two or more years to decide the product prices that differ from one year to the other.

Therefore, understanding the application of costing in ACAM should assist the CAM practitioner to capture the costing information of the services and products by adopting an ACAM costing model

2.10. Summary of the chapter

This chapter provided an overview of the African CAM practitioner's need to adopt a cost accounting model in order to capture cost data of the services and products of the South African CAM context. This is the macro context of this study. This chapter also explained the theoretical framework for this study which included a discussion of contingency theory and the cost of production theory of value. Concerning the African CAM in South Africa, specifically, there has been no stability at all in South Africa. For this reason, the development of CAM over the last centuries was discussed with particular emphasis on the origin and nature of CAM during pre-colonial, colonial and post-colonial times.

Special attention was given to understanding the definition of African CAM, its characteristics, the challenges, and the importance of African CAM. Furthermore, the African CAM practitioners were described with particular reference to the types of CAM health practitioners who provide the necessary primary health care services. This was preceded by the definition of CAM practitioners, the services provided by CAM practitioners, and the type of payment made by customers to the CAM practitioners.

The chapter also sheds light on the production of African CAM. Here the researcher

discussed the expenditure related to CAM in South Africa, the medicinal plants in South Africa, and the African CAM production process in South Africa.

Having presented the context of CAM in South Africa in this chapter, the next chapter will present the primary literature on cost accounting practice.

CHAPTER THREE

COST ACCOUNTING SYSTEMS PRACTICE

3.1 Introduction

The researcher in chapter three first reviews the literature that relates to cost accounting systems before investigating the evolution and the development of the cost accounting practice. The overview of cost accounting systems discusses the definition of cost accounting practice, the elements of costs, cost accounting systems, classification of costs, the allocation of overhead costs characteristics of cost accounting system, significances of cost accounting systems, different types of cost accounting system, and the techniques and methods of cost accounting systems. Furthermore, the characteristics of cost accounting practice will then be discussed, followed by a discussion of the significance of cost accounting, types of cost accounting, and methods and costing techniques.

The review includes the conventional methods of providing cost accounting data in support of costing the services and products of the ACAM model. The chapter discussed the literature that relates to cost accounting practice in the manufacturing organisations, in the service organisations, in the public service sector and the African Traditional healing sector. The literature review will close with a discussion of the stages of cost accounting practice and significant factors that have an impact on the application of cost accounting systems and conclude with a summary of the chapter.

3.2. Differentiating Cost Accounting and Management Accounting

Management accounting and cost accounting were used equivalently in the 1940s, both in academic and enterprise management (Ahmad, 2014). However, other cost accounting researchers used the same terminologies and emphasised cost accounting practices in vouchers, journal entries and journal preparations, purchase orders, requisitions, and time cards (Alsharari, & Youssef, 2017; Su, 2013; Cuzdriorean, 2017). Between the years 1930 and 1940, there were few books on management and cost accounting; instead there were books that dealt with numbers

that determine the actual manufacturing cost (Armitage, Webb, & Glynn, 2016). Su (2013) regards cost accounting as cost of inventory valuation while management accounting relates to the provision of appropriate information for decision making, planning, control and performance evaluation.

Cuzdriorean (2017) found that there were different management accounting costs, depending on the end-users, for various roles and objectives and the cost accounting's focus was on making sure that the full costs are managed. According to Bierer and Götze (2012) and Cuzdriorean (2017), between 1961 and 1962, the first textbooks on cost accounting were made available and duly published between the 1950s and 1960s, and that they focused on relevant costs for decision making. It is during this period that the analysis of the cost of inventory, cost-volume-profit decision and capital budgeting, was used by managers for decision making. Therefore, financial information was replaced by the theory of agency, which regarded accounting as the foundation of economic agents where its ownership had various rights, beliefs and information (Armitage, Webb & Glynn, 2016).

Therefore, understanding the difference between management accounting and cost accounting will allow African CAM practitioners to effectively differentiate and understand the two terms to adapt and use the cost accounting model to facilitate decision-making.

3.3. The Evolution of Cost Accounting Practice

This section discusses the origin of cost accounting practice, cost accounting practice before 1800, cost accounting in the years 1800 to 1900, and cost accounting in the years 1900 to 2000. This is crucial for African CAM practitioners in the development, adoption and demonstration of the cost accounting practice model in African CAM.

3.3.1. The Origin of Cost Accounting Practice

Researchers of cost accounting practice have different perspectives when discussing the development of cost accounting practice. White (2014) discovered that the development of a cost accounting system is divided into personnel management and

cost accounting system, and it is developed from cost accounting practice to strategic cost accounting practice. Researchers and scholars (King, Premo, and Case, 2009; Su, 2013). Bertoni, De Rosa and Lutinsky (2017), Drury (2015) Fatah (2013) and Muftah (2011) provide different perspectives that are useful in tracing the development of cost accounting practice. White (2014) and Muftah (2011) identified the evolution of the cost accounting system through cost accounting activities that represent stages of its development. Su (2013) found that double-entry bookkeeping was used before the introduction of the double-entry system. Furthermore, ICAI (2016) and Adum (2015) claim that the introduction of the accounting double entry system resulted in the introduction of cost accounting. During ancient times, the accountants of biblical studies in the royal court's service were used to determine the costs (Ozyapici & Tanis, 2016). Alsaïd (2017) discovered that the biblical Egyptians' Pharaohs used accountants to present a detailed cost of harvest in order to determine the correct taxes on wheat and maize.

King, Premo and Case (2009) and Solodovnychenko (2013) observed that all through 1800, there was little interest in the technique of identifying and managing costs. The accounting books in the 1700s utilised double-entry bookkeeping that was once posted in 1494 (Ozyapici & Tanis, 2016). In supporting this view, Al-Mawali (2015) and Cuzdriorean (2017) noted that accounting books of the late eighteenth century in America had been used to educate the Americans. Dalci, Tanis and Kosan (2010) indicate that these American books stored personal ledgers that contained money accounts with debits on the left and credits on the right. Further, the accounting books were additionally utilised in 1736 to preserve control over cash receipts and price accounts. Ozyapici and Tanis (2016) pointed out that the important example of the seventeenth century concentrates on the price calculations of the Worshipful Company of Bakers throughout 1620.

Alsaïd (2017) observed that throughout 1100 BC cost accounting practices of government auditing, budgetary accounts, expenditure control, and periodic reporting, were practised by using the Chinese. This is the systematic recording method of cost accounting that was developed in the nineteenth century (Al-Mawali, 2015;

Cuzdriorean, 2017). Alsaïd (2017) explains that some of the industrial money owned in the evolution of cost accounting trends consists of the issuing of bills such as the Del Bene firm, the Datini and Niccolò of Prato, the Plantin's and the Medici Accounts for the period 1315 to 1786. Therefore, in the fourteenth century, the applications of costing techniques and the single-entry recording technique were introduced in the late fifteenth century (Budiasih, 2016). Alsaïd (2017) determined that the documents of the early fifteenth century contained the elements of contemporary cost accounting structures such as controlling the cost elements during the production processes, and the businesses stability started on April 26, 1565. Kocakulah, Foroughi, Stott and Manyoky (2017) found that the approach utilised during this period used to be a costing system that the improved operational system. These accounting books had adequate data for about the cost of the products which have been produced (Faraji, Maghari & Mirsepasi, 2015). Rof and Capusneanu (2015) found that these price records were used in pricing selections but were not yet a price finding system; however, it came close to being one. Faraji, Maghari and Mirsepasi, (2015) and Mahal and Hossain, (2015) found that the purpose of industrial accounting had been based on the evaluation of the cost of producing rigid copper in the mining industries.

3.3.2. Cost Accounting in the Year 1800 to 1900

King, Premo and Case (2009) observed that at some point in this period, cost accounting practices had been largely utilized with the assistance of soldiers in the identification and classification of charges of labour and materials, which required substantial recordkeeping. The accounting for clothing and apparel prices was allowed a precise quantity of clothing every year of the five years in the navy (Military Health System Communications Office, 2016). King et al. (2009) found that between 1861 and 1865, pupils utilised accounting information as academic courses for suitable accounting practice. According to Ríos-Manríquez, Colomina and Pastor (2014), this was the period of the industrial revolution in which England and the US witnessed the massive cotton material factories that used cost bills to confirm the direct labour and overhead costs of changing raw substances into finished and material goods. These organisations were the advancement of cost and administration accounting of iron and

metal works, and the development of railroads in the USA (Jeyaraj, 2015). Dwivedi and Chakraborty (2015) found that there was once an entire cost accounting system that was used in 1810 and integrated a double-entry system, which produced a trial balance monthly. The researchers believed that cost accounting is a product of the nineteenth century used in textile mills and iron foundries, and works for companies with equipment in industrial productions (Oboh & Ajibolade, 2017; Kont, 2011).

Therefore, when the merchandise is sold, the warehouse buying and selling account used to be credited with the sales cost and regarded the depreciation charged twice at some stage in the 1830s (Dwivedi & Chakraborty, 2015). Ríos-Manríquez, Colomina and Pastor (2014) contend that cost accounting survived from built-in multi-process cotton textile mills in the USA during the first half of the nineteenth century to coordinate, control and extend the efficiency of a process, material, and labour utilisation. Dwivedi and Chakraborty (2015) also found that In the 1820s and 1830s, the British mining and smelting industries had material, labour and overhead costs which were similar to the price factors used at some stage in the twentieth century. These overhead costs were charged to distinct departments and merchandise that used the direct labour hour and had been allocated to the proportion of the labour cost that the department or product should have been aware of (King, Premo & Case, 2009).

Dwivedi and Chakraborty (2015) determined that the steel manufacturing organization adopted a cost accounting system that used to be significantly involved with the non-stop gathering of statistics on all direct expenses of every manufacturing process. According to Biondi and Zambon (2013) and Lee, Bishop and Parker (2014), the nineteenth century is viewed by accounting students as to the costing renaissance, when significant trends in cost and management accounting took place and appeared in manufacturing companies. Furthermore, King, Premo and Case (2009) contend that costing practices such as preferred costing, manner costing, overhead utilization, and the allocation of costs to products or departments, the usage of computation of labour hours and best cost strategies have been all been used in the manufacturing industries.

3.3.3. Cost Accounting in the Year 1900 to 2000 Centuries

Alsaid, (2017) discovered that at some point between the late nineteenth century and the early part of the twentieth century, the accounting managers came up with new cost accounting strategies to investigate and control the financial and physical efficiency of the efficiency of the production processes.

Therefore, it may also be concluded that the intention all through this was to evaluate the standard profitability of the business enterprise even though it was once intended for the assessment of the effectivity of the manufacturing processes. This is because the cost systems at some stage in 1910 provided data that was relevant to a wide variety of decisions concerning efficiency and product differentiation (Alsaid, 2017). These systems have been designed by engineers working in factories to assign charges to products and product strains (Alsaid, 2017). After 1910, these practices had been phased out because the collection of cost data was too challenging and costly for a widening range of products; making it impossible to justify the benefits (Jeyaraj, 2015).

Alsaid (2017) argues that these cost facts responsible for evaluating the cost of inventories and financial reporting. They were irrelevant and misleading for decision making needs, especially strategic product decisions. Jeyaraj (2015) and Alsaid (2017) indicate that researchers and historians were the principal contributors to the cost accounting literature in the 1920s and were in a position to recommend the distinctive costs used for particular functions through the production cost process.

Therefore, it is equally vital to comprehend the development of cost accounting over a certain period, as this will aid the African CAM practitioners to grasp and effectively use the cost accounting model to facilitate decision-making.

3.4. Overview of Cost Accounting Systems

This area discusses the definition of cost accounting practice, the elements of costs, classification of costs, the allocation of overhead costs, characteristics of cost accounting system, significances of cost accounting systems, different types of cost

accounting system, and the techniques and methods of cost accounting systems.

3.4.1 Cost Accounting Systems: Definition

This section discusses the definition of cost accounting practice, the elements of price accounting systems, under which the allocation of overhead costs, classification of costs, traits of costing system, cost accounting systems, distinct kinds of price, and of price accounting systems are also explained.

Cost accounting systems (CAS) are the managerial equipment that aims to reach enterprise targets by providing records for decision making, price control, and establishing product costs. Cost accounting systems can produce the records necessary for decision-makers. These systems help in the preparation of financial reports and assist the senior administration to highlight its key features (Gangadhar et al., 2015; Jovanović et al., 2014; Özyürek & Yılmaz, 2015; Hilsenrath, Eakin and Fischer (2015); Gapenski & Reiter, 2016; Revereet et al.. 2016). Some researchers such as Robinson and Brown (2013) have argued that even though there are many definitions of cost accounting systems, most refer to a similar meaning. Accounting Technicians Scheme West Africa (ATSWA, 2009) defined the cost accounting systems as:

“The manner of accounting for cost from the point at which expenditure is incurred to the establishment of its closing relationship with cost centres and cost units. In its widest usage, it embraces the training of statistical data, the software of price management strategies and the ascertainment of the profitability of activities carried out or planned.”

This definition of cost accounting consists of the perspective and the function of price accounting (Moisello, 2012; Baniya, 2014). Merriam and Mohamad (2012) claim that the term cost accounting refers to the utility of costing and price accounting principles, methods, and techniques, artwork and exercise of cost control, and the ascertainment of profitability. It consists of the presentation of records derived from managerial decision-making (Robinson & Brown, 2013). Costing refers to the methods and

processes of ascertaining costs. In other words, price accounting refers to the classification, recording, and allocation of overhead costs to determine the costs of merchandise or services. Cost Accounting practices are the managerial tools that assist managers to take strategic and operational decisions (Kludacz, 2013). Jovanović et al. (2014) state that these tools are widely used in the industrial sector. Researchers have been construing cost accounting strategies in industrial firms for decades. According to a few researchers, cost accounting was once developed at some stage in the Industrial Revolution that is the middle of the eighteenth century (Turney, 2010). Cost accounting systems, mainly those in the industrial sector, have acquired a great deal of attention from accounting researchers. As noted in the preceding paragraphs, cost accounting systems furnish cost statistics for internal or managerial use and external use to put together financial statements (Robinson, & MacPherson, 2012). In this thesis, the researcher focuses on cost statistics for managerial use in African Traditional healing, has been often omitted in the accounting literature (Velmurugan, 2010).

Therefore it is reasonable that understanding the definition of cost accounting will assist the practitioners to adopt and use the cost accounting model to facilitate decision-making and correctly determine the pricing of the products and services of ACAM healing.

3.4.2. Cost Accounting Systems: Elements of Costs

To successfully facilitate the determination of product costs, all the expenses are divided into three price factors, namely, material costs, labour costs, and expenses (ATSWA, 2009; Himme, 2012; Baniya, 2014; Horngren, Datar & Foster, 2006). Material charges are the elements used to make the product. They can be in a production or a manufactured country and should be used without delay or indirectly in the manufacturing technique (Narsis, 2009; Lutilsky, Žmuk & Dragija, 2016). During the manufacturing process, the direct substances ought to be easily recognised where the prices of the materials can be charged at once to a specific product, or to hint these substances to the product. Himme (2012) and Narsis (2009) regard oblique prices as the substances which cannot be allotted but can be apportioned and absorbed through

price facilities or the cost units, as proven in Figure 3.1 below. ATSWA (2009) and Horngren et al. (2006) argued that material costs encompass no longer only the material prices, but also the cost of material purchasing, handling, and storing; all the charges related to buying, transporting, and storing the substances ought to be introduced to the material costs.

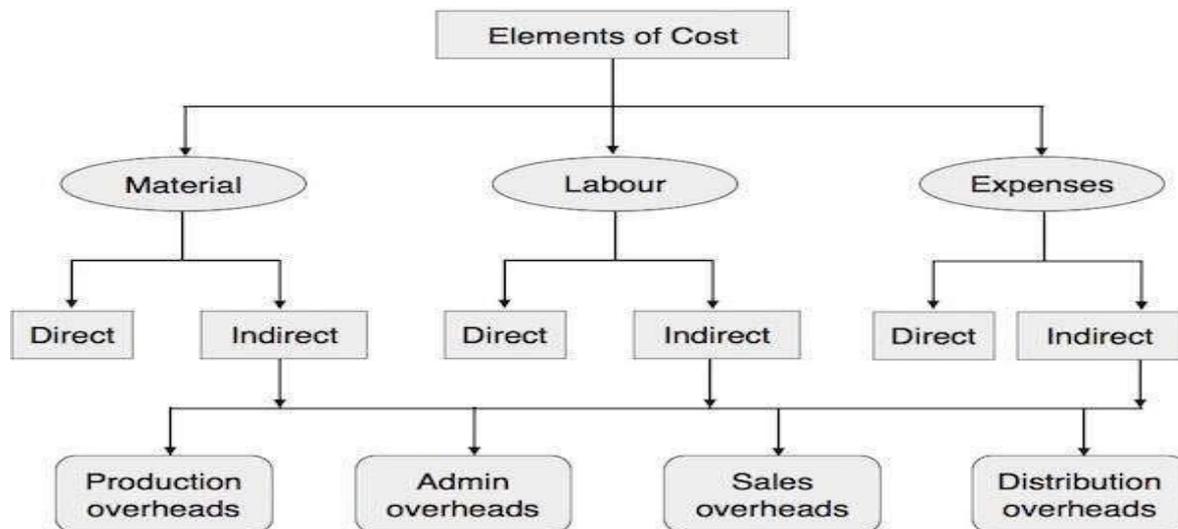


Figure 3. 5: Elements of cost (ATSWA, 2009)

Figure 3.1 above shows the factors of cost, such as material costs, labour costs, and overheads that effectively facilitate the determination of product costs. Hence, Figure 3.1 provides a summary of material costs, labour costs, and overheads that need to be taken into account to facilitate the cost accounting exercise model in CAM practices.

Labour costs are considered as the conversion of the materials cost into the completed products and require human participation (Lutitsky et al., 2016). Labour expenses encompass all labour expended on altering the construction, conformation, or situation of the product, inclusive of expert and unskilled workers' wages (Jovanović, Dražić-Lutitsky & Vašiček, 2019 and Van Derbeck, 2010). Labour expenses are divided into direct labour costs and indirect labour costs. Direct labour cost is the cost which may be consistently identified with the product by unit, part number, operation, department, or by whatever unit of cost is employed in the cost system by way of the unit, phase number, operation, department, or through any unit of cost employed in the price

system (Lutlisky et al., 2016; Horngren, Foster, Datar, Rajan, Ittner and Baldwin, 2010). Van Der Beck (2010) regards direct labour as the work of employees whose job is vital and directly involved in producing the product. For example, the job of the personnel who work on an assembly line in automobile manufacturing is viewed as direct labour for producing cars, and the salaries of these employees are recognised as direct labour costs. Therefore, indirect labour will refer to all the ACAM practitioners whose work is not crucial to converting the raw materials into the finished commodity but are no longer immediately associated to the product (ATSWA, 2009; Kumar & Mahto, 2013; Blocker, Stout, Juras & Cokins, 2013).

The ultimate component of costs, expenses, is divided into direct prices and indirect prices where direct costs are considered as the expenses that are allotted to cost centres or the cost units, such as the price of one-of-a-kind equipment required to accomplish a specific undertaking (ATSWA, 2009; Horngren, Datar, Foster, Raja & Ittner, 2009). In the indirect expenses, the opposite of direct costs, are the costs that cannot be allocated to cost centres or price units (Narsis, 2009; Tabitha & Ogungbade, 2016). Some scholars, such as Moisello (2012), Baniya, (2014) and Blocher et al. (2013), have referred to indirect expenses as overhead costs, which are defined as the cost of indirect material, indirect labour, and the overheads that cannot immediately be charged to specific price practices or cost centres.

The nature of ACAM is different from other organisations, such as manufacturing corporations; and the nature of raw materials, labour, and prices in ACAM is one of a kind and thus differ from those of other organisations. For instance, raw materials in ACAM healing ought to be seeds, fertilizers, water, and medicinal trees, and these types of materials cannot be used in manufacturing, servicing, and health organisations. Even in ACAM healing, the cost factors range between enterprises that produce drugs and organizations that supply services.

Therefore, the outcomes of studies that focused on explaining the price elements in manufacturing corporations cannot be generalised to companies in different sectors, as each sector has its characteristics that vary from one sector to the other.

3.4.3. Cost Accounting Systems: Classification of Costs

The expenses of cost accounting systems can be categorised according to identifiable cost elements such as direct costs, which are the expenses that can be effortlessly traced to the price object, direct labour and direct materials (ATSWA, 2009; Kont & Jantson, 2012; Horngren et al., 2009). Indirect charges cannot be easily traced to the cost object because there is no clear relationship between the price and the cost object. Therefore, cost accountants use allocation bases to allocate the indirect cost to the products that include common costing such as laptop hours and direct hours (ATSWA, 2009; Horngren et al., 2009; Kaspina, Khapugina & Zakirov, 2014).

The other classification of cost is made according to behaviour that includes fixed costs, where the prices continue to be constant. Therefore, regardless of adjustments in the level of activity, fixed expenses are not affected by changes. Consequently, as the degree of endeavour rises and falls, the fixed charges stay constant. The fixed charges can create confusion if they are expressed on a per-unit basis. This is because average fixed costs per unit increase and decrease inversely with changes in an activity where the activity can be expressed in direct material as a variable cost (Robinson & MacPherson, 2012; Horngren et al., 2010).

Figure 3.2 indicates the classification of expenses such as direct costs, direct labour, and direct materials that successfully facilitate the determination of product costs. Hence, Figure 3.2 affords a summary of the classification of prices that want to be taken into account and understood by CAM practitioners to facilitate the cost accounting exercise model in CAM organisations.

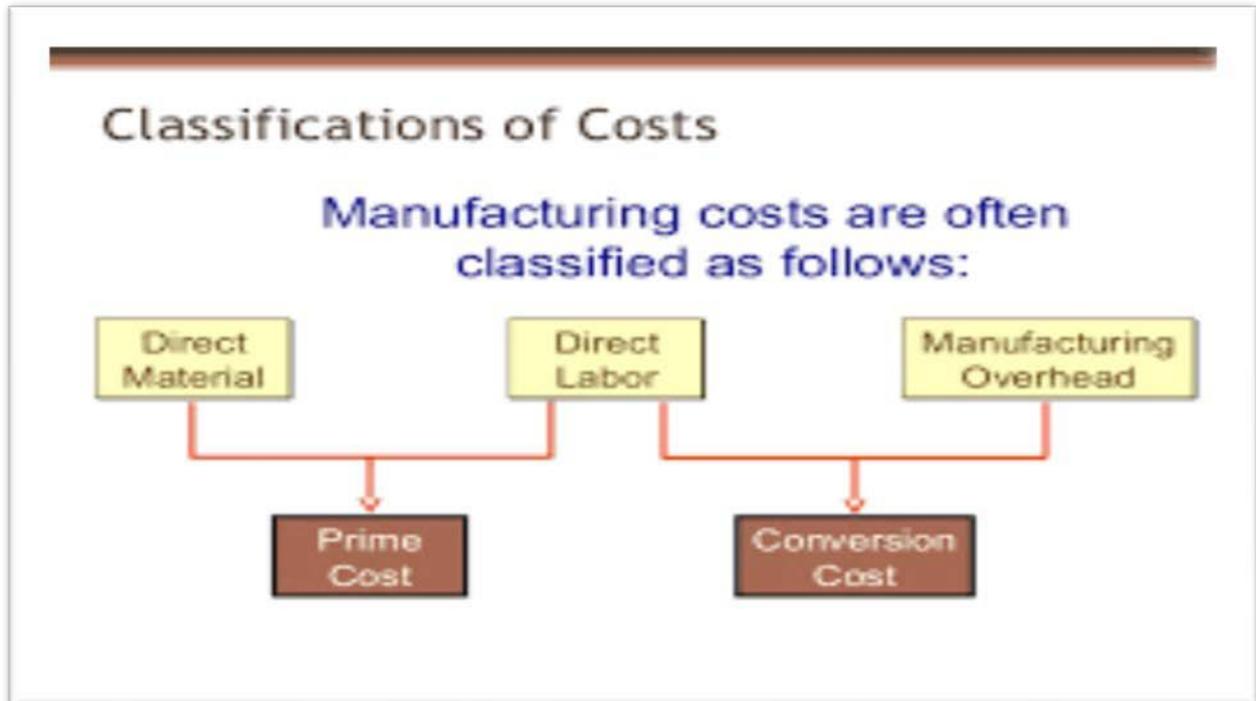


Figure 3. 6: Classification of costs (Narsis, 2009)

Costs can also be classified according to functions: production costs, which occur during the conversion of the materials into finished products; administration costs, which refer to the costs of determining firms' policies, leading the organization, and controlling the operations; and selling costs, which entail all the costs incurred in facilitating sales. Distribution costs include all the costs that occur as a result of the distribution of products (Merriam & Muhamad, 2012). The costs that can be controlled are classified into controllable costs, which refer to costs that occur in a specific responsibility centre. Costs that can be controlled by the head of the responsibility centre are considered controllable costs. In comparison, all costs that occur in the organisation and are not allocated to responsibility centres; such costs are considered uncontrollable (Tabitha & Ogungbade, 2016).

Additionally, costs can be classified according to their relationships. Prime costs are the direct material costs and direct expenses necessary to start producing the product. Conversion costs are costs incurred in processing the materials into the finished commodity, including the direct labour costs and factory overheads. Lastly, the period

costs and product costs are as shown in Figure 3.2 above (Narsis, 2009). Kaspina, Khapugina and Zakirov (2014) regard the period costs as all the costs that belong to goods sold accounts, whereas costs included in inventory costs are the product costs. However, when the inventory is sold, the product costs become period costs (Lutlisky, Žmuk, and Dragija, 2016). Other costs are classified according to normality, including standard costs and abnormal costs. When the cost falls within the target fixed in the budget, this type of cost is considered as a standard cost; however, if the cost exceeds the budget, it becomes an abnormal cost (ATSWA, 2009; Narsis, 2009; Kaspina, Khapugina and Zakirov, 2014).

Accordingly, it is expected from the African CAM practitioners that understanding the classification of costs in African CAM healing will assist in effectively adopting the cost accounting model to facilitate decision-making and cost the products and services.

3.4.4. Cost Accounting Systems: Allocation of Overhead Costs

Blocher et al. (2013) describe overhead expenses as those costs that cannot be traced immediately to a specific product or service. As claimed by Özyürek and Yılmaz (2015), the introduction of the mass production system led to increased manufacturing overhead costs, which made the producers think of allocating those overhead costs to cost objects. Kumar and Mahto (2013) argue that when the manufacturing environment was simple and overhead costs were not relevant; firms could manage their operations using simple techniques.

However, to allocate overhead costs, firms used several overhead allocation bases. ATSWA (2009) and Ramljak and Rogošić (2012) claimed that in the early twentieth century, most factories used direct labour costs to allocate manufacturing overhead costs. A direct labour base means that every product should bear manufacturing overhead costs according to the total direct labour hours consumed.

Figure 3.3 below indicates the allocation of overhead costs under normal and traditional costing and activity-based costing where merchandise are assigned manufacturing overhead expenses according to the total direct labour hours consumed. Hence, Figure 3.3 provides a cost allocation that needs to be understood

by CAM practitioners to facilitate the cost accounting practice model in ACAM organisations by CAM practitioners.

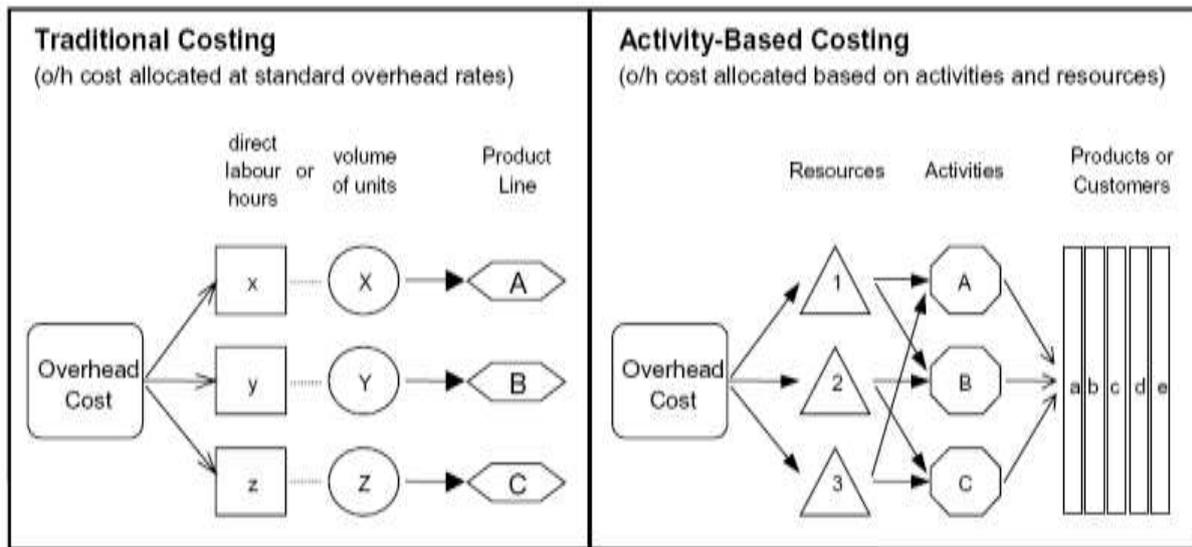


Figure 3. 7: Cost allocation under the two approaches (Prenaj and Ahmeti, 2016)

Prenaj and Ahmeti (2016) found that the direct labour costs are reasonable because most manufacturing overhead costs are caused by machine operations resulting in the manufacturing overhead costs determined by the time spent with the machine as in Figure 3.3 above. However, ATSWA (2009) and Horngren et al. (2010) suggest another base for allocating manufacturing overhead costs and refer to it as the machine hours. Changing the operation processes from labour-intensive to machine intensive led to increased manufacturing overhead costs, which made the use of direct labour for allocating overhead costs unreasonable while using machine hours became appropriate instead (Ramljak & Rogošić, 2012). The opening of branches in different places can make the allocation processes occur in two stages. First, by allocating joint costs to sub-units and then allocating overhead costs from sub-units to cost objects. Secondly, some organisations use two bases for allocating manufacturing overhead costs for direct labour hours and machine hours (Kambanou & Lindahl, 2016).

The cost object and the indirect costs led to the distortion of the product cost if the firms used volume-based costing to allocate manufacturing overhead costs (Turney, 2010; Robinson & Brown, 2013). This is because traditional costing distributes manufacturing overheads to all products regardless of whether the products are

customized or standard. In contrast, in some cost accounting systems, customized products yield high overhead costs (Kambanou & Lindahl, 2016). It is argued that traditional costing does not serve the management needs but serves financial accounting requirements more (ATSWA, 2009; Brierley, 2011; Kachalay, 2012). Therefore, Activity-based Costing (ABC) was developed to allocate overhead costs more accurately because ABC uses activities to allocate overhead costs (Kachalay, 2012). It is argued that ABC was used in many companies in the first half of the twentieth century; however, it is now used widely and has started to receive a great deal of attention from accounting researchers and practitioners since the 1980s. Although the adoption rate of ABC is considered low, especially in developing countries, most accounting researchers have argued that ABC presents more significant accurate cost records than typical cost accounting systems (ATSWA, 2009, Majid & Sulaiman, 2008; Kachalay, 2012). Moreover, Mahto (2013) suggested that the ABC system provides more appropriate cost information than traditional costing in terms of assisting decision-makers to make suitable pricing decisions. Hence, there may also be a need to recognize the allocation of overhead expenses to successfully adopt the cost accounting models in ACAM that seem to be beyond products and services pricing to improve costing in ACAM products and services.

3.4.5. Characteristics of Cost Accounting System

Lodha (2015) found that an ideal costing system is the one that achieves the objectives of a costing system and brings all the advantages of cost accounting to the business. Therefore, Lodha (2015) identified the following characteristics, which, as the ideal, should be taken into consideration before installing a costing system.

Suitability to the Business: A costing system should be tailor-made, practical and must be devised according to the nature, conditions, requirements, and size of the business. Any system which serves the purposes of the business and supplies necessary information for running an efficient business is ideal (Lodha, 2015).

Simplicity: The system of costing should be simple and straightforward so that it may be easily understood even by a person of average intelligence. The facts, figures, and

other information provided by the cost accounting system must be presented in the right form at the right time to the right person in order to make it more meaningful (Lodha, 2015).

Flexibility: The system of costing must be flexible so that it may be changed according to changed conditions and circumstances. The system without such flexibility will be outmoded because of fast changes in business and industry. Thus, the system must have the capacity of expansion or contraction without much change (Lodha, 2015).

Economical: A costing system is like other economic goods. It costs money, just like economic goods. If the system is too expensive, management may be unwilling to pay as buyers are not willing to pay for the goods if these are expensive as compared to their utility. A costing system should not be expensive and must be adapted according to the financial capacity of the business (Lodha, 2015). The benefits to be derived from the system must be more than its costs as management will only be willing to install the system when its perceived expected benefits exceed its perceived expected costs. In short, the system must be economical, taking into consideration the requirements of the business. The cost of installing and operating the system should justify the results (Lodha, 2015).

Comparability: The costing system must be such that it may provide facts and figures to management necessary for evaluating the performance by comparing it with the past figures, or figures of other concerns or against the industry as a whole or other departments of the same concern (Lodha, 2015).

The capability of Presenting Information at the Desired Time: The system must provide accurate and timely information so that it may be helpful to management for making decisions and suitable action for cost control (Lodha, 2015).

Minimum Clerical Work: Lodha (2015) discovered that the filling in of a variety of forms by supervisors and workers should involve as little clerical work as possible as many workers do not always have the necessary education. To guarantee reliable statistics, each authentic entry should be supported by an examiner's signature (Lodha, 2015).

Reconciliation of Cost and Financial Accounts: Both cost accounts and financial accounts should, if possible, be interlocked into one integral accounting scheme. If this is not possible, the systems should be devised in such a way that the two sets of accounts are easily reconciled (Lodha, 2015).

External Factors: The installation of a costing system depends mainly on the internal factors of a firm, but external factors may also affect the structure of the system. For example, cost accounting rules which apply to certain industries as notified by the Central Government require particular cost information to be developed and included in the books of accounts. Therefore, an ideal system of costing should take care of internal as well as external factors (Lodha, 2015).

Duties and Responsibilities of the Cost Accountant: Under a good system of cost accounting, the duties and responsibilities of the cost accountant should be clearly defined. The cost accountant should have access to all works and departments. To sum up, the principal criterion for an ideal costing system is how well it helps to achieve management goals to its cost? (Lodha, 2015).

Hence, understanding the impact of the characteristics of the type of costing system to be used may assist the African CAM practitioners to effectively adopt the cost accounting models in their African CAM practice to improve the cost of products and services for effective decision making.

3.4.6. Cost Accounting Systems: Significance

The literature indicates that the cost accounting system plays a vital role in both private and public organizations, and such roles differ among organisations. As argued by Horngren *et al.* (2010) and Kaspina, Khapugina and Zakirov (2014), cost accounting systems control the use of scarce resources in an organisation to ensure that the best returns are received from those resources. According to Velmurugan (2010), health resources for African CAM are scarce in South Africa; therefore, appropriately implementing cost accounting systems in the African CAM will assist in managing scarce health resources effectively. Concerning health care organisations, and Reiter

(2016) argue that cost accounting systems are tools that help firms in the health care environment by providing detailed and reliable cost information to assist them in surviving in the competitive environment. It is claimed that firms in all industries need cost information, not only health care companies or manufacturing firms. On the other hand, Revere, Delgado, Donderici, Krause and Swartz (2016) posited that for large, multi-product African CAM healing cost accounting systems for decision making are necessary. It is argued that organisations can benefit from cost accounting systems through decision making, cost management, product pricing, performance evaluation, budgeting and budgetary control, and the preparation of financial statements (, 2008; ATSWA, 2009; Turney, 2010; Robinson & Brown, 2013).

Gapenski and Reiter (2016) confirm that if firms that work in an uncertain environment and under intense competition want to survive, they have to apply target costing, which is a cost accounting technique. This method aims to reduce costs by reducing the product cost during the design stage, which is required under certain circumstances. Cost accounting systems provide decision-makers with accurate and dependable facts for effectual sound decisions.

According to Hilsenrath, Eakin and Fischer (2015) and Majid and Sulaiman (2008), firms need more accurate overhead allocation in the competitive environment of today, and this can be achieved by implementing ABC. Concerning the African CAM practice, Lutilsky et al. (2016) claim that practising cost accounting in African CAM can improve its management, and so lead to better CAM performance as the cost will be useful for monitoring the production expenditures of the product and services. In brief, ATSWA (2009) and Lutilsky, Žmuk and Dragija (2016) have argued that cost accounting practice enhances three primary objectives. First, the dimension of the price of items offered and the valuation of inventory for monetary reporting. Second, the provision of economic feedback about process efficiency to operators and managers. Lastly, the determination of the cost of activities, services, products, and customers.

Therefore, understanding the significance of cost accounting may assist the African CAM practitioner to effectively adopt the cost accounting models to improve costing in African CAM products and services.

3.4.7. Cost Accounting Systems: Different types of cost

ATSWA (2009) recognised that there are different types of cost accounting systems that are used in practice as discussed below;

Historical Costing Systems: In this type of cost accounting system, costs are ascertained after having been incurred (Medeiros, Santana & Guimarães, 2017; ATSWA, 2009). These prices are incurred in a particular month and ascertained and accrued in the following month (Medeiros et al., 2017; ATSWA, 2009). This costing system is useful for conducting a post-mortem examination of prices incurred in the past (Medeiros et al., 2017; ATSWA, 2009). This costing practice can no longer be useful for cost control but suggests a style in the behaviour of charges and is useful for estimating charges in the future (Medeiros et al., 2017; ATSWA, 2009; Abdel-Kader & Luther, 2006).

Absorption Costing System: In this type of cost accounting system, costs are absorbed by the units of the product regardless of the type of product and cost (Medeiros et al., 2017; ATSWA, 2009). The constant and variable costs are absorbed in the products primarily based on the principle that expenses be charged and absorbed to a cost unit or price centre (Medeiros et al., 2017; ATSWA, 2009; Abdel-Kader & Luther, 2006).

Marginal Costing Systems: With this costing system, variable prices are charged to the material while the ongoing costs are written off. The fixed costs are basically period costs that will not be entered into the production units as the fixed costs will not enter into the inventories and valued at marginal costs (ATSWA, 2009; Siva, Daniel & Shalini, 2013; Medeiros et al., 2017).

Activity-Based Costing Systems: Ramljak and Rogošić (2012) discovered that this approach is based on the definition of the activities performed by the company (Medeiros et al., 2017; ATSWA, 2009). This costing practice is used to obtain unique cost objects but not allowed for external monetary reporting. It is carried out in addition to the method or job-order costing structures (Siva et al. 2013). The expenses are amassed with the assistance of activities in manufacturing and non-manufacturing and

motivate managers to hint at the cost of the products and offerings (Fakoya, 2014). The enterprise incurs costs throughout the ordering, equipment setup, production, packing, and post-sale customer provider processes. In this system, ordering costs such as the prices of Smartphone operators and products ordered for the computers are assigned (Medeiros et al., 2017). Once the ordering technique is complete, the setup cost is added to the product until the product is efficaciously priced (Medeiros et al., 2017; ATSWA, 2009). Eventually, the kind of cost accounting practice created within the African CAM exercise will in all likelihood have an impact on the choice of price accounting model (Medeiros et al., 2017; ATSWA, 2009).

Uniform Costing Systems: This is not a distinct technique of cost accounting; however, it is the adoption of identical costing principles and methods by way of various units of a similar enterprise or using various undertakings by mutual agreement (Medeiros et al., 2017; ATSWA, 2009). The Uniform costing system enables legitimate comparisons between organizations and helps in doing away with inefficiencies (ATSWA, 2009; Siva et al., 2013; Medeiros et al., 2017).

Standard Costing Systems: This is the estimated price of production that presents regular operations and a minimal quantity of waste, defect, or spoilage (Siva et al. 2013). It compares the volume of materials, labour, and overhead expenses in production (Medeiros et al., 2017; ATSWA, 2009). If management knows the difference between the actual and standard to be significant, the agency will examine the difference and strive to rectify operations to remove the distinction in the future (Medeiros et al., 2017; ATSWA, 2009). If not, the company accepts the difference and does not change the process (ATSWA, 2009; Abdel-Kader & Luther, 2006; Medeiros et al., 2017).

Activity-Based Costing Systems: Ramljak and Rogošić (2012) observed that this method is based on the definition of the activities that are carried out by the company. This costing method is used to gain targeted price information currently not allowed for external financial reporting (Siva et al. 2013). The costs are collected using activities in manufacturing and non-manufacturing, and this encourages managers to trace the cost of the merchandise and offerings (Fakoya, 2014). The agency sets

prices for the duration of the ordering, machinery setup, production, packing, and post-sale purchaser service processes. In this system, ordering charges such as the costs of cell phone operators and products ordered for the computers, are assigned (Medeiros et al., 2017). Once the ordering process is complete, set up prices are brought to the product until the product is effectively priced (Medeiros et al., 2017; ATSWA, 2009). Eventually, the kind of cost accounting practice developed within African CAM practice may influence the need for the cost accounting model (Medeiros et al., 2017; ATSWA, 2009).

3.4.8. Cost accounting Systems: Methods and Techniques

ATSWA (2009) and Ngwakwe (2012) argue that costs follow a cause and effect link of why the cost has been incurred. ICWA (2008) reiterates that cost accounting techniques are those that assist enterprises to compute the cost of manufacturing or offerings whilst costing strategies are those who assist in presenting the facts to facilitate the choice making, price control, and cost reduction. The following cost accounting strategies and techniques had been stated (ATSWA, 2009, Medeiros et al., 2017)

Job Costing: The job order costing units based on jobs are based on manufacturing units responsible for jobs processing. The primary characteristic of this costing technique is to produce according to the requirements and specifications of the shoppers (ATSWA, 2009; Horngren et al., 2006). Furthermore, each job may be different from another. Production is on a precise order with no pre-demand production. It is essential to compute the cost of each job using a job costing system. In this system, each job is handled separately, and a job price sheet is organised to find the price of the job (ATSWA, 2009; Horngren et al., 2006, Medeiros et al., 2017). Organisations producing consumer items like televisions, air-conditioners, and washing machines use this costing system.

Process Costing: Products like sugar and chemicals contain a continuous manufacturing process, and consequently, a procedure costing approach is used to calculate the price of manufacturing (ATSWA, 2009; Horngren et al., 2010). In manner

costing, cost per method is calculated by dividing the total cost by way of the large variety of units. Industries like sugar, safe to eat oil, and chemicals are examples of a non-stop manufacturing process, and they use manner costing as indicated in Figure 3.4 below (ATSWA, 2009; Horngren et al., 2010; Medeiros et al., 2017).

Figure 3.4 below indicates the method and methods of costing that can be used to cost the merchandise and offerings of CAM businesses to determine the costing effectively. Hence, Figure 3.4 offers a summary of these strategies and techniques of cost accounting that need to be understood by CAM practitioners to facilitate the cost accounting exercise model in CAM companies by CAM practitioners.

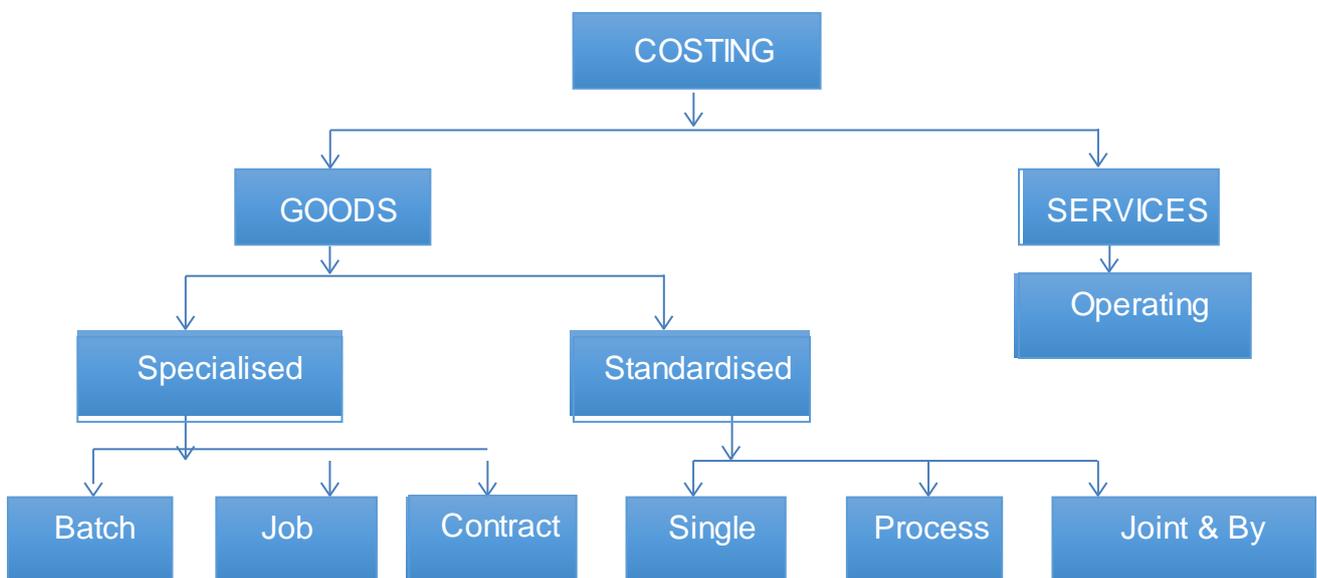


Figure 3. 8: Method and techniques of costing (ATSWA, 2009)

Operating Costing: The operating costing technique is used in the carrier region to work out the cost of offerings offered to the consumers such as the running costing technique used in hospitals, energy generating devices and the transportation region (ATSWA, 2009, Khairo & Davies, 2009; Medeiros et al., 2017). A price sheet is prepared to compute the total cost by dividing the units to working out the unit per cost.

Contract Costing: Contract costing is used in the building industry for the costing of contracts undertaken such as the cost of developing a bridge, business complex,

residential complex and highways (ATSWA, 2009; Khairo & Davies, 2009; Medeiros et al., 2017) Contract costing is similar to job costing; the sole difference being that in contract costing, one construction job may take various months or even years before completion, whilst in job costing each job might also be of short duration (ATSWA, 2009; Khairo & Davies, 2009).

Therefore, the availability of attractive cost accounting strategies and strategies for African CAM practitioners could facilitate informed and accelerated choices to improve product and service pricing in African traditional healing in South Africa.

3.5. Literature Related to the Implementation of a Costing Systems

The literature relating to cost accounting systems has focused on the importance of cost planning and costing practice as an essential tool in strengthening the performance of government's hospitals and health care organisations. This will empower the health care organisations aimed at enhancing the capacity of health care organisations. Therefore the related literature was discussed under cost accounting systems in the private organisation, cost accounting systems in public health care organization, cost accounting systems in service organisation and cost accounting systems in African traditional practise.

3.5.1. Cost Accounting Systems in the Private Sector Organisations

Cost accounting systems in the industrial sector have attracted much attention from accounting researchers (Kumar & Mahto, 2013). Tabitha and Ogungbade (2016) linked the development of cost accounting systems to the development of the industrial sector, pointing out that three causes led to the development of cost accounting systems in the USA. Such changes are one, the changes in the product markets, including changes in customers' demand and competition intensity; two, the changes in production technology, including characteristics such as mass or batch production and the company's reliance on labour-intensive or capital-intensive products, and third, the structure of the production and the demand for control. American companies have faced many changes in product markets. In the beginning, these companies were working in product markets without competition because the world demand was more

significant than the available capacity. In such a market, companies could sell their products, regardless of the quality, at any price they wanted, as was the situation before 1960. In 1970, despite the weakening of the US dollar, US companies were protected from foreign competition by the reduction in the cost of US products (Jinkens & Yallapragada, 2010). US products were made to cost less than the same products from foreign companies. After 1980, with the inflation dropping to zero and the US dollar becoming stronger than other currencies, US products became more expensive, especially against foreign currencies, such as the Japanese yen (Ning, 2005; Jinkens & Yallapragada, 2010). In such a situation, foreign companies were able to compete with companies in the USA markets. This forced American companies to change their policies and produce customized products instead of standardized products (Jinkens & Yallapragada, 2010). All these changes, in competition intensity and customer demands, gave rise to companies demanding accurate product costing systems to achieve cost control and cost reduction.

In 1980, the third change took place, which was cost control, involving the change from direct labour to manufacturing overheads. The manufacturing overheads thus became more significant and complex. If a company wanted to reduce its costs, it had to concentrate on the manufacturing overheads. Firms changed from producing standardized products to producing customized products. This meant that one machine was used to produce different types of products. In such a situation, there was a need to control the manufacturing overheads. Jinkens and Yallapragada (2010) studied the factors that influenced the development of Cost accounting systems in the USA's industrial sector. They ignored other countries as the situation in the USA sometimes differed from that in other countries. They also omitted industries such as service industries and the African Traditional healing sector. Regarding the contingency theory, firms choose cost accounting systems according to the business environment; for firms that produce one product, it is better to use simple cost accounting systems, whereas firms that produce different types of products are more likely to adopt more sophisticated cost accounting systems (White, 2014).

The study conducted by Brierley (2013) pointed out many advantages that ABC can

provide to manufacturing firms, and these include reducing costs, determining a more profitable product mix, and identifying opportunities for improvement. Brierley (2013) conducted the study to determine the similarity in the implementation of ABC between the type of industry, size, and location. They based their results on a web-based survey in industrial and service firms in many countries, including Asia, the USA, Canada, Latin America, and Europe. Although African Traditional healing is essential, Brierley (2013) did not include African Traditional healing in their study.

This means that the ABC system can be used for all sectors, including the African Traditional practise. Nowadays, African Traditional practice relies on machines more than before, meaning that the overhead costs have increased as a result of setting up new machines, maintenance, and depreciation. African Traditional healing might implement ABC to allocate those costs accurately to their products. Hence, managers will be able to make better managerial decisions. The results revealed that the implementation rates are quite similar in the manufacturing and service sectors. In the study of the relationship between the implementation of ABC and firm sizes, Medeiros, Santana and Guimarães (2017) found that large firms implement ABC, whereas small companies are most likely to use traditional costing because they do not have the diverse mix of products or services that would necessitate the use of ABC. In brief, Medeiros et al. (2017) pointed out that large firms with hundreds of employees have become more familiar with practising ABC than small firms. Furthermore, large firms are more willing to implement ABC than smaller companies. According to the previous information, ABC can be implemented in ACAM healing in South Africa because they produce multiple products, and most of them have more than a hundred employees. Therefore, applying the ABC method in these firms will have advantages, such as identifying opportunities for improvement, determining a more profitable product mix, and reducing costs.

Okafor, Okaro and Egbunike, (2013), meanwhile, studied the practice of incorporated environmental cost accounting in cost allocation using manufacturing companies in Nigeria. They studied the environmental costs which are allocated directly to products or processes based on allocating overhead to products/processes. Then, Okafor et al.

(2017) chose accountants from twenty-five (25) quoted manufacturing companies. These companies are from different industries: building, chemical, food/beverages, electrical, brewery, industrial/domestic, conglomerates, printing, health, and petroleum. The researchers chose twenty-five (25) accountants to facilitate questionnaire administration and collection for data analysis. According to Okafor *et al.* (2017), cost accounting systems are the quantitative information system in the organization. Okafor *et al.* (2017) also argued that cost accounting systems have two purposes, to provide cost data for external reporting and to provide quantitative data for internal use to aid the management in carrying out its functions.

Furthermore, in a study in Ghana, Mbawuni and Anertey (2014) point out that there is no ready-made system of cost accounting because businesses are not alike. The contingency theory indicates this. Pavlatos and Paggios (2009) claimed that there are no appropriate cost accounting systems suitable for all organizational circumstances. Consequently, these circumstances will determine the appropriate cost accounting systems. Özyürek and Yılmaz (2015) and Mbawuni and Anertey (2014) also argue that the methods and techniques of costing practice are the same; it is the application of those methods and techniques that is different. Their study revealed that most of the artisans do not keep detailed records of any kind because some of them are illiterate, while others do not think that their business is large enough to keep records. Even those who keep records do not keep full records related to job orders, debts owed, sales, inventory, and cost accounting systems.

Oluwagbemiga, Olugbenga and Zaccheaus (2014) were interested in studying the relationship between cost administration practices and its association with performance in manufacturing organisations. The study relied on secondary information extracted from the audited economic statements of the chosen company. The direct material, direct labour, manufacturing overhead and the administrative overhead cost was viewed as unbiased variables while profitability was determined on variables representing organisational performance. To conclude their study, Oluwagbemiga *et al.* (2014) despatched a survey instrument to forty manufacturing corporations listed on the Nigerian inventory trade from 2003 to 2012. However, solely

121 respondents returned the questionnaires. After analysing the data, they observed that there is a high-quality relationship between direct material cost, direct labour cost and company performance. However, production overhead costs and administrative overhead costs had been discovered to be negatively correlated with firm performance. Another finding by Abdul and Isiaka (2015) supports Oluwagbemiga et al. (2014) by way of studying the relationship between cost administration on the profitability of manufacturing firms in Nigeria, using records bought from the manufacturing unit by the workers, the debts and administrative personnel of the selected manufacturing companies in Nigeria. They made use of a questionnaire. The findings show that there is a vast difference between cost management and profitability.

According to Bescos and Charaf (2013), some elements affect the use of cost accounting systems, and these include competition, business ownership, changes in accounting legislation, and the development of the money market. Furthermore, Charaf and Bescos (2013) conducted their study in Morocco using a postal survey to collect the data. A mixed-method was used to collect the data. Using mixed methods overcomes the bias of using one method alone (Uyar, 2010). Charaf and Bescos (2013) focused on some critical issues in cost accounting, such as indirect cost allocation, determination of the selling price, transfer price determination, and product costing. However, Bescos and Charaf (2013) could not generalize the results because the response rate was only about 20.7% and the sample was not randomized and was exceedingly small (Bescos and Charaf, 2013). Bescos and Charaf (2013) sample consisted of 350 companies, 49 organizations were eliminated, while for nine organizations complete data was unavailable and 40 corporations that had been not suitable for the analysis, being consulting companies. The results reveal that there is a relationship between organizational and cultural elements.

From the management accounting literature, it is apparent that the majority of studies relating to the implementation of cost accounting systems were conducted in manufacturing firms. The reason for this may be because, in these firms, it is easy to identify the production processes, from acquiring the raw materials to making the final

product. Furthermore, it is not difficult to determine the number of materials used in every process and the labour needed to finish the product; whereas this is not the case in the cost accounting systems for service firms, such as hotels or hospitals, in which the final product is intangible, as elaborated in the next chapter. Therefore, academics can find numerous articles relating to the application of the costing systems in the private sector organisations, whereas few or no articles can be found on the application of cost accounting systems in the African CAM.

3.5.2. Cost Accounting Systems in Public Health Care Organizations

Silva and Cyganska (2016) conducted their study on hospital costs in Polish and Portuguese to learn the present state of cost accounting systems in the Polish and Portuguese hospital care systems. Of a total of 5 hospitals, three responded positively from Poland and two from Portugal. The researchers utilised experience to implement cost accounting as a strategy. The researchers implemented an exploratory case study approach to collect the data and found that in Polish hospitals, the costing systems are not updated frequently. In contrast, in the Portuguese hospitals, the costing systems are updated systematically due to the lack of educated staff, computer software and funds for implementing new solutions. However, Gapenski and Reiter (2016) state that ABC is a suitable choice for organisations in the service industry than in manufacturing companies. Silva and Cyganska (2016), during their research, established that the idea of discovering whether cost accounting systems in healthcare organizations improve healthcare efficiency is significant.

Bertoni, De Rosa and Lutilsky, (2017) in their study, highlighted the similarities and the differences between two hospitals - one Croatian and one Italian public hospital. It entailed a study of the implementation of cost accounting and full costing technique in their accounting systems where theoretical cost accounting methods introduced into the healthcare sector hold advantages to the whole society through a multiplied effectivity of the health care services provided to ensure better governing of hospital's resources by allowing more transparency in spending public funds.

This investigation was carried out through interviewing accounting officers in one

Croatian and one Italian public hospital. The preliminary results demonstrated that there are variations in regulation history concerning how they report costs. However, the results also show how they allocate charges to the cost objects and how they use cost facts in their decision-making process. Bertoni et al. (2017) conclude that to control public hospitals successfully, accurately, timely and validly, facts need to be acquired as a basis for decision-making where the cost accounting methodology is vital to the effective management of public hospitals. It should present data on the kind and quantity of resources spent, and therefore allow the preconditions for control, management and attainable reduction of costs.

Focusing on cost accounting system in the public health care sector, Lutilsky, Žmuk and Dragija (2016) pointed out the current flaws in the cost accounting methodology in Croatian public hospitals. The authors analysed the accounting system in Croatian public hospitals, finding the flaws of the accounting system, particularly in the recording and allocation of costs (Lutinsky et al., 2016). Out of 34 interviewed accountants and financial officers, 65 per cent accepted that the implementation of the accrual accounting system would increase the scale of accessible accounting information. Concerning the issue of economic sustainability, the Ministry of Health suggested the Croatian public healthcare sector cannot be viewed solely from the perspective of the customers and medicine but through the costs to patients or the services provided aligned with revenues.

In another study, Kihuba et al. (2016) investigated how hospitals make use of the costing system the use of demographic factors, namely the size, status of profit, membership of a chain, and location. Their study was conducted in Kenyan hospitals. They used a questionnaire to gather facts from a random sample consisting of chief financial officers in 149 hospitals. Only seven hospitals (4.7%) carried out the ABC system, whilst 71.8% were not aware of it. The hospitals that had implemented the ABC device mentioned that this system furnished more significant accurate charging and better cost control; five of them stated that the decision-making process in their hospitals had expanded after the implementation of the ABC system. This is also what Pines, Fager and Milzman (2002) determined in their study. Kihuba et al. (2016)

argued that though enormous progress has been made in the costing methodology, vital care research has no longer appropriately utilised these techniques. This may be because there is a lack of research that explains how to use price accounting systems and to inform decision-makers of the cost of the usage of progressive cost accounting systems.

In addition, Kihuba et al. (2016) asked the respondents how they had come to know about the ABC system, why they no longer used the system, and which cost accounting systems they were currently using. The respondents in Kihuba et al. (2016) research pointed out that they were aware of the ABC system from conferences, courses, and magazines; and 36.8% of the respondents noted that they did not observe the ABC system because of the high cost of implementing this system. Some answered that they are satisfied with their current cost accounting systems, while; others mentioned that they did not have sufficient knowledge of the ABC approach. However, 20 had been planning to use this practice in the future. Finally, the researchers discovered that the only area that had an impact on the hospitals' familiarity with ABC, as compared with the other demographic factors, which may be due to the concentration of competition in large cities is more extensive than in rural areas where there are only a few hospitals, so there is no preference for the patients as there is in the large cities.

Fialová (2013) carried out a study to determine the cost structure in hospitals; ascertaining the extent of costing utilisation in hospitals, establishing prevailing technique of costing and finally, to determine the reasons for not using other costing methods. Fialová (2013) collected the necessary data using a survey questionnaire amongst CFOs or their deputies in several hospitals in the Czech Republic. The questionnaire, consisting of 32 questions, was formulated to cover areas about costing administration in hospitals. Fialová's questions were centred on general economic information and cost management or the application of outsourcing and budgeting in hospital management. The questions were open and closed. Furthermore, Fialová (2013) conducted the research study as part of the project of the Internal Grant Agency at the Tomas Bata University in Zlín on the theme: "Project of Analysing of Economic-

Managerial Methods and Tools Utilised in the Hospitals in the Czech Republic”.

Kludacz (2012), on the other hand, conducted a survey of hospitals in Poland in 2012 to verify the characteristics of the cost accounting system which ought to be applied in a Polish health facility and the methodologies that must be used to calculate unit costs of the patient. The survey observed that the unit price calculated in the hospital could be used for cost setting, compensation and the price negotiations. It was, moreover, determined that statistics regarding unit prices analyses are vital for hospital management to use current assets efficiently and assess the organisation. It has further determined that cost accounting in Polish hospitals has to be based wholly on the complete methodology with the bottom-up micro-costing strategy which is a technique performed as a section of the monetary evaluation as it approves the calculation of accurate cost per patient or sub-population.

In addition, Fialová (2013) found that the Czech health care delivery and its associated costs have recently been a persistent theme of discussions. It is well-known that health care costs are rising continuously. However, is this trend sustainable in the long term? At first, it is necessary to know the exact level of costs caused by the given cost object. Based on this information, the price, which is subsequently either paid by patients themselves, or which becomes the object of the bargaining procedure between the health care facility and the health insurance company, is possible to be determined. Nowadays, costing of all medical procedures is performed only by less than half of the hospitals. The Job-Order costing method is applied in most cases. This costing method is one of the least difficult. The allocation base expressed in terms of volume or value is used to allocate common indirect costs to the procedures. This way of calculation, compared to the ABC method, is less accurate and does not result in actual outcomes. Therefore, it is necessary to focus on newer and more precise costing methods which can assign indirect costs to the cost object more accurately. The cost object is supposed to be medical procedures such as the surgical procedure, examination, etc. Until the exact costs of medical procedures remain unknown, it will not be possible to seek efficient cost-cutting solutions which would not have a negative impact on the quality of the provided health care.

3.5.3. Cost Accounting Systems in Service Organisation

Lutitsky, Vašiček and Vašiček (2012) surveyed to observe the state of managerial accounting use in the Croatian public sector. The survey was based totally on the questionnaire administered between 2006 and 2011. Furthermore, Lutitsky et al. (2012) handed out the questionnaire to over one hundred and fifty respondents of health care officials in the public sector. The total of 123 respondents returned the questionnaire in 2006, while 88 public sector practices and companies returned the completed questionnaire. Berton et al., (2017) discovered that cost administration for purposes of price planning and financial management in the Croatian public sector is still undeveloped and not sufficiently experienced in the technique of decision-making in budgetary spending in the Croatian public sector.

Sevim and Korkmaz (2014) conducted a research study where they looked into the cost management implementations of the Turkish inn industry. The research findings show that less than half of the respondent lodges utilise progressive cost management systems. Among these hotels, the utilisation of processes of the structures is significantly low. Furthermore, activity-based budgeting, the existence of life cycle costing, backflush costing and transfer pricing are no longer utilised by any respondent resort companies.

To achieve their objectives, Sevim and Korkmaz (2014) used their questionnaire to gather statistics. The questionnaire consisted of three sections. The first section was for demographic questions about hotels. The second section consisted of questions about the utilization of usual and modern cost administration strategies, and the last third included questions on the efficiency of modern-day techniques in managerial issues. Sevim and Korkmaz (2014) found that 52.4% of the motels had been independent, while 47.6% were part of an inn chain, and 66.7% had 5-star, whereas 33.3% were four-star hotels. As indicated, with the aid of the respondents of the

survey, 81% of the inns are working for a full 12 months and 19% of them working on a seasonal basis. Of the sample lodges, 76.2% have an all-inclusive carrier, and 23.8% are serving full board.

Akenbor and Agwor (2015) conducted their survey to inspect the relationship between overall costing and cost control in the Nigerian oil and gas industry. In their study, Akenbor and Agwor (2015) utilised the literature and developed hypotheses. Furthermore, Akenbor and Agwor (2015) identified the population for the survey from petroleum advertising agencies listed in the Nigerian Stock Exchange Fact Book of 2012. In order to generate vital statistics for this study, Akenbor and Agwor (2015) used both primary and secondary techniques of data collection. The records were collected by the administration of a questionnaire applying a 5-point Likert scale, while the secondary records were sourced from the Nigerian Stock Exchange Factbook of 2011. The findings generated in this research revealed that an extensive relationship exists between general costing and cost control. It was determined that the greater a company practises standard costing, the greater is the efficiency of the company in material, labour, and overhead costs.

A research study was conducted to study the elements that impact the design of cost accounting structures in hotels by Pavlatos and Paggios (2009). In their research, they wanted to discover the relationship between cost practice functionality and some of the contingent factors. Nitin and Delgobind (2013) argue that a purposeful cost practice has to furnish specific data, typical cost record reports, expanded classification of prices according to behaviour, correct cost data, and the calculation of more variances. Pavlatos and Paggios's (2009) research sample consisted of a hundred inns in Greece, and they investigated the affiliation between the cost system format and six factors, namely the extent of use of cost data, a less expensive strategy, stage of the competition, inn size, quantity of offerings and products, and membership of a multinational chain.

In their study, Pavlatos and Paggios (2009) used two data collection tools to collect the data, specifically a questionnaire and a semi-structured interview. Besides these,

they used measures from different researchers to measure the strategy, the level of competition, and the size. These measures are dependable because they have been used previously in different studies, which mean that the practices have been examined twice. After analysing the data, they observed that only 24 resorts used functional price accounting structures via billing customer services. They additionally labelled charges according to behaviour and suggested monthly cost data.

The survey/study by Georgiev (2014) examines the application of costs-volume-profit (CVP) analysis in the high-rating lodges in the north-eastern vicinity of Bulgaria. Such price systems use cost accounting strategies, such as CVP. The study by Georgiev (2014) was primarily based on the responses to questionnaires. The questions surveyed the respondents' opinion of the CVP tasks, and it was determined that hotels in Bulgaria use CVP. This is one of the most frequent tools used by lodge businesses to submit high utility data, as part of some useful management accounting methods utilized by the inn industry. Traditional Cost accounting systems, according to different researchers, distort the product charges (Carroll & Lord, 2016). Concerning the impartial variables, Georgiev (2014) observed that there is a beneficial relationship between the level of CVP and a low-price strategy and the extent to which the cost information is used, even as there is increased use by agencies to set up their price-setting policies on a broad scope of basic and ancillary services.

In their study, Mashayekhi and Ara (2017) wanted to obtain empirical evidence about the current trends in the implementation of activity-based costing (ABC) in the hospitality industry in Iran. To do this, Mashayekhi and Ara (2017) chose an Iranian global hotel, namely, the Tabriz International hotel, and used its accounting records in 2012 for the purpose of cost accounting by way of ABC and the traditional systems. Mashayekhi and Ara (2017) used the privately-owned four-star lodge in Tabriz in Iran, situated in a pleasant area in the middle of the city. It has 132 rooms which include single, double and triple rooms. Mashayekhi and Ara (2017) used ABC as a costing technique and examined the cost per service unit with that which had been obtained from the traditional costing method. They discovered that the result is a typical cost per unit for the two techniques. The ABC system was found to provide more accurate

and reliable information. Hence, the ABC system enhances the decision-making procedure for managers on decisions related to profitability analysis, budgeting and pricing.

Therefore, if cost accounting practice models can be successfully adopted in the service organisation sector, it could also be possible for the successful application of cost accounting systems in the African CAM domain.

3.5.4. Cost Accounting Systems in African CAM

This part discusses the extent to which cost accounting system has been undertaken in African traditional healing. African traditional healers are the target population for this thesis. Despite the economic and social importance of African CAM healing, there is a lack of research initiatives which analysed the provision of cost accounting systems implementation data and the use of cost accounting systems practice techniques. There is very little research on cost accounting systems in the African CAM sector. Academic research on African CAM management lacks qualitative and quantitative empirical studies, as declared by the studies by Kutch (2016), Moolasarn et al. (2005), and Tais and Zoberg (2013).

Davis (2013) conducted a survey on the US spending on African complementary and alternative medicinal drugs from 2002 to 2008. Taba and Fakoya (2016) observed that there were no accounting researchers who have been paying attention to price accounting structures in African CAM. According to the records at the researcher's disposal, the African CAM field no longer receives a great deal interest from price accounting researchers, practitioners, and tradition setters, but more on the expenditure and cost of medicines. Among the motives for this are the low level of managerial sophistication and the lack of financial ability in the African traditional healing sector. According to Kroll (1987) and Sabate and Encise (1997), this is because the African CAM and legal practices of European CAM suggest that they have no obligation to submit financial statements. African CAM practitioners who prepare them to comply with the tax framework and subsidy requirements.

Cost accounting exercises in the production sector have received necessary attention from researchers and the public. Researchers and trendsetters do not currently pay much attention to this field of knowledge. Nahin et al. (2009) carried out a survey to provide selected estimates of costs of CAM use amongst U.S. adults, the frequency of visits made to CAM providers, and the frequency of purchases of self-care CAM therapies. The results show that in 2007, adults in the United States spent \$33.9 billion out-of-pocket on visits to CAM practitioners and purchases of CAM products, classes, and materials. Furthermore, two-thirds of the whole out-of-pocket expenses that adults spent on CAM have been for self-care purchases of CAM products, classes, and materials at some stage in the previous 12 months (\$22.0 billion), in contrast with about one-third spent on practitioner visits (\$11.9 billion). Despite this emphasis on self-care therapies, 38.1 million adults in the USA made an estimated 354.2 million visits to practitioners of CAM. About three-quarters of each visit to CAM practitioners and total out-of-pocket expenses spent on CAM practitioners were related to manipulative and body-based therapies. At least 44% of all out-of-pocket costs for CAM, or about \$14.8 billion, was once spent on the purchase of non-vitamin, non-mineral, herbal products. Furthermore, Herman et al. (2005) determined that out-of-pocket bills of over \$34 billion per year in the US are a testimony to a broadly held belief that complementary and choice remedy (CAM) healing procedures have advantages that outweigh their costs.

Furthermore, Nahin, Barnes and Stussman (2016) argue that by estimation, African CAM health care per consumer expenditure for visits to an ACAM practitioner (\$433) is significantly more than purchases of natural product dietary supplements (\$368) or for self-care tactics (\$257). Adults had higher annual out-of-pocket expenditures for visits to complementary practitioners than teens (\$442 and \$291, respectively). Total out-of-pocket expenditures and per-person costs for ACAM health are substantially increased. The means the expenditure for ACAM health therapies was \$435 for people with household incomes less than \$25,000 and \$590 for people with family incomes of \$100,000 or more.

Spinks et al. (2013) conducted a survey to describe the key drivers and costs to men and women of CAM use in a population with type 2 diabetes and cardiovascular disease. The result indicates that previous attendance at a chronic ailment self-management programme and current attendance at a social or health-related assist group had also been associated with an elevated possibility of CAM use. Median CAM expenditure used to be estimated at AU\$240 per annum for practitioner use, and AU\$360 per annum for product use. African CAM practitioners can extend their income if they enforce price accounting structures in their traditional healings. Tais and Zoberg (2013) argue that with rising healthcare costs, insurers and coverage makers have expressed concerns about the cost-effectiveness of healthcare, whether conventional and CAM. Although more significant potential outcome research is needed to evaluate the cost-effectiveness of CAM, there have been studies demonstrating that CAM is cost-effective and there may be current cost savings due to less expensive treatments, decreasing science interventions, and its emphasis on preventative medicine. If healthcare reform proceeds along a route favouring lower-cost approaches, further integration of CAM practitioners, which includes naturopathic fundamental care providers, into healthcare delivery systems can also be beneficial. Here we assess the literature concerning the cost-effectiveness of CAM and naturopathic medicine. In this vein, Ahmad (2012) discuss the importance of accounting statistics structures in helping managers to make informed selections in African CAM recuperation development projects.

Kutch (2016), in his research, used survey records in order to produce estimates of the price and cost-effectiveness of African CAM blended with traditional treatments in the cure of nervousness issues. He further used the extensive definition of African CAM and surveyed information to investigate the cost-effectiveness. The effects located that African CAM customers with anxiety disorders confirmed a statistically insignificant decrease in costs of \$458.95 versus \$467.03. African CAM costs have been offset against a statistically considerable reduction in office-based and pharmaceutical costs. African CAM customers showed an increase in the probability of consistent or accelerated intellectual fitness compared to nonusers, resulting in an incremental cost-effectiveness ratio of \$12.70 per 10% increase in the likelihood of

regular or expanded mental health. This suggests a high likelihood that African CAM is low-cost for high costs of effect for nervousness issues of \$5000.

Therefore, if cost accounting practice models can be successfully adopted in private organisations, public health care organizations and service organisations, it may be possible for the successful application of cost accounting systems in African CAM.

3.6. Stages of Cost Accounting Practice

The implementation of a cost accounting procedure uses both the top-down and bottom-up approaches. In allowing for the assigning of direct prices and oblique charges to the price centres, the costing exercising needs to specify well-known cost centres as appropriate standards for price allocation. Özaltın and Cashin (2014) recognise seven steps of the cost accounting technique such as boost a well-known listing of fitness facility cost facilities, assign departments to cost core groups, calculate the complete cost for every input, assign direct costs to price centres, allocate costs to cost facilities, specify allocation bases, and calculate and cross-check unit costs.

Step I: Develop a Standard List of Health Facility Cost Centres

In this step, the costing teams should standardize the cost centres to ensure that the calculated unit costs can be fair and accurate in contrast across facilities. Facilities inside the equal health practice can also have organizational structures, specifically at the tertiary level, which can make standardization difficult. The costing teams need to avoid forcing the standardisation of departments to take into consideration the actuality of health facilities. For assistance with standardization, costing teams can seek advice from allotted guidelines, review accreditation applications, observe health data device data, or seek advice from health centre personnel. Standardization of departments can also occur over time if the cost accounting exercising is reutilised, permitting for steady definitions, a database of reference codes, and crosswalks to evaluate departments across hospitals (Özaltın &Cashin, 2014).

Step II: Assign Departments to Cost Centre Groups

After identifying and standardizing departments, the costing group should classify them into three categories, primarily based on their functional role within the health facility. First, the administrative departments that give overhead support to different departments. Secondly, scientific support departments provide diagnostic and medical support. In these departments, the services encompass laboratory tests, radiology exams, blood units, prescriptions, and surgeries. Lastly, the medical departments supply directly to affected person care and either discharge patients or behaviour outpatient or day-care visits. In these departments, services include discharges, bed-days, and outpatient visits. The cost accounting process results in unit costs for these units of service in the Clinical cost centres (Özaltın & Cashin, 2014).

How departments are categorized may also fluctuate based on the context of the United States of America (USA) health system (Özaltın & Cashin, 2014). To improve the accuracy of the cost accounting process, costing teams may also choose to consist of unofficial departments that are not formally recognised by the facility and separate these departments from the regular administration department (Özaltın & Cashin, 2014). The departmental charges for personnel and different recurrent items can then be allotted to the different departments for the use of a different targeted method than the one appropriate for the administration department (Özaltın & Cashin, 2014). This separation may additionally add complexity to the records collection and analysis, so costing groups must first discuss its merit (Özaltın & Cashin, 2014).

Step III: Calculate the Total Cost for Each Input

This step includes determining which cost objects will be protected in the cost analysis and measure the total cost of objects in the use of on-hand data (Özaltın & Cashin, 2014). In costing for issuer payment, it is quintessential to capture all costs that are relevant to the charging technique, or that can also be protected within the time horizon of the costing exercise (Özaltın & Cashin, 2014). The costing teams separate full fitness facility prices via inpatient, outpatient, and other offerings so the costs can be assigned and allocated to the right departments (Özaltın & Cashin, 2014). Due to lack

of uniformity in the practices of service-related with every type of patient care, it is, therefore, appropriate to conduct cost accounting for each type one by one by way of the capability of figuring out whole fitness facility expenses just for inpatient services. This will permit the calculation of the unit prices of discharges or bed-days (Özaltın & Cashin, 2014). Similarly, with the help of finding out facility expenses only for outpatient offerings and different services such as day-care visits and health advertising activities, will allow the calculation of the unit costs of outpatient visits and different services (Özaltın & Cashin, 2014).

Step IV: Assign Direct Costs to Cost Centres

This step assigns direct charges to administrative, medical support, and clinical departments based entirely on authentic facts on every department's use of those cost items. Direct costs are those that can be immediately attributed to a price centre. The cost practices classified as the direct cost can vary from facility to facility or from the country to country, relying on domestically used accounting procedures, the sophistication of the data systems, or the extent to which facilities budget and track expenses such as salaries, wages, benefits, drugs, and scientific supplies (Özaltın & Cashin, 2014).

Step V: Specify Allocation Bases

This step includes determining how to allocate prices that cannot be immediately assigned. In this step, it is not viable to directly attribute some charges to precise departments. These charges are viewed as indirect costs, which should be allocated primarily based on an estimate of each department's share of the full cost. Indirect costs are allotted according to a proxy measure of a department's use of the resources of a price item. In the absence of a direct measure of resource, the costing groups should use cost allocation methods first to assign unit costs to departments and then assign complete administrative and clinical department costs to the scientific departments in order to calculate the unit prices of medical branch services. Therefore, choosing an allocation base to explain indirect charges across departments is generally the preferred approach. Although there is no best allocation base for

apportioning costs, costing teams attempt to pick the outstanding estimate for departmental resources. The costing groups need to discuss the allocation with stakeholders to avoid conflict with the cost accounting system. The costing practitioners need to attain a consensus on the specific allocation bases, and those allocation bases must be utilised throughout all facilities. (Özaltın & Cashin, 2014).

Step VI: Allocate Costs to Cost Centres

In this step, the costing groups will allocate indirect costs in departmental prices the place all the oblique charges are assigned to an administrative branch and the price centres earlier than it can be allotted to the departmental cost allocation. If the same allocation base is used for multiple indirect cost items, it is appropriate to allocate the indirect costs together. Similarly, the allocation of indirect costs is selected to apportion these charges to mirror the different departments' use of the administrative departments' resources. The costing groups can allocate departmental expenses by either the use of a unique allocation base or via allocating unique cost objects in accordance to specific bases. Most costing groups choose a single allocation base to apportion branch costs, commonly by the use of measurement; however, in some cases, the different specified choice may be preferable. The costing groups list the departments that provide the most services to other medical institution departments at the top since expenses are allocated downward. The administration department generally comes first due to serving all the departments in the health care environment. (Özaltın & Cashin, 2014).

Step VII: Calculate and Cross-Check Unit Costs

This is the closing step in the cost accounting technique, where the calculation of unit prices takes place. The department unit cost is calculated by dividing the total price of each medical branch by its units of service. The costing team have to conduct a cross-check to verify that the total prices of the departments are equal to the full price of all departments before the allocation. This ensures that all charges have been accounted for, and no double-counting has occurred. If there is a discrepancy between the beginning total and the closing total, it will be imperative to go through the step-down

calculations again and establish where the error occurred. The allocation base reflects the motive and the impact relationship between aid use and the cost. Therefore, choosing an appropriate allocation base to allocate indirect costs throughout departments will be the favourable approach. Although there is no perfect allocation base for apportioning costs, costing teams should try to select an allocation base that provides the best estimate of departmental resource use for a country context. A simple approach is best; however: costing teams should consider the trade-off between accurately measuring resource use and feasibly collecting data. The allocation base selected may vary depending on data availability, data quality, and the unique context of the country or facilities. If data on resource use is unavailable or unreliable, costing teams can consult local experts to construct a base for allocation (Özaltın and Cashin; 2014).

Thus understanding and knowing the stages and steps needed for the successful implementation of cost accounting practice may assist the African CAM practitioner to effectively manage the adoption of the cost accounting models in African CAM to improve the costing of the various African CAM products and services.

3.7. Major Factors Impacting the Use of Cost Accounting Systems

The identified significant factors which have an impact in the implementation of any costing systems which are the size, level of competition, product diversity, technology, cost structure, the importance of cost information, organisational culture, and legal obligation, are discussed below.

3.7.1. Size

It is commonly agreed that size is one of the most critical elements that affect the use of any costing systems (Ahmadzadeh, Etemadi & Pifeh, 2011; Elhamma, 2012). According to Ahmadzadeh et al. (2011) and Amara and Benelifa (2017), size is considered to be one of the previous contingency theory variables. Many researchers have studied the correlation between the firm size and the application of cost accounting practice. Fei and Isa (2010) and Amara and Benelifa (2017) claim that

there is a relationship between firm size and ABC usage. This means that with an increase in firm size, there is an increase in usage as well. Fei and Isa (2010) found that the firms with more than a hundred employees, the managers are familiar with costing. Drury (2015) conducted a study aiming to examine the proportion in which various contextual factors may affect the choice of the product on costing practice. However, they found that there is a positive correlation between the size of the firm and higher costing system. Drury (2015) studied manufacturing and service firms and did not include African CAM.

Another study, conducted by Askarany (2012), aimed to examine the influence of organizational and cultural elements on the implementation and the adoption of cost accounting practice. The researchers found a correlation between the size of the business unit and all cost accounting systems, such as ABC. Askarany (2012) also studied the factors that affect the cost system design in hotels; the researcher claimed that the size is the most common factor that internally affects the cost accounting systems.

Tsvangirayi and Masani (2016) conducted a study to ascertain how hospitals implement the costing practice among the demographic elements, including organisational size, profit status, membership of chains, and location. After analysing the data, the researchers discovered that the location where the business is situated had a significant effect on the familiarity of the hospitals with costing as compared to the other demographic elements. This means that hospital size does not influence the use of ABC, as stated by Tsvangirayi and Masani (2016).

3.7.2. Level of Competition

It was discovered that one of the elements that influence the use of cost accounting systems is the level of competition (Fei & Isa, 2010; Kachalay, 2012). For instance, Ahmadzadeh *et al.* (2011) argue that due to a lack of competition, managers were previously able to make decisions about profit margins; however, this is not the case with cost accounting systems since the competition increased. Šiška (2016) claims that competition intensity and customer demands gave rise to companies demanding

accurate product costing systems to achieve cost control and cost reduction. Tsvangirayi and Masani (2016) claim that competition intensity is a determining factor for the adoption of the costing systems. Furthermore, Al-Tsvangirayi and Masani (2016) found that the sophistication of a higher level of cost system is positively related to the intensity of the competitive environment.

Šiška (2016) argued that intensive competition influences the application of cost management and control. Fei and Isa (2010) claim that the choice of Cost accounting systems in manufacturing firms relies on many factors, one of them being the competition faced by the firms. Reynolds (2013) claims that the intensity of competition is one of the factors that force firms to reduce their costs to be able to survive in the industry. Similarly, Quinn, Elafi and Mulgrew (2017) studied the correlation between adopting the ABC system and four elements, of which competition was one. Quinn et al. (2017) used two variables to represent competition, precisely the number of competitors and the percentage of exported products. Quinn et al. (2017) found that those who have not adopted the ABC system have a large number of competitors and a high export rate. Therefore, there is no relationship between the level of competition and the adoption of ABC. Furthermore, it was stated and agreed that competition level is a major factor that increases the desire to use costing systems in organizations (Uyar, 2010).

3.7.3. Product Diversity

One of the factors that cause cost distortion is product diversity because products consume different proportions of resources (Šiška, 2016). Firms that produce more than one product should implement cost accounting systems to determine each product cost separately. Some researchers, such as Reynolds (2013), have argued that firms that produce several products should implement refined costing systems, such as ABC if they want to determine the cost of product adequately because practising traditional costing will distort the product costs.

Ayadi and Affes (2014) determined the correlation between product diversity and designing of costing systems. They found a positive correlation between various products and the choice of costing systems. Firms with a low level of product diversity

usually choose a defined low-level cost accounting system and vice versa. The product diversity has elements such as diversity, production volume, size diversity, complexity diversity, set-up diversity, and material diversity, (Ayadi & Affes, 2014).

Reynolds (2013) argues that it is better for firms that produce more than one product or service to use ABC to be able to allocate overhead costs accurately to all the products. Furthermore, Madhu (2012) studied the factors that encourage firms to adopt ABC. One of those factors is product diversity. Madhu (2012) found that this factor is positively correlated with the adoption of ABC. Furthermore, his result was supported by Schoute (2009) who concurred with Madhu's results by claiming that product diversity is the most critical determinant of the use of ABC, because of a more complicated the production process, the more complex the cost accounting systems. In his study, Schoute (2009) studied the relationship between the adoption of ABC and product diversity as product diversity is related to the use and adoption of ABC.

3.7.4. Cost Structure

The changes in cost structure occurred in the total costs for products when the labour costs decreased, and the overhead costs increased as a result of changes in production technology (Fei & Isa, 2010), and this led firms to use not only cost accounting systems but more developed cost accounting systems, that is, ABC (Ahmadzadeh et al., 2011). Quinn *et al.* (2017) examined the elements that influenced the utilisation of ABC in Norway. These elements include the competition, product diversity, existing costing system, and cost structure. Quinn *et al.* (2017) found that only the cost structure is statistically significantly related to the diffusion of ABC. Quinn *et al.* (2017) argue that firms that have different cost structures adopt ABC more readily than companies that do not.

Bierer & Götze, (2012) and Asmara and Benelifa (2017) argue that the cost structure determines whether firms choose to use sophisticated or non-sophisticated costing systems. For instance, if the indirect costs are low in an industry, there is no need to invest in sophisticated cost accounting systems. On the other hand, Van Hai and van Dung (2017) claim that the choice of cost accounting and production control systems

depends on three factors, one of them being the significance of overhead costs. Again, Cugini and Pilonato (2013) contradicted other researchers when he found no relationship, which is essential among the cost structure and the application of ABC.

In another study, Van Hai and Van Dung (2017) analysed the state of cost accounting systems in Vietnam manufacturing firms. The researchers claim that structure costing is a significant element that influences the implementation of costing methods. Drury (2015) argues that the percentage of indirect costs does not only make firms use cost accounting systems but makes them choose either traditional costing or ABC. If the direct cost constitutes a high percentage of the total costs, firms should not invest in sophisticated cost accounting systems. However, if the indirect cost is more than the direct cost, firms should implement sophisticated cost accounting systems because traditional cost accounting systems will distort the product costs. Drury (2015) contradicted other studies when they found that there is no interconnection found among in the use of sophisticated costing systems in firms and the cost structure in their studies.

3.7.5. Technology

Van Hai and van Dung (2017) and Amara and Benelifa (2017) found that technological know-how is one of the simplest and most extended contingency factor used in administration accounting and capable of differentiating distinct kinds of production technologies. This includes the unit of production, small-batch, massive batch, mass production and process production, which is a contingency element that has long been known to influence the design of inside price accounting systems. Otley (2016) and Ahmadzadeh et al. (2011) declare that in most cases, the nature of the manufacturing procedure determines the amount of cost. Furthermore, technological know-how has a significant impact on the kind of cost accounting data that can be provided. Reynolds (2013) and Guan (2010) argue that organisational technology places a critical constraint on the information design system, and found a strong relationship between the technological working unit and type of data required to operate effectively. Drury (2015) perceives four principal categories of technology as programmable, technical, professional, craft, and research.

3.7.6. Organisational Culture

Reynolds (2013) and Guan (2010) defined organisational structure as the specification of distinct roles for the organisational members, or tasks for businesses that will make sure that the directives of the employer are carried out. This will affect the efficiency of work, the motivation of individuals, information flows, will manipulate structures and form the future of the organisation. Quinn et al. (2017) argue that organisational lifestyle influences all the components of organisational interactions and the appreciation of the contingency element. It is vital to observe and comprehend the performance dimension systems from a holistic perspective. The results of this research show a higher range of size for flexibility of the cost of the companies that control the cost firms. Quinn et al. (2017) conclude that managers in an enterprise reflect the flexibility of the by using more significant overall performance for efficient production purposes.

3.7.7. Importance of Cost Information

Cost information is needed for cost control, inventory valuation, and managerial decision making encourages firms to use cost accounting systems, especially in a competitive environment (Fei & Isa, 2010; Ahmadzadeh et al., 2011) in which competitors try to introduce their products at lower prices. This is possible by decreasing production costs. Reynolds (2013) claims that the primary role of cost accounting structures is to allow decision-makers with price information to manipulate the cost of the present activities, services, products, and customers. Cost accounting structures furnish relevant cost statistics for managers to become aware of worthwhile and unprofitable things to do and to make sure that solely worthwhile things to do are undertaken.

According to some types of cost information, decision-makers will need to choose the type of cost accounting systems to use. If the production system is simple, and most total costs are direct costs, it is not worthwhile investing in sophisticated cost accounting. Traditional costing can help to provide the required cost information (Rasiah, 2011). However, if the production system is more developed or sophisticated,

traditional costing will be of no benefit. ABC will be more appropriate for this production system (Haroun, 2015). According to Alanzi (2015), different types of cost information for decision making, cost reduction, and cost control may cause firms to use specific types of cost accounting systems. Weekes-Marshall (2011) concur that the information needed for decision making influences organisations to use management accounting systems.

Similarly, cost information is so vital that it encourages firms to use specific types of costing systems (Šiška, 2016). The increased importance of cost information makes firms use more innovative cost accounting systems, such as ABC. If the firms use high-tech machines to produce a variety of products, determining the product cost for every product will become difficult because of the increase in overhead costs that need to be allocated appropriately (Reynolds, 2013). It is argued that when the cost information is not particularly important for decision-makers, firms use simple cost accounting systems and avoid implementing sophisticated cost accounting systems. For instance, because governments subsidise universities, the cost information is not especially important for decision making to manage the universities' resources; therefore, universities use traditional cost accounting systems, such as full costing (Alanzi, 2015). Moreover, artisans who have small shops and rely on market prices for raw materials and finished goods usually do not use cost accounting systems, because cost information is not essential to them (Drury, 2015).

3.7.8. Legal Obligation

In legal obligation, some studies have suggested that cost accounting systems are implemented in some organizations for meeting regulations and abiding by the legitimacy of the organizational activities to create the impression to external stakeholders that the organizations are very well controlled in their operations. According to the literature review, most of the researchers have argued that a lack of legal obligation affects the use of cost accounting systems. For instance, Fei and Isa (2010) and Athanasios *et al.* (2010) claim that small organizations like traditional healing organizations do not publish financial statements because of the lack of legal obligation, and this finding is

supported by Šiška (2016). The fact that African Traditional healing in South Africa does not use accounting systems might be because they are not subject to income tax, so most of them do not keep records or publish financial statements (Reynolds, 2013; Amara & Benelifa, 2017).

Nair and Nian (2017) found that small and medium enterprises have legislative requirements for cost accounting practice data to implement cost accounting systems to meet these requirements. However, they do not use cost data for internal use in their organizations, but instead for activities such as managerial decision making. Ramli, Sulaiman and Zainuddin (2014) and Fatah and Mat-Zin (2013) concur that the use of accounting systems is to prepare financial statements according to accounting law and for tax purposes. Furthermore, Šiška (2016) argues that accounting legislation is one of the critical factors that influence firms to use cost accounting systems. Therefore, if the government implemented accounting legislation, all firms would follow this legislation, especially those that belong to the government sector.

The study's objective is to develop, implement and demonstrate a cost accounting model in ACAM for decision making about the products and services. Therefore, it is appropriate to discuss the elements that could influence the cost accounting model in African CAM as both the external forces and internal factors will be instrumental in assisting the practitioners in achieving successful development, implementation and demonstration of the cost accounting model in CAM practice.

3.7.9. Summary of the chapter

In this chapter, the researcher reviewed the literature related to cost accounting systems with special attention to the difference between management accounting and cost accounting. This was followed by the development of cost accounting and overview of cost accounting systems. The literature review on the implementation of cost accounting, the stages of cost accounting systems, and the factors that have an impact during the implementation of cost accounting system were also discussed..

In discussing the development of cost accounting system, the origin of cost accounting practice, the cost accounting practice before 1800 centuries, cost accounting practice in the year 1800 to 1900 and cost accounting practice in the year 1900 and 2000 was also discussed.

During the overview of cost accounting systems, the definition of cost accounting systems, elements of costs, classification of costs, characteristics of cost accounting, significance of cost accounting, types of costing systems and the different methods and techniques of costing systems were also discussed.

In identifying the literature related to the implementation of cost accounting practice, the implementation of cost accounting practice in private, public health care, service, and African CAM organisation were also discussed.

During the stages of cost accounting practice, seven steps such as developing a standard list of health facility cost centres , assign departments to cost centre groups, calculate the total cost for each input , assign direct costs to cost centres , allocate costs to cost centres ,specify allocation bases , and calculation and cross-check unit costs were discussed.

The chapter concluded by discussing the size, level of competitions, product diversity, technology, cost structure, importance of cost information, organisational culture, and legal obligation as factors with the major impact during the implementation of cost accounting systems.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Introduction

This study explored the processes of cost accounting practices in ACAM practices in South Africa. To achieve the main objective of the study, the previous chapters discussed the theoretical interrelationship between cost accounting and ACAM discipline. Chapter Two outlined the characteristics of the African CAM environment and the selection of theoretical frameworks, with the study adopting the cost of production theory and contingency theory. Chapter Three argued the main factors that might affect cost accounting practices in African CAM.

At this point in the study, it is essential to restate the objectives of this study:

- To ascertain the existing procedures that the ACAM health practitioners used to cost the ACAM services and products and how such procedures assist in the costing decision-making.
- To successfully develop, adopt and demonstrate the ACAM costing model for the ACAM facilities to effectively cost the ACAM products and services and enhance ACAM health care services; and
- To understand the deterrent factors that may be encountered in developing, adopting and demonstrating the proposed ACAM costing model to enhance the costing model.

This chapter discussed the overall research methodology and the basis of choosing various features in the process of the research. In doing so, the background to the research methodology, research paradigm and philosophy, the strategy of the research was discussed. In the research design, the action research model, the rationale and the stages of action research are discussed. The chapter also discussed the qualitative, quantitative, mixed methods and action research. Finally, the validity, reliability and trustworthiness of the data collection method and ethical consideration were discussed.

4.2. Research method

The researcher chose to use qualitative research method because the researcher gathered data through watching and experiencing. This method allowed the researcher to ask face to face open-ended questions, used documentation and observation in order to collect more data. Previous researchers such as Sundararajan, Mwanga-Amumpaire, King, and Ware (2020) also used qualitative approach when developing a conceptual model for pluralistic healthcare behavior in Uganda. Additionally, Gijimah (2016) used qualitative research method when studying representation of traditional and faith healers in Zimbabwe. Furthermore, Van Sickle, Morgan and Wright (2003) used qualitative research in his study while determining the use of traditional healing practice by asthmatic Navajo families. Therefore the qualitative research method utilised by the researcher is common in the study of African complementary and alternative research.

4.3. Research paradigm and philosophy

The researcher used interpretivist and constructivism approach as research philosophies to promote the idea that people are deliberate and creative in their actions and actively construct their social world. This interpretivist approach considers the changing and dynamic nature of the society and encourages multiple interpretations of the study through the historical or social situation. Previous researchers such as Mupfumira (2012) used both interpretivist and constructivist when assessing African traditional medicines in pregnancy and on birth outcomes by using pharmacists' perceptions on complementary medicines. The approach was also used by Mpono (2007) when assessing the traditional healing practices among the Nguni people. Furthermore, Sundararajan et al., (2020), used interpretivist approach when developing a conceptual model for pluralistic healthcare behavior using qualitative study in Uganda. Therefore the paradigms and philosophy utilised by the researcher are common in complementary and alternative research.

4.4. Research strategy

According to Ghorbani and Bravo (2016), research strategy is the universal design

that is employed by the researcher to respond to the research questions. Jonker and Pennink (2010) and Saunders and Rojon (2014) divided field study research techniques into survey research, action research, collaborative research, field method, cooperative inquiry, experimental methods, ethnography, grounded theory, narrative methods, and quasi-experiment research. Experimental strategic methods are much indebted to the natural sciences, while the field research's findings aim to enhance an intensive understanding and the skills of single or few fields (Parker et al., 2017). Furthermore, Parker et al.,(2017) discovered that the grounded theory, narrative strategies, ethnography and cooperative inquiry are indebted to the inductive approach, which, in return, is indebted to the Phenomenological methods. The action and collaborative research demand that the researcher work very closely through collaboration and coordination with the ACAM practitioners and to effectively form part of where the research is being undertaken.

Accordingly, the survey strategy is also indebted to positivism, and it assists researchers to survey more samples, to generalise the findings, and discuss the whole population's traits and is usually used when the researcher aims to acquire documents from large samples (Khupe & Keane, 2017 and Aliyu, Singhry, Adamu & Abubakar, 2015). Moreover, a survey method is a somewhat structured approach that allows the collection of standardised records (Easterby-Smith et al., 2015). Ghorbani and Bravo (2016) argue that the selection standards of a research method depend on the research aim and objectives, the researcher's constraints, and the time available. Based on this discussion, and for this research, an interview, documents, observation and survey approach were chosen for this study. The motive is threefold as an interview, and the survey method is associated with a deductive approach. The surveys are popular techniques used in organisational studies such as in ACAM facilities (Burke & Christensen, 2014; Saunders et al., 2012). The interview and the survey approach enable some opinions and attitudes, as well as ascertaining the motives and effectiveness of the relationships of ACAM and cost accounting practice (Isaacs, 2014; McVicar, Munn- Giddings & Abu-Helil, 2012) which helps to achieve the research objectives.

4.5. Research design

Khupe and Keane (2017) and Easterby-Smith et al. (2015) observe that a field study research design is divided into descriptive, exploratory and causal. If the research problem is poorly understood, the researcher employs exploratory research. If the purpose of the investigation is new or unclear, or if the research variables cannot be identified, the researcher will wish to comply with an exploratory design in order to serve the cause of the study and examine new ideas about the phenomenon (Jamshed, 2014; Kothari, Hamel, MacDonald, Meyer, Cohen & Bonnenfant, 2014). The intention of causal research or analytical research is to establish whether one event causes another (Wisdom, Cavaleri, Onwuegbuzie & Green, 2012).

The research design for this research was an action research plan which is suitable for this research as the researcher collected and accumulated statistics from the ACAM practitioners to comprehend how cost accounting practice is applied in ACAM. This action research is fitting because it uses the research cycle. Two research cycles were applied to promote the improvement and demonstration of the cost accounting model in ACAM in collaboration with the practitioners. It additionally indicates how all the significant parts of the research study such as the samples, groups, measures and remedies work together to address the identified research questions and achieve the research targets (Kothari et al., 2014). The following section discusses the action research, the reasons for action research, an action research model, and the stages of action research, all in order to successfully develop, adopt and demonstrate the cost accounting practice model in ACAM practice.

4.5.1. Action Research

Bristowe, Selman and Murtagh (2015) argue that the action research method grew to be popular within business and management at some point in the 1980s and 1990s because of its emphasis on the realistic results of such studies. This differentiates action research from other qualitative research methods. Riel and Rowell (2016) describe action research as a method where the researcher and customer coordinate in diagnosing a problem and finding a solution which is based on the diagnosis of the

situation. Furthermore, Khupe and Keane (2017) discovered that high-quality action research is relevant to businesses that are different from the existing model that relates to current concepts and leads to a newly emerging idea arising from the data, and the research will have an effect on collaborations.

Ponterotto, Mathew and Raughley (2013) identified the four stages of action research as identification of a problem, creating plans about how to resolve that problem, taking action to resolve the trouble and then, finally, evaluating the success of the solution. However, action research which encapsulates the above dialogue and defines action research as a new inquiry system. In this new system applied behavioural science knowledge is built-in with present organizational know-how, and it is utilized to clear up actual organisational problems such as those experienced in the field of ACAM (Mertler, 2017; Kingsley & Chapman, 2013). The researcher can conclude that action research is undertaken in a collaborative spirit. Moreover, the outputs of action research are readable, relevant, and fascinating to practitioners as much as to academic audiences (Rowell, 2019).

Khupe and Keane (2017) regard action research as the system of systematic series and the evaluation of statistics in order to make adjustments and improvements. Jamshed (2014) regard action research as an increasingly more general structure of research. However, Jamshed (2014) and Ponterotto et al. (2013) regard action research as the advertising of the collaboration between the researcher and individuals as so in this study this would be where the ACAM practitioners' expertise should improve from the action research undertaken in that field of study.

The purpose of this action research is to create a model to cost products and services and enhance the cost planning process (Riel & Rowell, 2016). Isaacs (2014) and Bristowe et al. (2015) found that action research is designed to convey alternatives for the improved benefit of the stakeholders. The hope is that the results obtained from conducting action research to investigate the challenges faced by ACAM will contribute to the development of a cost accounting model to enhance the ACAM practitioners' self-belief in costing their products and services.

4.5.2. The rationale for Action Research

The primary goal of action research is to effectively facilitate the researcher to bridge the academic gap from idea to practice (Mertler, 2015). Rowell (2019) found that action research is often used in language research and also as a strategy for external innovators to impact academic change. Kingsley and Chapman (2013) observed that the field study subject of action research had become a laboratory for experimenting, contesting, and evaluating context and situation. Bristowe, Selman and Murtagh (2015) contend that action currently can improve the contemporary situation of product and services and providing proof for change. Mertler (2017) and Anderson (2013) listed the advantages of doing action research to advance research skills. Moreover, collaboration as the predominant component of action research will assist towards an appreciation of ACAM facilities and the development of collaboration between the researcher and the ACAM practitioners (Mertler, 2015; Johnson, 2012).

Furthermore, action research presents ACAM practitioners with the possibility to acquire the necessary knowledge, ability and awareness of the interaction in the choices and prospects for interaction in the ACAM facilities (Sum, Ma, Ha, Tang, Shek, Cheng & Kong, 2016). Rowell (2019) and Parker, Lieschke, and Giles, (2017) also determined that practitioners collaborating in action research grow to be indispensable to their practice. Indeed, Rowell, Polush, Riel and Bruewer (2015) discovered that the most critical mission is to take a thought that sounds abstract and turn it into reality. Riel and Rowell (2016) determined that the participants of action research are in a position to alternate behaviour of personal engagement into practical challenges. Additionally, Johnson (2012) and Gamper, Schönhuth and Kronenwett (2012) regard action research as investigation units that enhance the ability to articulate an understanding in a given scenario while enhancing the potential to articulate a perception as well as the sources of knowledge. Hence, action research is an appropriate approach to determine how to increase self-assurance and costing competencies of ACAM practitioners and be in a position to cost the products and services accordingly effectively.

4.5.3. The Action Research model

In answering the first two research questions, the researcher devised two action research cycles for the African CAM practitioners that would assist in the designing of the costing model and also in identifying the challenges. The two action research cycles start with self-introduction, the assigning of costs to cost objects, activity analyses, calculating the activity rates, assignment of costs, activity identification and coffee break discussions. It is done under the following identified research questions: what are the existing procedures that are used by ACAM practitioners in costing the products and services, and does this approach assist in improving decision-making? What are the challenges experienced by the African CAM practitioners in costing their products and services, and how can the challenges be overcome to improve decision-making? Further, what possibility exists to develop a useful cost accounting model for African CAM practitioners to capture their products and services in South Africa?

4.5.4. Stages of Action Research

The researcher followed the action research stages to successfully collect data in order to develop and demonstrate the cost accounting system model in African CAM. Those stages of action research are the initial reflection, planning, acting, observation, reflection and dissemination (Mash, 2014; Mertler, 2017).

Stage 1: Initial Reflection

This stage was to build the capacity of individual African CAM practitioners as well as augment the systems in which they work to optimize conditions for the success of the model. During this stage, the researcher worked with the African CAM practitioners to identify and develop the resources, administrative support, and policies required for the implementation of the action model. The researcher developed the knowledge and skills of those practitioners implementing the model and refined the model activities based on the conditions of the African CAM.

Stage 2: Planning

During this stage, the researcher ascertained the content through documentation in

developing the model to reinvent and follow up on what had already been done. The researcher developed the cost accounting system model in collaboration with the data and information provided by the African CAM practitioners. At this stage, the researcher dealt with the identification and selection of relevant types of cost accounting information, procedures and synthesis of data to formulate data that has the potential to be incorporated into the design of the cost accounting system model for African CAM.

Stage 3: Acting

During this stage, various information and tools that can assist in developing the model were reviewed continuously, and the criteria were discussed with the African CAM practitioners. The other consideration at this stage was to aggregate the findings across the African CAM through qualitative and quantitative methods. The researcher identified a need to organise the existing knowledge of cost accounting systems to prevent the fragmentation of research in African CAM.

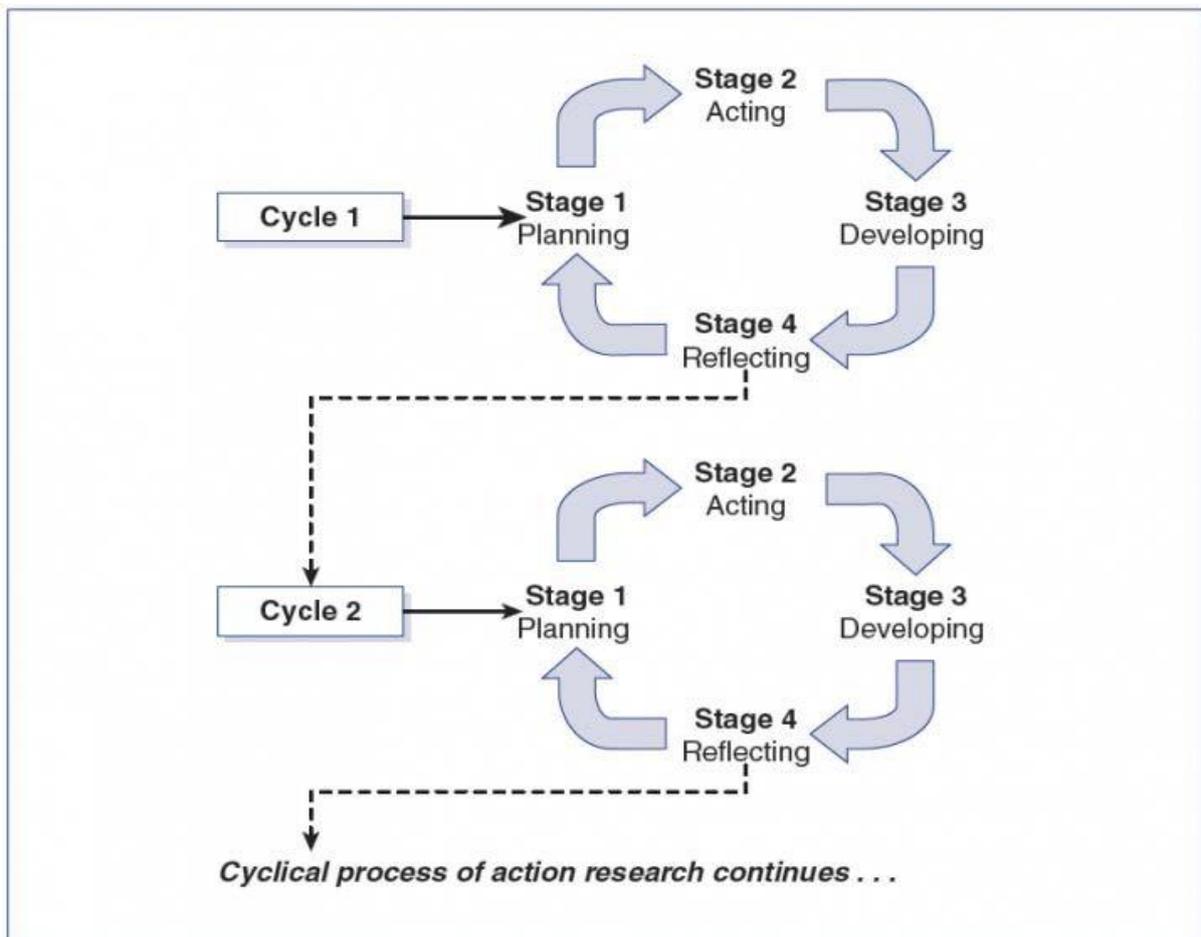


Figure 4. 9: The ongoing cyclical process of action research (Mertler, 2017)

Stage 4: Observation or developing

During this stage, the design created in the action stage evolved into a form that can be evaluated under field study conditions. The three key activities of this stage employed by the researcher include: first, developing the action research model; second, planning and implementing a pilot test in African CAM to determine the study's effectiveness; and finally, identifying the elements of the design by developing a set of procedures for the practitioners and implementing a trial test. This highlights the process which the researcher piloted and shaped through field studies. Therefore, early development was conducted to facilitate the implementation and modification of the action. This implies that the practitioners needed to acquire the skills to use the model. The practitioners provided valuable inputs in the evaluation of the model, and modifications were developed and incorporated into the model.

Stage 5: Reflection

During this stage, the developed model was evaluated and adjusted accordingly, and emphasise systematic evaluation and effects of the cost accounting system in African CAM. The researcher selected the appropriate evaluation methods and conducted a pilot evaluation to test the action research model and assess the cost accounting system in African CAM model. Consequently, the success of the model depends on the coordination and cooperation of African CAM practitioners. Such collaborations and cooperation were successful and were not threatened by the educational accounting skills of the practitioners. At this stage, the researcher ensured that all model activities are fully operational and implemented within the African CAM. The researcher then integrated cost accounting system practices into the African CAM practices and continued to adjust model activities based on the feedback on the cost accounting system in African CAM action model. The African CAM practitioners started costing the product and services of the African CAM. Both the African CAM practitioners and the researcher reflected on the strategies that helped African CAM practices to reach the goals of product and service costing.

Stage 6: Dissemination

During this stage, the researcher assesses the potential consumers in order to develop a plan for dissemination, demonstrates the use of the model by revising the dissemination plan and then disseminating it to the CAM health practitioners. The cost accounting system in African CAM approach was directed towards promoting the acceptance and utilisation of the model by the African CAM practitioners. The guidelines to the implementation of the cost accounting system in African CAM model were disseminated through workshops with African CAM practitioners and academic conferences and the development of a network of cost accounting system users in the African CAM field. Hence, these stages of the data collection method ran for 5 (five) months from the initial reflection to dissemination for effective implementation of the cost accounting system in the African CAM model. In this stage, the researcher demonstrated, promoted and managed the full implementation of the model. African CAM practitioners had to reflect on what problems they experienced up to

the successfully costing of the products and services and how they found ways to improve as the researcher was improving the model by starting the plan again for the next research cycle.

4.6. Mixed Research method

The study used both qualitative and quantitative research methods as a mixed research method where the researcher enlarges the credibility and the validity of the study dramatically. In the research approach, the researcher used the mixed-method approach to realise the main objective of the study. In the social sciences, the mixed-method approach provides the benefits of both research methods and overcome the shortcomings of using only one method (Parker et al., 2017; Kothari et al., 2014). The researcher used document analysis to develop a costing model to ensure that the products and services of the African CAM are appropriately reported. Mixed research methods were used to overcome biases and problems caused by a single method, single observer or single theory. This assists to effectively capture the different dimensions of costing products and services in African CAM. Although the research technique is defined following academic and enterprise purposes, the research approach may additionally refer to a research process in published literature, such as methodological research designs, a systematic research technique, investigation, and to enhance academic research expertise (Ennis & West, 2013).

Crano, Brewer, and Lac, (2015) and Yin (2012) regards the research techniques as influenced by the philosophical role of the research and representative of assumptions about the nature of reality, knowledge, and observable phenomena. Furthermore, quantitative and qualitative strategies are the two systematic and distinct classes that are typically used in conducting research (Mertler, 2013). To extend the reliability and validity of the research, unique methods would possibly be mixed to triangulate the study, namely, by combining multiple research methods (Ivankova, 2014; Dabaieh, 2013).

4.6.1. Qualitative Research Methods

The researcher uses documentations and face to face interviews to acquire qualitative statistics which is an appropriate approach for this research because model development requires a grasp of the strategies and allocation of used ingredients. (Saunders, Lewis, and Thornhill, (2012 regard the qualitative research as expressions and investigations such interview assessments for human behaviours and the interpretation of the researched subject. (Ponterotto, Mathew & Raughley, 2013). However, particular qualitative inquiries, that is, the interviews, may also be structured, semi-structured, or unstructured interviews. This study utilised semi- structured interview strategies in the field (Isaacs, 2014; Johnson & Christensen, 2014).

Wisdom and Creswell (2013) and Ponterotto et al. (2013) pointed out that the selection and confirmation may be conducted telephonically or through email as the researcher may use some elements and strategies to help develop an appropriate costing model to be validated for expanded decision-making in ACAM.

4.6.2. Quantitative Research Methods

The researcher went through two research action research cycles and also used self-rating scales and a survey questionnaire which had been conducted with the assistance of the African CAM practitioners.

According to Wisdom and Creswell (2013), a quantitative research technique is a numeric description which is derived from the study of a sample of participants that characterise trends, attitudes, or opinions of the population under study. Thus, Isaacs (2014) observes that this type of research provides computational expressions of the empirical inquiries and investigations through direct observations and a survey questionnaire. Furthermore, the quantitative research technique gives measurements for collecting and analysing unique and meaningful numerical varieties of data (Jamshed, 2014; Scotland, 2012). The direct observations can be used to obtain audio and visible records, documents, and enhance the analysis of the events or activities in the research area. After that, the survey questionnaire comprises open-ended and

closed questions for acquiring specific vital points, while heading off redundant responses, to assist in the development, adoption and demonstration of the ACAM cost accounting practice. The quantitative research technique can be administered electronically or by printed document for the respondents to accumulate high-quality and meaningful data (Saunders et al., 2012 and Lehmann, 2010). This was done to allow computational expressions of inquiries and investigations. The stages and activities of action research promote the development, adoption and demonstration of the ACAM costing model. The quantitative research study is conducted to scrutinize and validate the results from qualitative research data.

4.6.3. Mixed Methods

The researcher applied particular strategies of research which contain both qualitative and quantitative methods to avoid research bias. The mixed-method compensates for an individual research method's weaknesses by counterbalancing the weaknesses of other methods (Palinkas, Horwitz, Green, Wisdom, Duan & Harwood, 2015), and should also support each distinct technique by standardising the bias of a single technique through serving the bias inherent in the other approach (Ponterotto, Mathew, & Raughley, 2013). This has implications on the positioning of the two research techniques with the ontological and epistemological philosophies. Therefore, the possibility and desirability of combining both research methods by using a production cost of cost and contingency factors in implementation and demonstration of the ACAM costing model (Isaacs, 2014; Uzun, 2016). Accordingly, these philosophical assumptions, the mixed-method approach is viable for the cost of manufacturing cost principle and contingency research. However, most researchers see these two tactics as qualified to being triangulated to strengthen the data collection and statistical evaluation based entirely on a technical assumption (Wisdom et al., 2012; Palinkas et al., 2011).

Research can be more dependable when combining specific methods and strategies from unique angles or dimensions to obtain compelling information. Khupe and Keane (2017) suggest that the researcher may use multiple sources of records and databases as proof to amplify the validity and reliability of the research. Furthermore, data

validation can be achieved through correct operational strategies using appropriate instruments for information collection (Wisdom et al., 2012 and Bishop & Holmes, 2013). Internal validity considers the causal relationships in order to establish conditions through the correct analytic strategies for information and data analysis. In contrast, external validity considers sampling techniques and units of analysis to establish a generalisation of the research findings (Palinkas et al., 2011). Reliability considers that the replication of operational strategies supplies similar results and appropriate throughout research methodology (Isaacs, 2014). However, Jamshed, (2014) offers a primary assumption of mixed-method inquiry that serves as a greater appreciation of the research concern while the section that follows continues with the field study research. The three principal research instruments applied for the duration of this study were the survey questionnaire, ACAM documentation, and direct observation at certain stages during the field study, and lastly, semi-structured interviews with the ACAM practitioners. The next section discusses the application of the action research conducted using mixed-methods.

4.6.4. Applying Action Research in Mixed Method

Action research is a popular and useful method to implement the mixed-methods design that will assist the researcher in administering both qualitative and quantitative methods (Parker et al., 2017). It is primarily based on the sequence and analysis of quantitative statistics accompanied by the collection and evaluation of qualitative data from the quantitative methods (Martí, 2015 and Dabaieh, 2013). When a quantitative approach follows qualitative research, the intent will be to advance a survey instrument, informed through qualitative findings. When the qualitative section follows the quantitative section, it involves explaining the mechanism behind the quantitative results (Vicki. and Clark, 2019). This was done as quantitative research is capable of providing results which give a generalised picture of the research problem. It is used explicitly with qualitative data as in the figure (Figure 4.4) below. Wisdom and Creswell (2013), Isaacs (2014) and Jamshed (2014) found that mixed methods research is a suitable technique in assessing complex interventions similar to the cost accounting system model in ACAM.

Wisdom and Creswell (2013) and Lehmann (2010) indicate that applying mixed methods to a study provides several advantages. It makes it possible to compare both quantitative and qualitative data and subsequently reflect on the point of view of the participants, encourage the academic interaction, provide methodological flexibility, and present a rich collection of comprehensive data. Furthermore, Wisdom and Creswell (2013) and Ponterotto et al. (2013) point out that when mixed methods are used to evaluate complex studies such as ACAM costing model, there are challenges that are associated with the implementation.

Figure 4.2 shows the Methodological approaches of the baseline model that the researcher used to provide action research applying mixed-methods, and that assisted the researcher to gather both qualitative and quantitative information about the procedural development, and the demonstration and adoption of the cost accounting model in African CAM.

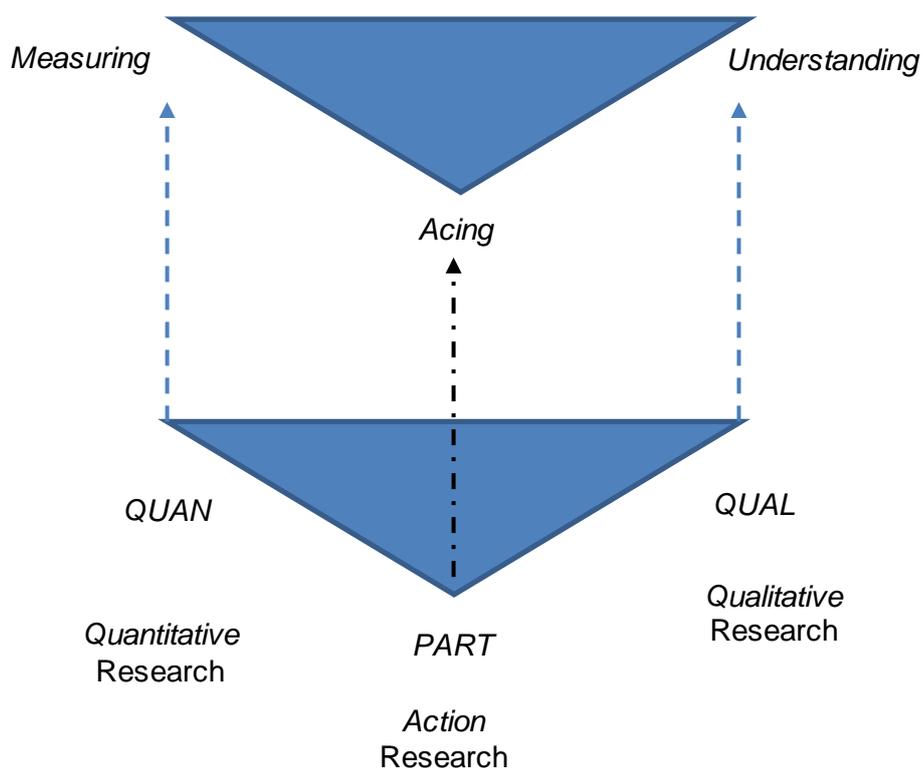


Figure 4. 10: Methodological approaches of baseline model (Parker et al. 2017).

Interventions, such as the ACAM costing model will eliminate those limitations that increase the complications of assessment that require increased resources.

4.7. Data collection approach

Previous studies by Taba (2015) and Taba and Fakoya (2016) found that African CAM practitioners provide and offer services that involve the use of products. Such data was collected based on the pricing of services and products on direct material cost, direct labour cost and direct overheads cost. The researcher collected data related to the products used by an African CAM practitioner's cost accounting practice in the African CAM model. This study used collected data to develop, demonstrate and evaluate a cost accounting model for the African CAM Practitioners to improve their decision-making specifically. The primary sources of data collected in a field study are the interviews, record analysis, direct remarks and participant statements (Martí, 2015 and Greener & Martelli, 2015). In this study, more than one collection strategy was employed in an attempt to avoid jeopardizing the validity and reliability of the results. Research that has used more than one method can capture the risks to the study about the underlying investigation (Ghorbani & Bravo, 2016; Yin, 2012). For this research study, the study's research method uses more than one data collecting source to obtain the necessary data from six South African traditional tutors or CAM organisations. These data collection methods include a questionnaire survey, interviews, document analysis and observation.

4.7.1. Questionnaire Survey

This questionnaire collects quantitative research information from the participants or organisations with no limitations (Ghorbani & Bravo, 2016 and Jamshed, 2014). It is, therefore, a necessary procedure as it will be able to cross-match information in the area of the cost accounting model in ACAM. This is due to the research being related to the development and implementation of the ACAM costing model in African CAM facilities. The model will be based on the pricing of services and products and analyse the critical cost accounting practice in CAM in improving the costing of ACAM material, labour and overheads. However, Wisdom and Creswell (2013) and Jamshed (2014)

contend that a questionnaire is suitable for a specific type of participant and with the use of short questions, the rate of responses increases. According to Ghorbani and Bravo (2016), the analyses of the collected quantitative data is done quickly. The data collected through the questionnaires are processed quickly and interpreted through computerised programs. Alternatively, some are the questionnaires provide unusable data, especially when the participants provide answers that are incorrect because they misunderstood the questionnaire. This can complicate and distort the data analysis, resulting in misinterpretation of the results (Jones, 2013; Isaacs, 2014). Hence, using a survey will assist the researcher to determine the successful implementation of the cost accounting practice model in African CAM.

4.7.2. Interviews

The interview is one of the most vital sources of information about the field study. Kingsley and Chapman (2013) and Ghorbani and Bravo (2016) state that there are three types of interviews, namely, structured interviews, unstructured interviews and semi-structured interviews. This type of interview, according to Wisdom et al. (2012), does not allow for flexibility. In this interviews, obtaining correct responses or additional statistics relies on the interplay between the interviewer and interviewee where the interviewer requires certain abilities and skills (Burke & Christensen, 2014).

Nevertheless, all the questions were asked, and the identical wording was used from interviewee to interviewee (Burke & Christensen, 2014; Palinkas et al., 2015; Ponterotto et al., 2013). Each interviewee was asked all questions in a logical and regular order (Ivankova, 2014). Kingsley and Chapman (2013) argue that the flexibility and comparability of interviews help the researcher to focus on the critical target of the interview. The advantage of using interviews consists of the potential to clarify questions, reply to any inquiries, give an explanation for harsh terms, and minimise the non-response rate (Palinkas et al., 2015; Jamshed, 2014). However, despite these advantages, Mertler (2017) and Ponterotto et al. (2013) emphasize the risks, such as that an interview may depend on more probing and questioning skills from the researcher; it takes from the personal time of interviewees, it is expensive, and the respondents might also be worried about the confidentiality of the answers provided.

4.7.3. Document Analysis

Documents are essential to verify the challenges revealed in the interview and to affirm facts from different sources, and so increase validity (Fioramonti, 2014). Yin (2012) argues that documentary records are likely to be relevant to each field study and can take different forms and be the purpose of specific data collection. The documents supply essential evidence about personalities and conflicts between the individuals and behaviour while the researcher observes (Kingsley & Chapman, 2013). The universal documentation used in the field studies includes personal documents, letters, written reports, administrative archives such as internal audit reports, agendas and price range reports (Bentahar & Cameron, 2015).

4.7.4. Observation

Direct observations were carried out all through the field visits. Initially, the researcher intended to visit ten (10) ACAM facilities to develop the ACAM costing model effectively; however, due to financial constraints, the researcher managed to go to only six CAM facilities in Gauteng, North West, Limpopo and Mpumalanga in South Africa. Observation refers to the collection and reporting of facts about the routine work processes, activities, and people's behaviour in their ACAM facilities and the surroundings, by observing and describing what they do (Bentahar and Cameron, 2015). Kingsley and Chapman (2013) regard observation as one of the qualitative methods that have their roots in traditional ethnography. Saunders et al. (2012) argue that narrating is a useful approach for the recording, evaluation and interpretation of people's behaviour. The current study employs direct observation and participant observation as follows.

4.7.4.1. Direct Observation

The academic researchers prefer direct observation in their research (Ivankova, 2014). This is done as the researcher observes human beings in their traditional working environment and any effect on their expected behaviour (Fioramonti, 2014). Thus, it provides a useful supply of evidence in the field study (Yin, 2012).

4.7.4.2. Participant Observation

The participant observations provide more understanding than interviews. This allows the researcher to study incidents that ACAM practitioners would not be concerned about and work-related matters they would be reluctant to discuss (Kingsley, & Chapman, 2013; Bentahar and Cameron, 2015). Accordingly, in this kind of observation, the researcher discloses the study objective. This participant observation allows the researcher to gain accurate information on CAM employees (Saunders *et al.*, 2012).

4.8. Sampling

In sampling, the researcher concentrated on active discussion with the target population, sample techniques, pre-test and pilot study, the actual African CAM study, was translated into Sepedi language.

4.8.1. Target Population

The researcher targeted a population of African CAM practitioners in South Africa. This population has more than 300 organisations with about 400 000 membership by

Table 4. 1: Total number of ACAM practitioners by province (Bateman, 2004)

| South African Province | Number of CAM Practitioners |
|-------------------------------|------------------------------------|
| Eastern Cape | 21 560 |
| Free State | 45 290 |
| Gauteng | 122 930 |
| Kwa-Zulu Natal | 50 860 |
| Limpopo | 14 732 |
| Mpumalanga | 11 5048 |
| North West | 11 870 |
| Northern Cape | 4 442 |
| Western Cape | 5 200 |
| Total | 391 932 |

2004 in South Africa and about 1,5 million by 2014 literate and illiterate members that consist of the diviners (sangoma), prophets and the herbalists (inyanga).

It was estimated that in 1994, there were 200 000 (Pretorius, 1994) and 400 000 in 2004 (Bateman, 2004) CAM practitioners in South Africa with 21 560 in the Eastern Cape, 45 290 in the Free State, 122 930 in Gauteng, 50 860 in Kwa-Zulu Natal, 14 732 in Limpopo, 115 048 in Mpumalanga, 11 870 in North West, 4 442 in the Northern Cape, and 5 200 in the Western Cape Province.

4.8.2. Sample

The sample of this study was the African CAM healing organisations and the tutor practitioners who are members of the South African Healers Association (SOAHA) and the South African Traditional Healing Organisation. These CAM healing organisations have a combined membership estimated at 60 000 (sixty thousand) members. The researcher spent four months with the professional training and healing organisations or tutors (*Nkobela*) of the CAM organisations collecting data to be included in the cost accounting system in African CAM practice model.

4.8.3. Sample Techniques

The researcher utilised a purposive sampling technique and chose the traditional healers or CAM practitioners to assist the researcher to understand and address any related questions that may arise from the implementation of the proposed cost accounting model. Purposive sampling enables successful data collection by selecting experienced individuals that relate to the research study (Fioramonti, 2014). In purposive sampling, the selection of the organizational research field permits the researcher to address the research questions and objectives of the study (Akaranga & Makau, 2016; Saunders et al., 2012). The researcher chose the African CAM practitioners in terms of section 47(1) and 32 (1) of the African Traditional Healing Act of 2007. In terms of the Act, African CAM practitioners are traditional tutors or CAM organisations that are accredited training institutions with traditional tutors registered under any of the categories of traditional health practice and these ACAM practitioners are teaching or training people to qualify as CAM practitioners. The researcher

sampled (6) six CAM healing and training organisations as they have more cost-related activities than individual practitioners.

4.8.4. Pre-Test and Pilot Study

The questionnaire was structured in levels and underwent several revisions with the supervisor before the last draft was produced. The compiling of a questionnaire entails considering the research objectives, questions and framework (Ivankova, 2014; Ennis, & West, 2013). It is essential to use a pilot study as it enhances the response rate and validity and reliability of the questionnaire. It is crucial to make sure that the questionnaire is cautiously designed, and upgraded too before it is disbursed for collection of statistical data.

Makau (2016) are of the view that a mini version or preliminary study performed earlier than a full-scale study project is usually regarded as a pilot study. The pilot study is traditionally for both qualitative studies and quantitative research. The benefit of conducting a pilot study is to provide a warning about how to follow research processes, avoid possible pitfalls, or whether the proposed format is too complicated and impractical, and the instruments of the research been inappropriate to gather the necessary data (Ketefian, 2015). The researcher developed a mixed-method research using the questionnaire to rate the ACAM Practitioners satisfaction and the interview using variables identified through the literature overview and research questions. The researcher facilitated sessions with the ACAM practitioners as experts and made the fundamental adjustments to ensure the research instrument is suitable before the study is carried out with the participants.

4.8.5. The Actual ACAM Study

The researcher commenced with data collection in August 2018 and finished collecting the data in December 2018. Data were collected by semi-structured interviews, documentation review and direct observation. The unavailability of ACAM practitioners caused delays in collecting the necessary data on workdays and the researcher's family commitments during the weekends. This unavailability of ACAM practitioners

started in August 2018 and continued throughout the data collection process, but the researcher exercised patience and waited for the ACAM practitioners to avail themselves. During August 2018 and December 2018, the researcher collected some data from the ACAM practitioners who were available. The time available for the interviews took between thirty to forty-five minutes, followed by physical participation in the explanation of the products used in different services provided by ACAM practitioners. The researcher undertook the necessary steps to achieve the research data's validity and overcome the research bias of the research study.

4.8.6. Translation into the Sepedi Language

The researcher developed the instruments of the research in the English language. As the official language of the targeted ACAM practitioners was one of the South African languages, namely, Sepedi, the researcher translated the research instruments into the Sepedi language, and these were validated by a Sepedi specialist, a graduate from the University of Limpopo. The questions were also checked by a PhD graduate from the University of South Africa, who is an English language practitioner. The researcher conducted the questionnaire in Sepedi and translated the responses back to English, and then the analyses back into Sepedi to minimise any misunderstandings from incorrect translation.

4.8.7. Generalisation

Akaranga and Makau (2016) argue that the usage of statistics to generalise from a sample to a population is a means of generalisation. Similarly, interpretivism and positivists generalise findings from one environment to a comparable environment (Onwuegbuzie and Byers, 2014). It is possible to generalise patterns, concepts or theories from detailed surroundings, or from few fields or single disciplines to other environments, which are referred to as theoretical generalisation where the researcher has obtained a comprehensive and deep understanding of the planned activities and behaviour (Jonker & Pennink, 2010). The nature of this study is to construct a theory, as the philosophy of the research is interpretive, and the primary data collection is via semi-structured interviews. Consequently, the generalisation of the findings from this

research is a theoretical generalisation. As a result, the generalisation of these research findings can be made within the ACAM facilities, provincially in similar internal and external environments in South Africa.

4.9. Data Analysis Procedure

In the literature of social science, there are several descriptions of data analysis. Isaacs (2014) and Uzun (2016) regard data analysis to be data that is examined, categorised, tabulated, recombined or tested - both evidence from the quantitative and qualitative methods were used to address the research problem. Daniel (2016) found that the challenges of data analysis in the qualitative research method are to decide how to represent the data in tables, matrices and narrative form. Additionally, Wisdom *et al.* (2012) and Palinkas *et al.* (2011) regard data analysis as a process of data display, data reduction, and conclusions verification. According to Daniel (2016), qualitative data have two principal methods of analysing data such as quantifying and non-quantifying methods of data analysis. According to Uzun (2016), the analyses of qualitative data provide information that relates to the relationships of variables within the research area. Saunders *et al.* (2012) identified procedures of analysing qualitative and quantitative data analysis as suggested and outlined below:

4.9.1. Analysis of Questionnaire Data

Quantitative data collected through the survey questionnaire relates to cost accounting with the ACAM health practitioners in South Africa. This survey questionnaire consists of three main sections, namely, the introduction and personal background, and self-rating scales that relate to successful adoption, implementation and demonstration of the ACAM cost accounting model by the ACAM practitioners in South Africa

4.9.2. Analysis of Field Study Data

The fundamental reason for this analysis is to decide on sensible rates of costing of ACAM products and services wholly separated from the cost of materials, labour and

overheads, which are connected to ACAM facilities. The cost accounting system continues with cost dimension and evaluation strategies of the ACAM costing model primarily based on prices which are disaggregated from the awarded services prices. The cost accounting system and ACAM services can, therefore, be carried out through useful tools and strategies for the cost administration and management practices of the overheads, material and products. Therefore, the availability of the costing model and the evaluation of controlling cost in the ACAM facilities in South Africa.

4.9.3. Analysis of Interview Data

The interviews of the African CAM tutors were conducted to explain the application of the cost accounting practice in the African CAM model and to validate the development of this model for the cost management of the services and products. McVicar *et al.* (2012) and Daniel (2016) found that qualitative data analysis provides the ACAM facilities with data management mechanisms such as coding, theory and testing text retrieval. Parker *et al.* (2017) described the content analysis as a scientific tool used for presenting the researcher with inferences that are valid to the contexts while also providing features for the identification of the themes, meaning and concepts, contextually. There are similar themes that contradict the patterns of produced data in the interpretation of the research data (Daniel, 2016 and Ghorbani & Bravo, 2016). The codes developed from the content material analyses are further developed through the categorisation of the data in records, themes, issues, topics, principles and propositions (Burke & Christensen, 2014). Furthermore, Bentahar and Cameron (2015) ascertained that from the codes, the researcher could make personal judgements about the meanings of the continuous pieces of texts for the whole analysis.

4.10. Reliability, Validity and Trustworthy

The study used both a qualitative and a quantitative research approach, and this contributes to the validity and reliability of the study (Akaranga & Makau, 2016). When using qualitative data, the notions of trustworthiness, dependability, transferability and

credibility are essential (Akaranga and Makau, 2016). Onwuegbuzie and Byers (2014) define validity as the degree to which the interpretations and principles have mutual meanings between the individuals and the researcher. According to Yin (2012), study reliability is the degree to which a research method produces stable and consistent results. Akaranga and Makau (2016) outline reliability as the extent to which consequences are constant over time and are the correct illustration of the total population under study. If the results of a study can be reproduced under a comparable methodology, then the data collection instruments are viewed to be reliable, valid, and trustworthy.

4.11. Ethical Considerations

For ethical purposes, the researcher ensured that the African CAM practitioners are well treated, with courtesy, and are always taken into consideration, and their dignity is not compromised (Shah, 2011). The researcher requested permission in writing from the owners of the CAM tutor's health care facility or the African CAM practitioner and used a consent form for both CAM tutors and the organization (Fouka & Mantzourou, 2011). The researcher explained to the African CAM practitioner that the study is for the researcher's doctoral study with the University of Limpopo. Furthermore, the researcher collected information that is concerned with cost accounting-related information for pricing of the products and services (Akaranga & Ongong'a, 2013). The researcher emphasised that any participation was voluntary and promised the practitioners' full confidentiality (Kour, 2014). The researcher used a video recording to capture the faces and CAM clothing and products. The researcher sought consent and followed the policy requirements about the use of video recording (Akaranga and Makau, 2016). Lastly, the researcher personally applied, before the study commenced, for an ethical clearance certificate from the University of Limpopo's ethics committee for the approval of the data collection instruments to be used to collect data. This was done to avoid mistrust and hesitation from the African CAM practitioners and to avoid the perception that by accepting the research would be equivalent to offering free African CAM training (Saunders et al., 2011). Furthermore, the researcher treated the actual names and identities of the participants' personal

information as confidential and unrecognisable (Shah, 2011). The researcher was as open as feasible in order to create trust and self-belief to inspire ACAM practitioners to share their true feelings and inner thoughts with the researcher.

4.12. Summary of the Chapter

The chapter started by detailing the background of the research methodology followed by the research paradigm and philosophy amid research strategy. In the research design, special attention was on detailing action research, the rationale for action research, the action research model and the the stages of action research approach. In the mix research methods, the researcher discussed the approaches to qualitative research methods, quantitative research methods, mixed research methods and the application of action research.

In the data collection approach utilised by the researcher, a detailed survey rating questionnaire, interviews, documents analysis, and observation were employed. In the observations, two observations were discussed with particular emphasis on direct observation and the observation of the participants who were the ACAM practitioners for this study.

The other important component of this study was the sampling method. Under this heading, the researcher discussed the targeted population, sampling, the sampling techniques, the pre-testing and piloting of the study, the actual ACAM study, the translation of the research instrument into Sepedi, and lastly, whether the study can be effectively generalised.

During the data analyses strategies, the researcher discussed analyses of the questionnaires data, analyses of the field study data, and the analyses of the interview data. The chapter concluded by discussing the reliability, validity and trustworthy, and the ethical consiretaion that research followed before and during data collection. The next chapter discusses the development of the cost model for complementatry and alternative medicines.

CHAPTER FIVE

DEVELOPMENT OF THE COST MODEL FOR COMPLEMENTARY AND ALTERNATIVE MEDICINE

5.1. Introduction

In Chapters Two and Three, the researcher identified and discussed critical subjects that are encompassed by the research. Those critical subjects were the importance and the responsibilities of ACAM; the functions and the responsibilities of cost accounting practice; the reasoning behind the inclusion of ACAM in the same academic research as cost accounting practice and the elements that may affect the idea of ACAM being able to be assisted by cost accounting practice in the costing of its services and products. Therefore, this chapter will bring all these critical subjects to the fore in order to assist in the development and demonstration of a reasonable ACAM costing model.

In Chapter Two, the literature on contingency theory and production theory of value factors were reviewed within a cost accounting practice. The issues that relate to the influence of cost accounting practice, from a contingency and production theory of cost perspective were examined.

This chapter covers the following topics: the potential contingent variables and the production theory of cost flexibility and its relationship to the implementation of the ACAM cost accounting practice model. Those variables are made up of cost structure, company sector, company size, product diversity, business unit culture, types of competition, and, nationality, while the production theory of cost variables relate to the elements and classification of cost. The chapter addresses the development of the research model, the integrated framework for ACAM and the cost accounting practice, the steps of placing ACAM in the context of cost accounting practice, a practical organisational model of cost accounting practice in ACAM.

5.2. Potential Contingent Theory Factors

A theoretical perspective would suggest that implementing cost accounting practice in individual ACAM organisations depends on certain factors about the organisation. Furthermore, such theoretical variables will not explain cost accounting practice adoption in CAM. However, such contingency and production theory of cost factors are viewed as rendering cost accounting practice suitable for adoption by such ACAM organisations.

The contingency factors include elements that are likely to assist in driving ACAM in a similar academic path of cost accounting practice and assist in the integration of ACAM and cost accounting practice. From the literature review in chapter three, it is not impossible to recognise the elements which have the potential to impact the implementation of cost accounting practice in an ACAM organisation. These factors are considered as follows, as discussed in Chapter Three.

- The size of the CAM organisation (Amara & Benelifa, 2017; Elhamma, 2012; Tsvangirayi & Masani, 2016).
- The level of competition in the CAM organisation (Tsvangirayi & Masani, 2016; Šiška, 2016; Quinn, Elafi, & Mulgrew, 2017).
- Product diversity in CAM organisation (Ayadi and Affes, 2014; Quinn et al., 2017; Amara & Benelifa, 2017; Van Hai & Van Dung, 2017).
- The organisational culture of the CAM organisation (Quinn et al., 2017; Asmara & Benelifa, 2017; Van Hai & Van Dung, 2017).
- Technology in the CAM organisation (Otley, 2016; Ahmadzadeh et al., 2011; Van Hai & Van Dung, 2017; Amara & Benelifa, 2017).
- Importance of cost information in the CAM organisation (Otley, 2016; Van Hai & Van Dung, 2017; Amara & Benelifa, 2017).
- The legal obligation of the CAM organisation (Otley, 2016; Van Hai & Van Dung, 2017; Amara & Benelifa, 2017).

The critical aspects of contingency factors' impact on the ACAM costing model were described and summarized above. The following section elaborates on the potential impact of production theory of cost factors on the CAM costing model.

5.3. Potential Production Theory of Value Factors

The production theory of value includes those elements that are capable of determining the total production cost of an ACAM service that will allow placing ACAM in the context of cost accounting practice. These factors are the elements and the classification of costs, as discussed in chapter three.

5.3.1. Elements of Costs

In elements of costs, considerations are on the total cost necessary to produce a service and the products of African CAM, the nature of the raw materials, labour, and overhead costs in African CAM.

5.3.1.1. Material costs

The raw materials used in African CAM services, as discussed in chapter three, can be used in the manufacturing of a healing product and for services in African CAM facilities. The material costs are the substances that were used to make the product in providing the African CAM service and can be used directly or indirectly in the production process (Narsis, 2009; Lutilsky, Žmuk & Dragija, 2016). The production process of the direct materials could be easily identified where the materials costs can be charged directly to a specific product or be traced to the product. The indirect costs are those materials which cannot be allocated and apportioned according to the service (ATSWA, 2009; Himme, 2012; Narsis; 2009).

5.3.1.2. Labour costs

The labour costs are the processing of the raw materials in African CAM healing, in the manufacturing of a product, and the services in the African CAM health facilities. In African CAM healing, the labour cost is those costs that are considered in the

production of medicines and the provision of services. As discussed in Chapter Three, the labour costs are the conversion of the materials cost into the finished products that need human participation (Lutitsky et al., 2016). The labour costs include the labour that is used in altering the construction, conformation, or condition of the product by both, skilled and unskilled workers in order to receive wages (Van Der Beck, 2013).

5.3.1.3. Overheads costs

In Chapter Three, the overhead costs were identified as those expenses that indirectly and directly are allocated to CAM cost centres or the cost units. These are the cost of special tools required to accomplish a specific service and product which cannot be allocated to the cost units in CAM organisation (Blocher et al., 2013; Horngren et al., 2006; Baniya, 2014). In order to effectively illustrate the costing model in CAM Organisations, the elements of costs were used to develop and demonstrate the African CAM healing services effectively.

5.3.2. Classification of Costs

The classification of cost is direct material costs, direct labour and manufacturing overheads. The indirect costs cannot be traced easily during the production cost due to the lack of relationship between the cost and the cost production cost.

5.3.2.1. Direct material costs

The direct material costs are the direct expenses related to the processing of the product into the finished commodity, and that includes direct labour costs. Other costs that are classified as direct material costs are period costs and conversion costs (Narsis, 2009; Kaspina, Khapugina & Zakirov, 2014). Understanding the classification of costs in African CAM practices will assist in adopting the cost accounting model to facilitate an informed costing decision and cost the products and services.

5.3.2.2. Direct labour costs

The labour costs include the conversion of the materials cost into finished products that need the involvement of humans/workers (Lutitsky, Žmuk and, Dragija, 2016). It includes all the direct labour expected in African CAM production and services cost that includes the wages of skilled and unskilled workers (Van Der Beck, 2013). Therefore, in this study, the direct labour cost will include all the African CAM practitioners whose work is directly related to the processing of the product of the African CAM services (ATSWA, 2009; Blocker, Stout, Juras & Cokins, 2013).

5.3.2.3. Manufacturing costs

The African CAM practitioners may take into account all the manufacturing costs of the materials converted into finished products, administration costs, costs of determining the production policies, the selling costs and the distribution costs (Merriam & Muhamad, 2012). The manufacturing overhead costs of African CAM, such as controllable costs are considered during the production period (Tabitha & Ogungbade, 2016). It is, therefore, expected from the African CAM practitioners that the adoption of the cost accounting model will facilitate decision-making about the products and services.

5.4. Development of the Research Conceptual Model

The ACAM costing model, which has been adopted in the study, is indicated as in Figure 5.1. This ACAM costing model was developed through the critical evaluation of the literature presented in chapters two and three. The basic contingency model of cost accounting practice in Figure 5.1 shows that CAM and cost accounting practice has been evolving separately (Street & Prinsloo, 2013; Stanifer *et al.*, 2015). The literature review, however, indicated that the placement of ACAM with cost accounting practice could assist in developing ACAM facilities that are capable of yielding resilient benefits (Street & Prinsloo, 2013; Zondi & Ntshangase, 2013).

Some factors drive ACAM to be placed in the same circumstances as cost accounting practice because both show similarities. A consideration of these similarities will ensure the long-term survival of the organisations. The ACAM practice and cost accounting practice both require the approval and participation of senior ACAM practitioners responsible for protecting and maintaining customers. The literature review, on the other hand, showed that there are factors that are likely to obstruct African CAM adopting cost accounting practice. Some of these are, for example, lack of cost accounting skill and fear of cultural change among the ACAM practitioners.

The literature review in Chapter Three identified contingency variable factors as potentially having an impact on the adoption of the cost accounting practice. Although there are conflicting ideas on the studies reviewed, there is no or little agreement on the effect of cost accounting practice. There appears to be agreement that the contingency factors may impact the adoption of African CAM cost accounting practice in ACAM organisations. Hence, it is possible to effectively involve ACAM in the development of an essential contingency model of cost accounting practice, as reflected in Figure 5.1.

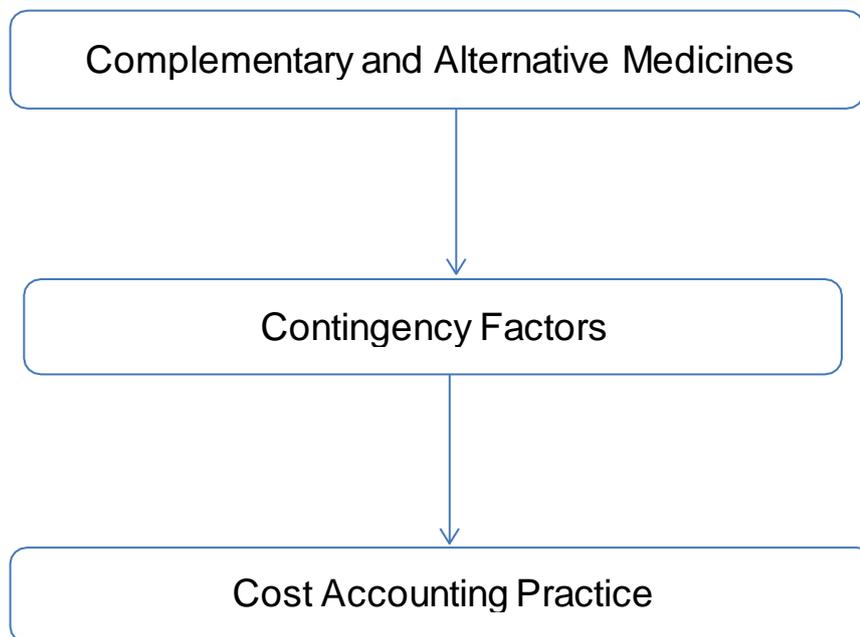


Figure 5. 11: Contingency model of cost accounting practice

The above essential model intends to point out the elements suggested by the literature that has the potential to affect the adoption of the model of cost accounting practice in the ACAM organisation. The above model, however, does not necessarily involve the results that relate to the challenges and barriers of cost of production theory of cost to the implementation of the cost accounting practice in the ACAM organisation. These barriers were considered in Chapter Three and identified in the classification of costs and element of costs.

Given the existence of such barriers, the cost of production theory of cost, the above factors may explain the adoption of cost accounting practice in the CAM organisation. It may indicate the contingency factors, which will render cost accounting practice appropriate to ACAM organisations unless the cost of production theory of value has overcome and understood. The ACAM organisations that would find cost accounting practice appropriate will not hesitate to adopt the system. This reasoning can be illustrated diagrammatically by Figure 5.2 below:

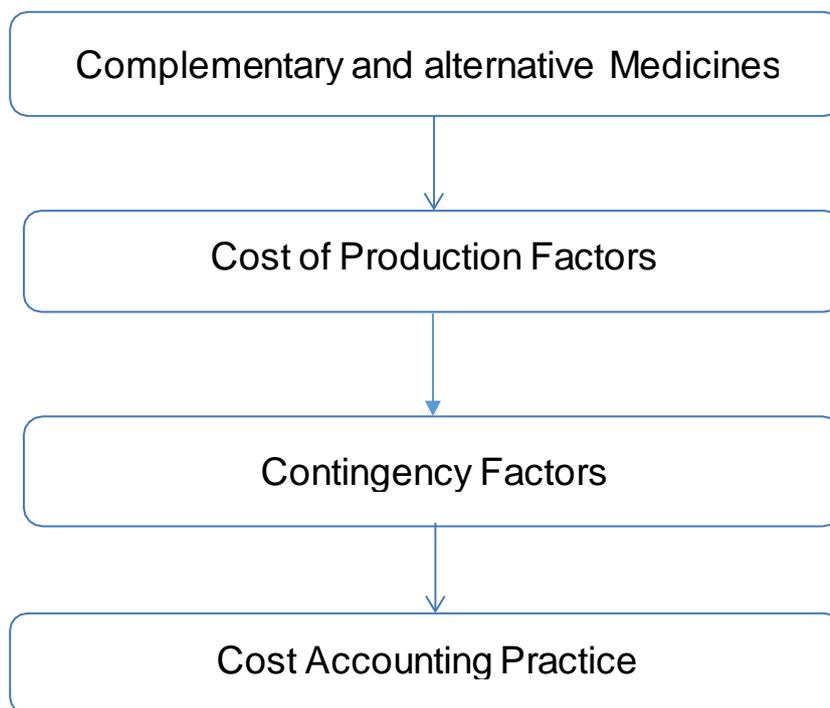


Figure 5. 12: Contingency factors and cost of production value factors

The suggestions by the model reveal that in adopting cost accounting practice, the contingency elements and the factors will be suitable for the ACAM facilities. The adoption of the costing system. and the facility's cost of production identify the elements of costs and classify the costs and the difficulties that are similar to the implementation of cost accounting system in ACAM organisations. Thus, the model suggests that those African CAM organisations, which have similar profiles, may reach the same decisions by adopting cost accounting practice as used by other organisations. This will be possible depending on the abilities and the interest in addressing and overcoming the challenges involved in the implementation and demonstration of the cost accounting system. It would also suggest that the adoption of a cost accounting practice model may result from cost production value factors through African CAM medicines and African CAM practitioners. The above model can be further developed by the implementation of ACAM medicines and ACAM practitioners. This is represented by Figure 5.3 below

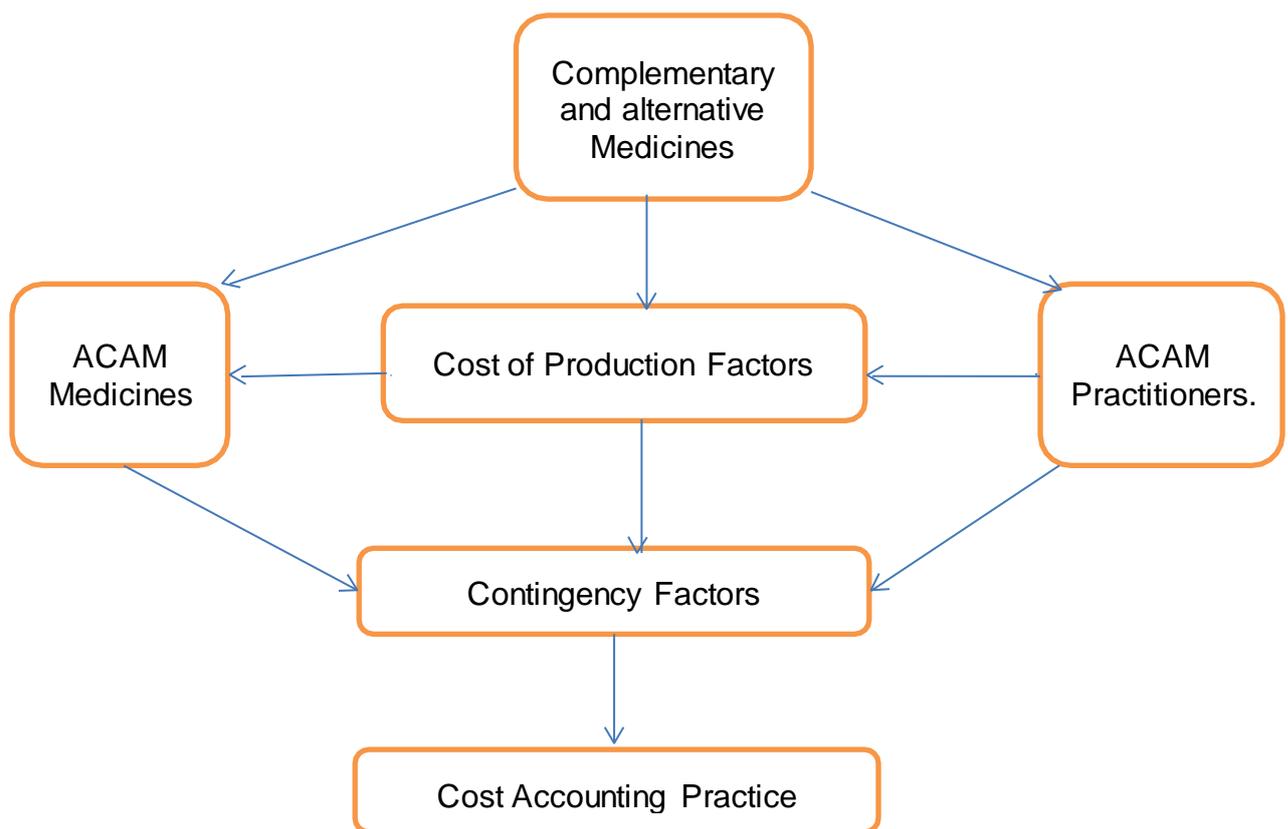


Figure 5. 13: Contingency variables and cost of production theory of value

It is, therefore, possible to reverse and identify the products and services that are associated with material costs, labour costs and overhead costs. Therefore, in the end, this association can be illustrated in a diagram as in Figure 5.4 below.

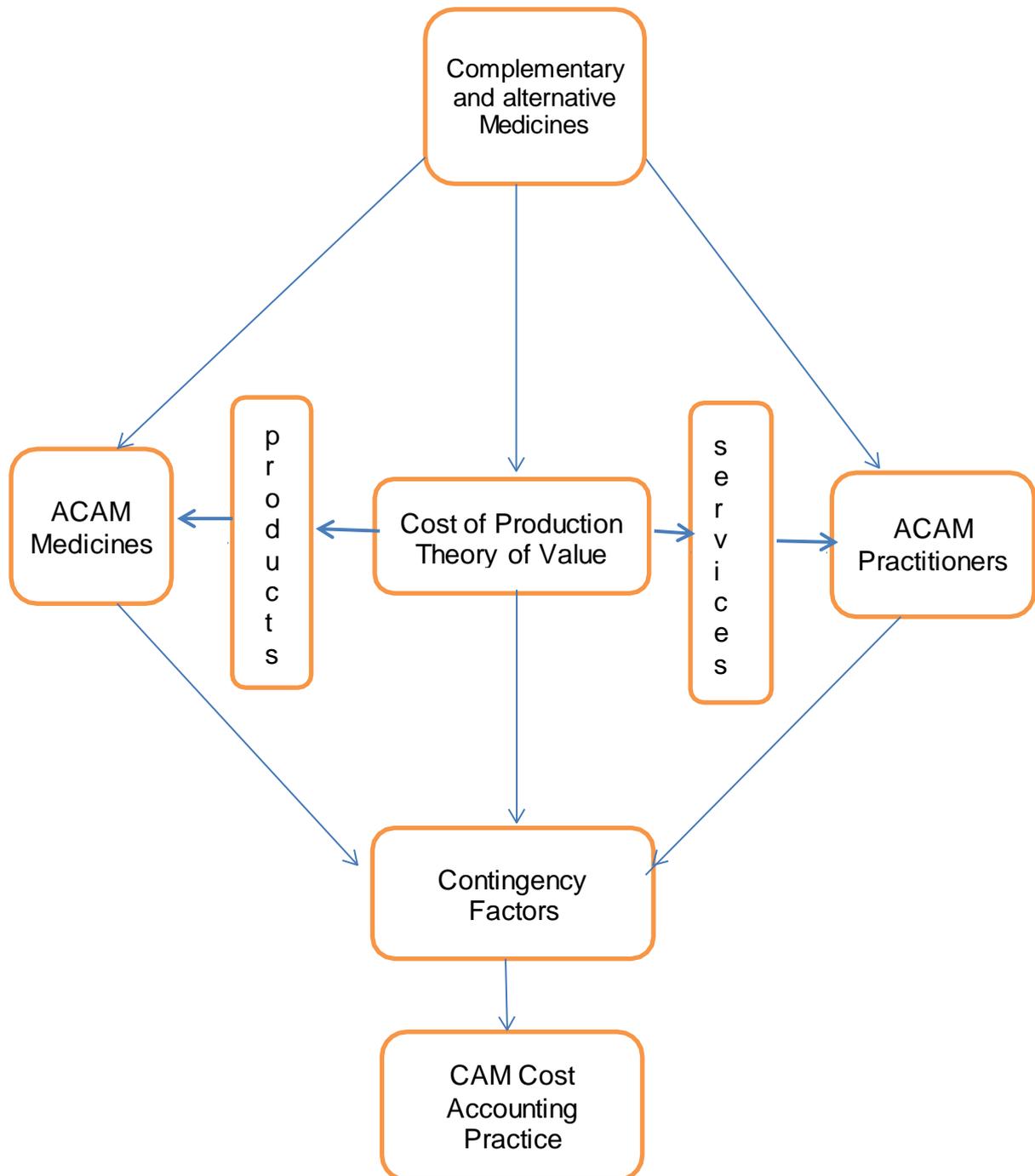


Figure 5. 14: ACAM cost accounting practice model

Therefore, the CAM cost accounting model, as reflected by Figure 5.4, was developed in order to improve the African CAM product and service and ultimately, effective decision making.

5.5 The Framework for African CAM and Cost Accounting Practice

Chapters two and three discussed the importance of ACAM and the reasons behind associating ACAM and cost accounting practice. The literature revealed that ACAM was used and practised in the majority of the countries around the world (Benzie & Wachtel-Galor, 2011; Furlan *et al.*, 2012; Kutch, 2016). Besides, WHO (2015), Pathak and Das (2013) and White, (2015) focused on the significance of CAM; while Horngren *et al.* (2010) and Kaspina *et al.*, (2014) have focused on the significance of cost accounting practice. This resulted in both terms being used separately without integrating ACAM and cost accounting practice in the same model to develop efficient ACAM facilities. This argument relates to the primary research objective, which relates to the development, demonstration and the adoption of a cost accounting model by African CAM health practitioners for the influence and improvement of the process for effective decision-making. This study seeks to develop an effective cost accounting model for African CAM healing practitioners to facilitate decision-making.

This further argument assists in revealing whether cost accounting practice can be implemented successfully in ACAM health facilities and hence develop an integrated model for ACAM and cost accounting practice.

The significance of cost planning and cost accounting as a performance tool to strengthen modern health care organisations and other organisations effectively has become a fascinating subject in several developing countries. In the United States, Poland, Australia, Canada, and Brazil, concerted efforts have been undertaken to empower the health care organisations aimed at enhancing the capacity of these health care facilities.

A survey study was carried out by Menke and Wray (1999) on six mobile clinics in the United States in 1999 to understand how costs per unit differed among the six mobile

clinics. The survey discovered that new patients seen through the mobile clinic placed a greater burden on the pharmacy department because the mobile health care centre visits frequently resulted in prescriptions being written. The survey observed that two mobile clinics had allocated full-time salaries to the clinic workforce who worked part-time. It additionally revealed that some clinics reported no cost for personnel who acknowledged working at the mobile medical clinic. The survey further determined that high cost did not always lead to high cost per visits. The total cost of the fixed-location mobile clinic decreased the entire cost of the mobile health care centre for all six sites. The survey additionally observed that the health centre would supply about 30% fewer visits and nevertheless have the same cost per visit as the mobile clinic.

Kludach (2012) conducted a survey of hospitals in Poland in 2012 to set up the elements of the cost accounting system wanted in Polish clinics and the methodology that is necessary to calculate the charges each patient, effectively. The survey found that the unit cost calculated in the medical institution could be used for rate setting, compensation and the payment negotiations. Further, it was determined that information involving unit costs analyses are essential for the medical institution administration to assess and then use the existing assets effectively in the hospitals. Furthermore, it was found that cost accounting practice in Polish hospitals should be based totally on the complete methodology with the bottom-up micro-costing approach, which is part of economic contrast as it permits the calculation of reasonable cost per patient or sub-population.

Aniza (2014) conducted research in 2014 on the development of first-rate cost models inside a supply chain environment agency in Canada. This research revealed suitable cost accounting models and developed a universal costing model. The proposed model can be used as a tool to calculate reasonable costs for customers. In this study, the implementation indicates that the model developed is capable of picking out and quantifying the hidden costs associated with the best of product assembly plants. It also identifies the manageable development opportunities inside the plant.

Raineri, Stivari and Gameiro (2015) conducted a study in 2015 to develop a model for the calculation and analysis of production expenses of lamb and to elaborate a production cost index in Brazil in order to define technical characteristics of lamb production. The third step consists of monitoring the costs of inputs used, calculating production costs, and producing the cost information. Lastly, the questionnaires had been applied to the sheep producers to validate the cost index. The model calculating the production cost was planned to be easily used by the farmers and at the same time loyal to the theoretical principles. The developed model can generate the necessary data that can help farmers or producers to make sound farming decisions. Having discussed the integrated framework for ACAM in cost accounting practice, the following section discusses the steps of implementing cost accounting practice in the context of ACAM.

5.6 Positioning CAM in the Context of Cost Accounting Practice

The literature discussed in Chapter Three pointed at the importance of implementing the cost accounting practice in association with ACAM. The literature further revealed that implementing the cost accounting practice in ACAM will allow its integration with the strategic cost accounting practice and organizational culture. Implementing cost accounting practice could also deal with the challenges that may be encountered when identifying the area of cost accounting practice in ACAM. The potential of integrating the cost accounting system and ACAM is evident in the literature (Dannemann *et al.*, 2008; Benzie & Wachtel-Galor, 2011; Furlan *et al.*, 2012; Kutch, 2016).

The practical implementation of a cost accounting process in African CAM practices will require that the costing exercise specify standard cost centres in African CAM organisations as well as criteria for cost allocation. The stages of cost accounting discussed in Chapter Three are there to help in the development of a standard list of health facility cost centres; to assign costs to cost centre groups; to calculate the total cost for each input; to assign direct costs to cost centres; to specify allocation bases; to allocate costs to cost centres; and to calculate and cross-check unit costs (Özaltın & Cashin, 2014). Thus, understanding and knowing the stages and steps needed for

the successful development and implementation of a cost accounting practice model in African CAM may assist the African CAM practitioner to improve the pricing of products and services.

5.7. Demonstration of the Costing Model in ACAM

The purpose of this section is to prepare a practical ACAM costing model to manage the cost of products and services for profitability management by the ACAM facilities for effective decision making. In achieving this purpose, it is necessary to choose one service from each of the six ACAM facilities visited and determine the most critical drivers of those services. Secondly, it is also necessary to explain the suggested processes used in managing the product and services cost of African CAM. The researcher intends to show that cost accounting can assist ACAM health care services through the products on offer in ACAM health facilities by the effective costing of material, labour and overheads costs of products and services. The following section, therefore, considers one service in each of the six ACAM health care facilities. These include Bosenyi (Criminal Cases), Sehuba (Tuber Colosis or TB), Go Bea Motse (Homestead), Sefola (Cancerous Wound), Mošomo (Job Seeker), and Kgwebo (Business).

5.7.1. Costing of Service from ACAM Health Care Facility 'A'

The cost for the provision of the criminal cases service to the customer was R3, 000. The unit calculations were made on the assumption that 1 ml = 1 gram. The above table shows that the total amount for material, labour and overheads for product A, is R205, for product B, R265, for product C, R175, for product D, R270, for product E, R345, and others, it is R90. The result of the table below shows the total production cost of R 1,350. The results reveal that the African CAM practitioners are overcharging the customers by R1, 650.

Table 5. 2: Total production cost of Bosenyi (Criminal cases) service

| Product | Description | Unit | R |
|--------------------------------|---------------------------|--------------|--------------|
| <i>Product A</i> | Material:20ml @R5 | 20ml | 100 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hrs @R80/hr. | Num of hours | 80 |
| total | Description | | 205 |
| <i>Product B</i> | Material:20ml @ R7,50 | 20ml | 150 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hr @R90/hr. | Num of hours | 90 |
| total | Description | | 265 |
| <i>Product C</i> | Material:20ml @R5 | 20ml | 100 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr @ R60/hr. | Num of hours | 60 |
| total | Description | | 175 |
| <i>Product D</i> | Material:20ml @R7,50 | 20ml | 150 |
| | Labour: one hour@ R15/hr. | 1 labourer | 15 |
| | Overheads:1hr @ R105/hr. | Num of hours | 105 |
| total | Description | | 270 |
| <i>Product E</i> | Material:20ml @R10 | 20ml | 200 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hrs@R120/hr. | Num of hours | 120 |
| total | Description | | 345 |
| <i>Product Others (1 @R50)</i> | Material:20ml @R2,50 | 20ml | 50 |
| | Labour: one hour@ R15/hr. | 1 labourer | 15 |
| | Overheads:1hrs @R25/hr. | Num of hours | 25 |
| total | | | 90 |
| Total Production Cost | Description | 160ml | 1 350 |

The adequate provision of this service by ACAM health facility A is made through the use of materials, labour and overheads. The material cost utilised includes six products that contain plants, bulbs and roots. The labour costs include the collection of the materials from the mountain and the forest, transportation of the material, processing the material by using a processor made of wood and iron, packaging the materials, taking the materials to storage, cleaning some of the materials with water, and others are usually processed by being chopped into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see annexure G and Annexure O).

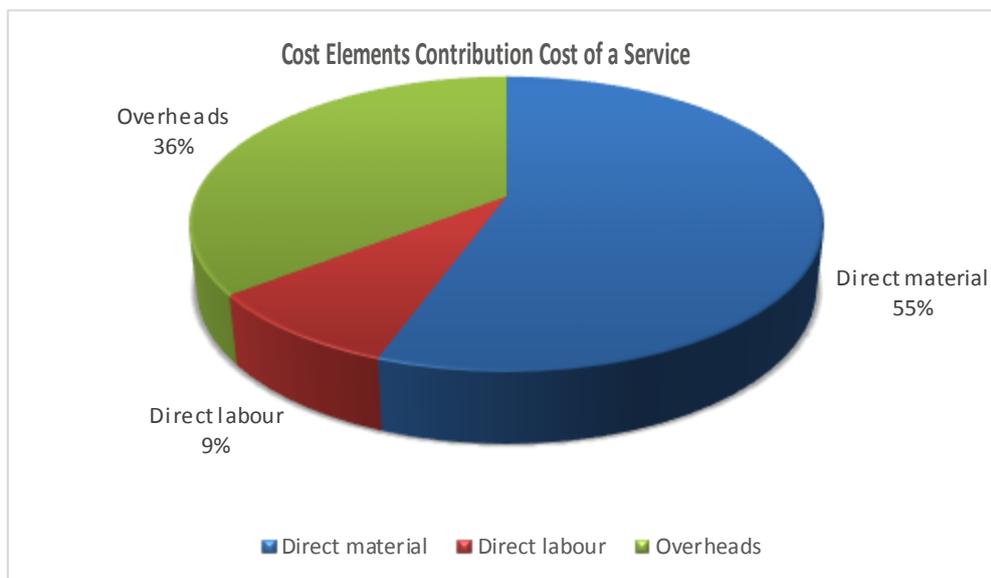


Figure 5. 15: Product contribution of the criminal cases service

The above Figure 5.5 shows the cost element's contribution to the provision of the criminal cases service by the ACAM practitioners in South Africa. The figure reveals that in providing the service, direct materials contribute about 55% of the service cost, followed by overheads of 36%, while the labour cost contributes approximately 9%.

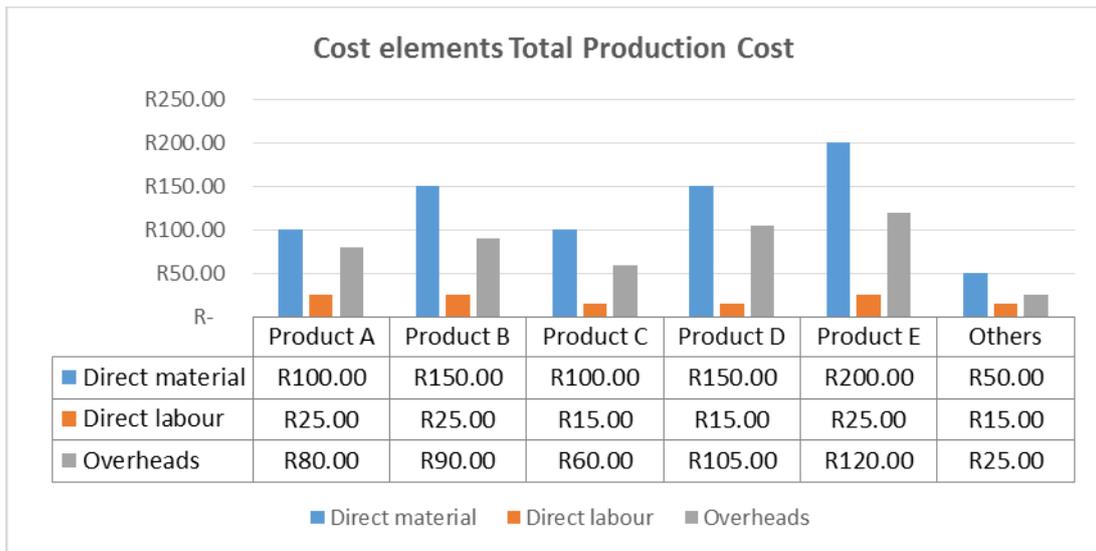


Figure 5. 16: Graphical cost elements of criminal cases service

Figure 5.6 shows the cost elements of the total production cost in the provision of service in a criminal case. The main materials are products E, B and D, contributing R150, and R150, respectively. The highest labour cost is on products A, B, and E that both contribute R25 of the service cost. The highest overhead costs are on products B, D, and E, at R90, R105 and R120, respectively.

5.7.2. Costing of Service from ACAM Health Care Facility "B"

The cost for the provision of the TB Sehuba service to the customer was R2 500. The unit calculations were made on the assumption that 1 ml = 1 gram. The above table below (Table 5.3) shows that the total amount for material, labour and overheads, for product A is R475, for B, R185, for product C, R95, for product D, R185, for product E, R105, and for others R90. The result from the above table shows a total production cost for R 1 135. The results reveal that the ACAM practitioners are overcharging the customers by R1, 365.

Table 5. 3: Total production cost of Sehuba (Tuberculosis) service

| Cost element | Description | Unit | R |
|------------------------------|---------------------------|-----------------|--------------|
| Product A | Material:20ml @ R12,50 | 20ml | 250 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hrs @R200/hr. | Number of ours | 200 |
| Sub Total | Description | | 475 |
| Product B | Material:20ml @ R5,00 | 20ml | 100 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hr @R60/hr. | umber of hours | 60 |
| Sub Total | Description | | 185 |
| Product C | Material:20ml @ R5,00 | 20ml | 50 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr @ R30/hr. | umber of hours | 30 |
| Sub Total | Description | | 95 |
| Product D | Material:20ml @R5,00 | 20ml | 100 |
| | Labour: one hour@ R15/hr. | 1 labourer | 15 |
| | Overheads:1hr @ R70/hr. | umber of hours | 70 |
| Sub Total | Description | | 185 |
| Product E | Material:20ml @ R2,50 | 20ml | 50 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads, 1hrs@R30/hr. | Number of hours | 30 |
| Sub Total | Description | | 105 |
| Product Others (1 @R50) | Material:20ml @R2,50 | 20ml | 50 |
| | Labour: one hour@ R15/hr. | 1 labourer | 15 |
| | Overheads:1hys@R25/hr. | Number of hours | 25 |
| Sub Total | Description | | 90 |
| Total Production Cost | | 120ml | 1 135 |

The adequate provision of this service by ACAM health facility B is by the use of materials, labour and overheads. Similar to health facility A, the material cost includes pricing of six products that utilise plants, bulbs and roots. The labour costs include the collection of the materials from the mountains and the forests, transportation of the

material, processing the material by means of a wood and iron processor, packaging the materials, taking the materials for storing, cleaning some of the materials with water and processing others usually by being chopped into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see Annexure H and Annexure P).

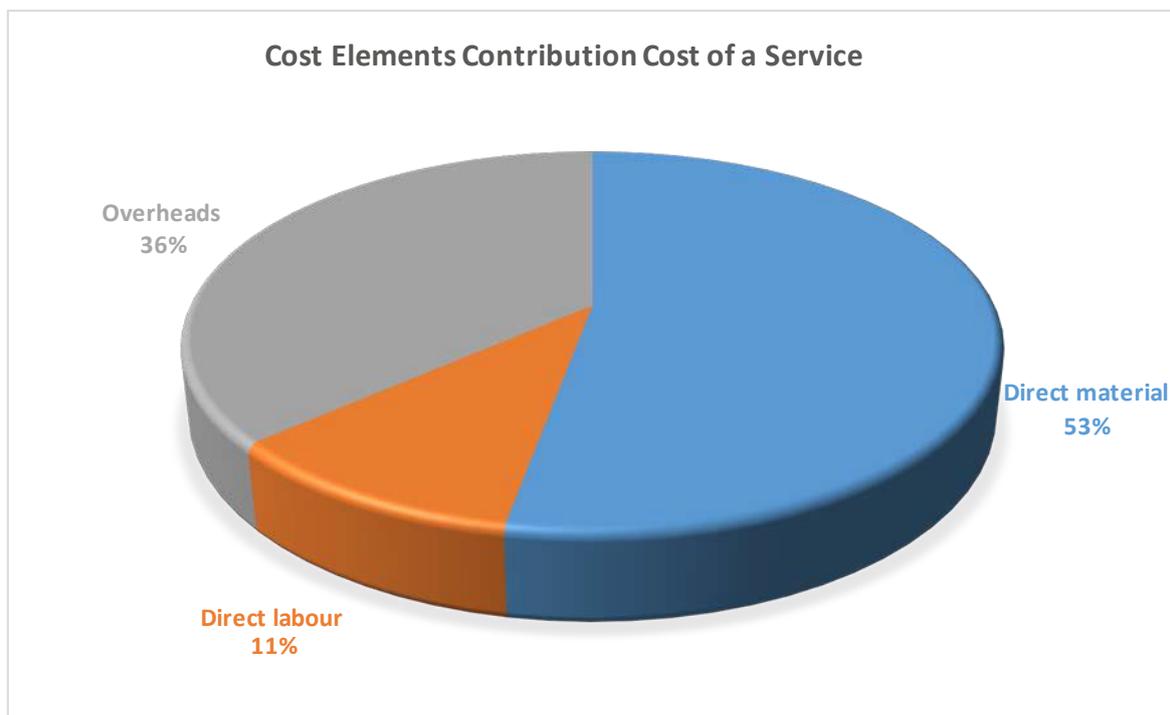


Figure 5. 17: Product contribution of tuberculosis (Sehuba) service

The above Figure 5.7 shows the cost element's contribution to the provision of TB Sehuba services by the ACAM practitioners in South Africa. The figure reveals that in providing the service, overheads are the most expensive as it contributes about 36% of the service, followed by direct materials on 53%. In comparison, the labour cost contributes 11% of the total production costs.

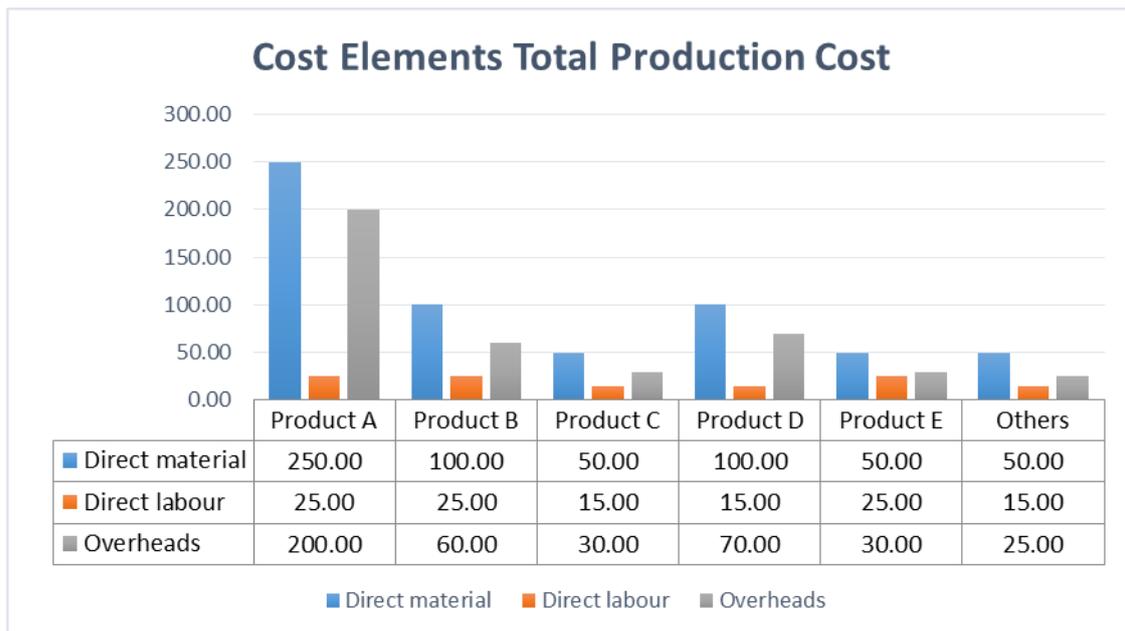


Figure 5. 18: Graphic cost elements of tuberculosis (Sehuba) service

Figure 5.8 shows the cost elements' total production cost of the provision of a TB Sehuba service. The main direct materials are products A, B and D contributing R250, R100 and R100, respectively. The main labour costs are products A, B, and E, contributing R25 of the service cost. The highest overhead costs are on products A, D, and B, at R200, R70 and R60, respectively.

5.7.3. Costing of Service from ACAM Health Care Facility “C”

Table 5. 4: Total cost of Go Bea Motse (Homestead) service

| Cost Elements | Description | Unit | R |
|------------------------------|----------------------------------|-----------------|--------------|
| Product A | Material:20ml @ R7,50 | 20ml | 150 |
| | Labour: 4 labour hours @R25/hr. | 1 labourer | 100 |
| | Overheads:4hrs @R30/hr. | Number of hours | 120 |
| Sub Total | Description | | 370 |
| Product B | Material:20ml @ R5,00 | 20ml | 100 |
| | Labour: 4 labour hours @R25/hr. | 1 labourer | 100 |
| | Overheads:4hr @R15/hr. | Number of hours | 60 |
| Sub Total | Description | | 260 |
| Product C | Material:20ml @ R5,00 | 20ml | 120 |
| | Labour: 4 labour hours @R15/hr. | 1 labourer | 60 |
| | Overheads:4hr @ R18/hr. | Number of hours | 72 |
| Sub Total | Description | | 252 |
| Product D | Material, 20ml @R5,00 | 20ml | 100 |
| | Labour: 4 labour hours @ R15/hr. | 1 labourer | 60 |
| | Overheads:4hr @ R17,50/hr. | Number of hours | 70 |
| Sub Total | Description | | 230 |
| Product E | Material:20ml @ R2,50 | 20ml | 150 |
| | Labour: 4 labour hours @R25/hr. | 1 labourer | 100 |
| | Overheads:4hrs @R22,50/hr. | Number of hours | 90 |
| Sub Total | Description | | 340 |
| Total Production Cost | Description | 100ml | 1 452 |

The provision of the Homestead Service cost the customer R5,500. The unit calculations were made on the assumption that 1 ml = 1 gram. The above table shows that the total amount for material, labour and overheads for product A is R270, for product B, R250, for product C, R252, for product D, R230, and E, R340. The result for the above table shows the total production cost of R 1, 452. The results reveal that the ACAM practitioners are overcharging the customers by R4, 048.

The adequate provision of this service by ACAM health facility C is through the use of materials, labour and overheads. The material cost includes five products containing plants, bulbs and roots. The labour costs include the collection of the materials from the mountain and the forest, transportation of the material, processing the material using a wood and iron processor, packaging the materials, taking the materials to storage, cleaning some of the materials with water and others are usually processed by being chopped into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see Annexure I and Annexure Q).

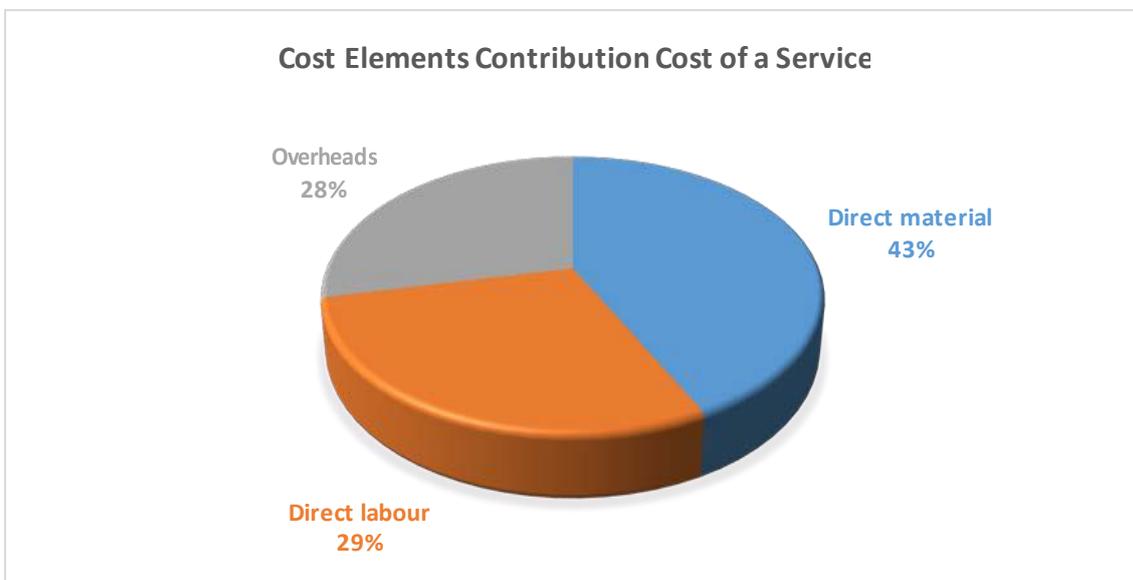


Figure 5. 19: Product contribution of Homestead service

The above Figure 5.9 shows the cost element's contribution to the provision of homestead service by the ACAM practitioners in South Africa. The figure reveals that in providing the service, direct materials are the most expensive as they contribute about 43% of the service, followed by direct labour on 29%. In comparison, the overhead costs contribute approximately 28%.

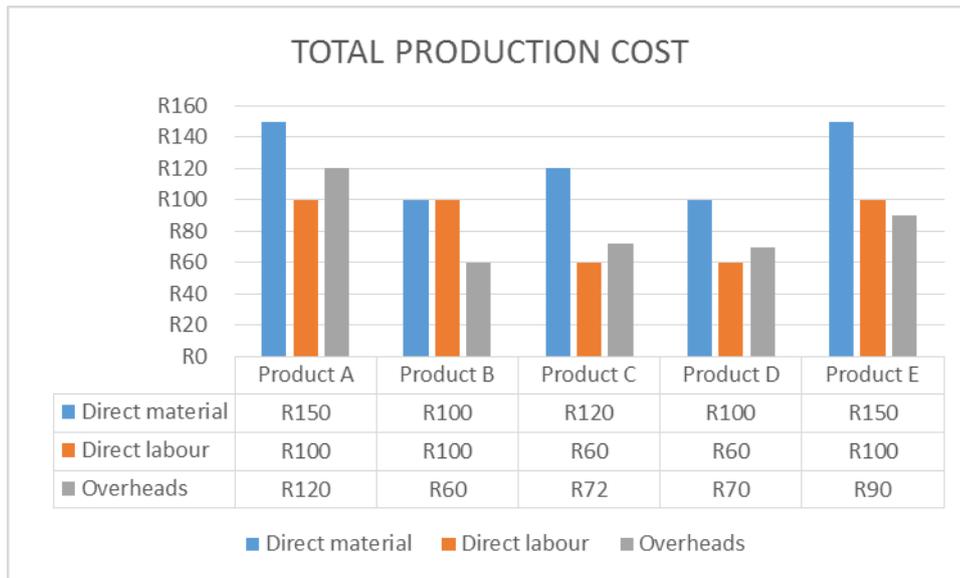


Figure 5. 20: Graphical cost elements of Homestead service

The above Figure 5.10 shows the cost elements' total production cost of the provision of a homestead service. Products A, E and C have the highest material costs that contribute R150, R150 and R120, respectively. The highest labour cost is on products A, B, and E that contribute R100 of the service cost. The highest overhead costs are on products A and E, at R120 and R90, respectively.

5.7.4. Costing of Service from ACAM Health Care Facility "D"

The cost for the provision of the 'sefola' services to the customer was R5, 000. The unit calculations were made on the assumption that 1 ml = 1 gram. The above table shows that the total amount for material, labour and overheads, for product A, was R295, for product B, was R185, for product C, was R415, for product D, was R279, and For product E, R217. The result for the above table shows a total production cost of R1,391. The results reveal that ACAM practitioners are overcharging customers by R3,609.

Table 5. 5: Total production cost of Sefola (Cancerous wound) service

| Cost Element | Description | Unit | R |
|------------------------------|---------------------------|-----------------|-------------|
| Product A | Material:20ml @ R7,50 | 20ml | 150 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hr@R120/hr. | Number of hours | 120 |
| Sub Total | Description | | 295 |
| Product B | Material:20ml @ R5,00 | 20ml | 100 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads:1hr@R60/hr. | Number of hours | 60 |
| Sub Total | Description | | 185 |
| Product C | Material:20ml@ R12.50 | 20ml | 250 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@ R150/hr. | Number of hours | 150 |
| Sub Total | Description | | 415 |
| Product D | Material:20ml @R7,50 | 20ml | 155 |
| | Labour: one hour@ R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@ R109/hr. | Number of hours | 109 |
| Sub Total | Description | | 279 |
| Product E | Material:20ml@ R6,00 | 20ml | 120 |
| | Labour: one hour@R25/hr. | 1 labourer | 25 |
| | Overheads: 1hr@R72/hr. | Number ofhours | 72 |
| Sub Total | Description | | 217 |
| Total Production Cost | Description | 100ml | 1391 |

The adequate provision of this service of ACAM health facility D is provided using materials, labour and overheads. Similar to health facility C, the material cost includes six products that contain plants, bulbs and roots. The labour costs include: the collection of the materials from the mountain and the forest; transportation of the material, processing the material by using a processor made of wood and iron; packaging the materials; taking the materials for storing; cleaning of the materials, while some are washed with water, and others are processed by chopping them into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see Annexure J and Annexure R).

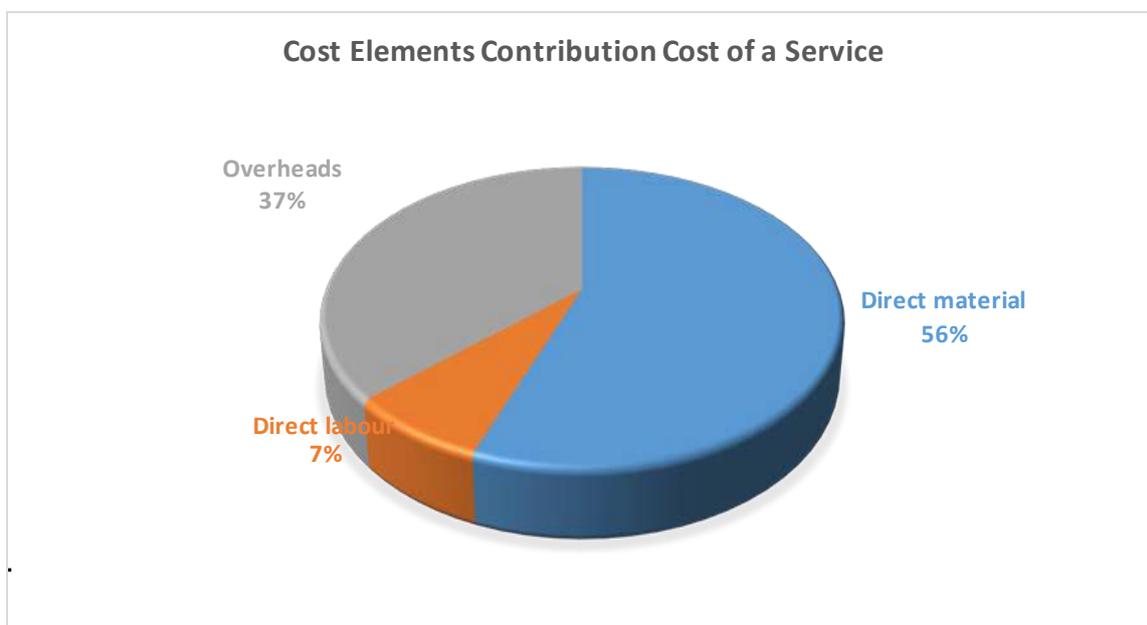


Figure 5. 21: Product contribution of Sefola service

The above Figure 5.11 shows the cost elements' contribution to the provision of the Sefola Service by the ACAM practitioners in South Africa. The figure reveals that in providing the service, direct materials are the most expensive as it contributes about 56% of the service, followed by overheads on 37%. In comparison, the labour cost contributes approximately 7%.

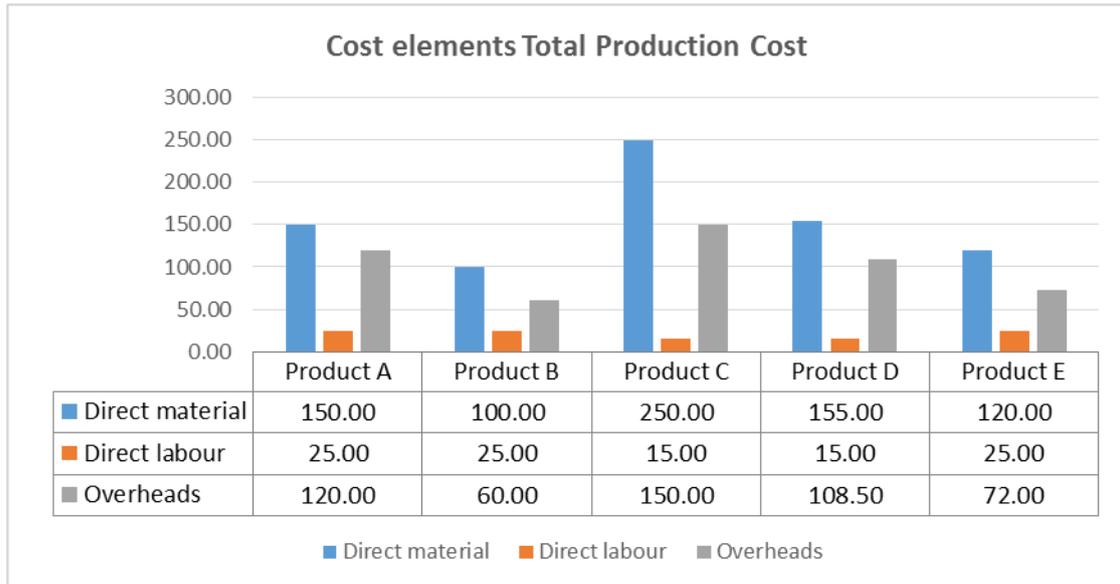


Figure 5. 22: Graphical cost elements of Sefola service

Figure 5.12 shows the cost elements of the total production cost in the provision of a Sefola service. The highest material cost is on products C, D and A that contribute R250, R155 and R150, respectively. The highest labour cost is on products A, B, and E that contributes R25 of the service cost. The highest overheads costs are on products C, A, and D, at R150, R120 and R108 respectively.

5.7.5. Costing of Service from ACAM Health Care Facility “E”

The cost for the provision of the ‘Looking for Job’ service to the customer was R3,500. The unit calculations were made on the assumption that 1 ml = 1 gram. The above table shows that the total amount for material, labour and overheads, for product A, is R105.

Table 5. 6: Total production cost of Mosomo (Job seeker) service

| Cost element | Description | Unit | R |
|------------------------------|--------------------------|-----------------|------------|
| Product A | Material:20ml@ R2,50 | 20ml | 50 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@R40/hr. | Number of hours | 40 |
| Sub Total | Description | | 105 |
| Product B | Material:20ml@ R1,25 | 20ml | 25 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@R15/hr. | Number of hours | 15 |
| Sub Total | Description | | 55 |
| Product C | Material:20ml@ R3.75 | 20ml | 75 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@ R45/hr. | Number of hours | 45 |
| Sub Total | Description | | 135 |
| Product D | Material:20ml@R6,00 | 20ml | 120 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr @ R84/hr. | Number of hours | 84 |
| Sub Total | Description | | 219 |
| Product E | Material, 20ml @ R2,25 | 20ml | 45 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@R27/hr. | Number of hours | 27 |
| Sub Total | Description | | 87 |
| Product Other (@R50) | Material:20ml @R5,00 | 20ml | 100 |
| | Labour: one hour@R15/hr. | 1 labourer | 15 |
| | Overheads:1hr@R50/hr. | Number of hours | 50 |
| Sub Total | Description | | 165 |
| Total Production Cost | Description | 120ml | 766 |

For product B, the total is R55, for C, it is R135, for D, R219, and for E, R87, for others R165. The result for the above table shows a total production cost of R766. The results reveal that the ACAM practitioners are overcharging the customers by R2, 734.

The adequate provision of this service of ACAM health facility E is through the use of materials, labour and overheads. The material cost includes seven products that utilise plants, bulbs and roots. The labour costs include the collection of the materials from the mountain and the forest; transportation of the material; processing the material by using a processor made of wood and iron; packaging the materials; taking the materials for storing; cleaning the materials, some with water and others processed by being chopped into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see Annexure K and Annexure S).

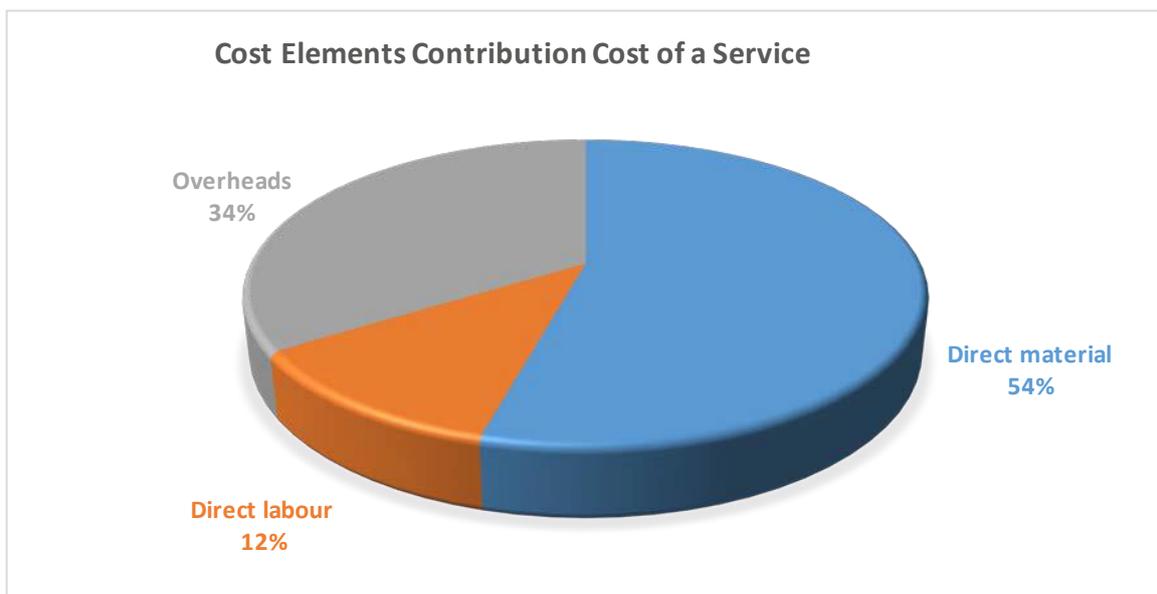


Figure 5. 23: Product contribution of "looking for job" service

The above Figure 5.13 shows that the cost elements contribute to the provision of the 'Looking for Job' service by the ACAM practitioners in South Africa. The figure reveals that in providing the service, direct materials are the most expensive as they contribute about 54% of the service, followed by overheads on 34%. In comparison, the labour

cost contributes approximately 12%.

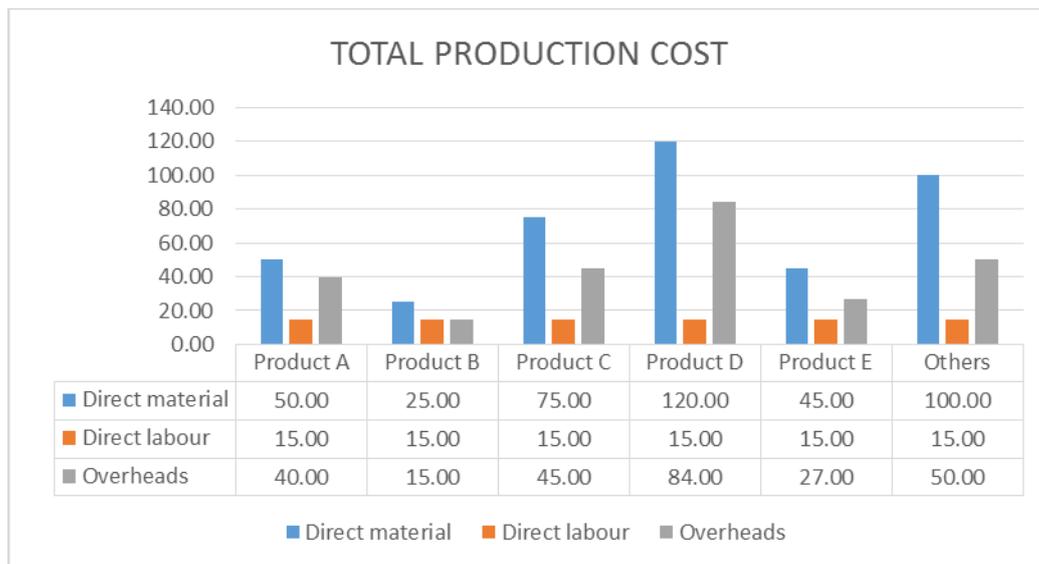


Figure 5. 24: Graphical cost elements of "looking for job" service

The above Figure 5.14 shows the cost elements of the total production cost for the provision of a 'Looking for Job' service. The main materials are product D, Others, and C that contribute R120, R100 and R75, respectively. The highest labour cost is products C, D, E. Others that both contribute R15 of the service cost, whereas the highest overhead costs are on product D, Others, and C, at R84, R50 and R45, respectively.

5.7.6. Costing of Service from ACAM Health Care Facility "F"

The cost for the provision of the successful business or entrepreneurial service to the customer is R4, 500. The unit calculations were made on the assumption that 1 ml = 1 gram.

Table 5. 7: Total production cost of Kgwebo (Business) service

| Cost element | Description | Unit | R |
|----------------------------------|---------------------------|------------------|-------------|
| Product A | Material:20ml@ R7,50 | 20ml | 150 |
| | Labour: one hour@R75/hr | 1 labourer | 75 |
| | Overheads:1hrs @R120/hr. | Number of hours | 120 |
| total | Description | | 345 |
| Product B | Material:20ml@ R5,00 | 20ml | 100 |
| | Labour: one hour@R75/hr | 1 labourer | 75 |
| | Overheads:1hr @R60/hr. | Number of hours. | 60 |
| Sub Total | Description | | 235 |
| Product C | Material:20ml@ R10.00 | 20ml | 200 |
| | Labour: one hour@R15/hr. | 1 labourer | 45 |
| | Overheads:1hr@ R120/hr. | Number of hours. | 120 |
| Sub Total | Description | | 365 |
| Product D | Material:20ml@R7,50 | 20ml | 150 |
| | Labour: one hour@ R45/hr. | 1 labourer | 45 |
| | Overheads:1hr@ R105/hr. | Number of hours | 105 |
| Sub Total | Description | | 300 |
| Product E | Material:20ml @ R5,00 | 20ml | 100 |
| | Labour: one hour@R75/hr. | 1 labourer | 75 |
| | Overheads:1hrs@R60/hr. | Number of hours. | 60 |
| Sub Total | Description | | 235 |
| Product Others (3 @R60) | Material:20ml @R60 | 20ml | 180 |
| | Labour: one hour@ R15/hr. | 1 labourer | 45 |
| | Overheads: 1hr@R50/hr. | Number of hours. | 90 |
| Sub Total | Description | | 315 |
| Total Production Cost | Description | 120ml | 1795 |

The above table shows that the total amount for material, labour and overheads, for product A, is R345, for product B, R235, for product C, R365, for product D, R300, for product E, R235, and for the others is R315. The result for the above table shows the total production cost of R2, 705. The results reveal that ACAM practitioners are overcharging customers by R1650.

The effective provision of this service of ACAM health facility F is through the use of materials, labour and overheads. The material cost for this facility includes eight products that utilise plants, bulbs and roots. The labour costs include the collection of the materials from the mountain and the forest; transportation of the material; processing the material using a wood and iron processor; packaging the materials; taking the materials for storing; cleaning the materials, some with water and others are usually processed by chopping them into small pieces and ground. The overhead costs include transportation, storage, water, electricity, and the packaging cost (see Annexure L and Annexure T).

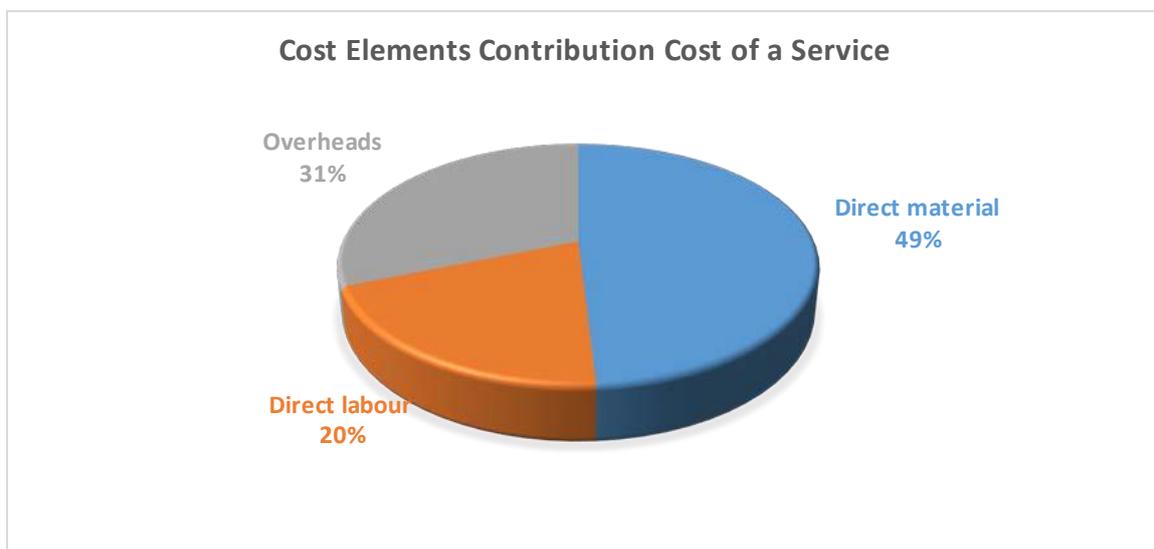


Figure 5. 25: Production contribution of "successful business" service

The above Figure 5.15 shows the cost elements' contribution to the provision of Successful Business Services by the ACAM practitioners in South Africa. The figure reveals that in providing the service, direct materials are the most expensive as it contributes about 49% of the service, followed by overheads on 31%. In comparison, the labour cost contributes approximately 20%.

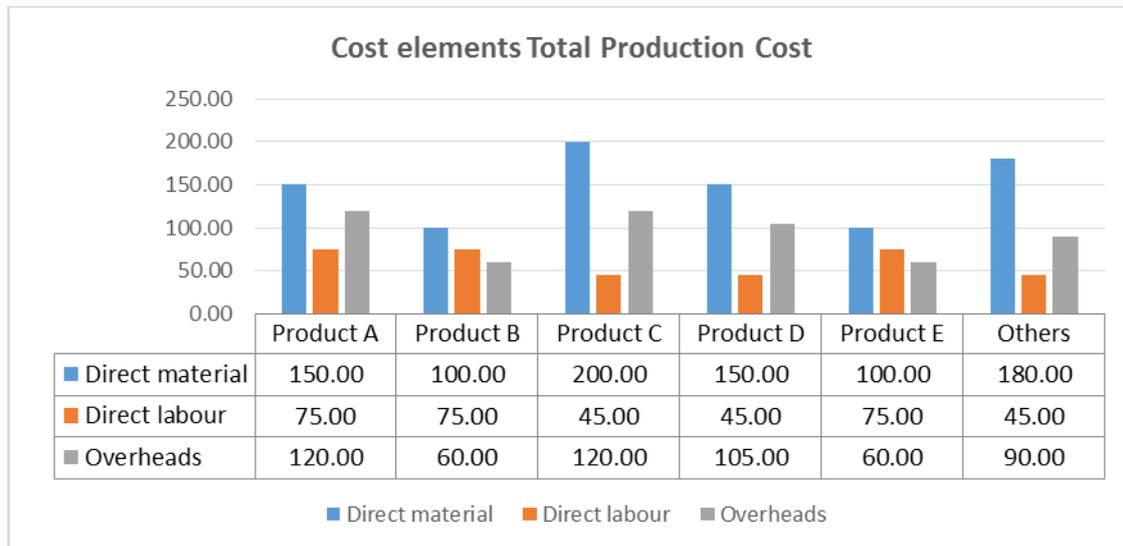


Figure 5. 26: Graphical cost elements of "successful business" service

The above Figure 5.16 shows the cost elements' total production cost of the provision of a Successful Business service. The highest material cost is on products C, others, A and D that contribute R200, R180, R150 and R150, respectively. The highest labour cost is on products A, B, and E that both contribute R75 of the service cost. The highest overheads costs are on products A, C, and D, at R120, R120 and R90, respectively.

5.8 Summary of the chapter

In discussing the development of cost model for the African complementary and alternative medicines, the researcher discussed the potential contingent theory and the potential production theory of value factors.

This was followed by the development of the research conceptual model, the framework for the African CAM and the cost accounting practice.

The chapters concluded by discussing the positioning of CAM in the context of cost accounting practice and demonstration of the costing model.

Having presented the development of the costing model for the ACAM facilities and

the practitioners in this chapter, the following two chapters will discuss and present the research cycles, which were undertaken by this study in all the six ACAM facilities with the essential services that the clients used and products utilised, in order to effectively develop, implement and demonstrate the ACAM costing model in South Africa.

CHAPTER SIX

RESEARCH CYCLE ONE: DATA PRESENTATION AND ANALYSIS

6.1. Introduction

In this chapter, a presentation, analysis, and discussion of the research findings of the Research Cycle One are undertaken, and it includes the observations by the researcher during the interactions with the ACAM practitioners. The chapter intends to discover whether the ACAM practitioners can adopt, develop and demonstrate the costing model in ACAM facilities.

The chapter begins with the ACAM health practitioner's reaction to the researcher with special focus on the evaluation of the ACAM practitioners' costing knowledge, costing competencies and confidence in the activities of the products and services, the practitioners' doubt and hesitation, the practitioners' general reaction to the costing activities and the ACAM practitioners' strategy in costing activities.

Analyses of the processes and results of cost accounting processes on ACAM practises done. Furthermore, the influence of cost accounting practice on ACAM will be discussed and categorised by discussing ACAM costing and the stages of cost accounting practice, re-consideration of the cost accounting strategies and the consideration of cultural barriers.

Lastly, the researcher reflected on the outcomes of implementing a cost accounting model followed by the changes to be considered for Research Cycle Two. Hence, the timing of visits to ensure the satisfactory attendance of the ACAM practitioners was considered. Consequently, seven themes were identified as needing some improvement when attending to Research Cycle Two. These are the timing of visits to ensure ACAM practitioners can attend, giving clear costing instructions, improving the explanation of the costing strategy, guiding practitioners towards applying a costing strategy, the development of group autonomy and cooperative costing, the number of costing exercises and changing the ACAM health facility structure.

6.2. The ACAM Health Practitioners Reaction to the Researcher

In this section, an evaluation, and the role and approach of the researcher were discussed. Data evaluating the role and approach of the researcher were obtained from ACAM practitioners. The ACAM practitioners' reactions were documented after they participated in developing and implementing the ACAM costing activity model.

6.2.1. The Evaluation of the Researcher by the ACAM practitioners

In this section, the ACAM practitioners' reaction was determined by the researcher and presented as to whether they met the objective of developing the costing model for effective decision making. The ACAM practitioners were required to rate the researcher to determine whether the briefing they received on costing practices met the expectation of the ACAM practitioners' objective as in Table 6.1 on the following page. Furthermore, Table 6.1. shows the practitioners' perception of the researcher's intention of developing the costing model for the ACAM practitioners' products and services with a rating of 1-5 (5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree) (See Annexure M). The overall result of the ACAM practitioners' evaluation had an overall mean of 3.54. It showed that ACAM practitioners were satisfied with the adoption, demonstration and development of a cost accounting model for ACAM products and services for effective decision making. Though there are no perfect costing methods, this, however, depends on how the researcher understands and reproduces the phenomenon in action research.

Table 6.8: Researcher's Costing Performance by ACAM Practitioners

| No | Description | Mean | Variance | SD |
|--------------|---|-------------|-------------|-------------|
| 25 | Be satisfied with costing | 3.6 | 1.67 | 1.29 |
| 25 | Acquire more knowledge of costing | 3.88 | 1.19 | 1.09 |
| 25 | Our facility is suitable for the costing | 3.48 | 1.18 | 1.09 |
| 25 | Providing clear criteria for evaluation of costing | 3.4 | 1.42 | 1.19 |
| 25 | Identifying the costing purposes | 4.04 | 1.04 | 1.02 |
| 25 | The researcher provided and assists in suitable costing activities | 3.68 | 1.06 | 1.03 |
| 25 | The researcher gave feedback to the Practitioners | 3.6 | 0.92 | 0.95 |
| 25 | The researcher came to the field work regularly | 3.92 | 0.49 | 0.70 |
| 25 | The researcher taught us costing accordingly, | 3.44 | 0.60 | 0.78 |
| 25 | The researcher taught the costing in a more understandable manner | 3.52 | 1.09 | 1.04 |
| 25 | The researcher taught costing content from easy to difficult | 3.28 | 0.88 | 0.94 |
| 25 | The researcher emphasized principles of reason more than costing by heart | 3.16 | 1.17 | 1.08 |
| 25 | The researcher provided an opportunity to think and ask | 3.28 | 0.79 | 0.89 |
| 25 | The researcher provided enough time to consult on costing | 3.16 | 0.89 | 0.94 |
| 25 | The researcher taught how to assign cost properly and easily | 3.8 | 0.21 | 0.46 |
| Total | | 3.54 | 0.72 | 0.97 |

6.2.2. The Role Played by the Researcher

In the self-introduction, the researcher stated that his role was to create strategies to promote, adopt and demonstrate costing of the ACAM services and products and to motivate the ACAM practitioners to show a willingness to accept the costing activities introduced by the researcher. The ACAM practitioners regarded the researcher as accommodating and willing to assist in costing as mentioned by one practitioner in Health Facility C: *“The researcher taught me costing activities very well, and he was not strict while participating in the costing activities”*.

Another practitioner in ACAM Health Facility B commented that *“the researcher is outstanding in costing and his understanding of costing our products and services and his willingness to teach me of how to cost my ACAM assisted me to understand costing better.”* Another practitioner in ACAM Health Facility D described and confirmed the researcher’s role as follows: *“the researcher is very energetic and gifted in motivating people! He explains the costing concept clearly, and you can see how passionate he is when motivating other practitioners to participate in costing their products and services effectively”*.

6.2.3. The Approach of the Researcher

In making sure that the ACAM practitioners understand costing, the researcher used various techniques to encourage the practitioners to participate in costs. These techniques included the researcher’s ability to plan, his encouraging ACAM practitioners of the significance of cost accounting, explaining complex costing terms, and preparing and providing a lively atmosphere in which cost accounting practice could be discussed.

6.2.3.1. The Researcher’s Ability to Plan

The researcher used the process of costing, the stages of cost accounting practice and the significant factors of cost accounting systems, the elements of costs and the classification of costs as the strategies to motivate ACAM practitioners’ to understand

cost accounting practice. The researcher observed that ACAM practitioners were able to understand the logical processes of cost accounting easily. One of the ACAM practitioners during the field study pointed out that *“The researcher started by explaining easy costing terms to the more difficult costing terms and provided enough time for understanding the information and enabled us to adapt it to ACAM information. He also introduced new costing terminology and taught us how to cost the products and services.”*

In the activity identification, the ACAM practitioners in all six ACAM facilities confirmed that the researcher prepared the costing exercises very well and helped the ACAM practitioners to understand ambiguous points. One of the ACAM practitioners in ACAM Facility D in referring to this identification said, *‘My view is that the researcher is trying to encourage us to contribute in the ACAM cost model development and we are therefore expected to be more confident in our products and services costing.’* However, the practitioner from ACAM Facility E said *“I think the researcher role today should be to guide the other practitioners who do not understand how to identify the costing activities. Perhaps, the researcher can show us the strategy of how to identify the activities and assist other practitioners that are still struggling”*. One other practitioner in the ACAM Facility F commented that *‘the researcher was enthusiastic about encouraging practitioners to cost the products and services accurately. This was the researcher’s intention as observing practitioners costing to cost the products and services and participating as many times as possible.’* Moreover, the researcher observed that if the ACAM practitioners have no enthusiasm and are unwilling to participate in the study, it can have a negative effect on their participation in developing a costing model. That will mean the ACAM practitioners will learn nothing about costing`. This endorses the Chinese proverb cited by Benjamin Franklin (Brown; 2016) whereby telling and teaching them will result in the ACAM practitioners forgetting what they have been taught, while, involving them, will allow the practitioners to learn the model more effectively.

In all the activities, the researcher encouraged and motivated the ACAM health practitioners to cost the products and services and thus be able to assign the costs to the cost objects. The ACAM practitioners in Facilities D and F supported each other by showing that the process of costing in terms of activity identification, activity analysis, assignment of costs, calculating the activity rates and assigning costs to the cost objects are impressive. ACAM practitioners D commented by saying *“I enjoyed this costing process because the researcher identified my other services and assisted me in assigning the costs of my products. CAM practitioners F said in support ‘by assisting in assigning these cost, I can easily identify the cost of my services and products”.*

6.2.3.2. Encouraging the ACAM Practitioners’ in Costing

The ACAM practitioners felt that the researcher’s thoughtful response assisted them to cost their services and products effectively. *“The researcher motivated us and gave an alternative solution when encountering costing problems and was, therefore, the most important factor in assisting me to cost our services”.*

During the activity analysis, the researcher found that ACAM practitioners relied on the assistance of the researcher’s in costing the products and the services. *“The researcher got along very well with all the practitioners, and he was not too stressed while assisting us in costing our products and services and assisted us patiently without blaming us when struggling with costing, but instead praised us and gave us special costing attention for each activity”.*

6.2.3.3. Explaining Difficult Costing Terms

The ACAM practitioner felt that the researcher reasonably explains the costing terms. One practitioner in the ACAM Facility B felt that the researcher’s explanation of complicated costing terms helped him to have more confidence in costing the product and services. *“He always simplifies the costing activities and allows enough time to practise and helped me to identify costing strategy, and that made me be more confident in costing”.*

6.2.3.4. Preparing a Well-Planned Costing Process

The ACAM practitioners are satisfied with the assistance they received from the researcher. The ACAM practitioners found the role of the researcher as that of a person who is gifted in preparing a simplified and understandable costing process for all the ACAM facilities and provided a positive and favourable atmosphere in the field study. One practitioner in Facility A mentioned that *“the researcher comes to the ACAM facilities well prepared and takes us through the costing process step-by-step and also encourages and all ACAM practitioners not to undermine their ability to cost the ACAM products and services”*.

The ACAM practitioner in Facility C mentioned that; *“The researcher encourages the ACAM practitioners’ to effectively participate on costing the products and services. The researcher also copes very well with the slow learning of the ACAM practitioners while other ACAM practitioners are walking around the health facilities not listening to what the researcher is saying”*. The ACAM Practitioner in Facility F mentioned that; *“There is a lot of noisy today as the ACAM facility atmosphere was fun and lively and the ACAM practitioners were willingly participating in the activity while the researcher tried to encourage the practitioners to ask any costing questions”*.

6.2.3.5. Positive Costing Atmosphere for ACAM practitioners

The ACAM researcher could not expect all practitioners to be able to understand cost accounting practices effectively. Whenever the ACAM practitioners found it difficult, the researcher encouraged them to continue practising costing the products and services. The researcher encouraged the ACAM practitioners’ in identifying cost-related activities because it is essential for the practitioners. The researcher never laughs at the ACAM practitioners when practitioners had negative attitudes and committed silly mistakes on costing ACAM services. One ACAM practitioner commended that.

“The researcher created a favourable environment for the ACAM practitioners as they started to be anxious and started losing interest in trying to understand costing. I liked

the way the researcher teaches me and spend time with us in order to master these products and services costing”.

6.3. The Costing Knowledge, Competence and Confidence

This section presents the ACAM practitioners’ costing knowledge, competency and confidence in six phases: the ACAM practitioners’ knowledge on costing, costing as fun and entertainment, costing enthusiasm, practitioners’ costing doubts and hesitation, practitioners’ reaction to the costing activities, and their understanding of strategies for costing.

6.3.1. ACAM practitioners’ Knowledge of Costing

During the six ACAM health facility visits by the researcher and the observer, it was identified that the ACAM practitioners lack the necessary knowledge and confidence as reflected from the qualitative results. These are related to the practitioners’ knowledge of costing, the practitioners’ attitudes to costing and their understanding of the strategies for costing. This section discusses the increased awareness of costing knowledge and practitioners’ confidence in costing.

6. 3.1.1. ACAM practitioners Awareness of Costing Knowledge

During the self-introduction to determine the ACAM practitioners’ awareness of costing knowledge and after introducing it to the practitioners, they acknowledged to the researcher that they now understand costing as an instrument to assist them to cost their products and services more effectively. The practitioners accepted that their costing competence in the ACAM products and services had increased. One practitioner in ACAM Facility B referring to awareness of costing knowledge commented by saying; *“I can see that my closing knowledge and my confidence my services has increased about costing of my products and services and I am not struggling like before the researcher introduced costing strategy to us.*

One practitioner in ACAM facility D when talking about this knowledge by saying; *‘I now believe that I understand costing as I can cost and identify my activities without the assistance of the researcher, I hope and believe that all the practitioners are comfortable and able to identifying costing activities in their products and services. I have observed and realised that the majority of the practitioners could cost their activities and they can use the costing structure that the researcher has given us without having to look at the costing notes that the researcher ‘has supplied’.* During the activity identification, the ACAM practitioners demonstrated to the researcher their costing awareness and knowledge as they participated in these critical costing activities. The ACAM practitioners were able to repeat and identify the activities, which is the sign that they clearly understand costing better by recognizing some activities of their services. One practitioner from ACAM Facility E commented, *‘It was fun to cost the product and services correctly because I managed to identify other products’ activities. I understood completely the costing of the products and services such as taking into account the labour and material used in my products!’*

The ACAM practitioners felt excited about having learned something and become aware of costing and of having more confidence in costing. The researcher concluded that the excitement of the ACAM practitioners shows that they were aware that they could reach their goal of understanding and effectively using costing principles in their practices. For example, this could encourage the ACAM practitioners to cost their products and services effectively. One practitioner in ACAM Health Facility D? said; *‘I felt excited as I have learned to cost my ACAM products and services without been assisting by the researcher’.*

The ACAM practitioners’ expressing that they had gained cost knowledge and costing competency, resulted in the ACAM practitioners having confidence in their ability to cost their products and services appropriately. Two practitioners in ACAM Facilities B and D commented: *‘after completing the activity; I realized that I knew and understood more costing activities of my products and services. I feel more confident in costing these services’.* When the ACAM practitioners realised that they lacked costing knowledge and competence, it resulted in a lack of confidence. One practitioner in

ACAM Facility F confirmed this by saying; *"I felt worried in costing my products and services and did not understand the reason why I have to cost them"*. During the calculations of the activity rates, the ACAM practitioners' reactions towards this activity showed that the ACAM practitioners were now confident in costing their products and services and moving in the right direction. One practitioner in ACAM Facility C commented that *"Knowing more about costing activities assisted me to have confidence in costing my product and services and be able to calculate activity rates effectively"*. In addition, the observer discerned that the given products and services encouraged the practitioners to cost and have more confidence while sharing costing with fellow practitioners. One practitioner in ACAM Health Facility B said, *"The ACAM practitioners got to share costing products and services and often share a lot about their costing activities to the products and services and how to calculate the costing after analysing the activities. The researcher imparted a lot of knowledge and input on the cost of the products and services for these activities. Therefore, we had many things to thank the researcher for the awareness created by this exercise."* During the coffee-break chat, practitioners commented on the new experience gained in using costing principles in their practice. One practitioner expressed this at ACAM Facility C saying *"The ACAM practitioners felt good to have a chance to understand costing because all the practitioners in this health facility had interesting services to cost and to explain to me such as quality service to the customers."*

6.3.1.2. ACAM Practitioners' Confidence

The ACAM practitioners gave the researcher several reasons for their increased confidence in costing the ACAM products and services. During the self-introduction, the ACAM practitioners commented that *"the activities gave us more confidence to cost."* Moreover, the observer added by saying. *"They showed some levels of confidence when talking about costing the products and the services with other practitioners."*

During the assignment of costs, one practitioner was more confident because of the ability to be able to assign the costs identified among the products and services

provided by the ACAM facility and being aware of the now increased knowledge of cost allocation. The practitioners were becoming aware of the competencies that they had acquired to cost their products and services. The researcher assisted the ACAM practitioners in assigning cost appropriately to show the actual cost of the services provided. One practitioner in ACAM Facility A commented, *"I find myself having more confident because before now I was not able to cost my services effectively"*. One practitioner in ACAM Facility C supported when saying, *"I felt my confidence coming back because I was not able to cost my products and services more adequately"*. Some practitioners were prepared to show the researcher how they can perform and decided to take part in the activity. The researcher concluded that by showcasing their costing competence, it would increase the ACAM practitioners' costing competence and confidence as well.

Two practitioners in ACAM Facility B and E commented together by saying, *"We were willing to present on this activity of cost assignment and began to feel confident because it was a challenge to assign the costs by our myself as this will increase our confidence to cost my ACAM services"*. If the ACAM practitioner decides to assign the costs, the ACAM practitioner's confidence will increase, and this shows that they are prepared to give maximum performance. Two ACAM practitioners in both ACAM Facility D and F commented, *"Before been involved in assign the costs activity, I was nervous, but now after been allowed to perform it in front of the researcher, I feel like to do it again"*. The observer argued that practitioners were not very confident about the assignment of costs but performed more naturally. *"When I was observing the ACAM practitioners performing this activity of assigning a cost, the practitioners look prepared and confidence and were ready to show their costing performance."*

Many practitioners showed signs of increased confidence on the assignment of costs as identified by the observer when he said, *'The ACAM practitioners show more enthusiasm and confidence than in the previous activities as the ACAM practitioners were chattering with their faces indicated less embarrassment on this activity of assignment of costs'*. This shows that the practitioners were more confident and were enjoying the activity more than the previous activities as they quickly identified the

costing activities whenever the researcher asked them to cost in front of the other practitioners, as reflected in this comment. *“The practitioners are at ease in this activity than the previous activities, and this is due to the researcher who always encouraged us; even those practitioners that are so shy to cost with fellow ACAM practitioners”.*

When assigning costs to the cost objects of the products and services, the practitioners were also aware of their improved confidence to cost. One practitioner in ACAM Health Facility E commented, *“I enjoyed all the costing activities, and this increased my confidence, and I felt confident”.*

6.3.2. Costing as Fun and Entertainment

The ACAM practitioners had fun and were entertained by participating in all eight costing activities. The ACAM practitioners learned from other ACAM practitioners as they motivated one another and provided a positive learning atmosphere when costing ACAM products and services. One practitioner in ACAM Health Facility B commented, *“I really enjoyed costing especially the activity identification, I have realised how fun and entertaining costing is especially when you understand the costing of product and services. So, I do not think ACAM products and services costing is boring and difficult”.* One practitioner in ACAM Facility D felt that by participating in such activities, it would not only assist in the development and demonstration of costing competence but also with understanding its principles. He said *‘It was fun to cost the product and services and I had to know the meanings of activity analyses and activity identification as well understanding the other activities which the researcher has identified to us to create an ACAM model, imagine a first in our country’.*

The observer confirmed that ACAM practitioners regard costing as fun and entertaining when doing the costing activities. *The comment “They laughed more often”*, is evidence that the practitioners enjoyed themselves and had fun while participating in the costing activities, and they felt comfortable among the group members, learning from other practitioners. The researcher concluded that having fun reflected an atmosphere of acceptance of the cost accounting practices among

practitioners. One practitioner in ACAM Facility E commented, *'It was fun to participate in all the activities and not stressful to cost the products and services from them in terms of activity analyses and to calculate the activity rates'*.

The ACAM practitioners showed satisfaction in participating in these activities. They kept on playing around and shouted while participating in the calculation of the activity rates and assigning of cost to cost the objects. One practitioner in ACAM health facility D displayed a little *'I felt a little apprehensive when participating in these activities, but it was fun to have an opportunity to learn to cost too many products and services that I provide. In doing so, it made me have more costing knowledge for my ACAM services.'*

There are several approaches that the researcher used to promote practitioners' fun and enjoyment during costing activities such as varied costing activities. The role played by the researcher, the competence of costing and cooperative costing as practitioners in Facility E and F noted and commented. *'We enjoyed costing, and we never experience any stress while participating in the costing activities because the lesson of the researcher was straight forward and made sure that we all participate with clear understanding. The atmosphere was rather conducive and suitable for learning and was able to use this opportunity to use co-operative costing with other practitioners.'* The observer also confirmed to the researcher that the ACAM practitioners were happy during their participation in the costing activities: *'the practitioners as they cost, their faces reflect smiles and laughter while costing the activities.'*

6.3.3. Costing Enthusiasm

The enthusiasm for costing appeared in the ACAM practitioners' interaction during the costing activities. Therefore, the researcher concluded that the enthusiasm for costing might encourage practitioners to cost the products and services effectively. The enthusiasm for costing in this action research project shows practitioners' willingness to participate in the costing activities. One practitioner in ACAM Facility C commented, *'the practitioners felt enthusiastic about participating in the costing activities and*

enjoyed the costing with other practitioners". The observer commented that the activities in which the practitioners participated, encouraged and promoted ACAM products and services costing: *"these activities encouraged and motivated the ACAM practitioners and spoke more about the ACAM products and services. Even those shy ACAM practitioners spoke out with their fellow practitioners. The ACAM practitioners were attentive because they were stimulated by the topic of a costing model and the type of costing activities"*. In contrast, in terms of the activity, the observer agreed that the activity promoted ACAM practitioners to talk, and commented as follows: *"the first round of costing was nice, the ACAM practitioners walk around the facility talking to each other."*

6.3.4. Practitioners' Costing Doubts and Hesitation

Despite expressions of costing as fun and entertainment and costing enthusiasm, other practitioners indicated that they developed nervousness during participation in the costing activities because they were hostile towards the costing of the products and services. They thought they were not good at costing the products and services: *"the situation is rather not favourable as I was afraid in product and services I felt so nervous that I could not cost correctly"*.

The practitioners were also apprehensive when requested to cost in front of the other ACAM practitioners; however, the practitioner loved these activities because they could express themselves freely without been criticised and were assisted by the researcher. One practitioner in ACAM Facility D commented, *"When I was selected to participate in costing in front of the other practitioners, I was very apprehensive, but I enjoyed costing my products and services even though my costing information was rather short and the researcher did not complain about me."*

During the assigning of costs to cost objects, the attitudes towards assigning the costs to cost objects of the products and services were the main factor inhibiting the ACAM practitioners' performance. The practitioners' doubts and hesitation prevented them

from expressing their costing ideas persuasively. One practitioner in ACAM Health Facility B said, *“I was not aware of costing of the product and services in terms of material, labour and overheads which make me have a feeling that these prohibited me from costing effectively.”*

Doubts and hesitation might have also been caused by the lack of costing strategies as is seen with the practitioners in ACAM Facility D. Two practitioners supported each other in ACAM Health Facility D by saying, *“I took a lot of time thinking how to go about assigning the costs to the cost objects as it was difficult for me, and it was difficult to express the costing ideas. This has resulted in preventing me from costing my products and services”*. The ACAM practitioners in ACAM health facility D realised that the costing activity is above their skills level due to the educational level, and they had negative attitudes towards products and services costing. However, the researcher explained that there was no expectation of perfect costing. The intention of the researcher was for the practitioners to have the opportunity to understand costing and to assist them in achieving the objective of the research, that is, of developing a costing model for ACAM health facilities and achieve performance according to the ACAM practitioner’s academic ability. The researcher did not want the ACAM practitioners to compete but to cost the services and products as was confirmed by one ACAM practitioner. *“The costing activity was good for all the practitioners, and their performance was good at preparing and costing their products and services. Other practitioners struggled to cost their products and services and the researcher never allowed competition, but assisted them in identifying some of the ACAM costing activities”*.

The researcher observed that the activities were disorganised, and this affected the perception of the practitioners of costing. One ACAM practitioner confirmed this in ACAM health facility F: *“It is not clear to me how these costing activities are organised or built on from other costing activities”*. During the calculation of the activity rates, some practitioners showed doubts and hesitation while participating in the calculation of these activity rates. The practitioners’ negative attitudes towards costing these products and services did not affect the practitioners’ costing progress. However, the

negative attitudes hindered the ACAM practitioners' costing and reduced the practitioners' confidence level as noted by one practitioner in ACAM health facility C, *"I was nervous as I feared of making mistakes while costing and this made me forget some of the processes during the activity costing rates however, I could succeed over that activity rates situation. My doubts on costing my activities vanished as the researcher spend time with the practitioners, and I became involved in activities."*

6.3.5. Practitioners Reaction to the Costing Activities

The researcher decided to test them on the ACAM practitioners and requested them to participate in all eight activities to show their presence on the costing activities. The researcher identified the most popular and preferred activities among the ACAM practitioner's apprentices. The ACAM practitioners had to decide to write one answer as in Table 6.2 below. The data shows that the ACAM practitioners (36%) liked activity 2 of activity identification, followed by calculating activity rates (16%), followed by activity analysis and assigning costs to cost percentage, followed by the assignment of costs and preparing and distributing management reports at 8%. (See Annexure N).

Table 6. 9: The Activity Which Practitioners Liked Most

| Activities | Description | No | Percentage (%) |
|--------------|---|-----------|----------------|
| Activity 1 | Self-Introduction | 1 | 4 |
| Activity 2 | Activity Identification | 9 | 36 |
| Activity 3 | Activity Analysis | 3 | 12 |
| Activity 4 | Assignment of costs | 2 | 8 |
| Activity 5 | Calculate Activity Rates | 4 | 16 |
| Activity 6 | Assign costs to cost objects | 3 | 12 |
| Activity 7 | Prepare and distribute management reports | 2 | 8 |
| Activity 8 | Coffee-Break Atmosphere | 1 | 4 |
| Total | | 25 | 100% |

After this exercise, the ACAM practitioners' work attained maturity, and the relationship between the researcher and the ACAM practitioners was very cooperative and very good. The ACAM practitioners had more responsibility for their tasks, and their confidence in products and services increased. Therefore, the weak points of calculating the activity rates and assigning costs to the cost objects were addressed.

6.3.6. ACAM Strategies for Costing

Understanding the ACAM strategies of costing the three sections, encouraged ACAM practitioners in costing. The ACAM practitioners' opportunity to practise costing and their cooperative costing are discussed.

6.3.6.1. Encourage ACAM practitioners in Costing

Costing motivation is to encourage ACAM practitioners to join in and learn. The researcher provided the product and services as authentic material to motivate ACAM practitioners to cost their products and services effectively. The researcher assumed that the ACAM practitioners' understanding of the cost of the products and services, might promote the practitioners to cost clearly and correctly. During the self-introduction, ACAM practitioners reported that they were encouraged and motivated by the researcher to cost goods and services, effectively. This resulted in costing activities not being challenging anymore. The ACAM practitioners participated willingly in the costing activity: *"It is no more difficult for me to cost my products and services as it is based on my personal information and ACAM knowledge"*.

The observer informed the researcher that the ACAM practitioners were not concentrating anymore due to noise and movement in the ACAM health facility E. The ACAM health practitioners in this health facility said, *"Costing the ACAM products and services and understanding material, labour, and overheads cost enhanced my ability to cost." I would like to learn and understand this, costing more than in the past.* The observer confirmed that the activity promoted ACAM practitioners to cost.

During the calculation of the activity rates, the researcher found that authentic materials and tools effectively promote the ACAM practitioners to cost, as indicated by one ACAM practitioners of ACAM health facility F. *“Having more up to date information on costing materials, overheard and labour cost assisted me to participate in the costing activities effectively.”*

6.3.6.2. ACAM Practitioners Opportunity to Practice Costing

The ACAM practitioners were given enough time to practise costing to increase the costing motivation, knowledge and competence of the products and services. The ACAM practitioners informed the researcher that they enjoyed costing activities because they had an opportunity to practise costing in ACAM health facilities. The researcher assumed that by *providing* the ACAM practitioners with enough time to practise, the costing knowledge and costing competence might be increased. During the identification of the activities, the ACAM practitioners informed the researcher that they had embraced the activity because they were allowed to make mistakes for useful costing knowledge of the products and services as one practitioner in ACAM health facility B commented, *‘I personally appreciate to be allowed to learn to practise costing and to the ability to identify the activities in my products and services*

The ACAM practitioners realized the cost of interactions in the costing of the products and services. One practitioner indicated this in ACAM health facility B: *‘I had an opportunity to share my knowledge with fellow practitioners of product costing of my product and services with other ACAM practitioners. However, I am not good at costing product and services’, but with time I will be able to cost more effectively”*.

During the activity analysis, the ACAM practitioners were aware of the opportunity to practise in order to increase costing knowledge and competence. Therefore, the researcher assumed that by providing the ACAM practitioners with an opportunity to practise, ACAM practitioners’ costing knowledge and competence would be increased. One practitioner in Facility E commented: *“Reading and understanding*

costing before trying to analyse the costing activities with fellow ACAM practitioner prompted me to cost my services effectively.

Some of the ACAM practitioners believe that having time to practise costing was an ideal strategy to help them in product costing and services. As one practitioner in ACAM Facility C observed, *“to have time to identify the activities that make up my products and services cost was my favourite costing moment”*. However, one ACAM practitioner in ACAM facility D did not feel good because he did not get enough opportunity to practise costing of these products and services: *“I got limited time to practice my costing products and services. As a result, I am not so good at costing my products and services, but I will keep on practising until I am perfect in product costing’*. The observer supported this and said *“The reaction of other ACAM practitioners reveals that they did not have enough time to practice costing their products and services because of time-constraints on the side of the practitioners, or due to lack of confidence and educational background”*.

During the calculation of the activity rates, the researcher observed that the ACAM practitioners needed more time to practice costing as this would allow them to perform better in costing the products and services. One ACAM practitioner from ACAM facility E commented: *“I am a bit nervous about costing’, however, if I had the opportunity to practise costing every day, I could cost better by identifying my activities and be able to calculate them without assistance from the researcher”*.

The opposite applies. This was shown when one practitioner from Facility C, showed that not having enough time to practise costing the ACAM practitioner became less confident to cost the products and services. *“I did not have confidence while costing the activities because I had never applied cost principles to my products and services before and this made me lose confidence when I see other practitioners performing better than me”*.

6.3.6.3. ACAM Practitioners Cooperative Costing

The researcher used the ACAM practitioners' cooperative costing to promote costing confidence in costing products and services and develop the costing model in ACAM facilities successfully. This was done when the researcher started pairing the ACAM practitioners. An ACAM health practitioner in facility E recognised that changing the approach to pair work or group work practitioners both in pairs and in a group allowed him to learn to cost accounting effectively. *"The changing of partners daily allows me to cost my products more effectively and was indeed my favourite costing strategy to learn costing".*

The ACAM practitioner in ACAM health facility C showed that the cooperative costing strategy assisted in identifying activities and in calculating the activity rates. The cooperative costing activity promoted group development as one ACAM practitioner in ACAM Health Facility B expressed his feelings after finishing the costing task: *"I was nervous, but I tried my best and managed to cost because I am cooperating with other ACAM practitioners and encourage each other on this costing."*

The ACAM practitioner in the health Facilities informed the researcher that after completing the costing, the ACAM practitioners celebrated together as they showed *'sinking and swimming together'* as the primary strategy of working together in costing the ACAM products and services, while one practitioner in ACAM health facility A commented: *"To have a chance to cost these products and services was very amazing. We identified the activities together, calculate the activity rates together and assign costs to cost objects together, so we felt imposing. However, after completing the task, we felt relieved and celebrated together, and this assisted us to charge and substantiate our services to our clients and the government. We learned to cost and acquired the necessary knowledge and can together understand and simplify what looks like a difficult task".*

During the assignment of costs, practitioners continued working in pairs to practise costing. They assisted each other as one ACAM health practitioner in Facility D showed: *'I really love participating in the assignment of costs activities with other*

practitioners. We cost the activities as a group, and all of the practitioners were so cooperative and nice to me even when it was taking more time to understand certain activities”.

During the calculation of activity rates, the researcher used ACAM cooperative costing to promote practitioners' confidence in costing the product and services. By working together among the practitioners, and caring and sharing among practitioners promoted the practitioners understanding of cost accounting as indicated by one practitioner in ACAM health Facility F: *“It was indeed enjoyable to see all the practitioners working together by caring for one another and sharing costing ideas with fellow ACAM practitioners as this, assisted me personally, to cost my ACAM products and services more effectively.*

The observer commented that the ACAM practitioners managed to express costing ideas to fellow ACAM practitioners: *“ CAM Practitioners were effective in-service and product costing when they cost the calculation of activity rates, learn from their fellow ACAM practitioners as other ACAM practitioners are encouraged in costing and been able to calculate the activity rates”.*

During the activity identification, the researcher continued using cooperative costing and encouraged the ACAM practitioners to identify the costing activities in the products and services. The ACAM practitioners showed improved knowledge in participating in the costing activities as indicated by one of the ACAM practitioners who expressed the general feeling like this: *“I was nervous during the activity identification, but as time goes on, I was able to cost every service that I provide and to prepare and distribute management reports in front of the researcher and practitioners”.*

The data showed that cooperative costing promoted practitioners' confidence in costing as indicated by one ACAM facility practitioner in F stated, *“Working with my fellow practitioners assisted me to have more confidence in costing my products and services”.* Moreover, the ACAM practitioners realised that it would be good to coordinate and cooperate with fellow ACAM practitioners as a way to understand costing while identifying costing activities: *‘Coordinating and cooperating with fellow*

practitioners on activity Identification by preparing and distributing management reports in our group was my favourite costing strategy". The practitioners in ACAM health Facility A realised that some practitioners are shy and quite which may be due to their level of education while participating in the activities and they only become effective when assisted by fellow ACAM practitioners, as indicated by one practitioner in health Facility A. *"Some of them are quite shy maybe is due to educational background and dependent on other ACAM practitioners, and they tried to do their best."*

The ACAM Practitioners *paid special attention to costing and watch other practitioners show how they cost their products and services".* Of all the activities, cooperative costing was still one of the primary *strategies* to promote practitioners' costing as confirmed by one ACAM practitioner in ACAM facility F. *"I prefer to be informed first by my fellow ACAM practitioners and later by the researcher as this increased my confidence in costing"*.

6.4. The Influence of Cost Accounting Practice in ACAM

In determining the influence of cost accounting practice in ACAM, the main categories to be discussed are ACAM costing and the stages of cost accounting practice, re-consideration of cost accounting strategy, and consideration of cultural barriers.

6. 4.1. ACAM Costing and Stages of Cost Accounting Practice

The researcher used a self-introductory exercise in each of the six ACAM facilities to help the ACAM practitioners to get to know each other and to share ACAM costing of the products and services. In order to build ACAM practitioners' confidence in assisting in to build a costing model of the ACAM products and services, the researcher gave constructive instructions and checked the practitioners' understanding in order to demonstrate and develop the costing model in ACAM. The researcher knew that a trust relationship with the ACAM practitioners would improve as the researcher continued engaging with the ACAM practitioners. The researcher was likely to receive resistance as the ACAM practitioners were shy to share cost information, and so the researcher provided the opportunity to promote a uniform understanding of costing.

However, most ACAM practitioners who were not ready to show their costing was less confident when they were asked in front of the other ACAM practitioners. Consequently, the ACAM practitioners who participated during the costing exhibition felt upset with ACAM practitioners who did not show the same commitment. So cooperative costing did not take place within those groups of ACAM practitioners. This might be because the ACAM practitioner knew on the day of the participation that they had to participate in the costing of the products and services. Therefore, the practitioners did not perform as expected from people who are ACAM practitioners, and this may have resulted in the researcher trying to solve the problem without success; but this was one of the main points that the researcher was aware of for the next research cycle. During the calculation of the activity rates, the practitioners' confidence was not enough to express themselves. The practitioners complained about the researcher's tablet during photo shooting as a factor that prohibited them from calculating the activity rates effectively.

One ACAM health care practitioners said, *"the tablet used by the researcher should not be focusing on me. It made me nervous and uncomfortable"*. In solving this problem, the researcher put aside the tablet and only used it once the activity was completed. By the time of the last activity, most practitioners felt more confident to work with other practitioners which resulted in feelings of achievement as stated by one ACAM practitioners in ACAM Facility B: *"It is a good thing I had the opportunity to assign the costs to cost objects. In doing so, I feel brave enough to assign the costs to the cost objects"*.

6. 4.2. Re-consideration of Costing Strategy

The observer gave the researcher guidance when informing him that the practitioners spoke different African languages, such as Tsonga, isiZulu, Setswana and Sepedi. After the first activity, the observer noted: *"Some may cost services effectively in African languages as the practitioners were talking to each other both in African languages and can therefore effectively determine costing of the ACAM products and services in own languages"*. Therefore, the researcher observes that the ACAM practitioners did not understand the costing and chose to identify and calculate the

costing activities. As one practitioner in ACAM Facility C said, *“When I did not understand the identification and calculation of the costing activities, I usually asked the researcher, again, please! However, slowly please!”*

The practitioners in Health Facility B and E commented about the lack of costing strategy that can assist them to continue costing the ACAM products and services effectively. *“I did not understand the researcher very well; as a result, I could not respond to him confidently on costing my ACAM products and services”*. The practitioners in both facilities A, C, and D reported about having an ability to use the costing strategy while costing the ACAM products and services. *“Some practitioners have been costing traditionally and use the researcher strategy of costing occasionally”*.

The researcher observed that the practitioners were standing and talking to each other about ACAM products and services. Therefore, the researcher realised that it was challenging for the practitioners to ask questions on costing the ACAM products and services. They could not explain what they wanted to ask. Perhaps they can cost the ACAM products and services but to cost they must practise and identify those activities much more often. One practitioner in ACAM health facility E commented that *“It is problematic for us the practitioners to formulate activities. Nobody had used a costing strategy before; I could not formulate a single costing activity only after been assisted by the researcher sentence”*.

The researcher also realised that most of the ACAM practitioners did not have a plan of where to start when costing their products and services that would enable them to keep costing the ACAM products and services. As a result, the researcher had to guide the practitioners in the costing strategy, more strongly in activity 2: activity identification, activity 3: activity analyses, and activity 4: calculating the activity rates. After the activities, the practitioners had to practise expressing the costing of ACAM products and services. Therefore this was the right time to guide and encourage the ACAM practitioner into a suitable costing strategy as some practitioners had developed their costing using all their products. The ACAM practitioner from health facility D indicated that *“I will cost the products and the services that I have in my*

ACAM facility because I understand them very well and I have been using them all my life.”

Most of the ACAM practitioners tried to cost the products and services and succeeded, while others even after trying never succeeded. The researcher's observation and further investigation by the researcher revealed that the reasons for the practitioners not reaching their costing plan were due to not being aware of a costing strategy that could assist them to maintain the costing flow and help to express complicated ideas. Therefore, the researcher had to ask himself, *“How do I help the ACAM practitioners to become familiar with costing strategy?”* Most of the ACAM practitioners succeeded in finishing their task, and the researcher used the data to assign costs to cost objects of Research cycle Two.

6.4.3. Consideration of Cultural Barriers

During the activity identification, the researcher observed that ACAM practitioners were influenced by thinking they were teaching the researcher the medicines freely, instead of at a price. They were afraid to upset the researcher, and so the interviews with the ACAM practitioners were positive. However, the researcher was not convinced about the positive attitude of the ACAM practitioners as the researcher was aware that the ACAM practitioners were struggling. In analysing the activities, the researcher thought that it is essential to consider the cultural barriers when dealing with the ACAM practitioners who were afraid to ask the researcher. Therefore, the researcher had to explain to the ACAM practitioners that the more they express their ideas towards the researcher's costing model, the easier it would be to develop and implement the products and services costing model. The ACAM practitioners asked about how to translate products and services into the costing model. Firstly, in order to break the ice between ACAM practitioners, the researcher prepared and predicted the problems that the ACAM practitioners might have in advance. Secondly, it was found to be essential to praise and advise the ACAM practitioners when they did well and when the ACAM practitioners failed to cost the services. Thirdly, the researcher had to avoid being emotional when judging the ACAM practitioners' behaviours and lastly, not to use the new term of costing whenever the ACAM

practitioners' needed assistance. The researcher also observed that the cultural barriers of the ACAM practitioners hampered the improvement of the ACAM practitioners in costing the products and services effectively.

The researcher on several occasions used the words *do not panic, relax, understand first, and do not compromise the situation*", in order to encourage the ACAM practitioners to tackle problems and to understand the costing of the products and services. The researcher decided to ask questions such as *"How old are you?"* because the researcher felt very uncomfortable as one of the ACAM practitioners was as old as the researcher's mother even though she looked young.

The researcher noticed that in South African culture, the ACAM practitioners had to be polite to visitors, and obey the instruction, primarily, because the ACAM practitioners were marginalised in South Africa. In general, South African ACAM practitioners do not discuss products and services costing with any person, so it was an excellent opportunity for ACAM practitioners 'to practice' expressing costing with the researcher. The extent to which the researcher approached and considered the presence of the cultural barriers in the ACAM facilities depended on the purpose of the products and services costing. If the primary purpose of products and services costing was to develop a costing model for the practitioners', the researcher had to ask himself the question: *"How do I assist the ACAM practitioners to cost the products and services effectively?"* Therefore, if the ACAM practitioners' wanted to calculate the activity rates even though they could not calculate the activity rates effectively, the researcher had to allow them to calculate the activity rates. This was the fourth activity which some ACAM practitioners could not do, that is, cost products and services effectively, and thus did not participate in the costing activity. The researcher had to think about this point when briefing the practitioners about product costing and services. However, the researcher was satisfied with the ACAM practitioners who were able to inform the researcher that they could not cost and would like to be assisted by the researcher.

6.5. The Changes Considered for Research Cycle Two

After evaluating the results of the Research Cycle One, seven themes were identified as needing some improvement when attending to Research Cycle Two. These included the timing of visits to ensure that ACAM practitioners could attend, giving clear costing instructions, improving the explanation of costing strategy, guiding practitioners towards applying a costing strategy, the development of group autonomy and cooperative costing, the number of costing exercises and changing the ACAM health facility structure.

6. 5.1. Timing of visits to ensure attendance ACAM practitioners

In Research Cycle One, the observer and the researcher visited the ACAM facilities together. Therefore, it was convenient for both the researcher and the observer to visit the different health facilities. This impacted severely on the researcher because the researcher had to rely on the observer for information about the performance of the ACAM practitioners in other facilities. Therefore, the researcher and the observer agreed to schedule the field visit by sharing health facilities departments such as consultation rooms, reception, processing, packaging, distribution, marketing, storage, transport, and promotion. After that, the researcher had to request the health facility owners to agree on the time and schedule when both the observer and the researcher were free to observe costing in the health facilities.

6.5.2. Communicating Costing Instructions

During Research Cycle One, the researcher realised that other ACAM practitioners relied on the researcher for the next activity on costing the products and services. During the activity identification, most ACAM practitioners failed to cost because the instructions were unclear. Therefore, the researcher added simulation during Research Cycle Two and checked the ACAM practitioners' comprehension before they performed the costing exercise.

6.5.3. Changing the Strategy of Communication Costing

When the ACAM practitioners experienced problems with the costing of the products and services, the researcher tried to explain the costing strategy again to make them understand very quickly. It is then that the researcher realised that some ACAM practitioners have negative attitudes towards products and services. The ACAM practitioner deserved to have a clear explanation on costing the products and services, and once the ACAM practitioners' confidence increases, the ACAM practitioners would be able to develop and apply the ACAM costing model. The researcher also had to prepare and explain the costing concepts for ACAM practitioners by simplifying them as much as possible. The researcher discovered that each ACAM practitioner had a unique costing approach and, therefore, should be treated differently. Therefore, understanding and development of costing model are imperative for the practitioners understanding of costing.

6.5.4. Guiding ACAM practitioners in applying a costing model

The outcome of observing ACAM practitioners participating in the costing activities was that both the researcher and the observer were concerned that ACAM practitioners could not express costing when meeting challenging costing concepts. The researcher and the observers were unsatisfied with the practitioners' costing ability as they lacked costing strategies when expressing costing ideas. Observing the ACAM practitioners talking to other practitioners, the researcher realised that they were effectively participating in costing activities of the products and services. The researcher realised that the objective of the study needed to be achieved by encouraging the practitioners to cost the products and service and so assist in developing the ACAM costing model, and also guide the ACAM practitioners on costing every product and service.

6.5.5. Development of cooperative costing

In Research Cycle Two, the ACAM practitioners had the opportunity to put together cost elements activities, and interestingly, the relationship between the ACAM practitioners and the researcher had by this time improved tremendously. Due to this improved relationship, the researcher adjusted to make the activities more challenging than in Research Cycle One. The researcher evaluated the observer's and ACAM practitioners' recommendations, and also the contingency theory and the production cost theory of value and adjusted the costing activities accordingly. However, the outcomes in research cycle Two will be determined on whether the researcher can solve the ACAM practitioners' problems. One question the researcher had to ask himself for research cycle Two was "*How can the researcher provide costing activities of the ACAM products and services input suitable to ACAM practitioners' different background, knowledge and understanding, and develop a costing model for ACAM?*" The more knowledge the researcher had of the ACAM costing strategy and with the experience of understanding ACAM costing in research cycle One, the more the researcher was able to assist the ACAM practitioners in costing different products and services in Research Cycle Two.

6.5.6. The Number of Costing Exercises

One practitioner advised the researcher that even though the ACAM practitioners had been trying to cost the products and services, the activities had been too long and sometimes also complicated. The ACAM Practitioners participated in the activities of self-introduction, identification of the activity, analysis of the activity, costs assignment, the activity rates calculation, preparation and distribution of management reports, and cost assignment to the cost objects. Therefore, the researcher randomly selected a practitioner to cost and demonstrate his understanding by costing in front of other practitioners. After that, they had to prepare cost management reports and then use their information and talk to fellow practitioners.

6.5.7. Changing the ACAM health facility Structure

The researcher and the observer agreed that the structure in the ACAM health facilities needs to change as it prevents the ACAM practitioners from understanding the costing of products and services. Therefore, changes were needed for the next research cycle. *"I think the ACAM health facilities were not appropriate for this kind of costing activities as are too small. They did not have enough space and are crowded and untidy for me today"*. In the next research cycle, the researcher would have ACAM practitioners practising more, and the researcher would act as facilitator and 'encourager' for the ACAM practitioners to reach their costing potential.

6.5.8. Summary of the Chapter

In this chapter, the ACAM health practitioners reaction to the researcher was discussed. This includes a discussion on the evaluation of the researcher by the ACAM practitioners, the role played by the researcher, the approach of the researcher, the researcher's ability to plan, encouraging the ACAM practitioners' in costing, explaining difficult costing terms, preparing a well-planned costing process and positive costing atmosphere for ACAM practitioners

Next, the researcher discussed the costing knowledge, competence and confidence. This included the ACAM practitioners' knowledge of costing, costing as fun and entertainment, costing enthusiasm, practitioners' costing doubts and hesitation, practitioners reaction to the costing activities and ACAM strategies for costing. The researcher further discussed the influence of cost accounting practice in ACAM. This included a discussion on ACAM costing and stages of cost accounting practice, re-consideration of costing strategy and consideration of cultural barriers.

Finally, the changes considered for Research Cycle Two were contemplated. This included the timing of visits to ensure attendance ACAM practitioners, communicating costing instructions, changing the strategy of communication costing, guiding ACAM practitioners in applying a costing model, development of cooperative costing, the number of costing exercises and the changing the ACAM health facility structure.

CHAPTER SEVEN

RESEARCH CYCLE TWO: DATA PRESENTATION AND ANALYSIS

7.1. Introduction

The previous chapter discussed data presentation and analyses thereof based on documentation and observation and the reaction of the ACAM practitioners during the field study at the six ACAM Health Facilities. This chapter reports the data presentation and analysis of part two of the study, which is based on the research methodology (see Chapter Four) and on the research questions. Thus, this chapter is organised around the research questions presented in Chapter One. The aim was to seek answers to the following questions:

First, what is the present state of affairs regarding the system the ACAM health practitioners use to cost their ACAM services and products, and how does such a system assist in the costing decision-making? Second, is it possible to develop, adopt and demonstrate an ACAM costing model for the ACAM practitioners that may successfully cost their products and services and thus enhance ACAM health care services? Third, what are the likely challenges that may be encountered in developing, adopting, and demonstrating the proposed ACAM cost accounting model to enhance the costing model?

The chapter starts with a summarised description of the evaluation of Research Cycle Two, then moves on to an overview of the CAM health care facilities, CAM business strategy, organisation of the ACAM facilities and ACAM practitioner's roles. This data are essential to comprehend the type of functions ACAM practitioners perform and its involvement in strategic costing of the CAM health care facilities.

The exceptional position in which the ACAM practitioners, as participants, found themselves, was to determine the costing of ACAM health facilities products and services and be able to determine the costing model. This was done through an analysis of how the practitioners react during the introduction, the current ACAM costing practices, the proposed ACAM costing model the ACAM challenges with the

costing model, and a consideration of how the practitioners conclude the discussion with the researcher. However, in describing the ACAM facilities, the researcher uses a false name to identify the facilities. The researcher will be referring to the ACAM organization as ACAM facilities as the researcher keeps his promise to keep the identities of the facilities confidential in line with the university ethical research requirements.

The chapter concludes by discussing the ACAM facilities that clients patronise for their services, the link between the research model and the research findings, the implications for the model, and the future use of the ACAM costing model. The information includes the insights of the participants and the ACAM practitioners' opinions and thoughts on the proposed ACAM costing model. To deliver quality data, a verbatim comment was used by the researcher to record an idea, feeling, or opinion as reported by the ACAM practitioners. By doing this, the researcher also attempts to realise the originality of the research and the ACAM practitioners' empowerment in understanding costing. The critical implications of the research findings are discussed in the next chapter.

7.2. Reflection on Changes from Research Cycle One

The researcher revisited the ACAM facilities to determine the things that should be adjusted. During the second consultation with the ACAM practitioners, the researcher realised that there was nothing more to add from the ACAM practitioners. This resulted in the saturation of data.

7.3. The ACAM Health Care Facilities

The ACAM Facility A to F (See Annexure L) provides primary and secondary health care services to a diverse number of clients in Mpumalanga, Gauteng, Free State North West, and Limpopo Provinces in different municipalities. The ACAM health facilities are managed and owned by ACAM health care practitioners with different formal qualifications, from non-formal education, Grade Twelve to a university degree such as Bachelor of Law (LLB.). The primary clients of the ACAM facilities are the

community leaders, profit and non-profit organisations, business executives, and pastors. Of the six ACAM care facilities, four are in urban areas and two in rural areas. The owners of the six health care facilities started practising ACAM at a very young age from 1968 to 1992. The operations of the ACAM health care facilities, regardless of been in rural or urban areas, they are managed and operated in the same process. The ACAM health care facilities provide different services with a diverse number of products; clients access the products and services through exclusive ACAM health care facilities. National Department of Health has given the facilities training in a small-scale to selected ACAM practitioners. The National Health department offered ACAM health facility short courses in primary health care services such as in sexually transmitted infections, diarrhoea, tuberculosis, cancer, breastfeeding, hygiene nutrition, family planning, and necessary counselling and polio detection services (See Annexure L).

Respective organisations also train the ACAM practitioners in completing sick leave forms and referrals to the clinic and hospitals for the TB, HIV and polio vaccinations for children. According to ACAM health facilities, there is a plan to extend the training to financial management and customer services to the majority of the ACAM facilities.

7.4. ACAM Business Strategy

The ACAM facilities enjoyed a high profile and recognition after 1994. Its revenues and net income are not expected to be scrutinised by the South African Revenue Services (SARS), and the facilities mainly benefit from services that are charged without being substantiated. According to Mothibe and Sibanda (2019) when referring to the World Health Organisation's (WHO) ACAM Strategy for 2002–2005, such business strategy had four objectives, which will enable the integration of ACAM into national health care systems. Such ACAM Strategies for 2002–2005, according to Mothibe and Sibanda (2019), are:

- the development and implementation of national ACAM policies and programmes aimed at promoting the efficacy, quality and safety of ACAM;
- broadening the skills base of the medicines;

- guiding quality assurance and regulatory standards; and ;
- increasing the affordability and availability of ACAM where appropriate.

Furthermore, Mothibe and Sibanda (2019) discovered that this WHO strategy 2002-2005 will improve and promote appropriate ACAM practices by ACAM practitioners and consumers. According to the ACAM health care practitioners, the long-term goal is to grow and improve costing and pricing efficiency of the ACAM facilities and improve the trust of the communities, consumers and customers.

Consequently, attempts to increase ACAM profitability by adopting several costing strategies through the visible acquisition of customers, concentrate on finding customers with high-cost in order to segment their services according to cost element principles. This segmentation of customers will result in improving the ACAM facility's profitability margin and also result in advantaging next generation by taking steps in the right direction to apply ACAM cost accounting practice. The responses to the research questions are based on the information the researcher discovered from the interviews with ACAM practitioners. Most of the ACAM practitioners' interviewed were responsible for product processing and service provision.

7.5. Organization of the ACAM Department

The ACAM facilities work takes place in various departments such as the reception, processing, packaging, distribution, marketing, storage, distribution, transport and promotion. About 19 employees work voluntarily in the ACAM health care facilities in a different department. The health facilities have other departments similar to the western culture of inpatient and outpatients. In outpatients, patients are treated and given medication and then go home, while at in-patient, all the patients are admitted in the ACAM facilities for various treatments of ailments. The reception is the most critical link in the ACAM services as clients are screened before accessing the ACAM practitioner. The ACAM practitioners, while referring to the different departments, state that "we have some *departments, we might be undermined, but we have departments similar to the western practitioners*".

According to the ACAM health care practitioners, the ACAM health care facilities consist of 11 departments, which consist of several teams. According to ACAM health care practitioners, the processing department performs a number of functions within the facility. The processing of the herbs, vines, and plants are bound and processed depending on the type of services the medicines are going to perform; some are immediately processed while others are later processed by using a processor made of wood and iron. Accordingly, this resulted in the realisation of the need to have a cost accounting model in ACAM as a tool to implement a health facility's standard list of cost centres effectively. This is consistent with research conducted by Özaltın and Cashin (2014). They argued that while implementing cost accounting, the costing participants should make sure that there is a standardisation of the cost centres or departments that will enhance the estimated costing unit to be equal and comparable in all the ACAM facilities.

The next phase of processing takes place at the facility manually by using wood and iron processors. Others are processed by being chopped into small pieces and ground (See Annexure L). During the processing, the plants, roots and bulbs are cut into smaller pieces with a knife. Once processed, different mixtures are made through using sophisticated mixtures that involve medicinal material that is chopped, ground and burnt. The primary clients of the ACAM facilities are the community leaders, profit and non-profit organisations, the business executives, business owners and pastors.

The goal of the packaging department is to package the medication in 2kg, 5kg and 8kg containers for storage. In this department, medicines are packaged in old plastic bags, old newspapers, old magazine pages, an array of old cold drink and paper-plastic bank bags. In other ACAM facilities, the packaging depends on the products and service to be provided and is given to clients in old newspapers and old plastic bags. In summary, the clients receive medication packaged in an old newspaper while others receive it in old and unusable plastic. Liquid products are given to clients and consumers in old and unused bottles while the size depends on the type of service and product.

The marketing and distribution channel to the clients and fellow practitioners depends

on ancestral guidance. The ACAM facilities distribute the medicines by full tablespoons to the clients for primary and secondary health care. The main marketing channels are through ancestral intervention, client referrals, and unique medicinal treatments that bring clients. During the interviews, the ACAM practitioners said the storage department plays a significant role as after collecting the medicinal plants, roots and bulbs, these medicinal plants are stored in the shade or a cool place. Furthermore, collected and processed medicinal plants are stored in a place where they will await further processing. Finally, the medicines are stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room for clients.

However, the transport and promotion department also plays a vital role in ACAM health care facilities. The medication that is found locally is collected on foot and carried in unique medical bags. Another medicine outside the area is collected by making several trips, either in a taxi or bus. The practitioners transport the materials from the rural and urban markets by using their cars. Concerning the promotion of services, the referrals are done by clients and word of mouth, and there are no government departments that assist in the promotion of the services. The promotion of services is also done by using special muti where the ACAM practitioner requests the ancestors to send clients to the facility to receive healing. However, in most cases, the ACAM practitioners promote and market products and services of their ACAM facilities. The findings are similar to the results of several cost accounting studies, such as ATSWA, (2009), and Horngren et al. (2006). They found and argued that material costs include not only the material prices, but all the costs related to buying, transporting, and storing the materials, and these should be added to the material costs.

7.6. ACAM Practitioners Roles

According to White (2015) and Mokgobi (2014), effective ACAM care service is best measured by separating the natural from the spiritual and by addressing health care issues. The ACAM health care practitioners have a basic knowledge of separating the natural from the spiritual and are capable of effectively referring patients to modern medical practitioners.

Furthermore, the role that ACAM health care practitioners play is divided into Spiritual and Physical issues (White, 2015; Mokgobi, 2014). The ACAM health care practitioners should have an appropriate knowledge base, of costing, research, and modern health care expertise. When ACAM health care practitioners take part in strategic costing for making an informed decision, the ACAM practitioners have the power formula with expertise in solving the health care problem. The practitioner also plays an essential function of influencer and specialist in modern health care decision-making and recommends treatments for health-threatening severe illnesses. The ACAM practitioner's expertise is separated into knowledge about products and services. This expertise includes the prescription of herbs, clay, the application of herbs and counselling. They are also responsible for training students as ACAM practitioners and create medicinal knowledge for the adequate provision of services. These ACAM student practitioners, although working very closely with the ACAM health care practitioners, are only responsible for producing medication and the provision of services, while the qualified ACAM practitioners identify the services and the products to be used.

ACAM health care practitioners consider themselves providers of primary health care within the South African National Department of Health. One ACAM, health care practitioner in ACAM Facility B, commented as follows: "our primary role has been, the provision of ACAM health care services, by identifying all the medicinal mixtures required for services, the treatment of children's illnesses, involved in decision of the type of medicinal mixtures required, provision of promotional medicinal mixtures, involved in the Facilities by communicating the mixtures to student trainees to deliver effective services to key customers".

The ACAM health care practitioners told the researcher that they work with their clients to solve health care problems. One of the ACAM practitioners said, "*We set up a meeting at the beginning with my ACAM student and talk to them about communication with gods on magical bones, why and how this communication of gods on magical bones is supposed to work, and what can be expected from magical bones.*" These findings are consistent with the studies conducted by Reynolds (2013), and Guan

(2010) who found organisational culture as the identification of various groups with distinct roles in the ACAM facilities to carry out the business of the facilities and ensure that tasks are done as effectively as possible. It is also consistent with the findings of Quinn et al. (2017) who found that organisational culture affects all the organisational activities and it is necessary to examine and understand the performance measurement systems from a holistic perspective.

7.7. Development of a Costing Model for ACAM Practitioners

This section discusses the development and adoption of a costing model based on the interview conducted with the ACAM practitioners. The research questions involve the ACAM practitioners' introductory remarks, current ACAM costing practices, models of ACAM, challenges of ACAM on costing model and practitioners' concluding remarks.

7.7.1. ACAM Practitioners' Introductory Remarks

During the introductory process with the ACAM practitioners, the researcher observed and heard passionate, and confident ACAM practitioners speak about the services provided. According to Bordogna (2015) and Tavares (2016b), that to ensure market competition locally and globally effectively, the ACAM practitioners should take advantage of the opportunities provided and adopt best business practices and persevere during intense competition. From the interview data, the demand for costing information has become more critical since the recognition of ACAM in South Africa post-1994. Since then, ACAM facilities have needed more costing details, frequency, and timeliness of costing. The ACAM practitioners of ACAM facility E said "*The ACAM need product costing details, costing accuracy and availability of reliable ACAM information to determine the pricing of products and services that provides marketing plans and make reliable decisions for service pricing*". Concurring, the ACAM practitioners of ACAM Facility D said, "*since the legislation of ACAM the health care facilities needs detail costing information such as the processing, storage and marketing departments*". ACAM practitioners have detected that costing is one of the innovations that could satisfy customers' needs and also assist in the professionalisation of ACAM services. This finding during the introductory remarks by the ACAM practitioners shows a significant need for cost accounting in ACAM facilities.

This also indicates that the involvement of cost accounting practice in ACAM is crucial for the prosperity of ACAM facilities. This discovery is in line with the results of most accounting researchers who have argued that cost accounting practice furnishes managers with more precise costing data as compared to the traditional costing systems (ATSWA, 2009; Majid & Sulaiman, 2008; Kachalay, 2012). This finding also confirms the finding of Kumar and Mahto (2013), who suggested that the cost accounting practice provides more appropriate cost information in terms of assisting decision-makers to make suitable pricing decisions.

In addressing the research questions, the review of the literature and the interview questions were used as corroboration. Therefore, ACAM health care facilities should be better placed to detect errors of the costing systems by adopting and implementing the costing model in ACAM.

7.7.2. Current ACAM Costing Practices

The current costing system used by ACAM practitioners to effectively and efficiently cost the products and services and how it can assist them to make informed costing decisions, accurately requires the consideration of several points such as the type of services, the pricing list, services required by clients, arrival at the material, labour and overhead costs and how the ACAM practitioners' costing methods help in investigating the products and services costing. The discussion of current ACAM health care practices was analysed with special attention to the facilities and the ACAM health care models. The ACAM practitioners who were the respondents were requested to offer further information on the way the ACAM practitioners operate in ACAM facilities (See Annexure C and F).

The result of the interview findings reveals that ACAM facilities focus on particular services and products in practising ACAM, which is consistent with ACAM business.

Furthermore, an interview with an ACAM practitioner revealed that the health facilities provide a wide range of services such as general consultations, a sexual boost for men, epilepsy, and bad luck (See Annexure L). These services are provided with the assistance of the products that are found in different parts of Southern Africa such as Mozambique, Eswatini (Swaziland), Lesotho, Botswana and Zimbabwe. At the same time, other products are also found around the South African provinces such as in Mpumalanga, Limpopo, Gauteng, Free State and Kwa-Zulu Natal. The ACAM practitioner unanimously agreed that the products that are used in the adequate provision of their services are not always found within their facilities. One ACAM health practitioner stated that: *“Our products are found as far as Kwa-Zulu Natal, Swaziland (eSwatini), and Zimbabwe while staying in Limpopo. Possibly, you (the researcher) will understand the high price that we are charging even though we are not recognised by the government and partially regulated”*. These results are in accordance with the discoveries of several of empirical studies of cost accounting, similar to those of Nitinand Delgobind, (2013) Pavlatos and Paggios’s (2009) and Reynolds (2013) who argue that a functional cost system has to provide detailed data, frequent cost information reports, improved classification of costs, accurate cost data, and the calculation of more variances. Hence, it was clear from the results of this study, including the results of previous studies of cost accounting practice, that even after the critical role of the services and products that are provided, it still requires materials and products to provide these services effectively

Regarding the price list of the services of all ACAM practitioners’ products and services, there is a feeling that people do not have faith in them because of the feeling of them not having a price list. One practitioners in ACAM health C, stated during the interview that, *“ the westernised doctors undermine our capability as they think we do not have the pricing list, and they fail to understand that our pricing are determined and regulated by our ancestors.”* The prices for products in the health care facility are highly variable as one ACAM practitioner in Facility D reiterated that *“our products are traded in units of handfuls, tablespoon, recycle plastics while the prices of services in different facilities range from R50 to R5000 depending on the service that will be provided.”*

During the interview on the services that the clients patronise the most in the various ACAM facilities, the ACAM practitioners stated that different clients consult the facilities with different requirements. This is due to a number of services that clients require daily across the facilities such as motse (Homestead), setlotlwane (Zombies), sefola (Cancerious Wound), Hlogo e Kgolo (big headache), Go hwa lehlakori (stroke), Bosenyi (criminal cases), Setopo (Cops), Moya o Mobe (evil spirits), Kgwebo (business), Tendara (entrepreneurial tenders), Baratani (relationships), Sehuba (TB) and Go hlakana hlogo (psychiatric illness).

This result is similar to Alanzi (2015), who found that cost information for decision making, cost reduction, and cost control may cause organisations to use specific types of cost accounting systems. This revelation is similar to the results of studies by Alleyne and Weekes-Marshall (2011) too. They also found that the information needed for decision making influences organisations to use cost accounting systems. This concurs with the results of the findings of Reynolds (2013) that the increased importance of cost information makes organisations like ACAM facilities use innovative cost accounting systems if the organisation produces a variety of products and it assists in determining the product cost for every product and appropriately allocates overhead costs.

During the interview, one ACAM practitioners in Facility F stated that: *“The products that I use for homestead, business and entrepreneurial tenders, use the same products to provide these services effectively. The most disappointing part is that after assisting the customers with the products, some of them will not even bother to pay back for those services, but the same clients will come and boast that, things are going for him/her, but will not even bother to talk about payment. Because most of the time, I will indicate services rendered will be paid once a tender has been awarded. I personally think that the costing model will assist in charging our clients correctly and upfront.”*

Interviews with three other ACAM facilities disclosed the profound interest by the ACAM practitioners to focus more on several activities in order to review the payment risk and business continuity frameworks of the ACAM facilities. The researcher

discovered that non-payment was practised by the majority of the clients in similar ACAM facilities. one ACAM practitioner discloses that: “*this activity is very severe and kills the ACAM practice and the profession*”. These activities, as mentioned above, include non-payment of services, the prevention of ACAM continuity and the discovery of the procedures used for protecting clients, ACAM practitioners and ACAM facilities. This result is similar to Özalpın and Cashin (2014) who find that in calculating the total cost for each product and service, one should determine which items of cost to include in the analysis of the cost and measure a product’s total cost and service using the data available and this capture all costs to be included when costing.

The ACAM practitioners from one of the ACAM facilities stated that: “*Since our ACAM facilities specialised in the provision and supply of effective ACAM products, a high focus on the human aspect of ACAM is made to secure and protect clients, who are considered the most important resources and a priority in our ACAM facilities*”. Examining how ACAM practitioners arrive at the material, labour and the overhead costs, the ACAM practitioners revealed during the interview that the ACAM facilities never focus on the elements of cost in investigating the costing of the services and products.

The critical finding is that the ACAM practitioners have these elements of cost, and the researcher will therefore focus on what the ACAM facilities have as part of their practice of CAM. This finding is similar to the findings of the studies of Kont and Jantson, (2012) and Horngren et al.,(2009) who found that the costs of cost accounting systems can be classified according to *categories*, such as direct costs, which are the costs that can be easily traced to the cost object, direct labour and direct materials. This is also consistent with the findings of researchers such as Himme (2012), Baniya (2014), Horngren, Datar, and Foster (2006), who found that to facilitate the determination of product costs effectively, the total costs are divided into three cost elements: material costs, labour costs, and expenses.

One of the ACAM practitioners stated that: *“The facilities never concentrated on the so-called elements of costs, but considering these elements of cost in pricing our products and services, will assist us to charge the correct price to our clients, I have started to use the model and have realised the importance of the costing model.”* When it comes to the materials, the researcher paid particular attention to product description, the processing of products, the packaging of the products and storage of the products by the ACAM facilities. These stages of material production are examined in order to investigate the pricing of services and products. Regarding the processing of products, ACAM facilities process products from materials immediately after the ACAM practitioner returns with the materials from the veld and the mountains and removes any non-important material from the product. This also depends on the type and the function performed by the product. The collected material from plants and roots from the fields and the mountains are stored in a carport of the facility. The materials are protected from the heat of the sun, with the tree bark, leaves, and the roots moved to the place of production. This finding reflects positively in effective decision making on the material services and products in facilities and puts ACAM in the context of cost accounting practice in South Africa. This result is similar to the study of cost accounting (ATSWA, 2009; Himme, 2012; Baniya, 2014) in which the material costs are the substances used to make the product and can be in a raw or a manufactured state and could also be used directly or indirectly in the production process.

Pertaining to the packaging of ACAM products, it is usually packaged in either 2kg, 5kg, and 8kg recycled containers for storage. The ACAM health facilities package the products in old plastic bags, old newspapers, old magazine pages, an array of old cold drink bottles and plastic bank bags. During the interview, the practitioners stated that *“In ACAM health facilities, the packaging of the products and service to the customers are wrapped in old newspapers and old plastic bags”*.

Regarding the storage of ACAM medicines, the ACAM Health practitioners, after having collected the medicinal plants, roots and bulbs, store the medicinal plants and any products in the shade or a cool place. Once the products are dry, they are

collected and processed and stored in a place where they will await processing. Once processed, products are stored in a particular room for medicinal plants, or on top of trees or a particular room outside the house and away from people. One practitioner stated that *'such medicines are the strongest medicines and are not supposed to be in the house or mix with other medicinal plants and roots while others are stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room waiting for the clients during consultations'*. The ACAM practitioner further stated that *'the strongest medicines after recovered in the bush, to harvest it, I have to take off all my clothes, and after been collected, I will leave them at my gate while still arranging the place of storage or sometimes, I will store them on top of trees'*. The findings confirm the findings of Kaspina et al. (2014), Moisello (2012) and Baniya (2014), which showed that material costs include not only the ACAM health facilities' material prices, but also the cost of material purchasing, handling, transporting, and storing, which should be added to the material costs.

Regarding the labour and overhead costs of ACAM medicines in the ACAM Health facilities, the ACAM practitioners never take into account the so-called labour and overheads of the facility. *"Regarding labour, I use the trainee practitioners and have not been doing such a job, and I regard it as part of their training"*. One ACAM practitioner stated that *'our overheads such as channels of distribution, channels of marketing, transport and promotion are minimal even though I use a lot of water and petrol for transporting the medicinal plants that are collected as far as Lesotho, Zimbabwe and Swaziland'*. Furthermore, the results from previous studies of Lutilsky et al. (2016), Tabitha and Ogungbade (2016), and Horngren et al. (2010) also concerned the purpose of labour costs in cost accounting practice. They showed that labour costs involve the conversion of the materials cost into the finished products and needs human participation. These results propose that there are an achievable relationship, concurrence and an interrelationship between ACAM and cost accounting practices in South African ACAM facilities.

During the interview, another ACAM practitioner stated that *'the proposed model will assist us a lot; because, I have never considered any cost other than the services, the*

price that I provide. However, at the moment, I will be in a better position to price my products and services accordingly, even though I have to request and report to my ancestors accordingly because they are the one that gave me this gift of assisting people.' I think; personally, it will make sense to use the costing model as will assist in professionalising our service.' Whether the present method will help in determining the right price for the products and services on ACAM medicines was discussed. Another ACAM Health facility respondent stated that: *"Costing is not practised in our ACAM health facilities. However, our ACAM health facility focuses mainly on the provision of primary and secondary health care provision, assisting customers on ubuntu basis, as we assist even if a person who has no money. Our philosophy is life first, money after because we attract young patients and children who have just been born and focus less on health risk and profitability. For this reason, the facility decided to link ACAM and cost accounting in order to improve our pricing of product and services and also the planning processes and secure our position in the National health care plan"*.

For instance, in a similar vein, a respondent from a leading and respected ACAM health care facility stated that *"recently, ACAM has become a strategic health care plan and there is improved support from the national department of health in South African government with an evident and understandable mission and vision on the main products and services, and none on strategic costing plan"*. However, such a developed strategic plan lacks the necessary course of action in respect of the steps required during a health care epidemic emergency and health care disaster management and crises. The availability of strategic costing in ACAM care facilities has shown to improve our ACAM strategies and has helped our ACAM health care facility become resilient. The finding is consistent with the study by Lodha, (2015), who proposes that the costing system must provide facts and figures necessary for evaluating performance. It is also consistent with Hannan (2008), Turney (2010), Robinson and Brown (2013) who argued that organisations could benefit from cost accounting systems for sound decision making, cost management, product pricing, performance evaluation, budgeting and budgetary control, and the preparation of financial statements.

Overall, the interview findings showed that ACAM health care facilities focused on particular aspects of ACAM concerning their type of business. This shows ACAM's operations are based on some known processes of ACAM traditions and standard processes and approaches which need to be undertaken and followed. ACAM is still a health care that is based on the provision of untested and scientifically unproven health care services. Moreover, the interview findings indicated that ACAM facilities safeguard and preserve different cost elements in ACAM facilities. These include production processes, storage, transportation, the price list of services and suppliers of services and products, and customers *preference*. This contributes to the results of the interviews where it was discovered that the majority of ACAM facilities could quickly adapt and implement a costing model and help in the costing of the services and products. The literature indicated that implementation of a costing model in ACAM facilities should at all times be the burden and sole function of the ACAM practitioners. This would mean having a clear strategic ACAM costing model and consolidation of a clear mandate of the ACAM practice. This result is similar to the finding of Van Hai and Van Dung (2017) who claimed that the choice of cost accounting and production control systems depends on three factors, materials, labour and the significance of overhead costs.

7.7.3. The ACAM Facility Costing Model

This section tests whether a costing model can be developed, adopted and used by the practitioners of ACAM to investigate the costing of the ACAM services and products in order to improve the effectiveness of health care services in South Africa. Further, the researcher considers whether ACAM practitioners can adopt the costing model developed explicitly for ACAM. The researcher also considers the capability of this costing model in improving the existing method and whether this new costing model can improve the ACAM practitioners' pricing decision making. In addition, the researcher tested whether ACAM practitioners can adopt the specialised costing model developed for them.

During the interview, it was clear that the ACAM practitioners were interested in the study and the costing model. Accordingly, it was the first time they hear of costing the products and services in order to make an informed decision. The results reveal that there are different steps or techniques which must be considered to place the ACAM practice in the context of cost accounting practice and integrate ACAM and the cost accounting practice in ACAM care facilities. Some of these techniques have been discussed in the literature review in Chapter Three. These were identified by Özaltın and Cashin (2014) and include developing a health facility standard list of cost centres, the assignment of departments to the cost centre groups, the calculation of the total cost for input, assigning direct costs to the relevant cost centres, allocation of costs to cost centres, allocation of specification bases, and cross-checking and calculation of unit costs. Hence, the presenting of the stages of cost accounting in ACAM helps to create a smooth implementation of the costing model in ACAM facilities. It helps and reinforces the presence of clear procedures and processes that will consolidate ACAM practices and cost accounting practice. However, academic studies similar to those of Özaltın and Cashin (2014) found that in calculating the total cost for each input, which is visible in the ACAM facilities, then the inclusion of cost items was measured and analysed through the available information of the total cost of items.

One ACAM practitioner referring to the costing model stated that: *“There is no way that I may not use the costing model, although it is the first time seen such a model, I will use the model and even introduce the model to my trainees, rest assured, a number of people will know about this. If you (the researcher) are available, I will also ask you to come and brief my trainees. These include having ACAM adopted by our facilities; having all ACAM trainees participating in ACAM costing model; expanding the scope of ACAM costing model to include all my products and services that are likely to threaten any of my profitability”.*

Regarding the capability of this costing model to improve the existing method, the ACAM practitioners stated that *“ I personally do not think there was any method that we were using, this is the first of its own because we never thought that somebody*

could come and interrogate our prices. So, the model will improve the way we have been working because presently it was just working as usual. You must remember that the ancestors guide us to do certain things, but for me, there is no doubt, the majority of the ACAM practitioner will use it and professionalise their services, just like the way the western practitioners operate". This result is similar to studies of White (2014), Ning (2005) and Jinkens and Yallapragada (2010) who found that firms choose cost accounting systems according to the business environment. Examples include firms that produce one product for which it is better to use simple cost accounting systems, whereas firms that produce different types of products are more likely to adopt more sophisticated cost accounting systems.

One ACAM practitioner stated that *"during the researcher's briefing, we learnt a lot. Thus, there is no way this costing model may not improve our pricing strategy, I will encourage everyone during our organisational meeting to use this new method which is capable of identifying our material, labour and overheads in order to price services accordingly. It is not enough to say for treating stroke is R1000, why not R500 or why not R2500? So, this costing will be very important in our ACAM facilities".* Another ACAM practitioner indicated that *"this costing is almost the same with just substantiating the amount that we charge for the clients, it is almost the same as how the western practitioners charge because they are always transparent about what they did. I now realise that we do not differ with them, the only problem is that they (western practitioners) can substantiate, whereas no substantiating, only the big amount is introduced to the clients".* This result is similar to studies such as those by Uyar (2010) and Charaf and Bescos (2013) who found that the critical issues in cost accounting practice are the indirect cost allocation, determination of the selling price, transfer price determination, and product costing. It is also consistent with the study of Kludach (2012), who noted that the unit cost calculated in the ACAM facilities could be used for price setting, reimbursement and the payment of negotiations.

7.7.4. Challenges of ACAM on Costing Model

Several challenges were identified that might impose a severe strain on the ACAM practitioners in successfully developing, adopting and demonstrating the suggested ACAM costing model to improve the model further. The engagement with ACAM practitioners further reveals several challenging factors that may affect the adoption of the costing model in ACAM health care facilities and to place ACAM in the context as that of cost accounting practice. The severe challenges that were revealed by ACAM health care practitioners were: costing awareness, availability of individual skills, availability of budgets, availability of infrastructure, availability of time, cost of implementation, fear of cultural change, compliance to legal acts, concerns about technological risk, concerns about political risk and lack of government support. These findings are consistent with Bordogna (2015), who discovered that ACAM facilities faced financial challenges, and this hinders their ability to treat their patients effectively where patients seek help without paying for the treatment. Furthermore, this finding is also consistent with Zimba (2014) who reported that the patients undertake to pay later, once there is money, but none of those customers bothered to honour such treatment payment. Zimba, (2014) reported that financial problems were not caused only by patients who did not pay for their services, but the ACAM practitioners lacked the money to buy medicines from chemists or to buy medicinal plants from suppliers of traditional medicines.

The interview findings showed that protecting ACAM clients was one of the most critical factors that inspired the integration of ACAM practice and that of cost accounting practice since the ACAM facilities were being more closely examined. Therefore, protecting and maintaining the client base for ACAM will assist in ensuring customer loyalty in the years to come for all ACAM facilities. The wrong client base information and non-electronic client profiles will further result in losing important data about ACAM customers and negatively affect the credibility of the ACAM facilities. This confirms the results established during the interviews, where it was discovered that maintaining and protecting customer's information will play a crucial role in allocating ACAM practices the same status as a strategic cost accounting practice. One ACAM

practitioner further revealed this: *“One of the most encouraging factors that encouraged the ACAM practitioner to decide to raise ACAM to a strategic costing model was protecting customers, their savings, and their profiles in utilising the services and make sure that the services and product costing benefit them the most”*. Another ACAM practitioner stated: *“The focus has been given to the planning and future ACAM services in order to prevent and maintain our position as the supplier of primary health care services and customers who utilise our products and services”*. However, the findings during the interview revealed that the ever-increasing population in South Africa and the increasing number of clients that utilise ACAM services encouraged placing ACAM in a similar context to that of cost accounting practice. These findings are consistent with studies by Mander et al. (2007) and Bussmann (2013). They found that the future threat of ACAM medicines is a traditionally large number of consumers of medicine, traditional medicine traders, the relationship with the pharmaceutical manufacturers, Laissez-faire manufacturers and a strained relationship with Western practitioners. This finding is also similar to that of WHO 2015 and Bussmann (2013), who found that the registration and regulation of traditional medicines lack scientific development, which includes the herbal product’s quality which is also not guaranteed; awareness is needed to promote the benefit of using ACAM medicines.

For instance, one ACAM practitioner from ACAM facility E run by an 80-year-old lady stated that: *“Since our facilities rely on interaction with the ancestors and rely on ancestral guidance, which deviates the way ACAM operates naturally, and this can put us on loggerheads with our ancestors, who are the most important resources in our ACAM facilities”*. In order to ensure uninterrupted and continuous operation of the ACAM facilities, it was found that maligning and dis-respecting ACAM practice while respecting and honouring cost accounting practice will result in ACAM facility services being disrupted and negatively affecting the ACAM costing model of the products and services and the provision of health care services. These findings are consistent with (Wallace, 2015 and Chirwa (2016), who found that during the pre-colonial era, failure to obey the moral code of the society was understood to be upsetting to the spirits of

the ancestors. This finding is also consistent with the findings of Chirwa (2016) and Mokotso (2015) who reported that although the ancestors were considered dead in body but not in spirit and continued to interact with the living. In this study, Zimba, (2014) reported that financial problems were not caused only by patients who did not pay for their services, but the traditional healing practitioners lacked the money to buy medicines from chemists or to buy medicinal plants from suppliers of traditional medicines, and this might lead to close their practices owing to financial problems.

7.7.5. ACAM Practitioners' concluding remarks

This section discussed the costing model of ACAM about the interview questions based on the interview with the ACAM practitioners. Those research questions concerned the ACAM costing practitioner's introduction; current ACAM costing practices; models of ACAM; challenges of ACAM on costing model and ACAM costing practitioner's conclusion. During the concluding remarks, all the ACAM practitioners felt they had provided the researcher with enough information. As a result, there was no further information provided to the researcher by the ACAM practitioners. These research results contribute additional academic knowledge to those of previous researchers such as those of Lutilsky, Žmuk and, Dragija (2016) and Horngren *et al.* (2010) regarding the purpose of labour costs in cost accounting practice. They showed that labour costs need human participation in order to convert materials cost into the finished products. These results reveal that there are operational similarities found between ACAM and cost accounting practices in South African ACAM facilities. Furthermore, this study also contributed to reducing the gap between the study of ACAM and that of cost accounting, which helps in the integration of ACAM practice and cost accounting practice. Such study results reveal that cost accounting practice in ACAM facilities is critical in achieving the development, demonstration and adoption of a costing model in ACAM.

7.8. ACAM Health Facilities Customers Patronised Service Costs

Table 7.1 shows the five identified most patronised services of ACAM Facility A. The first column shows the name of the patronised services provided by Facility A. Column two shows the cost of the services provided by the facility. The third column shows the name of the products utilised to provide healing services.

Table 7. 10: Health Facility A patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|------------------------------|-----------------|--|--------------------|--|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Stroke | R3,000 | Washing Rubbing Talk to gods Steaming Nose Sniffing Drinking for Cleansing | 6 | All assist in curing the illness |
| Sefola (Cancerious Wound) | R1,500 | Cleaning of Wound Washing Rubbing Talk to gods Steaming Nose Sniffing Drinking for Cleansing | 7 | All assist in curing the illness |
| Motse (Homestead) | R5,500 | Remove Zombies Remove Bad Spirit Peace in Family Protection from Criminals Lightning Others | 10 | All assist in curing the illness |
| Criminal Cases | R4,500 | Accused Clothing Wash the Clothing Wash for Bad Luck Muthi for Drinking Remove Bad Spirit Others | 10 | All assist in Releasing the Accused |
| Setopo(Cop) | R6,500 | Muthi for Family Steaming Sprinkling with Water Muthi for Revenge Muthi for Cop to Sleep Well Others | 10 | All assist in Making sure that the person Passed away to sleep well and get revenge |

The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function or the reasons for using the products

which indicate that they are all used to provide the services. Accordingly, these findings, as indicated in the above Table 7.1. resulted in the possibilities of having an ACAM costing model that will counteract challenges that may arise in future. These results of the study are similar to the study by Fakoya (2014), who found that cost is gathered through the production and non-production processes. It encourages the tracing of the products and services cost by the managers. This result is similar to the findings of ATSWA (2009) and Ngwakwe (2012). The authors found that the cost relies on cause and effect when the incurred cost has been repeatedly stated about the cost accounting practice. Furthermore, the foud that cost is capable of assisting the ACAM facilities to calculate the production cost of the services and the techniques of costing assist in presenting the information to enhance the cost reduction decision making and cost control.

The third column shows the name of the products that are utilised to provide the service. The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function for which the products are used and reveals that they are all used for to provide the services. This finding consequently triggered the need for applying cost accounting practice in ACAM practice. This is similar to the results as revealed by Nitin and Delgobind (2013) where they argued that a functional cost system has to provide detailed data, frequent cost information reports, improved costs classification, accurate cost data, and the calculation of more variances. This is also similar to the results as revealed by the research results of operational costing by Khairo and Davies (2009), Medeiros *et al.* (2017) and Fialová (2013), where it was found that the operation of the method of costing is used to function in the cost of services of the organisations in the service sector.

Table 7.2 shows the five identified patronised services offered by ACAM Facility B. As such, the first column shows the name of the services that are provided by the health facility. B. Column two shows the cost of the service that is provided by the health facility.

Table 7. 11: Health Facility B patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|---------------------------|-----------------|---|--------------------|--|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Setlotlwane (Ghost) | R5,500 | To Catch a Witch To Remove Bad Spirit To use Machine Oil Make the Home Strong Use of Magasyn | 5 | All assist in curing the illness |
| Sefola (Cancerious Wound) | R3,500 | Use of Gas Oil Lightning Leaves Smear with Powder Quills of Porcupine Medicines for Drinking | 5 | All assist in curing the illness |
| Motse (Homestead) | R6,000 | Remove Bad Spirit To Catch a Witch Make the Family Strong Make the Home Strong Prepare for Home Muthi Others | 10 | All assist in Strengthening the Family |
| Hlogo (Migraines) | R2,500 | Muthi for Inhaling Gas Oil Nuts of a Tree Nkuntsi e Vhovu Medicines Motelembe Medicines | 5 | All assist in curing the illness |
| Sehuba (Tuberculosis) | R3,500 | Use of Mohlanyane Medicines Use of Wonga Medicines Use of Use of Serokolo Medicines Use of Gataso Medicines Drink Honey as Medicines Drink Phila Medicines | 6 | All assist in curing the illness |

Table 7.3 below shows the five identified patronised services by the ACAM health facility C. The first column shows the name of the services that are provided by the health Facility C. Column two shows the cost of the service that is provided by the health facility.

Table 7. 12: Health Facility C patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|--------------------------------------|-----------------|--|--------------------|----------------------------------|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Spirits | R3,500 | Sneezing Drink Bathing Eating Steaming Inhaling | 6 | All assist in curing the illness |
| Sefola (<i>Cancerous Wound</i>) | R3,500 | Cleaning of Wound Rounding Off (Not to Spread) Smear with medicinal Powder Oil Drink | 6 | All assist in curing the illness |
| Motse (<i>Homestead</i>) | R6,500 | Remove Bad Spirit Peace in Family Protection from Criminals Respect Witch Animals Skin, and Others | 8 | All assist in curing the illness |
| Business | R6,500 | Bringing Customers Remove Bad Spirit Peace in Business To Bring Many People Protection from Criminals Respect the Business Animals Skin, and Others | 8 | All assist in curing the illness |
| Relationship | R5,500 | Commitment Love Improve Sexuality Remembered always Respect | 5 | All Assist in curing the illness |

The third column shows the name of the products that are utilised to provide the service. The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function or the reasons for using the products which reveal that they are all used to provide the services successfully. This is consistent with the study of Reynolds (2013) who discovered that it is better for firms that produce more than one product or service to use cost accounting for the accurate allocation of the overhead cost to the majority of the products. This result is similar to the findings of Schoute's study (2009). He found that product diversity is

the most critical determinant of the use of cost accounting practice, because the more complicated the production process, the more complex the cost accounting systems.

Table 7.4 shows the five identified patronised services offered by ACAM Facility D. The first column shows the name of the services that are provided by Facility D. Column two shows the cost of the service that is provided by the facility.

Table 7. 13: Health Facility D patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|-----------------------------------|-----------------|---|--------------------|---|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Sehuba (<i>Tuberculosis</i>) | R2,000 | Drink Bathing Eating Soft Porridge Steaming Inhaling | 5 | All assist in curing the illness |
| Sefola (<i>Cancerous Wound</i>) | R1,500 | Cleaning of Wound Washing Rubbing Steaming Nose Sniffing | 5 | All assist in curing the illness |
| Motse (<i>Homestead</i>) | R4,500 | Remove Bad Spirit Peace in Family Protection from Criminals Respect the Home Animals Skin | 5 | All assist in curing the illness |
| Business | R4,500 | Bringing Customers Remove Spirit Non Criminals Respect the Business Witches | 5 | All assist in the Success of the Business |
| Hlogo (<i>Migraine</i>) | R2,500 | Steam Sniffing Drink Bathing Eating Inhaling | 6 | All assist in curing the illness |

The third column shows the name of the products that are utilised to provide the service. The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function of or the reasons for using the products. This column reveals that they are all used to provide the services successfully. Accordingly, this resulted in developing a costing model in ACAM practice for effective decision making. This is consistent with Kumar and Mahto (2013),

who suggested that the cost accounting practice provides more appropriate cost information to assist decision-makers to make suitable pricing decisions. This result is also similar to the results of Özaltın and Cashin (2014), who found that the costing teams should accurately measure the resources and feasibly collect the costing information. There is a difference in the allocation base, which depends on the available information, quality data, and the uniqueness of the ACAM facilities. If the resource data is unreliable or unavailable, the teams responsible for costing consult available local experts for the construction of an allocation base.

The below Table 7.5 shows the five identified patronised services by the ACAM Facility E. In column two, shows the cost of the service that is provided by the Facility E. The third column shows the name of the products that are utilised to provide the service.

Table 7. 14: Health Facility E patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|---------------------------------------|-----------------|--|--------------------|----------------------------------|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Looking for Job | R1,800 | Vula ba Valile Medicine Maja ka Bomo Medicine Ndlandle e Mhlophe Medicine Sdumo Medicine and Others | 5 | All assist in curing the illness |
| Maoto (Legs) | R1,500 | Setima-Mollo Medicine Mohlabelo Medicine Nalete for go Hlabela Red Candle Lenaba Medicine | 5 | All assist in curing the illness |
| Menstruation | R1,200 | Moroto Wa Tshwene Moroto wa Pela Leihlo la Kgomo Medicine African Potato Modi | 5 | All assist in curing the illness |
| Promotion | R1,800 | Oill of Beka Mina Ngi Edwa Sedumo Mediame Medicine Hair of Whtie Person Vuma Medicine Others | 6 | All assist in curing the illness |
| Mabophe (Man or Woman non interest to | R1,200 | Maime Medicine Dirty Clothes Mabophe Medicine Mathithibala Medicine Moyakabomo Medicine | 6 | All assist in curing the illness |

The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function of or the reasons for using the products. This reveals that they are all used to provide the services successfully. This result is in accordance with the findings of Özaltın and Cashin (2014) who discovered the cost items that were included in the analysis of cost and measurement of the total cost through available information and in costing provider payment as it is critical to capture all the relevant costs that may assist in the method payment of the costing exercise. It is also consistent with the studies by Majid and Sulaiman, (2008); Kachalay, (2012) and Kumar and Mahto, (2013) who suggested that the costing system provides appropriate cost information that can assist ACAM facilities in suitable pricing decisions.

Table 7.6 shows the five identified patronised services by ACAM Facility F. The first column shows the name of the services that are provided by Facility F. Column two shows the cost of the service that is provided by the health facility.

The third column shows the name of the products that are utilised to provide the service. The fourth column shows the total number of products that are utilised to provide the service, while the last column shows the function of or the reasons for using the products. It also reveals that they are all used to provide the services successfully. This result is similar to the findings of Horngren et al. (2006) and Kuchta and Zabek (2011) who established that cost accounting is capable of helping the organisation in ascertaining the cost, services and processes of the products to help the future planning operations.

Table 7. 15: Health Facility F patronised services

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|---------------------------------------|-----------------|---|--------------------|----------------------------------|
| Name of Services | Cost of Service | Name of Product | Number of Products | Product Function |
| Relationship | R5,500 | Commitment Love Improve Sexuality Remembered always Do not look for other partners | 5 | All assist in curing the illness |
| Sefola (<i>Cancerious Wound</i>) | R3,500 | Cleaning of Wound Rounding Off (Not to Spread) Smear with Powder Oil Drink | 5 | All assist in curing the illness |
| Motse (<i>Homestead</i>) | R6,500 | Remove Bad Spirit Peace in Family Protection from Criminals Respect Witch Different Animals Skin, | 6 | All assist in curing the illness |
| Lefofonyane (<i>Spirits</i>) | R3,500 | Sneezing Drink Bathing Eating Steaming Inhaling | 6 | All assist in curing the illness |
| Business | R6,500 | Bringing Customers Remove Bad Spirit Peace in Business To Bring Many People Protection from Criminals Respect the Business | 6 | All Assist in curing the illness |

The finding is also similar to that of Van Der Beck (2013) and Kludacz (2012) who found that the data produced from cost accounting practice assist in the determination of costs of the product and help in the selling price's administration planning and operations control.

7.9. Analyses of Total Production Costs on Selected ACAM Services

This section discusses the analyses and findings of the selected services and the products utilised to provide the services. To achieve the targeted model development, it is necessary to identify the products utilised and its functions in the provision of the service. The development of the ACAM costing model is based on the production

theory of value, which emphasises that the value of a service is determined by the products and everything that was used to produce that service.

Table 7.7 shows the cost of the total production cost of a criminal service composed of direct material, direct labour and overheads from Health Facility A. The direct material, labour, and overheads cost R750, R120 and R480 respectively for the six products utilised to provide the Criminal Service. Products A, B, C, D, E, and others cost R205, R265, R175, R270, R345, and R90, respectively, with a total production cost of R1350 and charged R4,500 by the ACAM practitioners. (See Annexure O).

Table 7. 16: Total production cost of criminal service for ACAM Facility A

| CRIMINAL CASES SERVICES FOR HEALTH FACILITY A | | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
| Direct material | R 100 | R 150 | R 100 | R 150 | R 200 | R 50 | R 750 |
| Direct labour | R 25 | R 25 | R 15 | R 15 | R 25 | R 15 | R 120 |
| Overheads | R 80 | R 90 | R 60 | R 105 | R 120 | R 25 | R 480 |
| TOTAL | R 205 | R 265 | R 175 | R 270 | R 345 | R 90 | R 1 350 |

This research result reveals striking similarities to ACAM and costs accounting found in ACAM facilities A. It further indicates that the presentation and assistance of the ACAM practitioners are crucial for the success of the adoption of a costing model in ACAM facilities with visible materials, labour and overheads. This finding reveals the same results as recommended by both ATSWA (2009), Himme (2012), Baniya (2014) and Horngren *et al.* (2006) who argued that in facilitating the determination of product costs effectively, the total costs are divided into three cost elements, namely, material costs, labour costs, and overheads.

Table 7. 17: Total production cost of Tuberculosis for ACAM Facility B

| TB SEHUBA SERVICE FOR ACAM FACILITY B | | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
| Direct material | R 250 | R 100 | R 50 | R 100 | R 50 | R 50 | R 600 |
| Direct labour | R 25 | R 25 | R 15 | R 15 | R 25 | R 15 | R 120 |
| Overheads | R 200 | R 60 | R 30 | R 70 | R 30 | R 25 | R 415 |
| TOTAL | R 475 | R 185 | R 95 | R 185 | R 105 | R 90 | R 1 135 |

Table 7.8 shows the cost of the total production cost of a Tuberculosis service composed of direct material, direct labour and overheads from health Facility B. The direct material, labour and overheads cost R600, R120 and R415, respectively, for the six products utilised for the service. Products A, B, C, D, E, and others cost R475, R185, R95, R185, R105, and R90, respectively, with a total production cost of R1,135 and charged R3,500 by the practitioners. (See Annexure P). This finding shows the highly reliable information in ACAM, which will make integration of cost accounting in ACAM facilities possible as found in ACAM Facility B. This finding reveals the same results as recommended by Himme (2012), Baniya (2014), and Horngren *et al.* (2006) who argued that in facilitating the determination of product costs effectively, the total costs are divided into three cost elements such as, material costs, labour costs, and expenses.

Table 7. 18: Total production cost of Homestead service for ACAM Facility C

| MOTSE HOMESTEAD SERVICE FOR ACAM FACILITY C | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Total Amount |
| Direct material | R 150 | R 100 | R 120 | R 100 | R 150 | R 620 |
| Direct labour | R 100 | R 100 | R 60 | R 60 | R 100 | R 420 |
| Overheads | R 120 | R 60 | R 72 | R 70 | R 90 | R 412 |
| TOTAL | R 370 | R 260 | R 252 | R 230 | R 340 | R 1 452 |

Table 7.9 shows the cost of the total production cost of a Motse homestead service composed of direct material, direct labour and overheads from health Facility C. The

direct material, labour and overheads, cost R620, R420 and R412, respectively, for the six products utilised for the service. Products A, B, C, D, and E cost R370, R260, R 252, R230, and R340, respectively, with a total production cost of R1,452 and charged R6,500 by the practitioners (See Annexure Q). This finding shows highly reliable ACAM information and the cost accounting practice in Facility C. This finding reveals the same results as recommended by Van Derbeck (2010) who regards direct labour as the work of employees whose job is essential and directly involved in producing the product while direct material and overheads play an essential role in determining the total production cost service as in ACAM Facility C.

Table 7. 19: Total production cost of Cancerous wound service for ACAM Facility D

| CANCEROUS WOUND SERVICE FOR ACAM FACILITY D | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Total Amount |
| Direct material | R 150 | R 100 | R 250 | R 155 | R 120 | R 775 |
| Direct labour | R 25 | R 25 | R 15 | R 15 | R 25 | R 105 |
| Overheads | R 120 | R 60 | R 150 | R 109 | R 72 | R 511 |
| TOTAL | R 295 | R 185 | R 415 | R 279 | R 217 | R 1 391 |

The above Table 7.10 shows the cost of the total production cost of a cancerous wound service composed of direct materials, direct labour and overheads from health facility D. The direct material, labour and overheads cost R775, R105 and R511, respectively, for the six products utilised for the service. Products A, B, C, D, and E cost R295, R185, R 415, R279, and R217, respectively, with a total production cost of R1391 and charged R1,500 by the practitioners. (See Annexure R). This finding in ACAM Facility D is in line with the recommendations of Narsis (2009), and Lutilsky *et al.* (2016) who argued that material costs are the substances used to make the product and can be in a raw or a manufactured state and also could be used directly or indirectly in the production process of a cancerous wound service.

Table 7. 20: Total production cost of "looking for job" service for ACAM Facility E

| LOOKING FOR JOB FOR ACAM FACILITY E | | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
| Direct material | R 50 | R 25 | R 75 | R 120 | R 45 | R 100 | R 415 |
| Direct labour | R 15 | R 15 | R 90 |
| Overheads | R 40 | R 15 | R 45 | R 84 | R 27 | R 50 | R 261 |
| TOTAL | R 105 | R 55 | R 135 | R 219 | R 87 | R 165 | R 766 |

Table 7.11 shows the cost of the total production cost of a 'Looking for a Job' service composed of direct material, direct labour and overheads from health facility E. The direct material, labour and overheads cost R750, R120 and R480 respectively for the six products utilised for the 'Looking for a Job' Service. Products A, B, C, D, E, and others cost R105, R55, R135, R219, R87, and R165, respectively, with a total production cost of R766 and charged R1,800 by the practitioners. (See Annexure S). This finding of ACAM facility E indicates that the assistance and participation of the ACAM practitioners are more critical in the success and adoption of costing model in ACAM facility E with visible materials, labour and overheads. This finding reveals the same results as recommended by both of Özyürek and Yilmaz (2015) and Kumar and Mahto (2013) the introduction of the mass production system led to increased manufacturing overhead costs, which made the producers think of allocating those overhead costs to total production cost.

Table 7. 21: Total production cost of business service for ACAM Facility F

| SUCCESSFUL BUSINESS SERVICE FOR ACAM FACILITY F | | | | | | | |
|--|------------------|------------------|------------------|------------------|------------------|---------------|---------------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
| Direct material | R 150 | R 100 | R 200 | R 150 | R 100 | R 180 | R 880 |
| Direct labour | R 75 | R 75 | R 45 | R 45 | R 75 | R 45 | R 360 |
| Overheads | R 120 | R 60 | R 120 | R 105 | R 60 | R 90 | R 555 |
| TOTAL | R 345 | R 235 | R 365 | R 300 | R 235 | R 315 | R 1 795 |

Table 7.12 shows the cost of the total production cost of a Successful Business service composed of direct materials, direct labour and overheads from Health Facility F. The material, labour and overheads, cost R880, R360 and R555 respectively, for the six

products utilised for the Successful Business Service. Products A, B,C, D, E, and others cost R345, R235, R365, R300, R235 and R315, respectively, with a total production cost of R1795 and charged R5,500 by the practitioners. (See Annexure T). This finding indicates that the support of the ACAM practitioners in the ACAM facilities is significant for the success of adoption of costing model in ACAM. This finding reveals the same results as recommended by Himme (2012), Baniya (2014) and Ramlijak and Rogošić (2012), who argued that most organisations use labour costs to allocate overhead costs according to labour hours.

7.10. Integrating the ACAM costing model with Research findings

In this section, the researcher will try to integrate the ACAM costing research model (see Figure 5.1) which was developed and demonstrated, by including the relevant literature review as it relates to the research findings, and also the steps discussed and revealed in the ACAM costing model which have the same features like the research results in Figure 5.4. Furthermore, this will simplify and reveal whether the developed and demonstrated conceptual costing model for both ACAM practice and cost accounting practice has yielded the necessary results for the ACAM facilities. The review of the literature reveals the reasons why ACAM practice and cost accounting practice have been studied separately and individually by academic researchers, as indicated in Chapter One. The study also revealed the reason and the reward that can be realised by placing ACAM in a similar academic context as a cost accounting practice. The main achievement of ACAM is making cost accounting practice more comprehensive. The actual results revealed by the study showed that there are integration possibilities in the application of activities and the convergence that may be realised between ACAM and cost accounting practice. The researcher identified the possibilities of the successful implementation of a costing model in ACAM, leading to practical financial decisions and the correct pricing of ACAM services. The research findings further reveal that ACAM was the only health care service that was practised by various African communities and provided all elements of the ACAM health care facility.

The findings also showed that ACAM health care practitioners are well trained in ACAM health care provision and well tested by fellow ACAM practitioners. Furthermore, the ACAM practitioners are well supported and updated in the field of ACAM provision, which assists in establishing ACAM in the cultural activities of the ACAM health care facility. Regarding the findings of the objective of cost accounting practice as identified by Lodha (2015), the costing system serves business purposes and supplies the necessary information to run the business efficiently in an ideal system and to achieve the organisational objective that relates to the ACAM practice. These include risks identification that can threaten the existence and the credibility of the ACAM health care facility: the business environment, scanning, ensure the lively and proactive business existence that is aware of the importance of cost planning, and to ensure adequate provision of quality health care service. This also helped to bridge the gap between ACAM and cost accounting practice. The literature review reveals that the ACAM practitioner's responsibility, the participation in all areas of the ACAM facility, the ACAM facility's comprehensiveness, and the effectiveness of the approach to ACAM, are the four issues, which reflect the extent to which ACAM can be placed and integrated in cost accounting practice.

Additionally, the findings of the research also showed that the practical approach of the ACAM practice could assist in placing ACAM in the context of cost accounting practice in the ACAM health care facilities. The results further revealed that such factors presented in the literature by Amara and Benelifa (2017), Šiška (2016), Ayadi and Affes (2014), Quinn, *et al.* (2017), Benelifa (2017), and Van Hai and Van Dung (2017), size, level of competition, product diversity, technology, cost structure, the importance of cost information, organisational culture, and legal obligation were discovered to be the driving force in placing ACAM in the context of cost accounting practice. The researcher can, therefore claim that the ACAM costing model, which was developed and demonstrated based on the literature review as presented in Chapters Two and Three was a success. In conclusion, the study achieved integrated processes and procedures for ACAM and cost accounting practice through the application of both theoretical contingency factors and the total production cost of cost factors by improving the ACAM practical capability of the effective ACAM health care services.

7.11. Model Implications and Future Use

In this section, the researcher discusses the implication and the future use of the ACAM costing model. In doing so, the researcher discusses the ACAM practitioners briefing, the ACAM health care facility intergration, and the workload of the ACAM primary health care.

7.11.1. ACAM Practitioners Briefing

After the ACAM practitioners read the proposed costing model, a few of them told the researcher that the next step should be the real illustration of the costing model. The ACAM health facilities would specifically react to the determination of the raw material, labour and overheads. One ACAM health practitioner regarded the costing model “*a half of the discussions.*” *A more in-depth discussion and investigation may result in intensive analyses of the costing model, which would then provide exciting subjects for further discussions on product costing and services using the necessary cost elements or the ACAM practitioners who would involve in daily responsibility of ACAM.* The ACAM practitioners realised that the ACAM health facility would be rigorous in this approach.

The ACAM practitioners believe that the ACAM health care facility IS capable of adopting an ACAM costing model through practical briefings and workshops. ACAM health care practitioners in several of the ACAM health care facilities commented that “*This information workshops and briefing could either be one day or if possible half-a-day.*”. However, the ACAM practitioners recommended that the success of adopting the costing model would be dependant on how the ACAM practitioners remained firm about the costing model approach.

7.11.2. ACAM Health Facility Integration

The ACAM practitioners’ expectation is for the ACAM costing model to initiate inter-ACAM health care facilities conversation, strategy development and its implementation. Besides, ACAM practitioners are confident that there would not be

any resistance, even if ACAM practitioners lead the costing model project. Other ACAM practitioners also thought that the national health department should participate in the costing project. It is also anticipated that the costing model would create a costing interest among ACAM practitioners.

7.11.3. Workload of the ACAM Primary Health Care

Contradictorily, there are other negative attitudes to ACAM costing models with comments such as that there is little time for additional responsibilities. It is always indicated more often by the ACAM practitioners that this type of project would be difficult even though possible because ACAM practitioners would incorporate the project of cost in everyday work. *“ACAM practitioners just have to change the way they look at long and short-term objectives as related to costing strategy,”* one ACAM practitioner in Facility D commented.

One experienced and ancient ACAM practitioner predicted that by introducing this kind of cost, there is a possibility of strong resistance among ACAM practitioners. Some ACAM practitioners differentiated between long-term and short-term issues. An observation by the researcher was that the ACAM practitioners' view was that long-term strategies would indicate it is critical to have cost accounting, but not at the moment. *“They are overworked on the provision of health care services among communities,”* one ACAM practitioner remarked. long-term. *“Although the costing of services been intended to simplify our approach and overpricing, all ACAM practitioners refer overloading especially the ACAM tutor's facilities, for instance. Strategic costing, long-term planning and thinking are based on the deliberation of ACAM costing”.*

The majority of the discussion is the reaction of negativity about the use of the costing model. This was due to lack of reserves and well trained ACAM practitioners, thus resulting in the ACAM facility having a low profile and receiving little recognition from the national health department. Additionally, other ACAM practitioners from other ACAM health care facilities lacked ACAM care knowledge and skills. One ACAM practitioner summed up the situation as *“there is a lot to do on this costing model and*

not enough support from the national health department. Moreover, in part, that is because we have a legacy of been unrecognised by the government and been called witches by people who do not understand our ACAM health care facilities. If one looks at the government, none of them understands our operations except calling us witches, but as indicated, we are utilised by the majority of the population”.

7.12. Summary of the chapter

In this chapter, the data presentation and analysis of part two of the study, underpinned by the research methodology (see Chapter Four), was discussed and linked to the research questions framed in Chapter one. The chapter commences with a reflection on the changes from research Cycle One, followed by the description of the ACAM health care facilities, ACAM business strategy, organization of the ACAM department and the ACAM practitioners’ roles. Next, is a discussion of the costing model of ACAM with special attention on the research questions that guided the interviews conducted with the ACAM practitioners and on the current ACAM costing practices investigating the possible(?) ACAM models, and finally, the challenges of ACAM on costing models.

Next, an elaboration of and the deliberation of the current practice of ACAM focusing on the practitioners’ introduction, the current ACAM costing practices, models of ACAM, the challenges of CAM on a costing model, ACAM costing and the practitioners’ conclusion. This analysis revealed that ACAM health care facilities operate differently and are unique to a certain extent in the practice of ACAM.

Furthermore, an elaboration of and the deliberation of the ACAM health facilities’ customers who patronised service costs where ACAM practitioner’s services were analysed based on the purpose of cost accounting practice in ACAM health care facilities services were made, revealed and integrated into the costing model in ACAM services. Additionally, the linking to and integration of the research model with the findings that are necessary to place ACAM in the same context as cost accounting practice were examined in the context of ACAM health facilities in South Africa. Moreover, the model’s implications and future use regarding the model briefing, ACAM health care facility integration, and ACAM primary health care workload was discussed

and analysed. This analysis revealed the various factors that would affect the successful implementation of and the placing of ACAM in the context of cost accounting practice in the ACAM health care facilities.

Finally, the views of the ACAM health care practitioners about a cost accounting model and the placing of ACAM in the context of cost accounting practice were reported and discussed in detail. This study shows an overall favourable attitude to the ACAM practice and the smooth integration of cost accounting practice in ACAM health care facilities.

CHAPTER EIGHT

CONCLUSION, RECOMMENDATIONS AND FUTURE RESEARCH

8.1. Introduction

In this chapter, the methodological evaluation of the study, a summary of the key findings of the study is presented. The key findings will pay special attention to the current practice in ACAM, the costing model in ACAM and the challenges with the ACAM costing model. These will be discussed with particular focus on the observations, the interviews and the analysis of documentation that was gathered during the site visits to determine a costing model in ACAM by using input from the six ACAM facilities in South Africa.

This chapter presents the conclusions arrived at on the completion of the study, including significant contributions to knowledge about the ACAM facilities. The limitations and constraints of this study, as well as recommendations for further research, are articulated in the concluding remarks of the study.

8.2. Methodological Evaluation of the Study

This study contributes to the methodological approach by using a mixed-methods approach such as the use of interviews, observations, field study and case studies. The study employs an action research approach in developing a comprehensive costing model for ACAM facilities which assists in enhancing the development of knowledge. The study discovered a unique understanding of the relationship between the ACAM practice and cost accounting practice. This was ascertained by effectively employing a survey study and most importantly, by a comparative observable action research field study.

As part of its theoretical contributions, this thesis has significantly contributed to the methodology used, since the majority of the thesis' propositions were adapted from

past studies, which concentrated on orthodox health practices instead of traditional health practices.

Finally, the contribution to methodology relates to the appropriate application of the theoretical concepts and developed theories. The application of the theories in research and the developed models in other countries has been questioned owing to different cultural and social settings. The application of these theories in this study successfully contributes to a clear interpretation of cost accounting practice in ACAM in South Africa.

8.3 Summary of Key Findings of the Study

The section discusses a summary of key findings of this study, which relate to the current practice of ACAM and the existence of an integrated framework for ACAM and cost accounting practice in the South African ACAM health care facilities. Moreover, the development and adoption of a costing model in ACAM facilities and the challenges of such a costing model in ACAM health facilities that allow for the placing of ACAM in the context of cost accounting in relation to the three objectives of this study were discussed.

8.3.1. Current Practice in ACAM

The findings of the research show all the components that accommodate and assist in adopting the ACAM costing model, and are revealed in the theoretical framework of the ACAM costing model (see Figure 5.1) as are available in ACAM facilities. The infrastructure suitable for ACAM facilities for the adoption and demonstration of the costing model is also indicated. These findings will be discussed concerning the cost of production theory of value and contingency theory.

The following findings on contingency theory regarding the current practice of ACAM facilities are explained:

- Regarding the size of the ACAM facilities: this cannot be regarded as a determining element, where the field study results reveal that the ACAM facilities had no or few employees. At the same time, the working capital is unknown as there are no financial statements, which means that each of them may be regarded as small organisations.
- The presence of innovation: from the ACAM facilities this is not visible as the ACAM facilities are more manual than automated, thus with no innovation policy and no information technology, machinery and tools that would ensure that the production quantity and quality are processed effectively or assist in preserving the environment and reduce any defects of manufacturing.
- The top management in the form of ACAM practitioners: ACAM facilities would be in a better position to encourage the adoption of the new costing system in ACAM facilities if the ACAM practitioners were included. Such support from ACAM tutors is one of the most critical elements in the success of the ACAM costing model as the ACAM facilities need more detailed and accurate data on the provision of services and the manufacturing costs.
- Regarding the existence of ACAM organisational culture: there is no formal record of how the ACAM facilities perform their function. Non-records and non-compliance on tax and financial statements make it challenging to track the profitability of the ACAM facilities. Such records are essential as these facilities are capable of motivating other facilities with little cost accounting information to consider the model and the importance of the understanding system for the ACAM facility.
- Regarding the use of technology in ACAM facilities: the study found that technology use is non-existent in the ACAM facilities as the profiling of clients and the processing of medicinal plants are all processed manually.
- Regarding the importance of cost information: cost information is essential in order to take effective strategic costing decisions for planning costs control and pricing

decisions to overcome intense competition and sales faced by the ACAM facilities. The system of the existing cost system has not managed to assist in the provision of exact costing data, thus resulting in consideration of ACAM facilities' need to adopt the costing system. Regarding legal obligation: the study found that the ACAM facilities do not comply with any legal obligation as the facilities profiled by the researcher are unregistered as a business. The financial statements, tax returns and proof of business registration are invisible.

The following findings on the cost of production theory of value regarding the current practice of ACAM facilities are summarized:

- The ACAM facilities: all six facilities provide primary and secondary health services to a diverse number of clients through useful products and services. The educational background ranges from primary education to a postgraduate degree.
- Pricing of products and services: the ACAM practitioners discuss prices of services using the main price lists found in the health facilities. The prices for products in the health facilities differ according to the service and products to be used. The products for services in the health facilities are given to the customers in units of a teaspoon, handful, tablespoon, recycled old plastic and old newspapers. The prices of services in these facilities range from R50 to R6000 depending on the service that will be provided.
- The provision of services: all the ACAM facilities provide a wide range of services such as consultations for a sexual boost for men, epilepsy, bad luck, go bea motse (*homestead*), setlotlwane (*zombie*), sefola (*cancerous wound*), headache, and sehuba (*tuberculosis*). These services are provided with the assistance of the products that are transported from as far as Johannesburg, Mpumalanga, Mozambique, Eswatini, Limpopo, North West, Botswana, Zimbabwe and Lesotho.
- Product description: the ACAM health facilities provide different types of products which are stored in raw form or partially processed. The ACAM health facilities products which are in the form of bulb, roots and plants are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are

not in a sophisticated form, but the mixing of the bulbs, roots and plants for particular treatments and services are well-developed. The processing and packaging of these products are provided to clients in a single measure or mixtures of products from several species. The ACAM health facilities have more than 2000 processed and packaged medicinal products made of plants, roots and bulbs in the ACAM health facilities.

- Processing of the products: all the ACAM facilities start processing products by removing any non-usable parts during product gathering, which takes place in South Africa, Lesotho, Zimbabwe, Botswana and Swaziland. The collected products consisting of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving them to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines are going to perform, others are immediately processed while others are processed through the use of processors made of wood and iron.
- Product packaging: the products in ACAM facilities are packaged in either 2kg, 5kg or 8kg recycled containers for storage. The ACAM health facilities package the products in old plastic bags, old newspapers, old magazine pages, an array of old cold drink bottles or paper or plastic bank bags.
- Channels of distribution and channels of marketing: the CAM health facility medicinal plant distribution and marketing depend on ancestral guidance. The ACAM facilities distribute the processed medicines using tablespoons as measures of dosage for practical usage as part of its primary and secondary health care to clients. The main marketing channels within the CAM Health facilities are through ancestral intervention, client referrals, and exclusive medicinal usage that brings clients.

- Product transportation: the medication that is found locally is collected on foot, and then the package is carried back to the ACAM facilities. The other medicine that is not locally available is collected by using taxis or bus services or the ACAM practitioners' facility's cars.
- Product promotion: the promotion of ACAM products and services is through client's referrals and word of mouth with no government departments assisting in the promotion of the services of the health facilities. The other outstanding promotion, in the health facilities, is done through an ancestral intervention by using special 'muti' or medication for asking the ancestors to send patients or clients to receive healing.

These findings on the contingency factors and cost of production factors show that the most critical factors are available to the ACAM facilities to enable them to adopt the costing model effectively.

8.3.2. The Costing Model in ACAM

The following findings on the costing model in ACAM facilities are outlined:

The possibility exists to develop and adopt a cost accounting model for African Complementary and Alternative Medicines (ACAM) practitioners to determine the costing of the services and products to improve the provision of adequate ACAM health care service.

- The ACAM practitioners were interested in the study and the costing model. Accordingly, it was almost the first time that they heard of costing the products and services in order to make an informed decision.
- The ACAM practitioners have no existing cost accounting system. Since adopting the costing model specifically developed for their practice, their products and services pricing has improved; thus, they have been working to professionalise their services to operate as the orthodox practitioners do.

- The ACAM practitioners affirm that the cost accounting system has made their product and service pricing more transparent. Upon adopting the ACAM costing model, the practitioners were convinced that the model won't be used for services with smaller amounts of less than R1000 due to time consumption for now. Furthermore, the ACAM costing model has assisted the practitioners in substantiating the amount charged for the products and services. They affirm that the cost accounting system has made their product and service pricing more transparent.

8.3.3. Challenges of the Costing Model in ACAM

On investigating the challenges of the costing model in ACAM facilities, the practitioners reveal some thought-provoking challenges and findings.

- Some of the ACAM practitioners feel that the costing model might not be suitable for ACAM facilities. The ACAM practitioners also believe that they are overworked with the provision of health care services to communities. They are also worried by lack of recognition by the government and are always referred to as witches by the same customers who have been offered services.
- The ACAM practitioners lack the necessary cost accounting skills to identify costing activities, lack budget processes, have no organizational structure, and also fear that costing will interfere with their culture.
- The ACAM practitioners further feel that there is not enough time to implement the costing model and that they have little or no technological knowledge. They fear legal compliance and have the impression that politicians and the department of health are unreceptive to them.
- The ACAM health care practitioners observe with concern that they don't have computers and laptops, as a result the model might not be able to implement the costing model effectively.
- The ACAM practitioners express their concerns that with clients refusing to pay

for services rendered and lack of support by the government health departments, lack of trust among section of the community, and clients visits at night may pose serious challenges in the implementation of the costing model.

- The ACAM practitioners believe that the circumstances in the ACAM organisations are characterised by lack of standardised ACAM training and practice; lack of ACAM uniform knowledge; lack of a ACAM professional accreditation body; lack of uniform qualifications standard; and the lack of the evaluation of therapeutic outcomes

8.4. Conclusion of the Study

Among the many results of this study, the following have been identified.

- The current study on the cost accounting system and ACAM practice was reviewed in Chapter Two and Three. Research on the cost accounting system and ACAM practices is scarce and non-existent, and no comprehensive review of the literature that links the two fields exists. Therefore, Chapter 2 and 3 contribute to the current study by developing a theoretical framework for research referred to in Chapters Two and Three and mapping the current research using that same framework to build a foundation to fill in gaps in the current study.
- This study is an action research study that examines the operations of 6 (six) ACAM facilities in five provinces of South Africa, in Gauteng, Limpopo, North West, Free State and Mpumalanga. The study develops the ACAM costing model as a holistic system to help create a more accurate cost method for the practitioners of ACAM to effectively capture the products and services costs and improve the pricing of services and products.
- Cost accounting in ACAM facilities requires the competence of the ACAM practitioners and the recognition of the coalition, which is the coalition and understandable. ACAM practitioners might involve in costing management and contribute when competence and understanding are present.

- Costing of ACAM products and services requires more than mere communication and expertise. ACAM practitioners should have good business skills and information that is more than just the ACAM practitioner's practice. They need to understand their internal business environment, the industry it operates, and the external business environment in general.
- A costing model is useful in a complex environment for cost strategic implementation and adoption. It is capable of been incorporated in the management of ACAM facilities and used to involve in the operational functions.
- A costing model can benefit ACAM practitioners as a strategic costing technique and also serve as a means to control internal processes for the ACAM facilities and organisational learning.

8.5. Contributions of the Study

This research study significantly contributed to the present academic knowledge of the ACAM environment. The contribution of the study will be discussed under the headings theoretical contributions, practical contributions, managerial contributions of the study, contributions to the society and further contributions to knowledge.

8.5.1. Theoretical Contributions

This thesis makes several theoretical contributions to the cost accounting literature related to the use of cost accounting practice in health organisations, particularly in ACAM facilities. The researcher summarizes these contributions below.

First, in this study, a costing model was developed explicitly for ACAM practice. It allows for the development of a more sophisticated understanding concerned with the contemporary practice, and the challenges or factors influencing the success of costing model implementation and demonstration in ACAM facilities in South Africa.

This thesis contributes to the accounting literature based on the recommendations of several researchers who argued about the importance of cost accounting practices in

health care organisations but did not refer to ACAM practices, but only in the orthodox medical organisation as indicated above

This thesis attempted to understand how ACAM facilities can use cost accounting practice and which costing methods they currently use. From the interviews and documentation analysis, this thesis tries to understand how ACAM facilities use cost accounting practice. However, this thesis revealed that ACAM facilities are still nowhere near appropriately using cost accounting practice. Like manufacturing, public and health organisations are concerned about the allocation of overhead costs that affect products and service costs.

8.5.2. Practical Contributions to the Study

One of the most important goals of this study was to adopt, develop, and demonstrate a costing model in ACAM facilities and use it to assist in taking informed costing decisions. This study demonstrates how to use the costing method in order to maximise the contribution of ACAM practitioners.

The ACAM practitioners may use the proposed costing model in their practice. A costing model will assist in examining comprehensive future options and develop optimal strategies in the ACAM facilities. In addition, the costing model will empower ACAM practitioners to discover valuable ways to improve the decision making process of the products and services.

In In doing so, the study will extend the shrouded understanding of how ACAM practitioners can participate in strategic costing decision-making about the products and services, practically and theoretically.

This study provides a practical example of a costing model for ACAM facilities as well as a step by step procedural model for the adoption of a successful costing ACAM model. The ACAM practitioners should realise that information from the model may not only assist in the practice but also appreciate service costing better; and also empower the ACAM practitioners to enhance their cost accounting knowledge. The ACAM practitioners may re-evaluate their pricing decisions based on the findings of

this study.

The researcher emphasizes the importance of professionalising ACAM practitioners' knowledge and skill as essential for successful strategic cost management. The ACAM practitioner's ability and costing competence are vital components in the successful implementation of the costing model process. Furthermore, the researcher believes that this study shows a balance between academic theory and practical application in scholarly academic research. This study attempts to fill the gap between ACAM researchers and cost accounting researchers by providing a practical costing model based on solid practical and academic foundation. From the ACAM practitioner's perspective, this scholarly research should be applicable as well as educational for everyday ACAM facilities' practice.

8.5.3. Managerial Contributions of the Study

This study has offered several managerial contributions to ACAM practitioners in an action-research approach in ACAM academic contexts. The main objective of any business is to make a profit and satisfy an influx of clients. As a result, the managerial contribution of this study started with the investigation of the costing activities found in ACAM facilities as the measures of the production theory of value variables and the contingency theory variables that contributed to the outcome of the cost accounting model and ACAM practices. What emerged from this study is based on the theory and the literature review that referred to costing applied and adopted in the various health organisations in the United States, Poland, Canada, and Brazil. This study addressed through field study, the main research objective, as expressed in Chapter One. Hence, the researcher made the following managerial recommendations.

- ACAM practitioners are reminded of the importance of including both financial and non-financial measures in their organizational performance evaluation. The financial or non-financial performance will be prioritized depending on the contingency dynamics (internal and external) of the company (e.g. organizational strategy, organisational structure, cost accounting practices in use, nature and intensity of competitive environment) and the prevailing cultural environment.

Attention is drawn to the fact that competitive environmental dimension, organizational strategy and cost accounting practice usage have a strong positive association with both financial and non-financial performance indicators. Therefore, the ACAM practitioner should obtain the non-financial performance index to measure their impact on organisational performance.

- Concerning the significance of utilising cost accounting practices, ACAM practitioners' consideration is attracted to the vital element of cost accounting. Better decisions are made on reliable and substantial data offered by the cost accounting practices would lead to better costing decision of products and services. Consequently, the ACAM practitioners assistance on the impact of cost accounting practices may vary between the budgetary products and services.
- The business conditions of ACAM facilities have changed in the South, where cost accounting practices are received in the associations to upgrade the nature of ACAM facilities' dynamic services. This is significant in the light of viable costing that can assist with ACAM business direction by offering useful data to ACAM practitioners to settle on the correct products and services costing. Similarly, the cost accounting practices do not have enough competition to match with the current ACAM services and plans. The ACAM practitioners may have been furnished with incorrect and invalid data, which may undermine the ACAM facility's products and services. Hence, the cost accounting practices in the ACAM facility must be capable of giving correct ongoing data for the ACAM practitioners at all levels.
- The manufacturing process can release various matter (solid, liquid and gases) into the environment. Besides, these residues have the potential to degrade the environment. As with production processes, the packaging is another source of environmental degradation. The environmental costs of processes that manufacture, market, and deliver products and the post-purchase costs caused by the use and disposal of products are a significant concern for the modern industrial organisations. Assignment of environmental costs to products by the relevant cost accounting practices can produce valuable managerial information.

- Similarly, information collected on occupational accidents has been, for example, frequency, types, location, employee groups, and length of sick leave taken. This information is on the number of employees, the number of hours worked, and the number of job sites. However, when seeing the employee health and safety issues and occupational accidents in the cost accounting context, then the costs of these accidents, the cost that the company loses in the course of occupational hazards, accidents and the cost that is created through prevention initiatives become areas of interest.
- To maintain a competitive advantage, the company needs to determine strategies aimed at improving future competitiveness. The ACAM practitioner requires information which indicates by whom, to what extent and why the competition overpowers them. The answers to the preceding questions are given by cost accounting information systems, aimed at the creation of an information database on competition, based on which companies make strategic decisions and build competitive advantage. Intelligent and rational adjustment of a company's competitive position to the changes occurring in the market is provided by continuous reporting on the competition. The necessity of a system, oriented toward generating information on the competition is driven by the fact that competitive advantage is a relative position, which requires constant evaluation of discussions, findings and conclusions which can be achieved through relevant cost accounting practices.
- Achieving and sustaining competitive advantage in a dynamic and thorough health care environment in South Africa requires sophisticated cost accounting knowledge and skills, as well as designing an effective cost accounting information system to support the larger and more complex information requirements of ACAM practitioners at all levels. Constant and dramatic changes in the contemporary competitive environment, as well as the need for integration with the global markets, require the knowledge of a widely focused cost accounting practice.
- When considering the adoption of the latest cost accounting practices, it is

essential to link it with modern challenges of information requirements of organisations. A new environment brings new challenges and problems which predictably demonstrate the need for a serious reconsideration of past business philosophies of ACAM facilities, based on stable and imaginable business conditions. It is emphasised that, from the aspect of modern cost accounting practices, there is much left to be done in order to raise cost accounting to the highest level of modern strategic management. Therefore, results in this study provide helpful insights and useful guidelines to organisations facing these challenges, especially those ACAM practitioners who are responsible for making sure that their companies move in the right direction.

8.5.4. Contributions to the Community

ACAM was acceptable and the only trusted and used health care service for centuries in the African community. ACAM facilities provide products and services to the African community. The paradigm shift from providing financial breakdown information on the services and the products provided by the ACAM facilities, information relating to substantiating pricing decisions was the only missing link between knowledge of ACAM practises and strategic costing. Many organisations include environmental and social practices into strategic costing and costing the services and products. Therefore, ACAM health care facilities can appreciate that cost accounting practices have shed a significant influence, that of leading and facilitating ACAM facilities to serve the African community and its customers.

The challenges that are facing cost accounting practices in advancing unique and required knowledge to diversify study fields such as traditional healing, traditional medicines, and effectively communicating at various levels of ACAM organisations. Moreover, this is particularly significant in the multicultural society. Costing has now evolved as a profession that is capable of meeting the requirements in the

measurement of the financial and economic activities and can communicate such information to the communities.

The communities are currently requesting ecological data from organisations. The ACAM practitioner must upgrade their observation of the environment, wellbeing and security as part of ACAM organizations, which is accomplished through actualisation, and checking and monitoring the necessary costing practices. Cost accounting practices must incorporate interchanges that are required from ACAM practices to invest in continuing to accept proficient help from society individually.

Cost accounting practices in ACAM practice have played and assumed a critical role in ACAM facilities even before the 1900s. Academic researchers have upheld this idea. The cost accounting practices are viewed as significant data suppliers for business measures by arranging and controlling the pricing of products and services. The ACAM practitioners will benefit significantly through utilised materials, labour, machinery and cash by offering some benefit to the general public, by making accessible the items and administrations required by the general public, to the highest available quality and at the lowest costs.

8.6 Limitations of the Research

This research was no different from other studies, as Yin (2014) found. Each research study is confined by the constraints that are placed on the researcher. However, the researcher in this study made every effort to ensure that reliable data is gathered with legitimate statistics to achieve the goal and objectives of the research.

The following limitations were observed in this study:

- The research focused on only six ACAM facilities; thus, the results cannot be generalized to other manufacturing organizations. It must, however, be stated that the objective of the study is not to provide a generalization but, instead, to give a broad understanding of how ACAM facilities operate and whether the costing model can be adopted, implemented and demonstrated in the ACAM facilities. In

overcoming this limitation, the study adopted a large-scale survey approach in order to generalize the results to other settings.

- The time devoted to the field study with the ACAM facilities was too short. Therefore, an action research case study using both contingency theory and the production theory of value approach is needed to study costing in ACAM facilities. Conducting such studies needs at least two to three years of which the researcher has limited time for doctoral study.
- The researcher faced some difficulties in taping the interviews as the ACAM practitioners were not convinced that the researcher would keep the recordings confidential. As a result, these difficulties and limitations have reduced the accuracy and depth of the information obtained from ACAM practitioners.
- There is a lack of documentation available within the sphere of ACAM facilities, while other documents within the ACAM facilities were regarded as private and confidential by some of the ACAM practitioners. This resulted in an inability to collaborate or disapprove the interviewee's responses and clarify by triangulating the evidence.
- The researcher's inability to video or tape-record the interviews also resulted in severe limitation as this was due to the conservative ACAM culture. This may have resulted in the possibility of missing information vital for the interview analyses. In attending to this limitation, the researcher attempted to take down as many notes as possible during and immediately after the consultations with the ACAM practitioners to ensure that he remembered everything.
- The lack of academic research in ACAM facilities and costing systems was also regarded as a limitation of the research because of the terms operating parallel to each other. However, academic research is also generally minimal on such terms with similar structure and social culture.

- The insight gained from this study and the findings produced should, however, be assessed in the light of its limitations. The fundamental limitations of the research and the barriers to access the ACAM health care facilities resources and ACAM health care practitioners were a challenge. Despite this, the researcher had managed to interview a sizeable number of participants, and they all have practice facilities and train fellow ACAM practitioners.
- The interviews in ACAM facilities were personalised to the nature of the services that the ACAM practitioners performed. As a result, the interaction between the interviewee and interviewer involved practical cooperation. Therefore, there is a possibility that interviews were compromised through the unwillingness of the ACAM practitioners to share all necessary information, and this may have resulted in the supply of false information.

Therefore, the researcher ensured that reliable and valid information or data was gathered to achieve the main research objectives. Although the researcher had put in much effort, it was impossible to manage all the elements that could have influenced the standard of the study.

8.7. Recommendation for the Study

The following recommendations have materialised in establishing both the empirical and theoretical outcomes of this research. These were categorised into the recommendations for ACAM health facilities and those for future research.

8.7.1 Recommendations for the CAM Facilities

- The ACAM facilities should adopt and implement the costing system because it will provide them with more accurate cost data for each product and will assist them in the areas of planning, control and decision making. Moreover, it will assist in confronting the intense competition that they face in the market. Furthermore, the ACAM practitioners will benefit by challenging the intense competition and rejection by some sections of society
- It is absolutely imperative to provide the required financial resources from the South African government and the South African Department of Health for the effective implementation of the ACAM costing system.
- To successfully implement the ACAM costing system, the ACAM facilities should utilise the recommendation provided in this study to implement the ACAM costing model. Furthermore, the policymakers are required to identify the main requirements and features of the ACAM costing model before beginning with the implementation process.
- The adoption of the ACAM costing system should gradually be implemented in stages alongside the current ACAM costing system, beginning with one product at a time before going on to another product. Ultimately, the whole ACAM facility will make use of the costing model.
- The necessary and specialised training discussions for the ACAM facilities who show interest in the costing model should be held before beginning to use it in order to learn the significance and processes of the model.
- The South Africa ACAM facilities need to adopt and implement the ACAM costing model because it will provide them with more accurate cost data for the provision of each service and products and help in making effective and reliable decisions.

8.7.2 Recommendations for Future Studies

Although this study has made a significant contribution in understanding costing in ACAM and the placing of ACAM in the context of cost accounting practice, it has prompted the need for further research. Future research should focus on several issues:

- The researcher recommendation is to conduct experimental research in ACAM facilities to verify the accuracy of the benefits of cost by the ACAM costing model.
- This study focused on a number of aspects of ACAM practise, such as the person or groups who conduct it; the duration for which it has been practised; its maturity; its responsibility; the business areas involved in ACAM; its comprehensiveness; and the effectiveness of its approach in the listed organizations in South African ACAM facilities. Further research can focus on the practice of ACAM within other types of ACAM facilities, such as diviners, traditional birth attendants and prophets or faith healers in South Africa.
- It was found that there have been very few theoretical studies, as well as empirical research, that focus on the practice of ACAM, which include those characteristics listed above the facility operations. ACAM facility operations include historical health facility description, product description, processing of products, packaging, channels of distribution, channels of marketing, storage, transport, promotion, prices and capacity building, Therefore, future research is needed with a greater focus on the relationship between the practice of ACAM and organizational characteristics.
- The study manifested similar arguments between ACAM and cost accounting practice and provided a more detailed inspection of the elements that assist in associating ACAM with cost accounting practice. Therefore, additional academic research is needed in demonstrating how ACAM facilities can utilise medical aid schemes through this costing model.

- Placing ACAM in the context of cost accounting practice requires extensive efforts in order to build a cost accounting practice within the culture of the organization, which in turn, requires training and demonstration of the ACAM facility. The adoption and demonstration, as was discussed in the literature, can determine the success or failure of the cost model in ACAM. Therefore, future research could be centred on developing an understanding of the significance of the adoption and demonstration of a cost accounting model in ACAM and on the development of the most effective and efficient training and testing techniques of the costing model in ACAM facilities.

Overall, much remains to be learnt about costing ACAM facilities' products and services and its significance for ACAM facilities. The researcher hopes that this research study has made an essential step towards understanding the costing of ACAM products and services, and also the significance of placing ACAM in the context of cost accounting practice. Furthermore, the researcher hopes that the study will stimulate awareness of where costing researchers and ACAM practitioners can further examine what might be constructive and fruitful areas of research in this field.

8.8. Summary of the chapter

This chapter summarised the key findings of the interviews and the literature review. This summary included the current practice of costing in ACAM, the possibility of developing an ACAM costing model, and the challenges that may be experienced during the implementation thereof. This discussion was followed by the concluding remarks and the significance of the study. Theoretical, practical, and managerial issues and the study's contribution to society were deliberated.

The Chapter concluded by discussing the limitations of the research and recommendations to ACAM facilities and for future studies was suggested.

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Annexure A: Introductory Letter

I am Makomane Taba; a doctoral student in the School of Accountancy at the University of Limpopo. I wish to ask you whether you would be willing to take part in the study that will develop and demonstrate a cost accounting practice for African Complementary and Alternative Medicines (ACAM) practitioners.

As you might have already known ACAM organisations in South Africa, face different challenges in the ACAM facilities. As in any organisation doing business, ACAM is also challenged by an increase in environmental, technological, social, political, and economical uncertainties, high and unsubstantiated costs. The South African government have identified the necessity to effectively identify and respond to the effect of the type of business that ACAM operates. There are different elements of the environment, such as communities, customers, competitors, activists, shareholders, governments, and ACAM practitioners that have a competitive advantage over ACAM organizations. Accordingly, ACAM practitioners play an essential role in bringing an external perspective on the process of decision-making. Therefore, the study identifies obstacles and challenges faced with respect to the products and services of the ACAM and with these in mind, develop an ACAM costing model.

It is therefore essential that once you have accepted to be interviewed, I will conduct a face-to-face interview which will take place at your facility, preference and convenience. Once you decide to accept my invitation, I will send you an e-mail which will contain more information on my questions. However, you are therefore reminded that the actual duration of the interview will mostly depend on how detailed you will be when answering those questions. You are also reminded that even though the research might not be of direct benefit to you personally, your contribution of expertise and insights will improve the academic knowledge in the cost accounting practice in ACAM. The study will further assist me as I attempt to pursue and complete my Doctoral studies in the ACAM costing model.

Should you be interested, especially after completing the study, it will be my great pleasure to send you a copy and also an executive summary of the study. If you have any questions, please send them to Makomane.Taba@Tmcconsulting.co.za. Should you be interested in participating and contributing to this research, please indicate this by replying by e-mail to the address given above and also attach the Consent Form attached.

Please allow me to thank you in advance for considering to participate in this research on the ACAM cost accounting practice model. I certainly look forward to hearing back from you.

Thank you for your consideration,

Makomane Taba
DCom Accounting Student
School of Accounting
University of Limpopo
Makomane.Taba@Tmcconsulting.co.za

Annexure B: Informed Consent Form

I wish to indicate that I am 18 years old in good physical health and give consent to voluntarily participate in this ACAM costing model which is conducted by Prof Michael Fakoya and Mr Makomane Taba at the School of Accountancy at the Limpopo University, Student Number- 201429833. I also understand and declare that I am a traditional tutor and an accredited training organisation in terms of section 47(1) and 32 (1) of the African Traditional Healing Act of 2007.

I also wish to state that by participating in this study, I will be required for almost an hour, and this will depend on how detailed my answers will be. I understand that the researcher may use audio or video-tape my answers to collect this for the research. Audio or videotaped information is viewed as highly private and confidential. Therefore, my identity and name will not be revealed to a third party. The information provided will be collected for reporting and presentation information only.

I understand and know that the researcher will provide me with a copy of the results of this study after 1st December 2018 through Prof. Michael Fakoya at the above e-mail address or Makomane Taba (DCom Researcher) in the School of Accountancy, University of Limpopo, Sovenga, Polokwane, Tel 015-268-3811 e-mail: Makomane.tab@tmccconsulting.co.za.

If you have any questions about this research, please contact the promoter, Prof Michael Fakoya, at the School of Accountancy, Sovenga, Polokwane; University of Limpopo; Phone: 015-268-3811, e-mail michael.fakoya@ul.ac.za. Should there be questions about the infringements of rights as a participant or you wish to report a research-ethics injury, please contact Institutional Ethics Committee Office, Limpopo University, Sovenga, Polokwane; (e-mail); michael.fakoya@ul.ac.za; (telephone) 015-268-3811.

Participant name:

Participant Signature:

Date:

Annexure C: Focus Group Interview Questions

Interview with complementary and alternative medicines practitioners

1. Introduction

- The study background
- The process of the interview: Informed confidentiality and form consent.

2. Opening Remarks

- Please can you tell me about yourself, including African Complementary and Alternative Medicine experience and your education (ACAM) experience?

3. Current Practices in complementary and alternative medicines in South Africa

- a) Name the services that you provide as a complementary and alternative medicines practitioner.
- b) Do you have a pricing list of the services of all your product and services?
- c) Which of your services does your client patronise the most?
- d) How do you arrive at the material, labour and the overhead costs? Describe in detail through evidence?
- e) Does your costing method help you to determine the right price for the products and services?

4. Developing Model Questions

- f) If a specialised costing model is developed in complementary and alternative medicines, would you like to adopt or try it out?
- g) Does this specialised costing model improve your existing method?
- h) Do you think that this new costing model improves your pricing decision making? How? Explain.

5. Challenges on Model Development

- i) Do you have any challenges adopting this new costing model?
- j) If yes, what are those challenges?

6. Concluding Remarks

- What are the other things that you would like to address which were not discussed?
- Among all the things that were discussed today, which ones would you say are most important?

Annexure D: Lengwalo la Boitsibišo

Translation of Research Instruments: Sepedi Version

Project Title:

Adopting cost accounting model to facilitate decision making in complementary and Alternative Medicines practice in South Africa

Leina la ka ke Makomane Taba, ke moithuti wa grata ya bongaka sekolong sa diapalo-palo, ka Unibesiting ya Limpopo. Ke ikopantšha le wene ele ge ke rata go butšiša gore o ka kgona go ithaopa go tšea karolo go dinyakišišo tše tšaka tša go lebeledišiša mokgwa woo ka wona re kago šomiša cost accounting ka mo gare ga tšhomišo ya dihlahare tša segagabo rena (Cost accounting in Complementary and Alternative Medicine)

Bjalo ka ge o tšeba, mekgatlo ya CAM e kopana le mathata a go se fele le moo ba šomelago gona. Bjalo ka ge CAM e kopane le go gola ga tša kgoebo mo bašomelago gona, tša go phedišana kgoebong, tša dipolotiki, tša ramahlale, diphetogo le tšeo re sego ra di letela, ba bone go swanetše gore ba iphetolele go tšeo di diregago dikgwebong tša bona. Dilo tšeo di fapanego mo kgoebong tša go swana le bareki, baphenkgišane, pušo, didirišwa, mo re phelago gona, batšea karolo kgoebong, le bašomiši ba CAM ba thomile go ba badiriši ba bohlokwa mo kgwebong. Ka go realo, bašomiši ba CAM ba bapala karolo e bohlokwa go tšea sephetho sa maleba. Dithuto tše tšaka di tlile go lebelela mathata ao didirišwa le ditirelo tša CAM gammogo le gore ka moso re ka šomiša bjang re lebeletše dilwana-lwana tše tša CAM.

Ditekolo tše tša tshepidišo ya bongaka di tlo dirwa re lebelelane ka mahlong goba ka nako eo wena o kago ikhwetša o na le nako ya go boledišana le nna. Ge o tšere sephetho sa go tšea karolo dinyakišišong tše, ke tla go romela emailyaka ka botlalo le tše dingwe tšeo di nyakegago. Eupša nako eo re ka go e tšea re boledišana, e ka se

thuše wena fela, eupša tsebo eo e tšeneletšego ya gago, e tla thuša go tšwetša pele tsebo mabapi le tšhomišo ya dipalo-palo ka gare ga dihlare tša šetšo (CAM). Dithuto tše di tla nthuša gore ke kgone go fetša dithuto tše tšaka tša bongaka tša kgoebo ka dipalo-palo (Doctor of Commerce in Accounting) bjalo ka ge di amana le dipalo-palo ka mo gare ga dihlare tša šegagešo.

Ge eba o nale kganyogo ya go tšea karolo dinyakišišong tše, ka morago ga ge dithutho tše diphehilwe, ke tla go romela kgatišo e kopana ya sepheto sa dithuto tše. Ge e ba o nale dipotšišo tše o nyakago go di tseba goba mabapi le dithuto tše, ka kgopelo romela molaetša go Makomane.Taba@Tmcconsulting.co.za. Ge eba o nyaka go tšea karolo le gona, šomiša yona email e ka mo godimo gomme o romele foromo e ya go itlamba ka go šomiša yona email e ya ka godimo.

Ke rata go go leboga ge o iphile nako ya go tšea karolo go dithuto tše tša mabapi le dipalo-palo ka mo gare ga dihlare tše tša šegagešo. Ke lebeletše pele ka lethabo go tšwa go wena mabapi le dinyakišišo tše (CAM).

Wa Gago

Makomane Taba
DCom Accounting Student
School of Accounting
University of Limpopo
Makomane.taba@tmcconsulting.co.za

Annexure E: Foromo ya go Itlama

Ke tlišetša gore ke nale mengwaga e fetago e lesome-seswai (18 years), bophelo bjaka ke bjoo boitekanetšego gomme ke rata go tšea kaolo mo dinyakišišong tše di dirago ke Prof. Michael Fakoya le Mna. Makomane Taba ka mo sekolong sa dipalo-palo Unibesiting ya Limpopo. Nomoro ya ka ya go ithuta yona ke 201429833. Ke a kwišiša ebile ke a ikana gore ke ngaka ya setšo eo e ngwadišitšwego go neelana ka thuto ya bongaka bya setšo gape ke mokgatlo woo o dumeletšwego wa go neelana ka tlhahlo ka fase ga molawana wa section 47(1) and 32 (1) wa African Traditional Healing Act of 2007.

Ke a kwišiša gore go tšea karolo gaka go tlo nyakega nako eo e kabago ire e tee kamoka gomme yona e tla ya le gore ke hlaloša tshipidišo ya dihlare tše bjang. Ke kwišiša gape gore dinyakišišo tše di tlo gatišwa ka video goba segatiša mantšu bjalo ka ge ke dumeletše monyakišiši go e šomiša.

Ke kwišiša gape gore seo ke tlo go sebolela, e tla ba sephiri saka le monyakišiši, gomme leina la ka le ka seke la bolelwa le ge e kaba bjang kapa bjang. Seo ke tlo go se fa monyakišiši di tla kgobokantšwa felo mo go tee go bega le go bontšha ba bangwe.

Ke kwišiša gape gore nka kgona go hwetša bohlatse bya dinyakišišo ka morago ga 1st December 2018 ka go ikopantšha le Prof Michael Fakoya goba Makomane Taba (Monyakišiši) ka mo sekolong sa dipalo-palo, Unibesiting ya Limpopo, Sovenga, Polokwane, nomoro ya mogala ke (015) 268 3312 goba email, Makomane.Taba@Tmconsultng.co.za.

Ge eba o nale dipotšišo tšeo o nyakago go di botšiša, e kopantšhe le Mohlokomedi wa dinyakišišo, Prof Michael Fakoya, School of Accountancy, Sovenga, Polokwane, email; Michael.fakoya@ul.ac.za. Ge eba o nale dipotšišo mabapi le ditshwanelo tša gago tša go tšea karolo bjalo ka ge eba ke dinyakišišo tša nnete, ka kgopelo hle, e kopantšhe le, Institutional Review Board Office, University of Limpopo, Sovenga, Polokwane, email michael.fakoya@ul.ac.za, nomoro ya mogala ke, (015) 268-3811.

Maina ka Botlalo a Motšeakarolo:-----

Mosaeno wa motšeakarolo:_____ -

Letšatši Kgwedi: _____ -

Ge eba o nyaka ge dinyakišišo di gatišwa , bea mosaeno wa gago mo -----

Makomane Taba

DCom Accounting Student

School of Accounting

University of Limpopo

Makomane.Taba@Tmcconsulting.co.za

Annexure F: Focus Group Interview Questions

Dipotšišo tša dinyakišišo le Dingaka tša segagešo

1. Matseno

- Se se tsebjwago ka thuto ye
- Sebopego sa poledišano: Legwalo la tumelelo le foromo ya sephiri

2. Dintlha tša Pulo

Ke kgopela o mpotše ka wene le seo o se tsebago ka tšhomišo ya dihlare tša šegagabo rena le tšeo o ka go di šomiša legatong la dihlare tša bodikela (CAM).

3. Tšeo di šomišwago ga bjalo ka mo gare ga CAM mo Africa Borwa

- a) Ke kgopela o mpotše ditirelo tšeo o di fago batho bao ba tlogo go nyaka thušo mo go wena bjalo ka motho yoo a šomago ka dihlare tša šetšo?
- b) Naa o nale lenanego la ditefo mabapi le ditirelo tšeo o di abago le dihlare tša gona?
- c) Ke ditirelo dife tše batho ba gago ba ratago go di kgopela kudu?
- d) Naa o fihelela bjang mabapi le ditefelo tša (dišomišwa) material, (tefelo ya matsogo) labour le tšeo di sa bonwego (overhead)? O ka hlaološa ka botlalo gomme wa bontšha le bohlatse?
- e) Naa mokgwa wona wo o o šomišago wa go lefelwa ditirelo, o go kgontšha go neelana ka ditefelo tša maleba tša ditirelo le dišomišwa tša gago?

4. Mokgwa woo CAM e kago šomiša dipalo-palo ka gona

- f) Ge mafelelong a dithuto tše go ka ba le mokgwa o mokaone woo ka wona o ka kgonago go lefiša batho bao ba nyakago thušo, naa o kaba le kganyago ya go leka go o šomiša?
- g) Naa mokgwa wona woo o mokaone o kgona go go thuša bokaone mo go beakantšheng ditefelo?

h) O bona o kare wona mokgwa wo o moswa o dira dilo bonolo gore o kgone go tšea sephetho se sekaone kudu?

5. Dihlohlo tšeo mabapi le go šomiša mokgwa wona wo wa ditefelo

- i) Ke ditlhotlho dife tšeo o kopanago le tšona ge o šomiša mokgwa wo o moswa?
- j) Ge e ba dihlohlo di gona, ke ditlhotlho tše difeng?

6. Dintlha tša go tswalela

- Ke eng seo nna le wena re sego ra bolela ka sona o kago nyaka go se tšweletša?
- Go tšeo re boletšego ka tšona ka moka, ke eng goba nthla efe eo o bonago e le bohlokwa.

NB: Ka lebaka la mokgwa wa go botšiša ka go nyakišiša, ke šomišitše mokgwa wo bjalo ka tlhahlo le sebopego fela. Mokgwa wa go botšiša ka go tsenelela o tlo fetolwa-fetolwa go ya le ka moo ke fetolwago ka gona.

Makomane Taba

Dcom Accounting Student

School of Accounting

University of Limpopo

Makomane.Taba@Tmcconsulting.co.za

Annexure G: The ACAM Health Facility A

Health Facility description

The CAM Health Facility A is an African traditional healing facility 32km outside Pretoria in Mabopane. It falls under the Tshwane Metropolitan Municipality in Gauteng South Africa. The Health Facility was established after an ancestral spiritual visit to the owner in 1992. The Health Facility A is a registered health facility under a South African Non-Governmental Organisation (NGO). It involves the provision and the supply of primary health care services around the Mabopane area, Free State Province, Limpopo Province, Mpumalanga, Lesotho and Botswana.



The owner of the health facility also works as a prophet through the water to assist the clients. The health facility A has a good design, a modern, mixed with a traditional reception area, where clients await service and consultation while the health practitioner assists the other clients.

Service description

The Health Facility A provides a wide range of services. The services are effectively provided with the assistance of the products that are found across South Africa, Lesotho, Botswana and Swaziland or Eswatini.

| African Name | Western Name | Price |
|-------------------------|--------------|--------|
| Go busa moya ka Bothata | Asthma | R100 |
| Ba Tla Lucky | | R800 |
| Bolwetsi Bja Gowa | | R200 |
| Bolwetsi Bja Sukiri | | R100 |
| Bogafi/Mahlanya | | R3 500 |
| Boswagadi | | R1300 |
| Bohlologadi | | R1 300 |
| Ge O Batla Ngwana | | R2500 |
| Go Aga Lapa | | R1 800 |
| Go Foka | | R1000 |
| Go Fotha | | R50 |
| Go Phasa | | R300 |
| Go Tshireletsa Ntlo | | R1 200 |
| Go Tshireletsa Mpa | | R1 500 |
| Go Tshwara Lenyalo | | R2 500 |
| Kgetlana | | R600 |
| Kgwebo | | R2000 |
| Koloi | | R1 200 |
| Lefembo | | R1500 |
| Lebitla | | R3000 |
| Lehu | | R1 200 |
| Lucky | | R800 |
| Maoto | | R1 300 |
| Melato E Megolo | | R4000 |
| Melato E Menyane | | R1 400 |
| Motse | | R5000 |
| Pitsa Ya Bo Mme | | R300 |
| Pitsa Ya Bo Ntate | | R300 |
| Sefola | | R1 500 |
| Seghapo | | R50 |

| | | |
|------------------|--|--------|
| Selwane | | R1800 |
| Sefifi Sa Boloji | | R800 |
| Sejeso | | R1200 |
| Setopo | | R3 200 |
| Speit | | R50 00 |
| Strouk | | R3000 |
| Hlogwana | | R300 |
| Ko Mosebetsing | | R1 500 |

| | | | | |
|-----------|----|-----------------------|-----------|-----------|
| Sunday | 22 | Kgweba | R2000.00 | Small 1/2 |
| Monday | 23 | Selapa: MoFu | R3900.00 | |
| Tuesday | 24 | Lekhilla | R3000.00 | |
| Wednesday | 25 | T. Hlogwana | R300.00 | |
| Thursday | 26 | Asima | R100.00 | Lebedlolo |
| Friday | 27 | Pitsoya boNtate | R300.00 | Motsoso |
| Saturday | 28 | Pitsoya boMme | R300.00 | |
| Sunday | 29 | | | |
| Monday | 30 | Ko Mosebetsing | R1,500.00 | |
| Tuesday | 31 | Go aga Selapa | R1,800.00 | |
| Wednesday | | Melato e. Megato | R4000.00 | |
| Thursday | | E. menyane 1/2 ox 1/4 | | |
| Friday | | Go tsuaya leyaalo | R2,500.00 | |
| Saturday | | Sepili | R600.00 | |
| Sunday | | Go phatlha | R800.00 | |
| Monday | | | | |

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c/o Jacaranda & Magiel, Hennopspark, Centurion
Tel: (012) 653 1838/1883 Fax: (012) 653 1847
E-mail: print@printfactory.co.za

The services that the facility assists the clients with the most are services such as, sefolo, stroke, Motse, criminal cases, and setopo, with prices ranging from R1500, R3000, R5000, R4000 and R3200, respectively.

Product description

Health Facility A provides a wide range of products that are used to effectively deliver services for problems such as Business against criminals, Cops, and sefolo. These products are wild-harvested medicinal plants are found and sourced from Lesotho, Botswana, and Swaziland. The product is also found locally in Limpopo and Mpumalanga Province. Health Facility A provides different types of products which are stored in a raw form or partially processed. The ACAM health facility's products which are in the form of bulb, roots and plants, are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are not in a sophisticated form, but the mixing of the bulb, roots and plants for particular treatments and services are well-developed. The processing and packaging of these products are provided to clients in small pieces of newspapers, small pieces of plastic and different shapes of old bottles for adequate provision of the type of services customers require. The ACAM health facilities have more than 2000 products made from medicinal plants, roots and bulbs, and processed and packaged on the facility's premises.

Processing of products

The Health Facility A starts processing the products by removing any non-usable parts during product gathering. The gathering is done across South Africa, and as far as Lesotho, Zimbabwe, Botswana and Swaziland. The collected products of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving them to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicine is going to perform, some are processed immediately after having been recovered from the forest, mountains or wherever they have been recovered during the search for them. The next phase of processing takes place at the facility itself

where they are processed by using a processor made of wood and iron. Others are usually processed by being chopped into small pieces and ground.

The mixtures are also made by means of sophisticated mixtures that involve chopped, ground and burnt material. The other materials used are bought in medicine shops and from street medical vendors in an already processed mixture for retail and other synthetic ingredients are added for their special effects.

Packaging

The packaging in ACAM Health Facility A is in either 2kg, 5kg or 8kg recycled containers for storage. The ACAM health facilities package the products in old plastic bags, old newspaper, old magazine pages, an array of old cold drink and paper or plastic bank bags. In summary, the customers of this health facility are given the products of their services well packaged in either newspapers and papers that have been cut into small pieces for adequate service packaging. Depending on the services provided, other products are handed out in different sizes of old bottles and shapes in the form of liquid. This type of service and packaging is standard in ACAM facilities.

Channels of distribution

CAM Health Facility A's medicinal plant distribution depends on ancestral guidance, and the products are distributed to the clients and fellow practitioners for healing. CAM Health facility A distributes the medicines using full tablespoons to the clients for practical usage on its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility A are through ancestral intervention, client referrals, and unique medicinal usage that brings clients.

Storage

CAM Health facility A, after having collected the medicinal plants, roots and bulbs, stores the medicinal plants in the shade and a cool place. Once dry, they will be collected and processed and stored in a place where they will be waiting for

processing. Once processed, they will be stored in a particular room for medicinal plants. Finally, the medicines will be stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room waiting to be dispensed to the clients during consultations.



Transport

Regarding product transportation, the medication that is found locally is collected on foot and the package is carried back to the ACAM facilities. The other medicine outside the Mabopane area is collected by making several trips by either a taxi or bus. The practitioners transport the materials from the rural and urban markets. Most of the natural medicines are transported by using the two cars that the practitioners own.

Promotion

The promotion in this health facility of the industry is by both client referrals and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestors send patients or clients to receive healing. The other promotion is done by the healers' organization who do everything in their power to promote the health facility's products and services to needy customers and communities. There was no

attempt by the health facility to contact the pharmaceutical companies to promote the CAM medicinal products.

Prices

The ACAM practitioners discuss prices of services by means of the main price list supplied by the health facility. The prices for products in the health facility differ according to the service and products to be used. The products for services in this health facility are given to the customers in units of a teaspoon, a handful, a table-spoon, recycled old plastics and old newspapers. The prices of services in this facility ranges from R50 to R5000 depending on the service that will be provided. Refer to the price list above.

Capacity building by the Department of Health

There are no plans to do without ACAM practitioners but rather to capacitate the ACAM organisation and when it is done on a very small-scale to selected CAM practitioners or organisations provincially and nationally. The National Health department offered the CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services. The health facility A was also trained in sick leave form completion and making referrals to the clinics and hospitals for the TB, HIV and Polio inoculations for children. According to CAM Health Facility A, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage, promote, organise and market the ACAM facility effectively.

Annexure H: The ACAM Health Facility B

Health Facility description

Health Facility B is a CAM healing facility that provides primary and secondary health services to a diverse number of clients in the Steve Tshwete Local Municipality. The facility has even assisted clients from the white community, and the owner of the facility is from Bushbuckridge. The researcher travelled to the east of Tshwane towards Mpumalanga Province, about 120km from Tshwane. There is a small town called Middelburg. In Middelburg, there is a suburb called Rondebosch. There one will find Health Facility B situated in Mpumalanga Province in the Steve Tshwete Municipality under the authority of the Nkangala District Municipality.



The owner is a learned individual with an LLB degree from an incorporated Vista University which presently falls under the University of Pretoria. The owner is a prosecutor by profession with the National Prosecuting Authority of South Africa. The owner started practising CAM at a very young age in 1973 while still in primary school but was only trained for six months in Elias Motswaledi Municipality in 2014.

Services description

Health Facility B provides a wide range of services such as consultations, a sexual boost for man, epilepsy and 'bad luck'. These services are provided with the assistance of the products that are found in Johannesburg Faraday, Mpumalanga, Mozambique and Eswatini (Swaziland).

| African Name | Western Name or interpretation | Adult: Price | Children: Price |
|---------------------|---------------------------------|--------------|-----------------|
| Tinhlolo | | R200 | R1000 |
| MaAgome | | R3000 | |
| Sivolane | | R2000 | R3500 |
| Fall Sick | Epilepsy | R5000 | R400 |
| Silyana (Amabadi) | | R1000 | |
| Spoko | | R2000 | |
| Usebenzi (ikhundla) | | R2000 | |
| Umuzi | | R5000 | |
| Umuzi (spoko) | | R10000 | |
| sidliso | | R1800 | |
| Sipiyiti | | R150 | |
| Imfelo | Unable to have children | R300 | R1000 |
| Skolo | | R1500 | R750 |
| Ikhanda | Headache | R1500 | R1500 |
| Kgetlane | Clavicle | R5000 | |
| Amafufunyane | Depression | R800 | |
| Menstruation | | R300 | R200 |
| Ukuvusa indoda | | R500 | |
| Islumi | Preventing death in Child birth | R2000 | |
| Imoto | Motor Car | R1500 | |
| Ongazali | | R150 | |
| Ukugaba | | R3500 | |
| Mabophe | | R1500 | |
| Kgophorola | | R3000 | |
| Kgophorola (Umuzi) | Homestead | R15000 | |
| Ukuthwasisa | | | |

| African Name | Western Name or interpretation | Adult: Price | Children: Price |
|-----------------|---------------------------------|--------------|-----------------|
| Amafufunyane | Depression | R5000 | R1500 |
| Fall Sick | Epilepsy | R5000 | R3500 |
| Ikhanda/ Hlogo | Headache | R1500 | R500 |
| Imbiza | Sexual Boost | R150 | None |
| Imfelo | Unable to have children | R300 | None |
| Imoto | Motor Car | R2000 | None |
| Isfutho | Steaming | R150 | R50 |
| Islumi | Preventing death in Child birth | R500 | R200 |
| Kgetlana | Clavicle | R1500 | R750 |
| Kgomphorola/Umu | Homestead | R3000 | None |

| | | | |
|-------------------|----------------------------------|-------|-------|
| Mabophe | Non Interest in opposite partner | R3500 | None |
| Makgome | Diarhoa after funeral visit | R3000 | R1000 |
| Matsatsi A Sesadi | Menstruation | R800 | None |
| Ongazali | Infertility | R1500 | None |
| Sefola | Stroke | R2000 | R1000 |
| Sekolo | School Performance | R2000 | R1000 |
| Sidliso | To Eat Unaware | R1800 | R600 |
| Sinyama | Bad Luck | R1000 | None |
| Sipiriti | Bad Spirits | R150 | R50 |
| Spoko | Spoke | R2000 | R500 |
| Tinhlolo | Consultations | R200 | R50 |
| Ukugapa | Vomition | R150 | None |
| Ukutwasisa | Training of Sangoma | R1500 | R500 |
| Ukuvusa Indoda | Sexual Boost For Man | R300 | None |
| Umuzi | Homestead | R4000 | None |

The services that the facility assists the clients with the most are services such as, go bea motse for R4, 000, setlotlwane for R2000, sefola for R2 000, headache for R1500, and mabophe for R3500.

Product description

Health Facility B provides a wide range of products that are used to effectively deliver services such as Business against criminals, Cops, sefola. These are wild-harvested medicinal plants that are found and sourced from Lesotho, Botswana, and Swaziland. The product is also found locally in Limpopo and Mpumalanga Province. Health Facility B provides different types of products which are stored in raw form or partially processed. The ACAM health facility's products which are in the form of bulbs, roots and plants are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are not in a sophisticated form, but the mixing of the bulbs, roots and plants for particular treatments and services are developed. These products are provided to clients in a small piece of newspapers, small pieces of plastics and different shapes of old bottles for adequate provision of the type of services customers

required. The ACAM health facilities have more than 2000 processed and packaged medicinal products made of plants, roots and bulbs in the ACAM health facilities.

Processing of products

The Health Facility B start products processing by removing any non-usable products during product gathering, which are from as far as South Africa, Lesotho, Zimbabwe, Botswana and Swaziland. The collected products of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines is going to perform, others are processed immediately after been recovered from the forest, mountains or where it has been recovered during the lookout of them. The next phase of processing takes place at the facility itself where they are processed by using wood and iron processor. Others are usually processed by being chopped into small pieces and ground.



Packaging

The packaging in ACAM Health Facility B are packaged in either a 2kg, 5kg or 8kg recycled containers for storage. The ACAM health facilities packaged the products in old plastic bags, old newspaper, old magazine pages, an array of old cold drink and

paper-plastic bank bags. In summary, the customers of this health facility are given the products of their services well packaged in either newspapers and papers that have been cut in small pieces for adequate service packaging. Depending on the services provided, other products are given in different sizes of old bottles and shapes in the form of liquid, and this type of services and packaging is standard in ACAM facilities.

Channels of distribution

CAM Health Facility B medicinal plant distribution depends on ancestral guidance and is distributed to the clients and fellow practitioners for assistance. CAM Health facility B distribute the medicines using full tablespoons to the clients for practical usage on its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility B are through ancestral intervention, clients referrals, and unique medicinal usage that brings clients,

Storage

CAM Health facility B after having collected the medicinal plants, roots and bulbs, stores the medicinal plants in the shade and a cool place, see figure. Once dry, they will be collected and processed and stored in a place where they will wait for processing.



Once processed, they will be stored in a particular room for medicinal plants. Finally, the medicines will be stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room until prescribed to the clients during consultations.

Transport

Regarding product transportation, the medication that is found locally are collected by foot and carry the package back to the ACAM facilities. The other medicine outside Middelburg, and Groblersdal area is collected by making several trips by either a car, taxi or bus. The practitioners transport the materials from the rural and urban markets. Most of the natural medicines are transported by using the three cars that the practitioners own.

Promotion

The promotion in this health facility is by both the referrals by clients and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestor's sends patients or clients to receive healing. The other promotion is done through by the healers' organization whom they do everything in their power to

promote the health facility's products and services to needy customers and communities. There was no attempt by the health facility to contact the pharmaceutical companies to promote the CAM medicinal products.

Prices

The ACAM practitioners discussed the prices of services in accordance with the main price list supplied by the health facility. The prices for products in the health facility differs according to the service and products to be used. The products for services in this health facility are given to the customers in units of a teaspoon, handfuls, table spoon, recycled old plastics and old newspapers. The prices of services in this facility range from R50 to R5000 depending on the service that will be provided, refer to the price list above.

Capacity building by the Department of Health

There are no plans to do without ACAM practitioners but rather to capacitate the ACAM facilities and when it is done on a very small-scale to selected CAM practitioners or organisations provincially and provincially. The National Health department offered CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services.



The health facility B was also trained in sick leave completion and making referrals to the clinic and hospitals for the TB, HIV and Polio vaccinations for children. According to CAM Health Facility B, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage,



promote, organise and market the ACAM facility effectively.

Annexure I: The ACAM Health Facility C

Health Facility description

Health Facility C is a CAM healing facility that provides primary and secondary health services to a diverse number of clients that include nurses, priests, medical doctors, entrepreneurs, and lawyers in the City of Tshwane. The facility assisted even clients from celebrity communities such as TV actors and musicians. In order to access the facility, the researcher travelled about 15km west of Pretoria in Gauteng Province, South Africa. There is a small suburban area called Lotus Garden. In Lotus Garden, the researcher discovered health facility B situated almost in the middle of the suburban area. The owner has grade 12 or standard 10 from Soshanguve High School before becoming involved in complementary and alternative medicines at the age of nine (9). The owner undertook CAM training for two years from 1992 to 1993. The owner started having CAM visions at a very young age while still in primary school.

Services description

The Health Facility B provides a wide range of services such as business for more clients and protection from crime, medical surgeries for medical doctors, pastors 'respect, badimo, bad spirits, sefola, sejeso, motse and relationship problems.

These services are provided with the assistance of the products that are found and sources across South Africa, Zimbabwe, Mozambique, Malawi, Botswana and Lesotho. The owner has no price list for reference as the feeling is that it is not following those price list. The services that the facility assists the clients the most with are services such as, bad spirits, sefola, motse, business, and relationships with prices range of R10,000, R2000, R3500, R3000 and R2000, respectively.

Product description

The Health Facility C provides a wide range of products that are used to effectively deliver services such as Business against criminals, Cops, sefola, which are wild-harvested medicinal plants that are found and sourced from Lesotho, Botswana, and

Swaziland. The product is also found locally in Limpopo and Mpumalanga Province. Health Facility C provides different types of products, which are stored in raw form or partially processed. The ACAM health facilities products, which are in the form of bulb, roots and plants are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are not in a sophisticated form, but the mixing of the bulb, roots and plants for particular treatments and services are well-developed. The processing and packaging of these products are provided to clients in small pieces of newspapers, small pieces of plastics and different shapes of old bottles for adequate provision of the type of services customers required. The ACAM health facilities have more than 2000 products processed and packaged of these medicines made of plants, roots and bulbs in the ACAM health facilities.

Processing of products

CAM Health Facility C start products processing by removing any non-usable products during product gathering, which are from as far as South Africa, Lesotho, Zimbabwe, Botswana and Swaziland. The collected products of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines is going to perform, others are processed immediately after been recovered from the forest, mountains or where it has been recovered during the search for them. The next phase of processing takes place at the facility itself where they are processed by using a wood and iron processor. Others are usually processed by being chopped into small pieces and ground.

Packaging

The packaging in ACAM Health Facility C is packaged in either a 2kg, 5kg or 8kg recycled container for storage. The ACAM health facilities packaged the products in old plastic bags, old newspaper, old magazine pages, an array of old cold drink and paper-plastic bank bags. In summary, the customers of this health facility are given

the products of their services well packaged in either newspapers and papers that have been cut in small pieces for adequate service packaging. Depending on the services provided, other products are given in different sizes of old bottles and shapes in the form of liquid. This type of service and packaging is standard in ACAM facilities.



Channels of distribution

CAM Health Facility C medicinal plant distribution depends on ancestral guidance and is distributed to the clients and fellow practitioners for assistance. CAM Health facility C distribute the medicines using full tablespoons to the clients for practical usage on its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility C are through ancestral intervention, clients referrals, and unique medicinal usage that brings clients,

Storage

CAM Health facility C after collected the medicinal plants, roots and bulbs, stores the medicinal plants in the shade and a cool place, see figure. Once dry, they are collected, processed and stored in a place where they will be waiting for processing. Once processed, they will be stored in a particular room of medicinal plants. Finally, the medicines will be stored in recycled plastic containers of 100ml, 250ml, 2kg, 4kg and 9kg and stored in a medical room until clients come for consultations.

Transport

Regarding product transportation, the medication that is found locally is collected on foot, and the package is carried back to the ACAM facilities. The other medicine outside the Lotus Garden area is collected by making several trips by either a taxi or bus. The practitioners transport the materials from the rural and urban markets. Most of the natural medicines are transported by using the car that the practitioners own.

Promotion

The promotion in this health facility is by both referrals by clients and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestor's sends patients or clients to receive healing. The other promotion is done through by the healers' organization whom they do everything in their power to promote the health facility's products and services to needy customers and communities. There was no attempt by the health facility to contact the pharmaceutical companies in promoting the CAM medicinal products.

Prices

The ACAM practitioners discuss prices of services in accordance with the main price list supplied by the health facility. The prices for products in the health facility differs according to the service and products to be used. The products for services in this

health facility are given to the customers in units of a teaspoon, handfuls, table spoon, recycled old plastics and old newspapers. The prices of services in this facility range from R50 to R5000 depending on the service that will be provided, refer to the price list above.

Capacity building by the Department of Health

There are no plans to do without ACAM practitioners but rather to capacitate the ACAM facility and when it is done on a very small-scale to selected CAM practitioners or organisations provincially and provincially. The National Health department offered CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services. The health facility C was also trained in sick leave completion and making referrals to the clinic and hospitals for the TB, HIV and Polio vaccinations for children. According to CAM Health Facility C, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage, promote, organise and market the ACAM facility effectively.

Annexure J: The ACAM Health Facility D

Health Facility description

Health Facility D is a CAM healing facility that provides primary and secondary health services to a diverse number of clients in the Makhuduthamaga Local Municipality. This facility, as with other CAM health facilities, provides primary and secondary health care services to a diverse number of clients of all races, especially from the black community. The facility is found in the Sekhukhune District Municipality which falls under the Makhuduthama Local Municipality.

In order to access the facility, the researcher travelled from Pretoria to Jane Furse. This was done to get a different CAM opinion far from the Gauteng Province. To access the CAM health facility D, the researcher travelled approximately 110km from Gauteng to Mpumalanga Province and drove another approximately 150km to Madibong Village in Jane Furse.



The owner is an 80-year-old woman who has been in CAM health for almost 60 years. The owner never attended school, but according to her, she understands the laws and

operations of CAM. The owner has trained more than 200 fellow CAM practitioners from 1983 to date. The owner started practising CAM at a very young age in 1983 and was only trained for three months after being tormented by ancestral dreams and spirits and unhealed illnesses for several years when young.

Services description

Health Facility D provides a wide range of services. These services are provided with the assistance of the products that are found across South Africa, Lesotho, Botswana and Swaziland or Eswatini. The services that the facility assists the clients with the most are services such as, sefola, stroke, motse, criminal cases, and setopo, for which the prices asked are: R1500, R3000, R5000, R4000 and R3200, respectively.

Product description

Health Facility D provides a wide range of products that are used to effectively deliver services for problems such as Business against criminals, Cops, and sefola. These plants are wild-harvested medicinal plants that are found and sourced from Lesotho, Botswana, and Swaziland. The products are also found locally in Limpopo and Mpumalanga Province. Health Facility A provides different types of products which are stored in a raw form or partially processed. The ACAM health facilities products which are in the form of bulbs, roots and plants are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are not in a sophisticated form, but the mixing of the bulbs, roots and plants for particular treatments and services are well-developed. The processing and packaging of these products are provided to clients in small pieces of newspapers, small pieces of plastic and different shapes of old bottles for adequate provision of the type of services customers require. The ACAM health facility has more than 2000 products made from medicinal plants, roots and bulbs, and processed and packaged on the facility's premises.



Processing of products

CAM Health Facility D starts products processing by removing any non-usable material during product gathering which is done in South Africa, and as far as Lesotho, Zimbabwe, Botswana and Swaziland. The collected products of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines are going to perform, some are processed immediately after having been recovered from the forest, mountains or wherever they have been recovered during the search for them. The next phase of processing takes place at the facility itself where they are processed by means of a processor made of wood and iron. Others are usually processed by being chopped into small pieces and ground.



Mixtures are also made by using sophisticated mixtures that involve chopped, ground and burnt material. The other materials used are bought in medicine shops and from medical street vendors in an already processed and ready to be used form, which also involves mixtures of ingredients which are synthetic.

Packaging

The packaging in ACAM Health Facility D is packaged in either 2kg, 5kg or 8kg recycled containers for storage. The ACAM health facilities package the products in small plastic bags, small pieces of old newspaper, small pieces of magazine pages, and numerous old cold drink and paper or plastic bank bags. In summary, the customers of this health facility are given the products of their services well packaged in either newspapers and papers that have been cut in small pieces for adequate service packaging. Depending on the services provided, some products are dispensed in different sizes of old bottles and shapes in the form of liquid, and these types of services and packaging are standard in ACAM facilities.



Channels of distribution

CAM Health Facility D's medicinal plant distribution depends on ancestral guidance and is distributed to the clients and fellow practitioners for assistance. CAM Health facility D distributes the medicines using full tablespoons to the clients for practical usage for its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility D are through ancestral intervention, clients referrals, and unique medicinal usage that brings clients,

Storage

CAM Health facility D after having collected the medicinal plants, roots and bulbs, stores the medicinal plants in the shade or a cool place. Once dry, they will be





collected and processed and stored in a place where they will be awaiting processing. Once processed, they will be stored in a particular room for medicinal plants. Finally, the medicines will be stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room ready to be dispensed to the clients during consultations.

Transport

Regarding product transportation, the medication that is found locally is collected on foot, and the package is carried back to the ACAM facilities. The other medicine outside Madibong Village is collected by making several trips by either a taxi or bus. The practitioners transport the materials from the rural and urban markets. Most of the natural medicines are transported by using the car that the practitioners own.

Promotion

The promotion in this health facility is by both client referrals and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestors send patients or clients to receive healing. The other promotion is done by the healers' organization who do everything in their power to promote the health facility's products

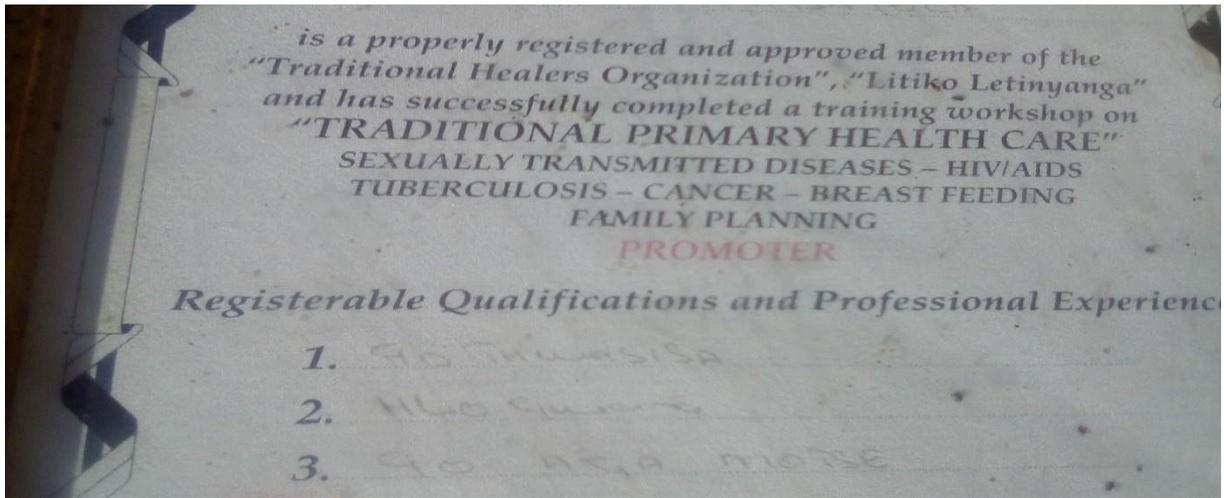
and services to needy customers and communities. There was no attempt by the health facility to contact the pharmaceutical companies in promoting the CAM medicinal products.

Prices

The ACAM practitioners discuss prices of services in accordance with the main price list supplied by the health facility. The prices for products in the health facility differs according to the service and products to be prescribed. The products for services in this health facility are given to the customers in units of a teaspoon, a handful, a tablespoon, recycled old plastics and old newspapers. The prices of services in this facility range from R50 to R5000 depending on the service that will be provided. Refer to the price list above.

Capacity building by the Department of Health

The plan is to capacitate the ACAM practitioners as the department has no plans for the ACAM facilities. When it is done, it is done on a very small-scale for selected CAM practitioners or organisations, provincially and nationally. The National Health department offered CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services. The health facility D was also trained in sick leave completion and making referrals to the clinic and hospitals for the TB, HIV and Polio inoculations for children. According to CAM Health Facility D, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage, promote, organise and market the ACAM facility effectively.



Annexure K: The ACAM Health Facility E

Health Facility description

The Health Facility E is a CAM healing facility that provides primary and secondary health care services to a diverse number of clients in Jericho, Madibeng Local Municipality, under the Bojanala Platinum District. Jericho (also known as Mmatope-a-Seretsana in Setswana) is a village in Bojanala Platinum District in the North West province of South Africa. It is under the Bakwena ba Mogopa tribal authority. Jericho is a small town situated in the extreme north-east of the province. Travelling to the west of Tshwane towards North West Province, it is about 110km from Tshwane. It takes a travelling time of 1 hour, 18 minutes to reach a small village called Jericho. There one will find the health facility E situated in North West Province.

The owner is a 67-year old lady who started practising healing at a very young age after experiencing frightening dreams while asleep. She only achieved a primary school education.

Services description

Health Facility E provides a wide range of services. These services indicated below are provided with the assistance of the products that are found across South Africa, Lesotho, Botswana, Swaziland, Eswatini and Zimbabwe as indicated in Table 5.1, below.

HEALTH FACILITY E

| African Name | Western Name | Adult: Price | Children: Price |
|---------------------|--------------------------------|-------------------------|----------------------------|
| Tinhlolo | Consultations | R200 | |
| Makgome | | R3000 | R1000 |
| Sefolwa | Stroke | R2000 | |
| Sinyama/ | Bad Lucks | R1000 | |
| Spoko | | R2000 | |
| Fall Sick | Epilepsy | R5000 | R3500 |
| senenzi/lkhundla | | R2000 | |
| Umuzi | | R1000 | |
| Sidliso | | R1800 | |
| Sipiyiti | | R150 | |
| Imfelo | | R300 | |
| Sekolo | | R2000 | R1000 |
| lkhanda | | R1500 | |
| Kgetlana | | R1500 | R750 |
| Amafufunyane | | R5000 | R1500 |
| Matsatsi A Sesadi | Menstruation | R800 | |
| Ukuvusa Indoda | Sexual Boost For Man | R300 | |
| Islumi | | R500 | R200 |
| Imoto | Motor Car | R2000 | |
| Ongazali | | R1500 | |
| Ukugaba | | R150 | |
| Mabophe | Non interest to other Partners | R3500 | |
| Kgomphorola/Umuzi | | R3000 | |
| Ukutwasisa | Training Of Sangoma | R1500 | |
| Imbiza | | R150 | |
| Isfutho | | R150 | |

The services that the facility assists the clients with the most are services such as, sefola, stroke, motse, criminal cases, and Setopo, which are priced as R1500, R3000, R5000, R4000 and R3200, respectively.

Product description

The Health Facility E provides a wide range of products that are used to effectively deliver services for problems such as Business against criminals, Cops, and sefola. These are wild-harvested medicinal plants that are found and sourced from Lesotho, Botswana, and Swaziland. The product is also found locally in Limpopo and Mpumalanga Province. The Health Facility E provides different types of products which are stored in raw form or partially processed. The ACAM health facility's products, which are in the form of bulbs, roots and plants, are packaged using old plastic and newspaper materials. The processing and packaging of the ACAMs are not in a sophisticated form, but the mixing of the bulb, roots and plants for particular treatments and services are well-developed. The processing and packaging of these products are provided to clients in small pieces of newspapers, small pieces of plastic and different shapes of old bottles for adequate provision of the type of services customers require. The ACAM health facility has more than 2000 products made from medicinal plants, roots and bulbs, which are processed and packaged on the facility's premises.

Processing of products

CAM Health Facility E starts processing the products by removing any non-usable products during product gathering. These products are from as far as South Africa, Lesotho, Zimbabwe, Botswana and Swaziland. The collected products, plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines are going to perform, some are processed immediately after having been recovered from the forest, mountains or wherever they have been recovered during the search for them. The next phase of processing takes place at the facility itself where they are processed by using a processor made of wood and iron. Others are usually processed by being chopped into small pieces and ground.

Packaging

The packaging in the ACAM Health Facility E is done in either a 2kg, 5kg or 8kg recycled container for storage. The ACAM health facilities package the products in old plastic bags, old newspaper, old magazine pages, an array of old cold drink and paper or plastic bank bags. In summary, the customers of this health facility are given the products of their services well packaged in either newspapers and papers that have been cut into small pieces for adequate service packaging. Depending on the services provided, other products are handed out in different sizes of old bottles and shapes in the form of liquid. This type of service and packaging is standard in ACAM facilities.

Channels of distribution

CAM Health Facility E medicinal plant distribution depends on ancestral guidance and is distributed to the clients and fellow practitioners for assistance. CAM Health Facility E distributes the medicines to the clients by full tablespoon measures for practical usage in its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility E are through ancestral intervention, client referrals, and unique medicinal usage that brings clients.

Storage

CAM Health Facility E, after having collected the medicinal plants, roots and bulbs store the medicinal plants in the shade or a cool place. Once dry, they will be collected and processed and stored in a place where they will await for distribution. Once processed, they will be stored in a particular room for medicinal plants. Finally, the medicines will be stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room in preparation for the clients who come for consultations.

Transport

Regarding product transportation, the medication that is found locally is collected on foot and carried back to the ACAM facilities. The other medicine outside the Jerico

area is collected by making several trips by either a taxi or bus. The practitioners also transport the materials from the rural and urban markets. Most of the natural medicines are transported by using a car that the practitioners own.

Promotion

The promotion in this health facility is by both the referrals from clients and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestors send patients or clients to receive healing. The other promotion is done by the healers' organization, who do everything in their power to promote the health facility's products and services to needy customers and communities. There was no attempt by the health facility to contact the pharmaceutical companies in promoting the CAM medicinal products.

Prices

The ACAM practitioners discuss the prices of services in accordance with the main price list supplied by the health facility. The prices for products in the health facility differs according to the service and products to be prescribed. The products for services in this health facility are given to the customers in units of a teaspoon, a handful, a tablespoon, recycled old plastics and old newspapers. The prices of services in this facility range from R50 to R5000 depending on the service that will be provided. Refer to the price list above.

Capacity building by the Department of Health

The National Department of Health in South Africa has no plan to capacitate the ACAM facilities or even the ACAM practitioners. When it is done, it is done on a very small-scale for selected CAM practitioners or organisations, provincially and nationally. The National Health department offered CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services. The health facility E was also trained in sick leave form completion and making referrals to the clinics

and hospitals on the TB, HIV and Polio inoculations to children. According to CAM Health Facility E, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage, promote, organise and market the ACAM facility effectively.

Annexure L: The ACAM Health Facility F

Health Facility description

The Health Facility F is a CAM healing facility that provides primary and secondary health services to a diverse number of clients in Metsimaholo Local Municipality. The facility assists clients from the whole of South Africa, especially from Lesotho, Limpopo, Gauteng, Eastern Cape and Mpumalanga. Travelling to the north of Tshwane Metro towards Free State Province on the N1, about 140km from Tshwane, there is a small town called Sasolburg. In Sasolburg, there is a suburb called Zamdela. There the researcher found the health facility F situated in the Free State Province in the Metsimaholo Local Municipality under Fezile Dabi District Municipality. The owner has a standard ten from High School and has been tormented by dreams and gods' spirits and been involved in complementary and alternative medicines from the age of 14 years. The owner undertook CAM training for two years in Ga Masemola Village, Limpopo, in 2006.

Services description

The Health Facility F provides a wide range of services. These services are provided with the assistance of the products that are found across South Africa, Lesotho, Botswana and Swaziland or Eswatini as indicated in Table 5.1, below.

HEALTH FACILITY F

| African Name | Western Name | Adult: Price | Children: Price |
|-------------------|----------------------|--------------|-----------------|
| Tinhlo | Consultations | R200 | |
| Makgome | | R3000 | R1000 |
| Sefolwa | Stroke | R2000 | |
| Sinyama/ | Bad Luck | R1000 | |
| Spoko | | R2000 | |
| Fall Sick | Epilepsy | R5000 | R3500 |
| Spoko | | R2000 | |
| Usenenzi/lkhundla | | R2000 | |
| Umuzi | | R1000 | |
| Sidliso | | R1800 | |
| Sipiyiti | | R150 | |
| Imfelo | | R300 | |
| Sekolo | | R2000 | R1000 |
| Ikhanda | | R1500 | |
| Kgetlana | | R1500 | R750 |
| Amafufunyane | | R5000 | R1500 |
| Matsatsi A Sesadi | Menstruation | R800 | |
| Ukuvusa Indoda | Sexual Boost For Man | R300 | |
| Islumi | | R500 | R200 |
| Imoto | Motor Car | R2000 | |
| Ongazali | | R1500 | |
| Ukugaba | | R150 | |
| Mabophe | | R3500 | |
| Kgomphorola/Umuzi | | R3000 | |
| Ukutwasisa | Training Of Sangoma | R1500 | |
| Imbiza | | R150 | |
| Isfutho | | R150 | |

The services that the facility assists the clients with the most are services such as, sefola, stroke, motse, criminal cases, and Setopo, which ask prices of R1500, R3000, R5000, R4000 and R3200, respectively.

Product description

The Health Facility F provides a wide range of products that are used to effectively deliver services for problems such as business against criminals, cops, sefola. These products are wild-harvested medicinal plants that are found and sourced from Lesotho, Botswana, and Swaziland. The products are also found locally in Limpopo and Mpumalanga Province. The Health Facility F provides different types of products which are stored in a raw form or partially processed. The ACAM health facilities products which are in the form of bulb, roots and plants are packaged using old plastic and newspaper materials. The processing and packaging of the ACAM are not in a sophisticated form, but the mixing of the bulb, roots and plants for particular treatments and services are well processed. The processing and packaging of these products are provided to clients in small pieces of newspapers, small pieces of plastics and different shapes of old bottles for adequate provision of the type of services customers required. The ACAM health facility has more than 2000 products made from medicinal plants, roots and bulbs, and processed and packaged on the facility's premises.

Processing of products

CAM Health Facility F starts product processing by removing any non-usable products during product gathering, which are from as far as South Africa, Lesotho, Zimbabwe, Botswana and Swaziland. The collected products of plants, roots and bulbs are stored in a carport on arrival from the veld or mountains and are protected from the heat of the sun while the bark, leaves and the roots are usually dried before moving to the production section. The processing of the herbs, vines and grasses are bound in bundles for clients. Depending on the type of services the medicines are going to perform, some are processed immediately after having been recovered from the forest, mountains or wherever it has been recovered during the search for them. The

next phase of processing takes place at the facility itself where they are processed by means of wooden and iron made processor. Others are usually processed by being chopped into small pieces and ground.

Packaging

The packaging in ACAM Health Facility F is packaged in either a 2kg, 5kg or 8kg recycled containers for storage. The ACAM health facilities package the products in old plastic bags, old newspapers, old magazine pages, an array of old cold drink and paper/plastic bank bags. In summary, the customers of this health facility are given the products for their ailments/problems which are well packaged in either newspapers and papers that have been cut into small pieces for adequate service packaging. Depending on the services provided, other products are given in different sizes of old bottles and shapes in the form of liquid, and this type of service and packaging is standard in ACAM facilities.

Channels of distribution

CAM Health Facility F's medicinal plant distribution depends on ancestral guidance, and it is distributed to the clients and fellow practitioners for assistance. CAM Health facility F distributes the medicines using full tablespoons to the clients for practical usage for its primary health care.

Channels of marketing

The main marketing channels within the CAM Health facility F are through ancestral intervention, client referrals, and unique medicinal usage that brings clients.

Storage

After having collected the medicinal plants, roots and bulbs, CAM Health facility F stores the medicinal plants in the shade or a cool place. Once dry, they will be collected and processed and stored in a place where they will await processing. Once processed, they will be stored in a particular room of medicinal plants. Finally, the

medicines will be stored in recycled plastic containers of 2kg, 4kg and 9kg and stored in a medical room waiting for the clients during consultations

Transport

Regarding product transportation, the medication that is found locally is collected on foot, and the package is then carried back to the ACAM facilities. The other medicine outside the Zamdela area is collected by making several trips; either by taxi or bus. The practitioners transport the materials from the rural and urban markets. Most of the natural medicines are transported by car - using a car owned by the practitioners.

Promotion

The promotion in this health facility is both by the referrals of clients and word of mouth, and there are no government departments that assist in the promotion of the services of the health facility. The other important promotion, in the health facility, is done through an ancestral intervention, where through the medication available, ancestor's sends patients or clients to receive healing. The other promotion is done through by the healers' organization who do everything in their power to promote the health facility's products and services to needy customers and communities. There was no attempt by the health facility to contact the pharmaceutical companies in promoting the CAM medicinal products.

Prices

The ACAM practitioners discuss prices of services using the main price list supplied by the health facility. The prices for products in the health facility differ according to the service and products to be prescribed. The products for services in this health facility are given to the customers in units of a teaspoon, a handful, table-spoon, recycled old plastics and old newspapers. The prices of services in this facility range from R50 to R5000, depending on the service that will be provided. Refer to the price list above.

Capacity building by the Department of Health

There is no plan of training the ACAM practitioners and the ACAM facilities as training is done on a very small-scale to selected CAM practitioners or organisations provincially and nationally. The National Health department offered CAM Health Facility short courses in primary health care services such as TB, HIV and Polio detection services. The health facility F was also trained in sick leave form completion and making referrals to clinics and hospitals for TB, HIV and polio for children. According to CAM Health Facility F, there is a plan to extend the training to financial management and customer services, which will assist the ACAM practitioners to effectively manage, promote, organise and market the ACAM facility effectively.

Annexure M: Researcher's Rating by ACAM Practitioners

Please circle the correct answer according to your observation where

1 Strongly Disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly Agree

| Description | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|-------------------|----------|---------|-------|----------------|
| Be satisfied with costing | 1 | 2 | 3 | 4 | 5 |
| Acquire more knowledge of costing | 1 | 2 | 3 | 4 | 5 |
| Our facility is suitable for costing | 1 | 2 | 3 | 4 | 5 |
| Providing clear criteria for evaluation of costing | 1 | 2 | 3 | 4 | 5 |
| Identifying clearly the costing purposes | 1 | 2 | 3 | 4 | 5 |
| The researcher provided and assisted in suitable costing activities | 1 | 2 | 3 | 4 | 5 |
| The researcher gave feedback to the practitioners | 1 | 2 | 3 | 4 | 5 |
| The researcher came to the field work regularly | 1 | 2 | 3 | 4 | 5 |
| The researcher taught us costing accordingly | 1 | 2 | 3 | 4 | 5 |
| The researcher taught costing in a more understandable manner | 1 | 2 | 3 | 4 | 5 |
| The researcher taught costing content from easy to difficult | 1 | 2 | 3 | 4 | 5 |
| The researcher emphasized principles of reason rather than costing by heart | 1 | 2 | 3 | 4 | 5 |
| The researcher provided opportunity to think and ask | 1 | 2 | 3 | 4 | 5 |
| The researcher provided enough time to consult on costing | 1 | 2 | 3 | 4 | 5 |
| The researcher taught how to assign cost properly and easily | 1 | 2 | 3 | 4 | 5 |

Annexure N: The Activity Which ACAM Practitioners Liked Most

Questions on your opinion about costing activities

The purpose is to survey ACAM practitioners' attitudes towards costing activities. Mark with an X on the activity that you love the most

| Activities | Items | Mark with an X |
|-------------------|---|-----------------------|
| 1 | Self-Introduction | |
| 2 | Activity Identification | |
| 3 | Activity Analysis | |
| 4 | Assignment of costs | |
| 5 | Calculate Activity Rates | |
| 6 | Assign costs to cost objects | |
| 7 | Prepare and distribute management reports | |
| 8 | Coffee-Break Atmosphere | |

Annexure O: Total Production Cost of Criminal Service for ACAM Facility A

| CAM Health Facility A | | | | | |
|-----------------------------------|---------------------|---------------------------|--------------------------|--------------------|---------------|
| Name of Service: Homestead | | | | | |
| MATERIAL | | | | | |
| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Measurement (UM) | Cost per Unit (CU) | Total Price |
| Product A (2 Cloth) | 100 | 20 | ml | 5.00 | 100.00 |
| Product B | 150 | 20 | ml | 7.50 | 150.00 |
| Product C | 100 | 20 | ml | 5.00 | 100.00 |
| Product D | 150 | 20 | ml | 7.50 | 150.00 |
| Product E | 200 | 20 | ml | 10.00 | 200.00 |
| Others (1) @ 50 | 50 | 20 | ml | 2.50 | 50.00 |
| TOTAL | 700 | 100 kg | | 35.00 | 750.00 |



| LABOUR | | | | |
|----------------------|-------------------|---------------------|--------------------|------------------|
| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) |
| Product A | 1 | 1 | 25.00 | 25.00 |
| Product B | 1 | 1 | 25.00 | 25.00 |
| Product C | 1 | 1 | 15.00 | 15.00 |
| Product D | 1 | 1 | 15.00 | 15.00 |
| Product E | 1 | 1 | 25.00 | 25.00 |
| Others (1 @ 1 Hrs) | 1 | 1 | 15.00 | 15.00 |
| TOTAL | 5 | 5 | 105.00 | 120.00 |



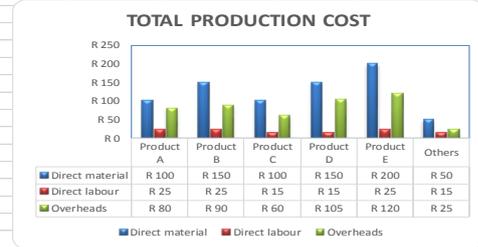
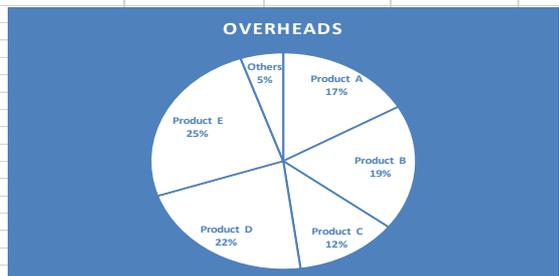
Amount deducted from the training Amount as are not paid physically and includes the provisions of the service

| OVEHEADS | | | | | | | |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|
| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Oost | Cost Per Labour Hour |
| Product A | 30.00 | 10.00 | 10.00 | 20.00 | 10.00 | 80.00 | 80.00 |
| Product B | 15.00 | 15.00 | 15.00 | 30.00 | 15.00 | 90.00 | 90.00 |
| Product C | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 60.00 |
| Product D | 30.00 | 15.00 | 15.00 | 30.00 | 15.00 | 105.00 | 105.00 |
| Product E | 20.00 | 20.00 | 20.00 | 40.00 | 20.00 | 120.00 | 120.00 |
| Others | 5.00 | 5.00 | 10.00 | 5.00 | 0.00 | 25.00 | 25.00 |
| TOTAL | 110.00 | 75.00 | 80.00 | 145.00 | 70.00 | 480.00 | 480.00 |

| Estimated Percentage Cost | | | |
|----------------------------------|----------------|---------|-----------------|
| Name of Overheads | Percentage (%) | Average | Number of Hours |
| Transport Cost (TC) | 0.3 | 500 | 62.5 |
| Storage Cost (SC) | 0.1 | 50 | 6.25 |
| Water Cost (WC) | 0.1 | 100 | 12.5 |
| Electricity Cost (EC) | 0.2 | 100 | 12.5 |
| Packaging Cost (PC) | 0.1 | 50 | 6.25 |

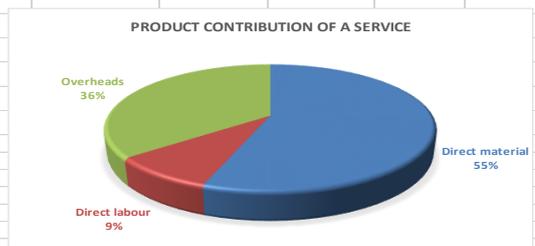
Oveheads calculated as the percentage of the product concerns.

| CRIMINAL CASES SERVICES FOR HEALTH FACILITY A | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|-------------|----------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
| Direct material | R 100 | R 150 | R 100 | R 150 | R 200 | R 50 | R 750 |
| Direct labour | R 25 | R 25 | R 15 | R 15 | R 25 | R 15 | R 120 |
| Overheads | R 80 | R 90 | R 60 | R 105 | R 120 | R 25 | R 480 |
| TOTAL | R 205 | R 265 | R 175 | R 270 | R 345 | R 90 | R 1 350 |



The above graph shows the cost element's total production cost of the provision of a criminal case
Transport Cost (Storage Cost Water Cost (WC) Electricity C Packaging Cost (PC)

| Cost Element (CE) | Total Amount |
|-------------------|-------------------|
| Direct material | R 750.00 |
| Direct labour | R 120.00 |
| Overheads | R 480.00 |
| TOTAL | R 1 350.00 |



The above figure shos the cost elements contributions on the provision of criminal cases by the ACAMpractitioners in South Aftica. The figure reveals that in providing this service, direct materials are the most expensive as it contribute about 55% of the service, followed by oveheads on 36%, while the laboiu cost contribute approximately 9%.

Annexure P: Total Production Cost of Sehuba Service for ACAM Facility B

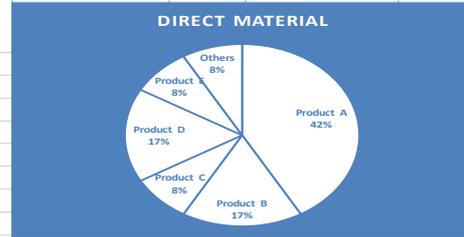
CAM Health Facility B

Name of Service: TB

MATERIAL

| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Mesurement (UM) | Cost per Unit (CU) | Total Price |
|----------------------|---------------------|---------------------------|-------------------------|--------------------|---------------|
| Product A | 250 | 20 | ml | 12.50 | 250.00 |
| Product B | 100 | 20 | ml | 5.00 | 100.00 |
| Product C | 50 | 20 | ml | 2.50 | 50.00 |
| Product D | 100 | 20 | ml | 5.00 | 100.00 |
| Product E | 50 | 20 | ml | 2.50 | 50.00 |
| Others (1) @ 50 | 50 | 20 | ml | 2.50 | 50.00 |
| TOTAL | 550 | 100 | kg | 27.50 | 600.00 |

1 ml = 1 gram



LABOUR

| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) |
|----------------------|-------------------|---------------------|--------------------|------------------|
| Product A | 1 | 1 | 25.00 | 25.00 |
| Product B | 1 | 1 | 25.00 | 25.00 |
| Product C | 1 | 1 | 15.00 | 15.00 |
| Product D | 1 | 1 | 15.00 | 15.00 |
| Product E | 1 | 1 | 25.00 | 25.00 |
| Others (1 @ 1 Hr) | 1 | 1 | 15.00 | 15.00 |
| TOTAL | 5 | 5 | 120.00 | 120.00 |



Amount deducted from the training Amount as are not paid physically and includes the provisions of the service

OVEHEADS

| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Oost | Cost Per Labour Hour |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|
| Product A | 75.00 | 25.00 | 25.00 | 50.00 | 25.00 | 200.00 | 200.00 |
| Product B | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 60.00 |
| Product C | 5.00 | 5.00 | 5.00 | 10.00 | 5.00 | 30.00 | 30.00 |
| Product D | 20.00 | 10.00 | 10.00 | 20.00 | 10.00 | 70.00 | 70.00 |
| Product E | 5.00 | 5.00 | 5.00 | 10.00 | 5.00 | 30.00 | 30.00 |
| Others | 5.00 | 5.00 | 10.00 | 5.00 | 0.00 | 25.00 | 25.00 |
| TOTAL | 120.00 | 60.00 | 65.00 | 115.00 | 55.00 | 415.00 | 415.00 |

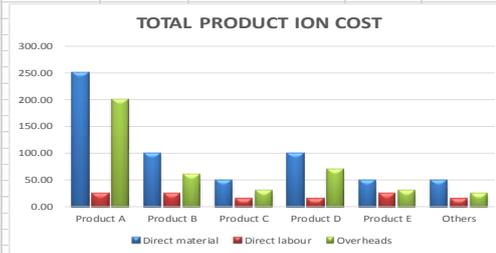
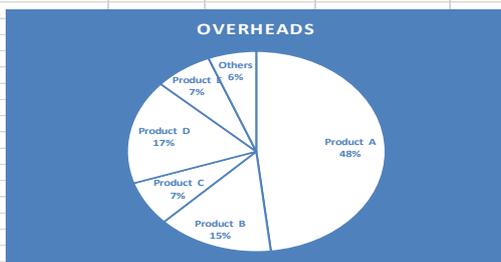
Estimated Percentage Cost

| Name of Overheads | Percentage (%) | Average | Number of Hours |
|-----------------------|----------------|---------|-----------------|
| Transport Cost (TC) | 0.3 | 500 | 62.5 |
| Storage Cost (SC) | 0.1 | 50 | 6.25 |
| Water Cost (WC) | 0.1 | 100 | 12.5 |
| Electricity Cost (EC) | 0.2 | 100 | 12.5 |
| Packaging Cost (PC) | 0.1 | 50 | 6.25 |

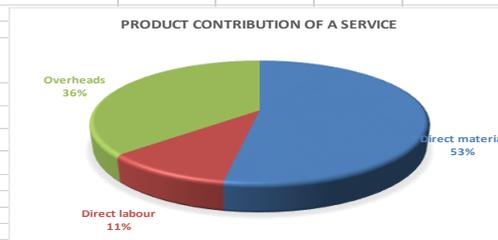
Oveheads calculated as the percentage of the product concerns.

TB SEHUBA SERVICE FOR ACAM FACILITY B

| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
|-------------------|---------------|---------------|--------------|---------------|---------------|--------------|----------------|
| Direct material | 250.00 | 100.00 | 50.00 | 100.00 | 50.00 | 50.00 | 600.00 |
| Direct labour | 25.00 | 25.00 | 15.00 | 15.00 | 25.00 | 15.00 | 120.00 |
| Overheads | 200.00 | 60.00 | 30.00 | 70.00 | 30.00 | 25.00 | 415.00 |
| TOTAL | 475.00 | 185.00 | 95.00 | 185.00 | 105.00 | 90.00 | 1135.00 |



| Cost Element (CE) | Total Amount |
|-------------------|----------------|
| Direct material | 600.00 |
| Direct labour | 120.00 |
| Overheads | 415.00 |
| TOTAL | 1135.00 |



Annexure Q: Total Production Cost of Homestead Service for ACAM Facility C

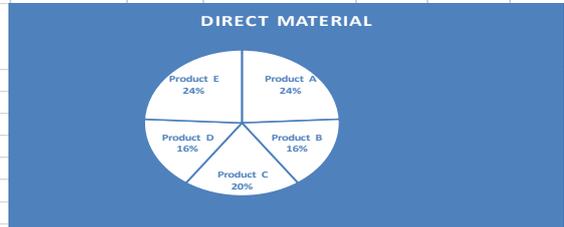
CAM Health Facility C

Name of Service: Homestead

MATERIAL

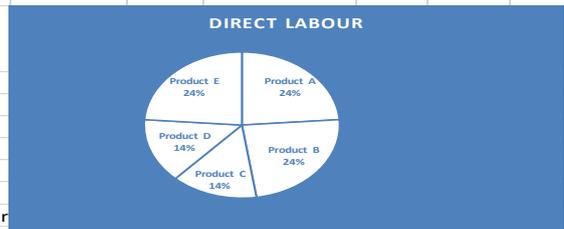
| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Mesurement (UM) | Cost per Unit (CU) | Total Price |
|----------------------|---------------------|---------------------------|-------------------------|--------------------|---------------|
| Product A | 150 | 20 ml | ml | 7.50 | 150.00 |
| Product B | 100 | 20 ml | ml | 5.00 | 100.00 |
| Product C | 120 | 20 ml | ml | 6.00 | 120.00 |
| Product D | 100 | 20 ml | ml | 5.00 | 100.00 |
| Product E | 150 | 20 ml | ml | 7.50 | 150.00 |
| TOTAL | 620 | 100 kg | | 31.00 | 620.00 |

1 ml = 1 gram



LABOUR

| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) |
|----------------------|-------------------|---------------------|--------------------|------------------|
| Product A | 4 | 1 | 25.00 | 100.00 |
| Product B | 4 | 1 | 25.00 | 100.00 |
| Product C | 4 | 1 | 15.00 | 60.00 |
| Product D | 4 | 1 | 15.00 | 60.00 |
| Product E | 4 | 1 | 25.00 | 100.00 |
| TOTAL | 20 | 5 | 105.00 | 420.00 |



Amount deducted from the training Amount as are not paid physically and includes the pr

OVEHEADS

| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Oost | Cost Per Labour Hour |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|
| Product A | 45.00 | 15.00 | 15.00 | 30.00 | 15.00 | 120.00 | 30.00 |
| Product B | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 15.00 |
| Product C | 12.00 | 12.00 | 12.00 | 24.00 | 12.00 | 72.00 | 18.00 |
| Product D | 20.00 | 10.00 | 10.00 | 20.00 | 10.00 | 70.00 | 17.50 |
| Product E | 15.00 | 15.00 | 15.00 | 30.00 | 15.00 | 90.00 | 22.50 |
| TOTAL | 102.00 | 62.00 | 62.00 | 124.00 | 62.00 | 412.00 | 103.00 |

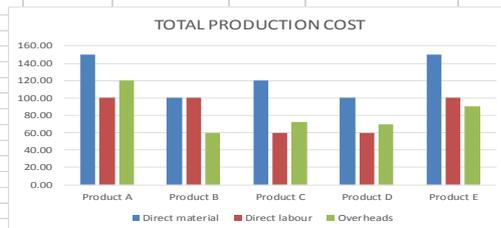
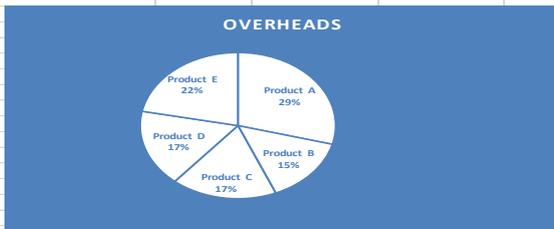
Estimated Percentage Cost

| Name of Overheads | Percentage (%) | Average | Number of Hours |
|-----------------------|----------------|---------|-----------------|
| Transport Cost (TC) | 0.3 | 500 | 62.5 |
| Storage Cost (SC) | 0.1 | 50 | 6.25 |
| Water Cost (WC) | 0.1 | 100 | 12.5 |
| Electricity Cost (EC) | 0.2 | 100 | 12.5 |
| Packaging Cost (PC) | 0.1 | 50 | 6.25 |

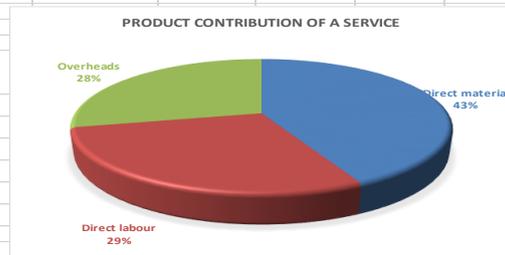
Oveheads calculated as the percentage of the product concerns.

MOTSE HOMESTEAD SERVICE FOR ACAM FACILITY C

| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Total Amount |
|-------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Direct material | 150.00 | 100.00 | 120.00 | 100.00 | 150.00 | 620.00 |
| Direct labour | 100.00 | 100.00 | 60.00 | 60.00 | 100.00 | 420.00 |
| Overheads | 120.00 | 60.00 | 72.00 | 70.00 | 90.00 | 412.00 |
| TOTAL | 370.00 | 260.00 | 252.00 | 230.00 | 340.00 | 1452.00 |



| Cost Element (CE) | Total Amount |
|-------------------|----------------|
| Direct material | 620.00 |
| Direct labour | 420.00 |
| Overheads | 412.00 |
| TOTAL | 1452.00 |



Annexure R: Total Production Cost of Sefola Service for ACAM Facility D

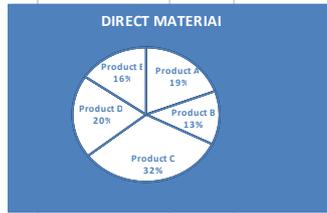
CAM Health Facility D

Name of Service: Sefola

MATERIAL

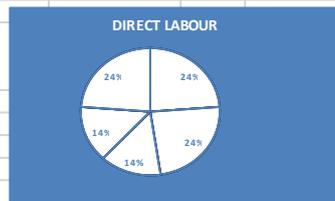
| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Measurement (UM) | Cost per Unit (CU) | Total Price |
|----------------------|---------------------|---------------------------|--------------------------|--------------------|---------------|
| Product A | 150 | 20 | ml | 7.50 | 150.00 |
| Product B | 100 | 20 | ml | 5.00 | 100.00 |
| Product C | 250 | 20 | ml | 12.50 | 250.00 |
| Product D | 155 | 20 | ml | 7.75 | 155.00 |
| Product E | 120 | 20 | ml | 6.00 | 120.00 |
| TOTAL | 775 | 100 | kg | 38.75 | 775.00 |

1 ml = 1 gram



LABOUR

| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) |
|----------------------|-------------------|---------------------|--------------------|------------------|
| Product A | 1 | 1 | 25.00 | 25.00 |
| Product B | 1 | 1 | 25.00 | 25.00 |
| Product C | 1 | 1 | 15.00 | 15.00 |
| Product D | 1 | 1 | 15.00 | 15.00 |
| Product E | 1 | 1 | 25.00 | 25.00 |
| TOTAL | 5 | 5 | 105.00 | 105.00 |



Amount deducted from the training Amount as are not paid physically and includes the provisions of the service

OVEHEADS

| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Cost | Cost Per Labour Hour |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|
| Product A | 45.00 | 15.00 | 15.00 | 30.00 | 15.00 | 120.00 | 120.00 |
| Product B | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 60.00 |
| Product C | 25.00 | 25.00 | 25.00 | 50.00 | 25.00 | 150.00 | 150.00 |
| Product D | 31.00 | 15.50 | 15.50 | 31.00 | 15.50 | 108.50 | 108.50 |
| Product E | 12.00 | 12.00 | 12.00 | 24.00 | 12.00 | 72.00 | 72.00 |
| TOTAL | 123.00 | 77.50 | 77.50 | 155.00 | 77.50 | 510.50 | 510.50 |

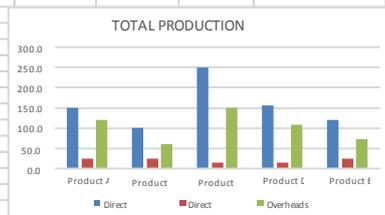
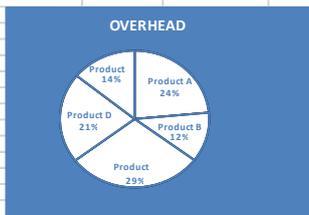
Estimated Percentage Cost

| Name of Overhead | Percentage (%) | Average | Number of Hours |
|-----------------------|----------------|---------|-----------------|
| Transport Cost (TC) | 0.24 | 500 | 62.5 |
| Storage Cost (SC) | 0.16 | 500 | 6.25 |
| Water Cost (WC) | 0.15 | 100 | 12.5 |
| Electricity Cost (EC) | 0.30 | 100 | 12.5 |
| Packaging Cost (PC) | 0.15 | 500 | 6.25 |

Oveheads calculated as the percentage of the product concerns.

SEFOLA SERVICE FOR ACAM FACILITY D

| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Total Amount |
|-------------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Direct material | 150.00 | 100.00 | 250.00 | 155.00 | 120.00 | 775.00 |
| Direct labour | 25.00 | 25.00 | 15.00 | 15.00 | 25.00 | 105.00 |
| Overheads | 120.00 | 60.00 | 150.00 | 108.50 | 72.00 | 510.50 |
| TOTAL | 295.00 | 185.00 | 415.00 | 278.50 | 217.00 | 1390.50 |



| Cost Element (CE) | Total Amount |
|-------------------|---------------|
| Direct material | 775 |
| Direct labour | 105 |
| Overheads | 510.5 |
| TOTAL | 1390.5 |



Annexure S: Total Production Cost of a Job Service for ACAM Facility E

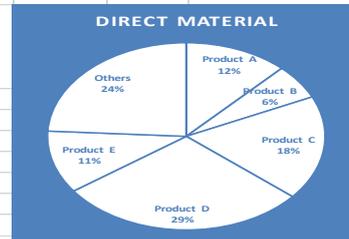
CAM Health Facility E

Name of Service: Looking for Job

MATERIAL

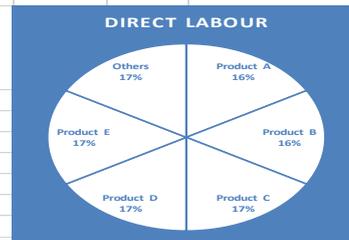
| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Measurement (UM) | Cost per Unit (CU) | Total Price |
|----------------------|---------------------|---------------------------|--------------------------|--------------------|---------------|
| Product A | 50 | 20 | ml | 2.50 | 50.00 |
| Product B | 25 | 20 | ml | 1.25 | 25.00 |
| Product C | 75 | 20 | ml | 3.75 | 75.00 |
| Product D | 120 | 20 | ml | 6.00 | 120.00 |
| Product E | 45 | 20 | ml | 2.25 | 45.00 |
| Others (2) @ (45+55) | 100 | 60 | ml | 1.67 | 100.00 |
| TOTAL | 315 | 100 kg | | 15.75 | 415.00 |

1 ml = 1 gram



LABOUR

| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) |
|----------------------|-------------------|---------------------|--------------------|------------------|
| Product A | 1 | 1 | 15.00 | 15.00 |
| Product B | 1 | 1 | 15.00 | 15.00 |
| Product C | 1 | 1 | 15.00 | 15.00 |
| Product D | 1 | 1 | 15.00 | 15.00 |
| Product E | 1 | 1 | 15.00 | 15.00 |
| Others (2 @ 1 Hrs) | 1 | 1 | 15.00 | 15.00 |
| TOTAL | 5 | 5 | 75.00 | 90.00 |



Amount deducted from the training Amount as are not paid physically and includes the provisions of the service

OVEHEADS

| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Oost | Cost Per Labour Hour |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|
| Product A | 15.00 | 5.00 | 5.00 | 10.00 | 5.00 | 40.00 | 40.00 |
| Product B | 2.50 | 2.50 | 2.50 | 5.00 | 2.50 | 15.00 | 15.00 |
| Product C | 7.50 | 7.50 | 7.50 | 15.00 | 7.50 | 45.00 | 45.00 |
| Product D | 24.00 | 12.00 | 12.00 | 24.00 | 12.00 | 84.00 | 84.00 |
| Product E | 4.50 | 4.50 | 4.50 | 9.00 | 4.50 | 27.00 | 27.00 |
| Others | 10.00 | 10.00 | 20.00 | 10.00 | 0.00 | 50.00 | 50.00 |
| TOTAL | 63.50 | 41.50 | 51.50 | 73.00 | 31.50 | 261.00 | 261.00 |

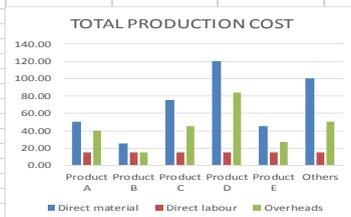
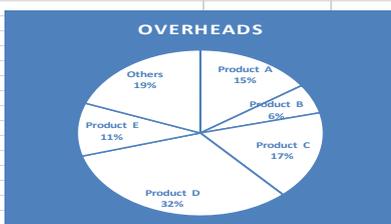
Estimated Percentage Cost

| Name of Overheads | Percentage (%) | Average | Number of Hours |
|-----------------------|----------------|---------|-----------------|
| Transport Cost (TC) | 0.3 | 500 | 62.5 |
| Storage Cost (SC) | 0.1 | 50 | 6.25 |
| Water Cost (WC) | 0.1 | 100 | 12.5 |
| Electricity Cost (EC) | 0.2 | 100 | 12.5 |
| Packaging Cost (PC) | 0.1 | 50 | 6.25 |

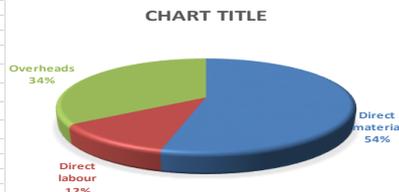
Overheads calculated as the percentage of the product concerns.

LOOKING FOR JOB FOR ACAM FACILITY E

| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount |
|-------------------|---------------|--------------|---------------|---------------|--------------|---------------|---------------|
| Direct material | 50.00 | 25.00 | 75.00 | 120.00 | 45.00 | 100.00 | 415.00 |
| Direct labour | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 90.00 |
| Overheads | 40.00 | 15.00 | 45.00 | 84.00 | 27.00 | 50.00 | 261.00 |
| TOTAL | 105.00 | 55.00 | 135.00 | 219.00 | 87.00 | 165.00 | 766.00 |



| Cost Element (CE) | Total Amount |
|-------------------|--------------|
| Direct material | 415 |
| Direct labour | 90 |
| Overheads | 261 |
| TOTAL | 766 |



Annexure T: Total Production Cost of Business Service for ACAM Facility F

| CAM Health Facility F | | | | | |
|------------------------------|---------------------|---------------------------|--------------------------|--------------------|---------------|
| Successful Business Services | | | | | |
| MATERIAL | | | | | |
| Name of Product (NP) | Purchase Price (PP) | Volume of Production (VP) | Unit of Measurement (UM) | Cost per Unit (CU) | Total Price |
| Product A | 150 | 20 | ml | 7.50 | 150.00 |
| Product B | 100 | 20 | ml | 5.00 | 100.00 |
| Product C | 200 | 20 | ml | 10.00 | 200.00 |
| Product D | 150 | 20 | ml | 7.50 | 150.00 |
| Product E | 100 | 20 | ml | 5.00 | 100.00 |
| Others (3) @ 60 | 180 | 60 | ml | 3.00 | 180.00 |
| TOTAL | 700 | 100 | kg | 35.00 | 880.00 |
| 1 ml = 1 gram | | | | | |
| LABOUR | | | | | |
| Name of Product (NP) | Labour Hours (LH) | Number of Employees | Rate per Hour (RH) | Total Price (TP) | |
| Product A | 3 | 1 | 25.00 | 75.00 | |
| Product B | 3 | 1 | 25.00 | 75.00 | |
| Product C | 3 | 1 | 15.00 | 45.00 | |
| Product D | 3 | 1 | 15.00 | 45.00 | |
| Product E | 3 | 1 | 25.00 | 75.00 | |
| Others (3 @ 1 Hrs) | 3 | 1 | 15.00 | 45.00 | |
| TOTAL | 15 | 5 | 105.00 | 360.00 | |

Amount deducted from the training Amount as are not paid physically and includes the provisions of the service

| OUEHEADS | | | | | | | | Estimated Percentage Cost | | | |
|----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|---------------|----------------------|---------------------------|----------------|---------|-----------------|
| Name of Product (NP) | Transport Cost (TC) | Storage Cost (SC) | Water Cost (WC) | Electricity Cost (EC) | Packaging Cost (PC) | Total Cost | Cost Per Labour Hour | Name of Overheads | Percentage (%) | Average | Number of Hours |
| Product A | 45.00 | 15.00 | 15.00 | 30.00 | 15.00 | 120.00 | 40.00 | | | | |
| Product B | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 20.00 | Transport Cost (TC) | 0.3 | 500 | 62.5 |
| Product C | 20.00 | 20.00 | 20.00 | 40.00 | 20.00 | 120.00 | 40.00 | Storage Cost (SC) | 0.1 | 50 | 6.25 |
| Product D | 30.00 | 15.00 | 15.00 | 30.00 | 15.00 | 105.00 | 35.00 | Water Cost (WC) | 0.1 | 100 | 12.5 |
| Product E | 10.00 | 10.00 | 10.00 | 20.00 | 10.00 | 60.00 | 20.00 | Electricity Cost (EC) | 0.2 | 100 | 12.5 |
| Others | 18.00 | 18.00 | 36.00 | 18.00 | 0.00 | 90.00 | 30.00 | Packaging Cost (PC) | 0.1 | 50 | 6.25 |
| TOTAL | 133.00 | 88.00 | 106.00 | 158.00 | 70.00 | 555.00 | 185.00 | | | | |

Overheads calculated as the percentage of the product concerns.

| SUCCESSFUL BUSINESS SERVICE FOR ACAM FACILITY F | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|
| Cost Element (CE) | Product A | Product B | Product C | Product D | Product E | Others | Total Amount | Percentage |
| Direct material | 150.00 | 100.00 | 200.00 | 150.00 | 100.00 | 180.00 | 880.00 | 49.03 |
| Direct labour | 75.00 | 75.00 | 45.00 | 45.00 | 75.00 | 45.00 | 360.00 | 20.06 |
| Overheads | 120.00 | 60.00 | 120.00 | 105.00 | 60.00 | 90.00 | 555.00 | 30.92 |
| TOTAL | 345.00 | 235.00 | 365.00 | 300.00 | 235.00 | 315.00 | 1795.00 | 100.00 |

| Cost Element (CE) | Total Amount |
|-------------------|--------------|
| Direct material | 880 |
| Direct labour | 360 |
| Overheads | 555 |
| TOTAL | 1795 |

Annexure U: Turfloop Research Ethics Committee Approval Letter



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2212, Fax: (015) 268 3935, Email:ansatasia.ngobe@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

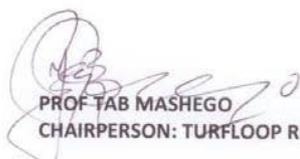
MEETING: 05 September 2018

PROJECT NUMBER: TREC/139/2018: PG

PROJECT:

Title: Adopting cost accounting model to facilitate decision making in Complementary and Alternative Medicines (CAM) Practice in South Africa.

Researcher: ML Taba
Supervisor: Prof MB Fakoya
Co-Supervisor: N/A
School: Accountancy
Degree: Doctor of Commerce



PROF TAB MASHEGO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
- ii) The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Annexure V: English Language Editing Certificate

RMCLANGUAGE PRACTITIONER
117 OOSTVALLEI VILLAGE
657 COLEY STREET
GARSFONTEIN
PRETORIA 0081

TO WHOM IT MAY CONCERN

This is to certify that I have proofread and edited the doctoral thesis (DCom) entitled ***Adopting a cost accounting model to facilitate decision making in African Complementary and Alternative Medicine Practice in South Africa*** by Makomane Lucas Taba.

I applied Microsoft Office Word track changes to the document and have suggested certain changes and corrections to language usage, syntax, and general style which I trust will be effected to make it suitable for examination.

Signed:



Date: 10 November 2020

Dr RV McCabe
MA in Applied Linguistics (NWU)
MPPS - Masters in Public Policy Studies (UP)
PhD in English Language Studies (NWU)

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 - **EMAIL: rvmccabe@oostvallei.co.za**