



**A Qualitative study on the Treatment practices of  
Complementary and Alternative Medicine  
practitioners in the treatment and management of  
Gastro Oesophageal Reflux Disease**

**By**

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**DECLARATION:**

I, Ashadré Naidoo, do hereby declare that this dissertation is representative of my own work, both in conception and execution, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

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## **DEDICATION**

To my number one supporter, my grandmother, Vimla Pillay for giving me the gift of education, for all the advice and valuable lifelong teachings that have made me the strong and resilient woman I am today.

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# **ABSTRACT**

## **Background**

Gastro Oesophageal Reflux Disease is a digestive disorder that occurs when stomach acid frequently flows up into the oesophagus and irritates the oesophageal cell lining and damages the lower oesophageal sphincter. This condition is commonly known as Acid Reflux or Regurgitation, encompassing a range of different disorders such as dyspepsia and pyrosis and in some cases may cause difficulty swallowing. There may be a sour or bitter taste at the back of the mouth due to reflux of acid. Gastro Oesophageal Reflux Disease is difficult to treat successfully. Prolonged Gastro Oesophageal Reflux Disease leads to injury and inflammation of the oesophageal lining resulting in a condition known as Barrett's Oesophagus, with complications such as oesophageal cancer, ulceration and stricture of the oesophagus. Gastro Oesophageal Reflux Disease is commonly seen in pregnant women and individuals with hiatal hernias that suffer from dyspepsia and pyrosis, it is also commonly seen as a side effect of medication and, more commonly, stress and anxiety related effects. Gastro Oesophageal Reflux Disease and other gastrointestinal disorders are caused due to stress related inflammation which occurs in patients with stressful lifestyles.

## **Aim of study**

This study aimed to identify the possible therapeutic practices and management of Gastro Oesophageal Reflux Disease from diagnosis to treatment plans by various Complementary and Alternative Medicine protocols within the context of their philosophical backgrounds. Furthermore, this research study would document valuable information of six different Complementary and Alternative Medicine modalities. These modalities are Traditional Chinese Medicine, Ayurveda, Unani-Tibb, Homoeopathy and Reflexology.

## **Methodology**

The research methodology has utilized a qualitative design incorporating semi-structured interviews of twelve Complementary and Alternate Medicine practitioners in the eThekweni area on their treatment of Gastro Oesophageal Reflux Disease. Interviews were done with each Complementary and Alternative Medicine practitioner at a place that was convenient to each practitioner. The interviews were recorded on a Dictaphone and a mobile audio recorder. Each interview was 30 minutes long and was guided by research questions. A stratified purposive sampling was implemented in order to select practitioners according to their modality in the provinces of South Africa exclusively. A pilot study was conducted to ensure trustworthiness and Ethics approval was sort from the Durban University of Technology Institutional Research Ethics Committee (IREC)

Analysis of data utilized qualitative design methods that would produce themes and concepts from the information collected.

## **Results**

The findings of this study showed that Gastro-oesophageal Reflux Disease can be interpreted by many Complementary and Alternative Medicine modalities according to different philosophies such as Miasms, Temperaments, Systemic Meridians and Doshas. Each Complementary and Alternative Medicine philosophy is governed by a set of factors that requires homeostasis to produce optimal health. Despite the various philosophical theories, all modalities were underpinned by the same principle that Gastro Oesophageal Reflux Disease is caused by a constitutional imbalance. This is characterized, in modern times, by inflammation, acidic build up, emotional and mental health and physical conditions, being understood as contributing factors of Gastro Oesophageal Reflux Disease, thus the theme of individualization was the key understanding in the treatment and management protocols. Each Complementary and Alternative Medicine modality prescribed well indicated herbal medicine in conjunction with lifestyle modification best suited for each patient individually. Management included therapies such as acupuncture, yoga, cupping and calming exercises. Furthermore, each modality “borrowed” medicines or

therapies from other modalities in order to enhance the efficacy of the treatment and management of Gastro Oesophageal Reflux Disease.

## **Conclusion**

It was concluded that Gastro Oesophageal Reflux Disease needs a multidimensional approach of treatment and management. Lifestyle changes, medication (herbs and remedies), stress management and dietary changes are needed to correct and manage Gastro Oesophageal Reflux Disease along with reducing or preventing the risk of complications that can manifest. Overall, the treatment and management through Complementary and Alternative Medicine modalities can improve the quality of life of patients with Gastro Oesophageal Reflux Disease.

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## Definition of terms (Farlex, 2019)

GORD	Acronym for Gastro-Oesophageal Reflux Disease
CAM	Acronym for Complementary and Alternate Medicine
Allopathy	Conventional medical treatment of disease symptoms that uses substances or techniques to oppose or suppress the symptoms.
Pathophysiology	The functional changes associated with or resulting from disease or injury.
Squamous cells	Thin flat cells on the surfaces of the skin, cervix and linings of various organs
LES( Lower Oesophageal Sphincter)	Musculature of the Gastroesophageal junction that is tonically active except during swallowing.
Anticholinergics	Antagonistic to the action of parasympathetic or other cholinergic nerve fibres( for example: Atropine)
Beta Blockers	Medicines that affect the body's response to certain nerve impulses. This, in turn, decreases the force and rate of the heart's contractions, which lowers blood pressure and reduces the heart's demands for oxygen.
Pyrosis	A burning sensation in the oesophagus, or below the sternum in the region of the heart, one of the common symptoms of indigestion, also called heartburn.
Dysphagia	Difficulty in swallowing
Odynophagia:	Painful swallowing

Dyspepsia	Dyspepsia can be defined as painful, difficulty, or disturbed digestion, which may be accompanied by symptoms such as nausea and vomiting, heartburn, bloating and bloating.
Pepsin	A proteolytic enzyme that is the principle digestive component of gastric juice and acts as a catalyst in the chemical breakdown of protein.
Bile	A bitter, alkaline, brownish-yellow or greenish-yellow fluid that is secreted by the liver, stored in the gallbladder, and discharged into the duodenum and aids in the emulsification, digestion and absorption of fats.
Peristalsis	The movement of the intestine or other tubular structure, characterized by waves of alternate circular contraction and relaxation of the tube by which the contents are propelled onward.
Basal Cells	A relatively undifferentiated epithelial cell, which gives rise to more specialized cells.
Pyknosis( Pyknotic cells)	A thickening or condensation; specifically a condensation and reduction in the size of the cell or its nucleus, usually associated with hyperchromatosis; nuclear pyknosis is a stage of necrosis.
Repertory	A reference book which lists homeopathic symptoms and the remedies used to treat them. Details on the modalities, locations and sensation associated with the symptoms may be

	exhaustive. Repertories are typically very large.
Materia Medica	A reference encyclopaedia that lists the effects of homeopathic remedies.
Endorphins	Opioid peptides originally isolated from the brain but now found in many parts of the body; in the nervous system endorphins bind to the same receptors that bind exogenous opiates.
Enkephalin	Endopeptide endorphins, found in many parts of the brain, that bind to specific receptor sites, some of which may be pain-related opiate receptors; hypothesized as endogenous neurotransmitters and non-addicting analgesics.
NSAID's(Non-Steroidal Ant-Inflammatory Drugs)	A type of medicine used to relieve pain, swelling and other symptoms of inflammation, such as ibuprofen or ketoprofen.
Gut Microbiome	The complete genetic content of all the microorganisms that typically inhabit a particular environment, especially a site in the gastrointestinal tract.

## **CHAPTER ONE: INTRODUCTION**

This chapter provides the information necessary to prepare the reader for what to expect from the research study by outlining its contents as well as the research problem, aims and questions. The chapter focuses on unravelling the rationale behind this qualitative study. The aim of this study is comprehensively explore the many therapeutic approaches conducted by the Homeopathy, Reflexology, Traditional Chinese medicine, Ayurveda and Unani-Tibb practitioners in the treatment and management of GORD.

In order to gain knowledge of how different practices treat certain diseases and disorders, there needs to be understanding on the approach taken for the diseases and disorders. If this could be understood, the different Complementary and Alternate practices and Allopathic medicinal practices can work together with a synergistic outlook for the benefit of the patients.

# Chapter One: Introduction and Outline

## 1.1 Introduction

Gastro-Oesophageal Reflux Disease (GORD) is a common digestive condition that develops when there is retrograde flow of stomach contents back into the oesophagus (Clarrett and Hachem, 2018). GORD is a clinical problem that affects many people in most countries worldwide and the incident of GORD can be high in the general population, as it is estimated to affect up to 20% of the population worldwide, being the most commonly diagnosed condition in gastroenterology practice (Boulton and Dettmar, 2021).

Due to modern fast paced lifestyles, a quick amelioration of symptoms tends to be the go-to for most individuals suffering with GORD. The most common or classical symptoms of GORD are heartburn, sour eructation's and regurgitation. Heartburn, which is associated with acid reflux, is a painful, burning sensation rising up the oesophagus to the pharynx (throat), often felt in the middle of the chest retrosternally (Clarrett and Hachem, 2018). The burning sensation is due to the regurgitation of stomach contents back up the oesophagus and can often cause sour eructation or food tastes in the mouth (National Institute of Diabetes and Digestive and Kidney Diseases, 2020). Other symptoms of GORD present as chest pain, nausea and when left untreated, can result in a chronic cough. More serious complications that can occur if GORD is untreated include Oesophagitis and Barrett's Oesophagus, which can progress to malignant transformations (Clarrett and Hachem, 2018).

Conventional treatment and management of GORD addresses the resolution of symptoms and prevention of complications. The main option presented is medicinal therapy such as Proton Pump Inhibitors and other gastric acid suppressants that are either over the counter medications, or scheduled prescription medication (Antunes et al., 2023). However, overuse or misuse of these medications can lead to serious side effects such as vitamin deficiencies, increased risk of bone fractures, nausea, diarrhoea, constipation and headaches, with potential risks for more serious systemic conditions including liver, kidney and cardiovascular diseases. An overuse or misuse medication can also increase susceptibility to respiratory and gastrointestinal infections (Harvard Medical School, 2021).

Complementary and Alternative Medicine (CAM) refers to a wide range of healthcare practices that are not part of conventional medicine and may not be fully integrated into the dominant healthcare system (World Health Organisation, 2019). CAM is becoming more popular in the area of chronic conditions. Patients are diverting to CAM when conventional methods have failed them or resulted in undesirable side effects. Patients are also persuaded due to the negative aspects of a patient-practitioner relationship, which can be perceived as more practitioner dominated than patient-centred. Another outlook can indicate that patients are drawn to alternate medicine due to its safety, cost effectiveness and holistic nature, as well as the cooperative relationship experienced with CAM practitioners (Fallis, 2012). Studies show that patients with GORD can benefit from CAM for the reduction of symptoms with minimal side effects due to the different approaches taken by individual CAM practitioners (Zhang et al., 2020). Limited established evidence-based protocols have been documented formally in the CAM systems of therapeutics, currently.

Therefore this study aims to document possible existing CAM therapies in the management of GORD by various systems of CAM within the context of their unique philosophical backgrounds, and thereafter determine whether the information presented is evidence based. Furthermore, there are many patients and practitioners that do not fully understand the philosophies, thus documenting this information is valuable to enlighten Medical practitioners, CAM practitioners and patients. This may bridge the gap and further information regarding specific CAM practices available for the treatment and management of GORD.

## **1.2. Outline of Dissertation**

### **1.2.1. Context of Research**

Gastro Oesophageal Reflux disease, with its accompanying symptoms, is becoming more prevalent in society as it is primarily stress related. Stress usually causes many problems in the gastrointestinal system. A stressful lifestyle, bad eating habits, use of relaxants and stimulants are all contributing factors that increase stress on the body (Porter and Kaplan, 2011). Stress often leads to digestive problems, if a person is very busy there is no time for the body to properly digest and assimilate food. During stressful times, people often turn to fast food; however, foods in this category have

very little nutritional value. Stimulants such as caffeine, or relaxants such as alcohol, also impact the gut negatively if taken in high amounts frequently as their acidity affects the lining of the stomach and intestines (Sethi and Richter, 2017).

Pharmacological drugs available to treat the symptoms of GORD are predominantly antacids, anti-diarrheal and drugs containing proton pump inhibitors (National Institute of Diabetes and Digestive and Kidney Diseases, 2020). Ant-acids counteract stomach acidity and prevent pyrosis, however they may alter the absorption of other drugs that could be taken chronically. Anti-diarrheal medicines decrease the frequency and urgency of bowel movement. The mainstream treatment of proton pump inhibitors decreases the amount of acid released in the stomach and functionally works to decrease the transient Lower Oesophageal Sphincter (LES) relaxation rate and sensitivity. The cramp sensation from abdominal pain or oesophageal spasms associated with GORD are often treated with medicines containing the key ingredient of hyoscine butyl bromide. Other key drug components used in the treatment of GORD are histamine antagonist (H2 receptor antagonist), prokinetic medicines and visceral pain modulators (Dreyer et al., 2016).

Complementary and Alternate medicine is growing in South Africa, the perception in terms of healing is to become more holistic and includes practices such as Homoeopathy, Chiropractic, Ayurveda, Reflexology, Chinese Medicine, Phytotherapy, Naturopathy and other modalities listed as alternate practices under the Allied Health Professionals Council of South Africa [AHPCSA] (The Allied Health Professions Council of South Africa, 2023). In order to gain knowledge of how different modalities treat certain diseases and disorders, there needs to be an understanding of the approach taken for the treatment practices by each modality. If this could be understood, the different Complementary and Alternate practices and Allopathic medicinal practices can work together with a synergistic outlook for the benefit of the patients (Shirwaikar et al., 2013, Agarwal, 2018).

### 1.2.2 Research problem

GORD is an increasing global problem due to the effect that stress has on the digestive tract. There are medicines available for the treatment thereof, but no

research has been conducted correlated these 5 CAM modalities together in such a manner as to providing a comparative baseline when managing this disorder. Review of the current literature indicates the extensive use of homeopathy, Unani-Tibbs, Ayurveda, Reflexology, and Traditional Chinese Medicine as common methods of treating GORD. Hence, these five treatment practices were chosen as modalities for this study (Kemppainen et al., 2018).

### 1.2.3 Research Aims

This qualitative research aims to explore the treatment and management practices of complementary and alternate medicine practitioners in the treatment of GORD in South Africa.

### 1.2.4 Research Questions

1. What are the South African Homeopathy, reflexology, traditional Chinese Medicine, Ayurveda and Unani-Tibbs CAM practitioners understanding of the cause, trends and patterns seen in the treatment of patients GORD?
2. What is the experience of the South African Homeopathy, reflexology, traditional Chinese Medicine, Ayurveda and Unani-Tibbs CAM practitioners in treating patients with GORD?
3. What is the treatment and management plan of the South African Homeopathy, Reflexology, Traditional Chinese Medicine, Ayurveda and Unani-Tibb CAM practitioners when treating patients with GORD?
4. What are the referral patterns of the South African Homeopathy, reflexology, traditional Chinese Medicine, Ayurveda and Unani-Tibbs CAM practitioners in treating patients with GORD?

The next chapter that follows is Literature Review, which builds on the brief descriptions of the study in the introduction, focusing on the understanding of GORD as a disease, including conventional therapies, and introducing CAM modalities more extensively.

## **CHAPTER TWO: LITERATURE REVIEW**

This chapter is an overview of the key literature that is relevant to the research topic/title i.e. Gastro-Oesophageal Reflux Disease and the complementary and alternative modalities. This chapter includes sections on pathophysiology, philosophies and general comparisons of each modality.

The literature reads as follows: An introduction to CAM, Defining GORD as a disease, basic pathophysiology, clinical diagnosis of GORD, the epidemiology and allopathic treatments. Information of GORD is then followed by the philosophies of the CAM modalities Homeopathy, Reflexology, Traditional Chinese Medicine, Ayurveda and Unani Tibb with general comparisons tabulated, correlating all CAM modalities that have been allocated for this study.

## **Chapter Two: Literature review**

### **2.1 Introduction to the concept of Complementary and Alternate Medicine (CAM)**

When looking at the historical to modern timeline of human healthcare, there were various means to diagnose, cure, manage or prevent different ailments and diseases using either natural, semi-synthetic as well as purely synthetic treatments (Ahmad et al., 2023). Conventional therapies are generally the first mainstream treatment for most acute and chronic diseases, including Gastro-oesophageal Reflux Disease (GORD). While Complementary and Alternative Medicine (CAM) therapies are usually the last resort due to the fast paced lifestyle of modern days. The impact and choice of medicinal system is dependent on the knowledge and belief each individual has on each system's efficacy and safety (Ekor, 2014).

While allopathic medicine has made significant contributions to the advancements to healthcare, it is not without its disadvantages. CAM modalities take on a more holistic and individualized approach, allopathy generally aims to provide symptomatic relief and not generally the underlying cause. CAM tends to be safer due to the more natural approach to medicine and practices, whereas allopathy may have serious side effects that can outweigh its benefits (Ahmad et al., 2023). Allopathic meds for conditions like GORD can be found in local pharmacies and whilst it can be costly (may depend on brand and schedule of drug), it may also be more cost effective due to it being more accessible. CAM depends on patient compliance due it its slower, yet long term relief, and may not be easily accessible or cost effective in South Africa specifically. This is due to CAM being inclusive in the healthcare systems, but has not yet fully integrated such as not being available in all healthcare levels within South Africa, i.e. not all medical health schemes may cover CAM practitioners or the accessibility to registered (by an official council) CAM provider or practitioner prescribed medicines (Mousavi et al., 2021). The cost effective aspects of natural therapy is what can be found locally , making the natural approach more accessible and cost effective .(Ekor, 2014)

Complementary and Alternative Medicine (CAM) comprises of a range treatments that generally fall outside of mainstream healthcare. However, the term CAM, when dissected, indicates that these non-mainstream practices can be used together with (complementary) or instead of (alternate) conventional/allopathic medicine (Phutrakool and Pongpirul, 2022). According to Ghaedi et al. (2017) CAM Modalities such as Homeopathy, Reflexology, Traditional Chinese Medicine, Ayurveda and Unani Tibb play a significant role in the treatment of long term ailments, thus it is said to have an increased frequency of usage, more so in patients who need management of their conditions chronically.

## **2.2 Definition of GORD**

Kumar et al. (2017) defines Gastro-Oesophageal Reflux Disease (GORD) as a digestive disorder that occurs when there is a retrograde flow of gastric contents into the oesophagus. This retrograde flow then irritates and erodes the oesophageal mucosa, which is made up of stratified squamous cells. This reflux of acid damages the lower oesophageal sphincter. This condition is commonly known as Acid Reflux.

## **2.3 Basic Physiology and Mechanism of the Oesophagus**

The Oesophagus is a hollow, muscular tube that is located in the mediastinum behind the trachea, serving as the essential passage way for one of the initial parts of the digestion of food (Rengarajan and Gyawali, 2021). The function of the oesophagus is to transport masticated and swallowed food boli and liquids from the pharynx to the stomach where it can be broken down by gastric acid, which is known as Hydrochloric acid (HCL). The muscle constituent of the oesophagus is designed to propel food down to the stomach (Chaudhry and Bordoni, 2023). There are muscular flaps on the superior and inferior parts of the oesophageal rings designed to open and close when eating. The lower muscular flap is called the epiglottis, which prevents food and liquids from going down the trachea, the smaller superior flap is called the uvula, which prevents liquids from passing upwards into the nasal cavity. The superior and inferior openings of the oesophageal tube have ring shaped muscles called Sphincters, which are one way valves that keep food moving in the right direction. The Upper Oesophageal Sphincter (UES) relaxes and contracts according to the presence of food that is sensed coming down the tube. Once foods

are within the oesophagus, a wave of muscular contractions called peristalsis pushes food downwards. The food then passes the diaphragm and reaches the Lower Oesophageal Sphincter (LES) which sits at the Oesophago-gastric junction and relates to food that passes through to the stomach. The LES stays shut to prevent reflux and regurgitation (Rengarajan and Gyawali, 2021).

## **2.4 Histology**

Rishniw et al. (2011) described the epithelium of an adult oesophagus is squamous and stratified. The oesophagus presents very similar to skin epithelium, which consists of a basal layer of dividing cells that constantly proliferates upwards, therefore there is constant replacing of the epithelial lining. The oesophageal lumen is made up of pyknotic cells that also have the ability to divide.

A study done by Paxton et al. (2019) describes four cellular levels of the Oesophagus that aids in the movement of food to the stomach and the prevention of acid reflux. The first inner layer is the mucosa, a moist layer that aids in the food passing smoothly into the stomach. The sub mucosa contains glands that produce mucous to keep the mucosa moist and forms a biochemical neutralizing system. The muscularis is a doubled smooth muscle layer that facilitates the peristalsis action of the oesophagus to push food downwards towards the stomach and is more prominent at the lower part of the oesophagus. The last layer is called the adventitia, the outer layer that attaches the oesophagus to the nearby parts around it (Paxton et al., 2019).

The oesophageal mucosa is the most prominent cellular layer and is directly influenced by external factors and is made of epithelium, lamina propria and muscularis externa mucosa. The epithelium is highly vascular whereas the lamina propria contains loose connective tissue, lymphatic capillaries and blood capillaries (Rishniw et al., 2011). According to Triantos et al. (2015) the external muscular layer, or muscularis externa, contains layers of smooth and skeletal muscles of stronger peristaltic action and adhesive purposes. Oesophageal mucosa consists of non-keratinized squamous epithelial cells that are divided into three protective layers, the proliferative stratum basalis, the metabolically active stratum and the enucleated stratum corneum. The epithelium makes up a biochemical neutralizing system that

when damaged causes a lack of mucous –secreting and bicarbonate-secreting cells, exposing the oesophagus mucosa to the toxic effects of the refluxate (Sharma and Yadlapati, 2021).

Increased exposure time of the mucosa to the gastric refluxate is due to the impaired retrograde flow of gastric content from the oesophagus (Galmiche et al., 2013). The most common complication is Oesophagitis due to the regurgitation of the refluxate. The improper clearance of the refluxate from the oesophagus leads to a condition called Barrett's Oesophagus, a specialized interstitial metaplasia of the lining epithelium of the oesophagus. Kumar et al. (2017) describes the manifestation of the condition as high grade dysplasia which often leads to oesophageal cancer, most commonly an oesophageal adenocarcinoma.

## **2.5 Aetiology and Pathogenesis**

The leading aetiology of GORD is an excessive movement of acid-containing substances in the gastric secretions or bile from the duodenum and stomach up into the oesophagus. The lower oesophagus sphincter (LES) causes the reflux, it may be a frequent transient LES relaxation, which is seen as functional or a hypotensive LES, which is seen as mechanical issues (Tack and Pandolfino, 2018). The major component that facilitates oesophageal mucosal damage is the refluxate due to its potency, composition and time of exposure to the oesophageal lining. The refluxate is made up of various levels of acid, food contents, bile, pepsin and normal gastrointestinal or gut microbiota (Sharma and Yadlapati, 2021).

A functional LES problem can be caused by certain foods, such as coffee, chocolate, alcohol, and any high fatty content foods due to the need for an increase in acidic gastric secretions to break-down the fats and therefore are associated with the increase risk of GORD. El-Serag et al. (2005) showed that the dietary intake of these foods leads to a decrease in lower oesophageal pressure and an increase in oesophageal acid exposure. The study shows that a daily intake of total fats, saturated fats and proteins were significantly higher in those that presented with GORD symptoms that was not associated with erosive oesophagitis.

Conversely, these foods are often craved during periods of stress and that exacerbates the problem. Hormones (e.g., progesterone) and high levels of nicotine

in the body seem to be contributing factors towards the disease. Thus, individuals in times of stress are prone to smoke more for the alleviation of stress, which in turn aggravates the GORD symptoms (Porter and Kaplan, 2011).

#### 2.4.1 Stress related changes to the oesophagus:

According to Yaribeygi et al. (2017), stress is difficult to define per individual; this is mainly due to the subjective experience of stress with large variations in the capacity to cope in stressful situations, thus the effect of stress can induce either a beneficial or harmful effect on the body. Studies done by Kogler et al. (2015) emphasises that a stressful experience can be real (physical) or perceived (psychological) which is caused by events in the environment or within the individual. Regardless of the cause, the body's response to maintain homeostasis is the same. A behavioural response would include anxiety, panic attacks, and nervousness. The autonomic response would be an increase in heart rate, blood pressure and inflammation. The hypothalamic- pituitary-adrenal axis response is an increase in cortisol levels with corticotrophin releasing hormone being the main mediator. An increase in cortisol indicates a Sympathetic Nervous System overdrive and a Parasympathetic under drive; this affects actions such as sleep, healing and digestion. Individuals dealing with these maladaptive responses will be predisposed to diseases in multiple organs in the body including the gastro-intestinal tract resulting in GORD and other conditions such as Irritable –Bowel Syndrome and Ulcerative Colitis. A probable mechanism that connects psychological stress to gastrointestinal diseases is the stress induced effects on the mucosal barrier function, motility perception and visceral perception which all contribute to the pathogenesis of heartburn and acid reflux (Sandhu and Fass, 2018).

According to Lee et al. (2017) stress is any threat to the homeostasis of the body and GORD patients often reported a link between stressful situations and their reflux symptoms. An increase in symptoms without an increase in acid exposure can possibly be explained by an induction of oesophageal hypersensitivity to GORD during periods of stress. Various types of stress have a major impact on gastrointestinal physiology, which includes psychological, physical, acute and oxidative stress. Foster et al. (2017) elaborates that acute stressors can be both physiological and psychological; those who are stressed and anxious do display

gastrointestinal susceptibility. Stress increases heart rate and blood pressure which in turn alters the amplitude and duration of the oesophageal peristaltic contractions.

A study done by Pizzino et al. (2017) states that oxidative stress on the body is caused by the imbalance between free radicals and antioxidants and is caused by a range of health conditions such as diabetes mellitus, cancer, viral infections and neurodegenerative diseases . Oxidative stress damages cells, proteins and DNA indicating physical and genetic damages to the oesophageal mucosa. According to Kauppi et al. (2016), Barrett's oesophagus is a complication of GORD and is due to the interstitial metaplasia that can cause other conditions such as adenocarcinoma to which oxidative stress is a driving force.

There is extensive research done indicating the stress induced effects on the oesophageal epithelial permeability may increase the risk of developing erosive conditions in patients with GORD (Sandhu and Fass, 2018).

GORD and other gastrointestinal disorders are very commonly diagnosed as they are stress related inflammations. Western dietary habits (bad eating habits) and an increase in stress and anxiety have made GORD a very common disease (Mohammad et al., 2019). Hartman et al. (2013) states that when the body is put under pressure; inflammation due to internal or external factors causes the body to react. Most of the body's stress resides in the gut and therefore is the first place affected thus causing GORD, peptic ulcer disease and stress related mucosal injury. The stress that the individual is under contributes to the creation of this illness, having a fast lifestyle and looking for fast acting medication, which may cause the possible complications for GORD as a side effect of these medications (Patti and Schlottmann, 2019).

## **2.6 Signs and Symptoms**

The classical oesophageal symptoms associated with this disease are pyrosis, dyspepsia, dysphagia and regurgitation. Generally, patients suffering with GORD experience the burning feeling in the retrosternal area that rises into the chest and radiates towards the neck, throat and occasionally the back (Richter and Rubenstein, 2018).

Atypical symptoms include nausea, bloating, belching, epigastric fullness and pressure and non-cardiac or epigastric pain (Badillo and Francis, 2014). There are certain extra-oesophageal symptoms that may be experienced with GORD, such as sore throat, odynophagia, hoarseness of voice, coughing due to the aspiration of acidic fluid and /or wheezing, water brash and hiccups. Individuals with GORD have an increased risk of infection in the areas affected (Richter and Rubenstein, 2018).

GORD is commonly seen in pregnant women, individuals with hiatal hernias suffering with dyspepsia and pyrosis (Beers, 2018). It is often seen as a side effect of certain medication such as beta blockers, nitrates, calcium channel blockers and anticholinergics (Porter and Kaplan, 2011).

## **2.7 Clinical diagnosis**

According to Zhang et al. (2019), GORD is a common clinical diagnosis, but the pathogenesis can be quite complex as there are multiple factors that contribute to the development and symptoms of GORD, thus diagnosis of such factors are important to know the root of the onset of GORD. The main medical diagnostic tests and procedures are as follows:

### *An upper endoscopy and biopsy*

This invasive procedure uses a camera at the end of the catheter or endoscope taken down the oesophageal tube via the oral cavity to view and examine the oesophagus, the stomach and the superior aspect of the small intestine. A biopsy can also be taken from an abnormal area of tissue to be examined externally under a microscope. These specific procedures are not necessary for non-erosive oesophageal condition but are the only way to diagnose more serious conditions such as oesophagitis and Barrett's oesophagus (Eluri and Shaheen, 2017).

### *Oesophageal pH test*

During an Endoscopy, a catheter with a wireless acid sensing device on the tip is passed through the nose into the oesophagus and the device is placed about 2 inches from the LES. A portable recorder monitors the pH within the oesophagus over 48 hours; this can indicate that the oesophagus contains gastric acid and also

measures the duration in which the acid sits in the oesophagus. However, this procedure is also quite invasive (Felix et al., 2014).

A study done by Hayat et al. (2015) has shown a non-invasive way of diagnosing non-erosive GORD which achieves a higher sensitivity rate and specificity to the condition. The measurement of concentration of salivary pepsin can determine Acid reflux. A higher concentration is associated with the symptoms of heartburn and eructation, the concentration of pepsin will also determine if patient needs further investigation. This diagnosis technique is clinically relevant in order to avoid unnecessary, prolonged and expensive diagnostic tools.

## **2.8 Epidemiology**

Gastroesophageal Reflux Disease has a global effect in the aspects of stress related diseases and has a huge impact on the individual as the management and treatment taken can often fail to help stop the progression or induce the regression of the complications of GORD , especially if the main risk factor is a stressful lifestyle (Hobson et al., 2018).

Other risk factors and co-morbidities that may contribute or aggravate GORD are (Taraszewska, 2021):

1. Family history of GORD and other Gastroesophageal conditions
2. Obesity(usually hand in hand with the dietary lifestyle)
3. Smoking and alcohol consumption(causes a degree of inflammation in the body)
4. Respiratory diseases
5. Reflux chest pain syndrome

## **2.9 Allopathic and pharmacological treatment of GORD**

The Pharmacological management for patients with GORD generally aims to provide symptom relief and may promote oesophageal healing. Damages on the oesophageal mucosa depend on the symptom severity and are treated accordingly. Pharmacotherapies available are Transient Lower Oesophageal Sphincter

Relaxation inhibitors(TLESR's), Proton Pump Inhibitors (PPI's), mucosal protectants, histamine blocker, prokinetic agents and acids (Maradey-Romero and Fass, 2014).

### TLESR's inhibitors

Bashashati et al. (2014) states that TLESR inhibitors such as metabotropic glutamate receptor 5 antagonists are based on the understanding of neurotransmitters in the body. The drug increases the pain threshold of the patient and is a potential treatment for refractory symptoms of GORD.

### Mucosal Protectants

The purpose of mucosal protectants is to safeguard the lining of the GIT, preventing mucosal damage, and generally works alongside other acid suppressors or medication such as antibiotics. Drugs such as Sucralfate affect the oesophageal bicarbonate/mucin secretion and increase the oesophageal lining ability to resist injury done by acid reflux (Bashashati et al., 2014).

### Antacids

The constituents of antacids are magnesium, sodium salts, inorganic aluminium or of calcium carbonate, which act as a gastric juice buffer. The purpose of an antacid is to protect the oesophagus from the acid refluxate by creating a barrier along the oesophageal mucosa (Yuan et al., 2016b).

### Histamine Blockers

This drug is also known as Histamine H2 Antagonist blockers or H2 blockers. Histamine is a chemical produced naturally by the body that and its role in the digestive system is to stimulate the release of stomach acid This class of drugs work on blocking the histamine receptors on the stomach lining. These inhibitors lower acid secretion and potentially heal oesophageal erosions (Yuan et al., 2016b).

### Prokinetic agents

These serotonergic agents enhances the activity of the smooth muscles of the GIT tract however it is less effective than PPI's and generally prescribed in combination with antacids. These agents are also prescribed when lifestyle changes and other

types of acid suppressors or medications are not sufficient to correct GIT activity (Yuan et al., 2016b).

### Proton Pump Inhibitors

PPI's are the most popular and highly effective in the long and short term treatment of symptoms generated by GORD. The function of PPI'S is to reduce the production of Hydrochloric Acid (gastric acid) in the stomach. PPI's plays a role in treatment and management of numerous oesophageal conditions such as erosive and non-erosive oesophagitis and Barrett's oesophagus however the long term adverse effects from PPI's can be quite extensive (Dekel et al., 2004). Adverse effects of PPI can range from the generalized nausea, diarrhoea, headaches and rashes to more serious effects due to extensive usage. The long term usage results from the favourable pharmaceutical safety profile and is uncommon for patients to stop the PPI's even with the side effects. According to Lehault and Hughes (2017) diminished gastric secretion can affect the absorption of several nutrients and vitamins, as gastric acid is essential for absorption of dietary vitamin B12, calcium, iron and magnesium.

According to Heidelbaugh (2013), PPI's and other acid suppressants that cause these deficiencies can have acute and chronic effects on the body as stated below:

### Vitamin B12 Deficiency

Chronic acid suppression and lack of pepsin leads to a decrease in absorption of dietary vitamin B12, which must be acquired from diet. A deficiency can cause neurological disorders like neuropathies, spinal cord degeneration, and falls due to gait disorders, depression and early onset dementia (Miller, 2018).

### Calcium Absorption deficiency

Acid secretion facilitates calcium absorption. An acidic environment in the stomach aids in the release of ionized calcium from dietary insoluble calcium in foods. Long term acid suppression decreases intestinal calcium absorption. Calcium deficiency leads to a decrease in bone density and therefore increases the risk of bone fractures, osteoporosis and hyperparathyroidism (Heidelbaugh, 2013).

### Iron absorption

Dietary iron absorption is facilitated by gastric acid. Gastric acid suppression decreases iron absorption and in turn decreases ferritin and iron levels within the body resulting in iron deficiency/ pernicious anaemia (Heidelbaugh, 2013).

Characteristics of GORD and allopathic treatments is that there are chronic relapses in patients and therefore require prolonged maintenance therapy for their symptom relief. If a patient terminates the acid suppression therapy, the result is acid rebound and will make the GORD symptoms and severity worse (Rochoy et al., 2018).

## **2.10 Complementary and alternative medicine**

Complementary and alternative practice (CAM) includes a wide variety of treatments and practices that are used either instead of, or in conjunction with, the mainstream, conventional therapies. When combining different modalities it is also known as integrative medicine. In South Africa, CAM is comprised of Homoeopathy, Chiropractic, Ayurvedic practices, Traditional Chinese Medicine, Reflexology, Unani-Tibb, Traditional African Medicine, Aromatherapy, Naturopathy, Phytotherapy, Acupuncture, Osteopathy and more, and is regulated by the Allied Health Professions Council (The Allied Health Professions Council of South Africa, 2023). The Allied Health Professions Council monitors and regulates the CAM practitioners.

In South Africa, CAM ranges from the more traditional and rooted practices to widely accepted therapies from other traditions or philosophies. Chiropractic and homoeopathy are relatively new, that are now supported by medical aids within the country (Talebi et al., 2022). An estimated 70% of the population will consult with a CAM practitioner before seeking conventional help (VitaCare, 2019). South Africa and the rest of the world are becoming more open to the healing and holistic practices of CAM.

### 2.10.1 Traditional Chinese Medicine (TCM)

TCM is one of the oldest healing systems known to man and is based on approximately 3500 years of medicinal practice in China. TCM uses a combination of acupuncture, cupping, massage, diet, exercise and herbal medicine in the treatment of an individual (Li and Zhang, 2013). There are five essential substances in the

TCM philosophy: earth, fire, wood, metal and water. These five substances involves the concept of Chi. Chi is known as the life force or energy of the universe therefore deals with the link between the individual and the universe (Yagüe et al., 2022). The treatment and management of diseases in TCM focuses on health management, specifically on enhancing the body's resistance to diseases (Yao et al., 2022).

There are four key principles that TCM practitioners apply when treating a person (Wang, 2019a):

1. The body is an integrated whole
2. An individual is completely connected to nature
3. An individual is born with self-healing abilities
4. Prevention is better than cure

#### 2.10.2 Ayurveda

Ayurveda, the traditional Indian medicine (TIM) is described as the science of life (ayur-life, veda-science or knowledge), originates from the Vedic culture of and founded by the collective wisdom of the ancient healers and saints of India. Ayurveda, like Traditional Chinese Medicine, is one of the oldest systems of natural healing. Ayurveda works on the concept that human beings are part of nature and treatment offers the body a boost to reach its full human potential when healing (Mohiuddin, 2019).

According to Rizvi et al. (2022) the approach to treatment of a disease starts with an internal purification process followed by herbal remedies, diet regimens, yoga and meditation. To achieve this concept, three fundamental forces describes in Ayurveda governs the energy of the individual. These primary forces, in Sanskrit, are known as the three doshas: kapha (earth), pitta (fire) and vata (wind). The forces are said to be responsible for the characteristics of the mind and body (Mills et al., 2019).

#### 2.10.3 Unani-Tibb

Unani-Tibb is a Greek-Persian medicinal practice that follows the teaching of Hippocrates and Galen. This practice was developed in Greece, by the Arabs, and utilizes the art of healing and science combined. It is aimed at treating the person as

a whole and not individual parts and the concept is to treat the mind, body and soul (Ahmad et al., 2023).

The principles that diagnosis is based on concepts known as the 4 axioms (South African Intergrative Medicine, 2019) are:

- Temperament – uniqueness of individual
- Physis – the body's self-healing power
- Qualities – when the body is in disharmony, a disease develops
- Lifestyle factors

When diagnosing in this modality six essential factors are considered- air, food and drinks, body movement, psychic movement, sleep and wakefulness, evacuation and retention. Therapy and treatment is based on diet, medicine, physiotherapy, leeching and surgery. The form of practice used in Unani-Tibb is designed to enhance healing; it combines medical systems in an integrative approach to increase the probability of cure (Ahmad et al., 2023).

#### 2.10.4 Homoeopathy

Homoeopathy is a highly effective system of holistic medicine developed by the German physician Samuel Hahnemann who had written a book, *The Organon of Medicine*, which is based on the principles of Homoeopathy and is essentially still an important cornerstone of the practice. The book emphasizes the effectiveness of homoeopathy as a practice that offers a clear, simple and relatively inexpensive way of treatment (Hahnemann, 2016).

The approach taken in homoeopathy is to treat individuals as a whole, the physical, mental and emotional states. The belief in homoeopathy is “like cures like”, triggering the body's defence system, not aggravating but stimulating the natural defence system of the body (Kardile et al., 2015).

A range of plants, minerals and other substance derivatives are used in the most diluted form to make remedies to treat the body. Homoeopathy is known for its effectiveness in the treatment and management of long term or chronic illnesses that

are usually made worse due to suppression from allopathic medication (Hamre et al., 2023).

### 2.10.5 Reflexology

Reflexology is based on physiological and neurological study with the skills of massage therapy. The practice is based on the concept that the feet are the microcosm of the body. All body parts, including organs and glands are represented by points on the feet known as reflex areas. Pressure applied on reflex areas stimulates that particular body part to heal itself. If there is sensitivity in an area it would be an indication of that body part (The International Academy of Reflexology and Meridian Therapy, 2019).

Homeopathy, TCM, Ayurveda, reflexology, and Unani-Tibbs share many similarities and differences in their approach to treating GORD. These similarities and differences are due mainly to the way the modalities approach the healing process in the human body. Table 1 shows the similarities between the 5 modalities while Table two shows the differences.

Area of Similarity	Homeopathy	Reflexology	TCM	Ayurveda	Unani-Tibbs
Holistic Approach	Miasmatic and constitution prescribing based on mental, emotional and physical state	Based on meridians that have a mind. Body and energy philosophy	Based on meridians and stimulation of Chi using herbal medicine and acupuncture, which also has a mind. Body and energy (chi) connection	Based on the three Doshas that constitutionally affect mind, body and energy (prana)	Based on temperments  Integrates allopathy, herbal medicine traditional techniques stimulate detoxification thereby balancing mind and

					body
<b>Individualized Treatment Plans</b>	Is based on constitutional prescribing of remedies	Based on the individuals meridian pathways that is affected	Based on the individuals meridian pathways that is affected	Based on the individuals dosha/s which are imbalanced	Based on the individual's physiological system within the body that is affected
<b>Focus on Root Causes</b>	Remedies work the root causes of imbalances due to mental, emotional, physical and environmental stresses on the body	Treatments work on the root cause of energy blockages by clearing energy paths under stress and inflammation within the body	Treatments works on the root cause of energy blockages by clearing energy paths under stress and inflammation within the body causing an imbalanced Chi	Treatments work on the root cause of imbalanced dosha/s through herbal medicine, spice and diet	Treatments work on the root cause of toxin overload by removing these toxins on the body
<b>Lifestyle Modifications</b>	Is Required through diet, physical activity and mental healing	Is Required through diet, physical activity and mental healing	Is Required through diet, physical activity and mental healing	Is Required through diet, physical activity and mental healing	Is Required through diet, physical activity and mental healing
<b>Emphasis on</b>	Emphasis on balancing the	Emphasis on balancing	Emphasis on balancing the	Emphasis on balancing	Emphasis on detoxification

<b>Balance</b>	vital force	the good energy flow through the body	good Chi through the body	and igniting Agni or Prana	to balance the body and its innate ability to heal itself
<b>Mind-Body Connection</b>	Emotional and mental stresses can manifest as disease	Emotional and mental stresses can manifest as blocked meridians	Emotional and mental stresses can manifest as bad Chi	Emotional and mental stresses can manifest as imbalanced dosha/s	Emotional and mental stresses can manifest toxicity
<b>Environmental Connection</b>	Body disrupted by incorrect diet, high paced lifestyles and overall stress	Body disrupted by incorrect diet, high paced lifestyles and overall stress	Body disrupted by incorrect diet, high paced lifestyles and overall stress	Body disrupted by incorrect diet, high paced lifestyles and overall stress	Body disrupted by incorrect diet, high paced lifestyles and overall stress

Table 1: Shows the similarity between the 5 modalities

<b>Area of difference</b>	<b>Homeopathy</b>	<b>Reflexology</b>	<b>TCM</b>	<b>Ayurveda</b>	<b>Unani-Tibbs</b>
<b>Philosophical Foundation</b>	Based on “Like Cures like”	Based on meridian pathways	Based on the concept of Chi	Based on the concept of Prana and Doshas	Based on the concept of detoxification

Diagnostic Methods	detailed symptom analysis and individual case assessment	reflex point sensitivity	pulse diagnosis, tongue examination, and questioning to determine imbalances	dosha assessment	clinical examination
Treatment Modalities	Treatment remedies	manual pressure on reflex points	acupuncture, herbal medicine, and dietary therapy	herbs, dietary adjustments, detoxification practices	Herbal medicine, cupping therapy
Concept of Energy Flow	Exists as vital force	Exists as chi	Exists as Chi	Exists as Prana	Does not exist
Herbal Formulations	Highly diluted substances through succussion	No herbal medicine	Uses Unique blend of Chinese herbs	Uses Unique blend of Indian herbs and spices	Uses Unique blend of herbs like Black seed, anise seed and Asafoetida.
Cultural Roots and Historical Development	German origin	Egyptian origin	Chinese origin	Indian Origin	Greek – Arabian origin

Use of physical body manipulation Techniques	Not common although it can be integrative	Heavily reliant through manual pressure	Commonly utilized through acupuncture	Moderately utilized through massage techniques	Commonly utilized through cupping therapy
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Table 2: Showing differences in the modalities

There are many CAM practices available in South Africa at present. GORD as a disease has a long-term impact on its sufferers. Any treatment protocol that can be utilised in the treatment of this condition will impact the health of the patient. Therefore, it is important to assess the current status of CAM treatment with regards to GORD and have a comprehensive understanding of what is available for patients. As stress increases, GORD will increase, and patients will seek alternative therapies to supplement or enhance their current treatment. Most complementary practices work with the fundamental principle of boosting the body's own healing ability to restore its health and maintain wellness. Most CAM practitioners support at least one or all dimensions of life, physical, mental, emotional, and spiritual. This research will thus form a basis of what these CAM practitioners have on offer so that more information can be shared that will assist patients in treating this chronic condition in the best way possible.

In conclusion, this Chapter has shed light on the topic of GORD and the relevant CAM modalities. The Next Chapter (Methodologies) will focus on the intricacies of the data collection and interpretation processes needed to meet the aims of this study.

## **CHAPTER THREE: METHODOLOGY**

In this chapter, a description of how the research study was conducted has been laid out. The information provided reiterates the research question and design by discussing the study outline, how participants were recruited the process of data collection and all ethical considerations.

This chapter presents the methodology of the qualitative research study which implements purposive stratified sampling of participants and indicates the data collection and analysis tools. The design of the study indicates a sample population of 12 participants representing 5 modalities namely: Homoeopathy, Reflexology, and Chinese herbal medicine, Ayurveda and Unani-Tibb. The data collected was by means of Semi structured interviews and analysed using Tesch's eight steps to qualitative data analysis and Creswell's approach which was stated extensively. The trustworthiness of this study methods have been evaluated through a pilot study whereby valuable input was appreciated by the participants of the pilot study.

## Chapter Three: Methodology

### 3.1 Study outline

#### 3.1.1 Study design

A qualitative study design is an explorative type of research study that provides a deeper insight into real world concerns. The approach taken for this study is Phenomenology, which essentially looked at the lived experiences of the participants (Tenny et al., 2024). A typical Qualitative Research design was conducted to understand the viewpoints of the participants. This method was chosen as the research is exploratory and sought to gain an understanding of human perceptions or experiences, investigations and protocols used by selected CAM practitioners in the treatment of GORD. The rationale of this exploratory study is not to rationalise the findings, but to understand them. Qualitative methodology used, emerges from the observation and interpretation of the treatment and management of GORD from the data collected (Maxwell et al., 2009).

#### 3.1.2 Study Setting

This study was confined to the republic of South Africa and participants were from Kwa-Zulu Natal. Western Cape and Gauteng, There is potential to be expanded out of South Africa at a later stage as this study is to provide a theoretical and substantial baseline in the treatment and management of GORD. The details of the participants were obtained from official professional councils such as Allied Health Professions of South Africa and therefore are registered with either council. Participants were emailed directly with an invitation to participate in the study either through zoom or at convenient location. Six participants opted to be interviewed via zoom and the remaining six were interviewed in their own practice located in various areas in Durban, i.e. Umhlanga, Glenwood, Dawncliff, Hillcrest, Umbilo, and Westville

### 3.1.3 Study population

The population of this study included CAM practitioners of the 5 chosen modalities who are all registered with their respective professional councils and have practiced for a minimum of four years (in private practice)

### **3.2 Pilot study**

Prior to the process of data collection, a small-scale preliminary experiment of the full scale research study was conducted. The purpose of the pilot study is to assess whether the Interview Guide answer the research question, indicating the feasibility of the research protocol to gather enough relevant data for the study. The pilot study assisted the researcher in determining whether the questions were practical, relevant or required modification.

A focus group of six qualified participants who are well informed about GORD were selected and excluded from the full-scale study. Participants was recruited via purposive sampling and consisted of Academics from a South African University who lecture and/or conduct research in basic medical sciences on health issues pertaining to the GI system particularly GORD and the long term physiological effects of GORD. Participants also consisted of qualified CAM professionals such as qualified Homeopaths and Chiropractors. All participants were interviewed over zoom approximately 3 months before the actual study. The amendments suggested by the participants was to apply more open ended questions, giving research participants the means to freely explain any informant, with the assistance of selected prompts to assist the researcher in obtaining relevant data for the purpose of the research study.

The overall results of the pilot study allowed for the questions included in the Interview Guide (Appendix C) to be amended and approved proceeding to the full-scale research study without any need for further alterations.

### **3.3 Recruitment of participants and sampling process**

The study sample included an expert group of twelve CAM practitioners who are all registered with their respective professional councils and have practiced for a minimum of four years (in private practice) , selected through purposive sampling.

A minimum of twelve CAM practitioners were selected, there is no maximum sample size as this can be determined by data saturation. This methodology of this study was based on previous work published by Khan (2021) who indicated that a minimum of 12 participants are required for the Qualitative Study. Previously published Literature has also recommended that qualitative studies require a minimum sample size of at least 12 to reach data saturation (Clarke and Braun, 2013, Guest et al., 2006, Fugard and Potts, 2015). Due to the nature of this qualitative study, a stratified purposive sampling was implemented in order to select practitioners according to their modality in the provinces of South Africa exclusively.

Purposive sampling is a research method in which participants or cases are deliberately selected based on specific criteria relevant to the study's objectives. Unlike random sampling, which involves a random selection of participants, purposive sampling involves a conscious and purposeful selection process. Researchers choose participants who possess particular characteristics, experiences, or expertise that align with the research question. This technique is employed when depth and specificity are crucial for the study's success, aiming to gather targeted and relevant information.

Five out of eleven CAM modalities were chosen to be included in this study, namely Homoeopathy, Reflexology, Ayurveda, Traditional Chinese Medicine and Unani Tibb. The rationale for selecting these particular practises is that they are most likely to encounter patients with GORD and may be directly involved in the diagnosis, treatment and management of this condition. Due to the researcher being a homeopathic student, the research approach had been grounding in homeopathy, allowing greater utilization of homeopathic practitioners/ participants.

To gain the relevant contact details of practitioners for the study, the researcher had accessed the online register of the Allied health Professions Council from their website electronically in order to obtain a sample frame for the CAM practitioners in

the country. Thereafter the researcher selected eighteen practitioners from each discipline to accommodate the possibility of decline participation or withdrawals. Prospective participants were emailed directly using the information provided on the profession board's websites inviting them to participate in the study.

#### *Inclusion criteria*

1. Each participant is registered with their respected governing council such as Allied Health Professions Council of South Africa (AHPCSA) and Each participant practiced in the country of South Africa
2. Each participant should be knowledgeable and experienced with the treatment and management of GORD as illustrated with a minimum of 4 years in private practice

#### *Exclusion criteria*

1. Participants who did not sign the letter of informed consent and familiar with the letter of information
2. Participants who are not currently registered with their respected governing council and do not possess a valid practice number
3. Participants who are currently practising out of the country
4. Participants who have practiced less than four years in private practice

### **3.4 Data Collection Process**

Once the sample was selected, each CAM practitioner that fitted the inclusion criteria was approached and invited to participate in the study via email or telephonically. CAM practitioners included four homeopaths, two traditional Chinese Medicine practitioners, two Ayurvedic practitioners, two Reflexologists and two Unani-Tibb practitioners. A letter of information (Appendix A) and consent form (Appendix B) was sent out informing each participant of the study and relevance of their participation therein. Once the participant had consented, the consent letter is mailed back to the researcher with a signature from the participating practitioner. Herein, it will also state the confidentiality of the study.

Following consent of participant, the researcher set up a time at a physical location or online platform that was convenient to practitioner in order to meet for the

research interview. A Dictaphone, voice recorder and online meeting recorders were used to record the interviews and represent the raw data recorded and stored from each Cam Practitioner. Beginning the interview, the grand tour questions was posed first and foremost with subsequent sub questions to assist the researcher in attaining the information required. The interview questions were presented to the participants and were listed in the interview guide (Appendix C).

Once data saturation was reached, all information was transcribed from the Dictaphone, voice recorder and online conference recordings and then documented chronologically as per each participant along with the field notes taken by the researcher. Many interviews in this process were done online via a communication software i.e. Zoom. Collection and storage of raw data was easily accessible for assessment purposes due to the interview protocols put into place.

### **3.5 Ethical Considerations and conduct**

The institutional Research Ethics Committee (IREC) at the Durban University of Technology (DUT) issued in an approval letter (Appendix G) as well as a reference letter number which permitted the researcher to proceed into full-scale research study.

The information letter (Appendix A) was issued to participants that explain the study in extensive detail which included; a short introduction and purpose of the study, outline of procedures and contact information.

A consent form (Appendix B) is also issued for further declaration that the participant was given complete free will to choose to participate in the research study and could withdraw from the study at any time during the interview process without any adverse actions. Upon confirmation, each participant was supplied with an informed consent form which ensured full disclosure of the information and allowed the participant to voluntary decisions.

There were three basic ethical principles adapted from the Belmont report according to the Department of Health (US department of Health and Human Services, 2016) were adhered to consistently throughout the study, namely; *respect for persons; beneficence and justice.*

Respect for persons refers to the acknowledgement of autonomy of each participant and should this be compromised, acknowledging their right to protection. This principle recognizes the right and capacity of each participant to make decisions without any coercion; this was emphasized in the letter of information (Appendix A). Overall, respecting each participant ensures that their dignity is valued and protected.

Beneficence is a concept in research ethics that incorporates the principle of “first do no harm” encompasses the welfare of each research participant, protecting from unethical actions (Nagai et al., 2022). Beneficent/Benevolent behaviours are those that actively protect from harm and therefore ensure full consideration of potential risks that the individual might encounter as a result of the study and therefore researcher would try to minimize or eliminate these risks.

Justice is the principle that requires fairness in distribution of rewards, penalties, benefits and burdens. This ultimately conveys the researcher’s responsibility to treat each participant equally and therefore ensures no favourable treatment is offered to a single participant over the other (Cassell, 2000).

### **3.6 Trustworthiness**

The researcher needs an alternative way to appropriate the qualitative designs that’s ensures rigor without sacrificing the trustworthiness of the qualitative research (Krefting, 1991). Trustworthiness can be based on the 1995 model of Lincoln and Guba (Shenton, 2004). This model demonstrates the necessary criteria to establish trustworthiness of qualitative studies. The four criteria are: Credibility, dependability, conformability and transferability.

#### **Credibility**

Credibility is a key criterion for the researcher to ensure their study measures what is actually intended. Credibility ensures that there was maintained communication by the researcher and supervisor throughout the data collection process of the study indicating that updated information was communicated to the supervisor accordingly. The research supervisor overseeing the study is highly competent and has valuable insight of various Complementary and Alternative Medicine (CAM) topics. The research supervisor has overseen over 30 master’s dissertations, gaining expertise

that provides valuable foresight in efficiently planning and executing the research study.

The researcher has recorded the interviews via a Dictaphone along with a voice recorder and simultaneously wrote descriptive field notes of certain aspects of the interview where the researcher deemed important in order to aid in the understanding of the research topic. The notes were read back to the participants to ensure the appropriate data was recorded and the researcher was satisfied with the information, giving the participants the opportunity to verify statements and fill in any gaps in the interview. This step ensures that the participants were satisfied with the information transcribed.

### Dependability

To ensure the reliability of the study, an audit trail of the original data was maintained through the storage of the raw data which includes the audio recordings and the transcriptions of each interview on a word document. The transcribed documents are stored separately from the analytical documents to prevent any distortion of the original information.

### Conformability

The researcher recorded the interview in order to introspect the participant's voice thereby capturing the interview information in an authentic format. The audio recordings serve as a direct reference to the researcher when transcribing the information. Following the transcription process, each participant was given the opportunity to review the field notes and interpreted data. The researcher will collate all data recorded for the participant to verify that information was an accurate representation of their views and approach to the disease treatment and management.

### Transferability

The researcher has taken a Data-orientated approach to the study through purposive sampling. Purposive sampling is a form of non-probability sampling that was used to maximize the specific data related to the context in which it was collected. To facilitate the transferability of information, the researcher supplied a clear and distinct

description of the research context, selection of participants, data collection and data analysis extensively

### 3.7 Data Analysis Tools

The researcher implemented *Tesch's eight steps to data analysis and Creswell's approach (Creswell and Creswell, 2022 & Tesch.R,1990)*.

#### 3.7.1 *Tesch's eight steps to data analysis*

Tesch (1990) eight steps to analysis of unstructured data were followed below:

1. After transcribing 12 interviews on a Microsoft Word document, the raw data was interpreted by the researcher by reading through each interview in a meticulous manner. The researcher was thus able to understand and obtain the necessary background information.
2. The researcher ruminated over what the data was about and developed the idea to insert a table at the end of each interview containing the necessary headings pertaining to the research topic; this table assisted in summarizing each interview. *Each column represented a topic within each research sub-question explored by the researcher such as: Contributing Factors, patient profile, most effective treatment and management plan.* The researcher tabulated all the topics, one column per data document, placing all the columns on the same sheet to compare all the topics pertaining to each interview.
3. After completing this procedure in several documents, the researcher combined all tables in a separate word document and grouped them according to practitioners and modalities to look for common and uncommon information among each group.
4. The topics were then abbreviated as codes. With this list of codes, the researchers go back to the data and write the codes next to the appropriate segments of the text. Be open for new categories and codes that may emerge. If any ideas about the data come to mind, the researchers should write it down in their notes (analytic memos).
5. Find the most descriptive words for the topics, which have begun to turn into categories. Try to reduce the categories by grouping together those that relate

to each other. Try to look for subcategories. A 'normal' number of categories are between 20 and 50. This is the organising system for the data.

6. Make a final decision on the abbreviation of each category and alphabetise the codes to ensure that no duplication occurs. The researchers should remember that categories have fuzzy boundaries and a segment of data can fit in two or three categories.
7. Put the data belonging to each category together and perform a preliminary analysis, looking at all the material in one category at a time. The focus is now on the content of each category. During this process, keep the research question in mind in order to discard irrelevant data.
8. If necessary, recode the existing data. The organising system may help the researchers to give structure to their research reports.

### *3.7.2 Creswell's' six step approach*

Creswell and Creswell (2022) approach to data analysis is presented as six interrelated steps in a linear, hierarchical process and was conducted as follows:

1. Organisation and preparation of the data for analysis:  
All interviews were transcribed immediately after data collection on a Microsoft word document and were categorized according to practitioner and modality. Each interview heading contained the following information: Interview number, Practitioner (modality), Location and Time. The main research sub-questions were listed in each interview and the relevant content was then transcribed from the audio recordings beneath each sub-question.
2. Read through all the data:  
By doing this, the researchers get a general sense of the information and possibly its overall meaning. Perhaps the researchers want to write down general ideas about the data.
3. Coding of the data:  
It is the process of organising the data into chunks of information and writing a word that represents a category in the margin.
4. Description of the setting or people and categories or themes for analysis:

During the coding process, the researchers give detailed descriptions of the setting or the people involved as well as descriptions of the categories or themes for analysis.

5. Present the results of the analysis:

This is often done in a narrative passage to convey the findings of the analysis. It may include a chronology of events, a detailed discussion of several themes or a discussion of interconnecting themes.

6. Interpretation of the results of the analysis:

The aim is to answer the following question: 'what were the lessons learned?'

Data was analysed based on individual CAM practitioners as the unique units of data. This was opted over collating data in the 5 modalities because a practitioner in the same modality may have different approaches to treating and managing GORD.

### **3.8 Data Management and Storage**

The Data collected is stored in a way that ensures confidentiality and anonymity of each participant. The personal details of each participant were kept anonymous as it was not recorded in any raw data such as the audio recordings, field notes or interview transcriptions. The participants were assigned a code and the participants' name was in the possession of the researcher exclusively. All information collected was electronically saved and password protected, which only the researcher and supervisors had access to. Files were stored in a locked cupboard in the Department of Homoeopathy at the Durban University of Technology and can only be accessed by the research supervisor. The data collected will only be stored for a maximum of 5 years; thereafter any data remaining will be shredded.

### **3.9 Role of the Researcher**

Miss Ashadre Naidoo, the student was responsible for generating the idea of the study; formulating the research aims; objectives and research questions; creating, administering and collecting the research instrument, data analysis and write-up

Dr IM Couchman was the supervisor and Mrs J Ducray was the co-supervisor of the study. They provided inputs and corrections to all aspects reported.

In Conclusion, this chapter had shed light on the methods used by the researcher to obtain more accurate, reliable and explorative data. The next chapter focuses on the interpretation of the data collected through themes and sub-themes derived from the information through the data collect process.

## **CHAPTER FOUR: RESULTS**

This chapter presents the outcomes of the data collection process. This chapter conveys results obtained and discussions of the findings from the semi-structured interviews of the CAM Practitioners accordingly.

The interpretation of the data collected had been divided into themes and sub-themes for a better understanding of the findings which will assist in the discussion of the results in the next chapter. Thematic analysis of the data further breaks down the transcribed data from the interview recordings for a more in-depth focus into themes and sub-themes directly from the raw data obtained.

## Chapter Four: Results

### 4.1 Themes and Sub-Themes

Four broadened main themes and their sub themes were derived from the data and were aligned with the research questions. The identified themes following the data analysis have been summarized in table 4.1 below

*Table 4.1: Themes and Sub-themes*

<b><u>Themes</u></b>	<b><u>Sub-Themes</u></b>
<b>1. Contributing Factors to development of GORD</b>	
<b>2. Patient profile</b>	a. Demographics – age, gender, ethnic group, status, occupation  b. Prevalence – increase , decrease, constant patients presenting with GORD
<b>3. Treatment and management of GORD according to CAM modality</b>	a. Long term, short term , chronic, acute  b. Diet, lifestyle, special techniques or adjunctive therapy, complementary methods
<b>4. Most effective treatment and management plan according to CAM modality</b>	a. Holistic approach, allopathic and alternative combined  b. Patient compliance  c. Referral patterns

In addition to the thematic identification, a supporting discussion is represented which elaborates extensively on each theme with relevant quotes from participants as it appears in the interview transcripts. To ensure strict anonymity, the names of the participants have been excluded and codes have been assigned to represent each participant and their modality. The code schema RP X – Y are as follows:

RP – research participant, X is a number associated with the individual participant, Y – refers to the modality (H – Homeopathy, R – Reflexology, C – Traditional Chinese Medicine, A – Ayurveda and U – Unani-Tibb)

## 4.2 Demographic Profile of Participants

*Table 4.2: Demographic profile of participants*

<b>Variables</b>	<b>Group</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age (years)</b>	30-35	5	1.67
	35-45	1	0.33
	45-55	5	1.67
	55-65	1	0.33
<b>Gender</b>	Male	2	0.33
	Female	10	1.67
<b>CAM practitioner</b>	Homeopathy	4	1.67
	Reflexology	2	0.83
	Unani Tibb	2	0.83
	Traditional Chinese Medicine	2	0.83
	Ayurveda	2	0.83
<b>Areas</b>	Kwa-Zulu Natal	6	1.5
	Gauteng	4	1
	Western Cape	2	0.5

Sample Size (N) = 12

## 4.3 Thematic analysis of data

### 4.3.1. Theme 1: Contributing factors to the development of GORD

Each CAM modality and practitioner has a different way of looking at the causes of GORD, the opinion and perception can originate from a particular type of CAM practice, modality history or can follow a very general pathological theory to the causes of GORD. A selected few opinions of participants have been recorded below:

#### Reflexology

*“Okay, so my understanding is that generally it occurs when the acidity of the stomach is where the stomach is not acid enough. I know that sounds counterintuitive.”*

[RP1-R]

*“I find stress is the biggest contributing factor and the secondary is, I would say, is diet. Well, they go very hand in hand and I do find it goes hand in hand in a lot of patients, if they have depression, will suffer with gut issues because of their whole gut brain relationship.”*

[RP2-R]

#### Unani Tibb

*“There are lots of risk factors, the overweight patients; those that are smoking especially in the Indian culture, the population will be consuming very big heavy meals, especially more later in the evening after sunset.*

*Pregnancy obviously aggravates the reflex. And it’s got a lot to do with lifestyle, but obviously there are underlying medical causes that you see like a hiatal hernia or, we see a lot of oesophagus cancer at the hospital, so there are different causes in the different population groups”*

[RP3-U]

*“with most conditions, it's usually multifactorial causes and the diagnosis comes down to an imbalance in the temperament that predisposes you to acid reflux and under that you would have all your lifestyle causes, like for example, being overweight, which would predispose you to it or incorrect diet, not eating for your correct body type.”*

[RP4-U]

### Chinese Medicine

*“So we actually treat based on the main complaint, not on the Western diagnosis. It's usually there's three main reasons what happens. Firstly, it can be from improper diet, like low greasy fried foods will leads to dampness which creates phlegm and then phlegm blocks the stomach and causes the stomach not to be able to descend the food and fluid then it comes back up because it can't go down. The other reason is emotional issues, stress or overwork leads to the same thing. The speed is too much, and stomach is too weak, so they can't descend the foods you eat so they come back up.*

*The third cause is loss of blood or serious illness, which will weaken the body and make the stomach weak and the Chi or food and fluid comes back up. And that's why you have this burning sensation and upward sensation. It normally means there's some part type of heat in the body, some type of internal heat.”*

[RP5-C]

*“Number one is food related and most people now just eat what they like, but everybody is different. Some people, their body has an allergy condition, but the people just eat what they like. Another is stress related, when you very stressed your central nervous system will be more concentrated on the emotionally parts and not looking after the stomach. Another one of the cause is a genetic condition, so like a food allergy; it's a kind of loss of a connection genetically. Some people maybe got an infection that did not clear and the disease and then become a chronic condition.”*

[RP6-C]

## Ayurveda

*“I've seen one of the main causative factors for it is stress and really poor lifestyle regimen and irregular diets. So a lot of the times patients will present with very high stress, or not sleeping enough or sleeping too late or eating a lot of spicy foods, oily foods, deep fried foods junk food, fast food, frozen stuff, pickles, vinegar and tomatoes. We don't just look at the symptom, we try to get to the root cause of it, find out what it may be. It's very different for everybody because we assess what, their body constitution and what their lifestyle is what their diet is like.”*

[RP7-A]

*“It's completely lifestyle related a person's habits, a diet plays a big role. Other causes are eating very irregularly, you're not eating on time or you're eating and sleeping. It's completely related to how you operate your day. Stress also plays an impact in this gastro oesophageal reflux. So is the food you're eating a lot of spicy food, hot, oily, those foods are also not good for us excessively.”*

[RP8-A]

## Homeopathy

*“It is often a secondary complaint, so they might come in with a different main complaint. It does sometimes happen that it's digestive complaint and that secondary complaint comes in the history taking where I say, do you have any digestive issues? So a lot of them will admit, they'll say I'm struggling with my heartburn. , but my diet's been bad. There are a lot of patients who get aggravated by wheat, bread, cakes and pastries.”*

[RP9-H]

*“In paediatric cases is usually due to the, the sphincter not being mature enough. In adults when anxiety, stress sets in and your fight or flight, that that's when your sympathetic nervous system is over activated and parasympathetic means sleeping feeling digesting. So we need to work from stress and anxiety as one of the causes. We do have medication, specific medication that can also trigger.”*

[RP10-H]

*“So in terms of causes, it's variable and it really is patient dependent because then you can get the patient who comes in, we go through diet and lifestyle, very poor diet, processed foods, inflammatory, oily foods, fiery foods, takeout. Then you can have the type A personality patient, very healthy, exercise, but very high strung with lots of anxiety, which triggers a response.”*

[RP11-H]

*“I think it's often linked to sort of greater digestive problems, or perhaps weight issues. I feel there is a stress component where the nerve input into the stomach is causing excessive acid production. There is probably an element of hyper acidity. And then whether that's what causes the inflammation or it could be sort of a bacterial component.*

*It could probably be a hiatus hernia or factors affecting or compromising the efficacy of that cardiac sphincter, so any other digestive issue that may be increasing pressure upwards.”*

[RP12-H]

#### 4.3.2 Theme 2, Sub-themes a, b: Patient Profile

The many different factors that cause GORD in an individual and can depend on certain growth stages or ways of life. Due to the fast paced lifestyle many individuals currently lead, GORD can develop within many age groups and ethnic groups. The prevalence of GORD is always changing and there are many socioeconomic factors that influence the development of GORD in gender groups, occupations and personality types of each patient. A selected few opinions of participants have been recorded below:

##### Reflexology

*“Probably an even split between the male and female. I have a range of ages probably from 40s to 80s. People that are under a lot of stress, a lot of women but generally those that are also working and housekeeping and bringing up children and*

*Most of my patients are white do see Indian people so it's between them as far as equally."*

[RP1-R]

*"Higher between the ages of 40 and 55 is probably your main age category for that. I know a lot of women who start to go through menopause when they start to put on excessive weight or suddenly develop the acid reflux, because then I find men, sometimes they've been overweight for a long period of time. And so for men, it's higher. I do find the Indian population tend to have a higher incidence of it."*

[RP2-R]

### Unani Tibb

*"More moms, I don't see too many male patients, so my practice is more female based. So I would think it's more in our elderly home housewives, more that population. Your elderly diabetics overweight population. I don't get exposed to too many young patients in my setting."*

[RP3-U]

*"I would say the businessmen and corporate workers, younger, driven, highly stressed, insomnia, A-type personality tend to be affected because they tend not to relax. Seen in early twenties and can go right up into like the seventies, eighties and more male. Unani Tibb Appeals more to the Indian population"*

[RP4-U]

### Chinese Medicine

*"No increase or decrease, it's been pretty constant. I see a fair amount, but most of the time, just have it as a side effect. So it's not clinically diagnosed as GORD but they have a lot of the symptoms. Currently, most of my patients are younger, in their thirty to forty years of age .The education level, these patients don't often know that the causes of this condition so they're often drinking two, three litres of Coke, eating a lot of hot, spicy food, lots of greasy foods."*

[RP5-C]

*“I feel more stable, no increase or decreased. Middle ages more, around the age 40. I see quite a number of these patients. Young people, their stomachs are strong. I see lots of male patients. Mentally and physically challenged workers that do business, they are stressed, linked quite a lot.”*

[RP6-C]

### Ayurveda

*“It's a definitely an increase. It's probably one of the most common disorders that we face. I say between the ages of 20 to about 50 and I would say more females. I see a lot of business people and students in very high stress conditions, also a lot of moms. I see a lot of Indians and Africans as well.”*

[RP7-A]

*“It has been increasing quite significantly. You see quite a few younger people because they're prioritizing work and studies, so their lifestyle also does take a hit and the stress levels are quite high.*

*I'd say ages between 20 and 40, it's quite a large age range, and it's always postdoctoral to the stage of people are high in their careers. I've also seen an equal amount of men and women but a woman tends to have a tendency to have more of this heat in her body owing to the menstrual cycle, and the transformation that happens in her body.*

*More commonly, well, culturally, I would say Indians because of the food you're eating. But in practice I get people that are mixed in race because they're also not combining the food correctly.”*

[RP8-A]

## Homeopathy

*“It’s consistent patients I see who suffer from it, suffer it from it quite chronically. I think there’s definitely predominance for people who are slightly overweight and I would say males more than females generally. It is quite the businessmen and students high living type picture. I probably see more, I would say between ages 35 and 60. Regardless of race, the business type, almost A type personality. People who are quite highly strong willed, who are quite perfectionist, who get quite irritated when things are not in their control.”*

[RP-9-H]

*“It’s more the adults and babies. So the babies in the early breastfeeding stages will experience the silent reflux and the adult’s between 40s and 60s that can be either all of the sudden reflux or just Gastroesophageal reflux and I do see more females.”*

[RP10-H]

*“I would really say it’s between ages 25 to 40. I would say 95% of my patients are female. I can get patients who are highly stressed, besides working from home 24-7; they might be suffering with that surgery. It just depends on the person.”*

[RP11-H]

*“I would say not exclusively male, but definitely more, more men. I’ve seen young women from age of 24, 28 through to older in their 40s and 50s. It’s the younger person really pushing themselves to get into sort of a high pressure environment, or the older person who’s perhaps in a position of very high responsibility.”*

[RP12-H]

4.3.3. Theme 3, Sub-theme a, b: Treatment and management of GORD according to the CAM modalities

Many CAM modalities individualise their treatment and management options according to the contributing factors, the mode of diagnosis and the patient’s constitution in relation to the CAM modality accordingly. Certain CAM practitioners have different preferred remedies or practices that have worked well for their patients

over the years. A selected few practices of treatments and management of GORD have been recorded below:

### Reflexology

*“Generally, is something that people don't think to bring up until I'm doing their feet and then I can pick up the oesophagus that's often sensitive and scarred, and then I asked them if they have heartburn, and they're all quite surprised, you can literally pick up the scarring on the feet. And that's why there's almost an immediate improvement by the next day or next week. My go to is apple cider vinegar and that is magic. I prescribed one tablespoon in a glass of water once a day. And that's about all in terms of diet and then I just do the treatment and I specifically work with digestive system and the Vagus nerve to try and break the stress cycle and activate the whole parasympathetic nervous system. I do, also is talk about diet. So I go through the more acid forming foods and then what are the learning foods and I've got a printout that I give them on that and suggest to them that they try and adjust their diet so they eat more of the Alkalisers like green vegetables and less of the gluten and the more acidifying things like, then see if it makes much of a difference”*

[RP1-R]

*“I will assess whether it is predominantly lifestyle or what their stress levels are like, or if it's a combination of both, because that then helps me to determine which reflexes to work.*

*Digestion connects from the stomach to the brain, the phrenic nerve runs through the through the chest up into the neck, where your liver meridian runs. So the parasympathetic nervous system is what wants to reduce and you want to counteract what's going on with the sympathetic. The Vagus nerve, very important, it's what works on your whole digestive system, the diaphragm and the solar plexus. It's not to try and stop the reflux that's more just to try and ease that that burning sensation that you're getting the whole time.*

*I would address how you are sitting when you eat and their diet so when they put their food on plate, and they look at it; it must be 30% acid foods and 70% alkaline*

foods. I do ask if they smoke, because obviously, that's going to increase the acid levels in the body.”

[RP2-R]

### Unani Tibb

“My firm favourite is honey water or honey with warm milk combination to neutralize the acidity. Then for those with indigestion we encourage like a mint tea, just fuse your tea with a little bit of mint,

It's more lifestyle modification, and then I would tell them, you know, uh, not too much of the aesthetic foods. Now according to Unani Tibb you have the cold and dry foods, your vinegar, your pickles, your fizzy drinks, you know, that's more aesthetic. Your sour foods, citrus fruits, and so forth. So we tell patients to avoid those types of foods. Eat your last meal before sunset, not a very late meal and elevate your pillows a bit, elevate the top of your bed .Cutting down and smoking, losing weight. My sister is a dietician, so I, we often refer them then to the dietician because I think your diet is quite a major effect.”

[RP3-U]

“It's basically correcting the imbalance in the body and then the body basically does heal itself with a little bit of support from the herbs and remedies and things. It would be a very unique remedy, individualized; we look at the patient and its entirety. Some prefer like a hands on treatment, like a cupping therapy. So that's where we treat the entire digestive system using either dry or wet cupping. And that helps to regulate acid reduction. It helps to increase the motility of the digestive tract. It eases those feelings of heartburn. And then we assist with herbs so, it could be a herbal tea, or it could be a herbal formulation. That's those ancient formulations that have been passed down through the ages that work brilliantly. It could be a mixture of like ginger, fennel, cardamom, cinnamon, dill. Uh, it could be a mixture of all of those things. And if we need some mush herbs, we usually go with the slippery elm or the marshmallow root or bitter herbs like dandelion or bitter melon”

[RP4-U]

## Chinese Medicine

*“This disease is difficult to treat because there are long term changes in the body. So I normally say one to two months of treatments, depending on the severity. The acupuncture, if we use acupuncture, it can alleviate at least the pain or the nausea or any of the major discomfort in a week or two. And then we use the herbal medicine to reduce the incidents and cure or fix the imbalance. That's cause for disease; hence generally it is quite effective. It can be anywhere from two to twenty herbs in a formula. And then what we will do is adjust a dosage of each herb based on the patient.”*

[RP5-C]

*“We see the patients and we ask the question, what do they like to eat or what kind of job they are doing. We first give the herbs, but we strongly believe that's a link with food. We can do acupuncture and We can do the herbs for stomach problems like reflux, and the main treatment should be Chinese herbs ginger for fresh, ginger for stomach. We use fresh ginger for stomach.*

*Some people have heat and they got a bitter taste and dry mouth, they got a burning sensation. This means heat in the stomach. We need a cooling down. But any cold food can make worse, warm food and cook the food, it will feel good. Then ginger is good.*

*So, we kind of use single herbs only to treat for very simple conditions, but the stomach condition always complicated. So we need a formula. Our formula got lots of different herbs for the reflux, some formula to warm up the stomach and to nourish the chi for a stronger function of the digestion system, but some actually mix for nourishment and the cooling.”*

[RP6-C]

## Ayurveda

*“In terms of treatment, it's very different for everybody because we assess what is their body constitution and what their lifestyle is, what their diet is like. And from that viewpoint we could recommend foods that are very good for counteracting it.*

*So, things like white pumpkin and things that is very cooling to the GIT like coconut water or a bit of ginger and curcumin. We've got medicines like Amlaki and Himcocid by Himalaya or a special preparation with liquorish root, some cumin and some raisins, and we would soak that in water. Also, some cardamom and some rose milk and rose water.*

*We have something called Rose Jam that also relieves and Amla or shankavatti. But if it is something that we see is a very chronic and deep-seated condition, we may opt for things like what we would call as Sadyo Vamana or Sadyo Virechana which is a mild panchikarma procedure that basically removes the morbid factors, what we would call as Doshas. So, if somebody is presenting with GORD, it's usually a result of maybe an imbalanced pita dosha, which is too high, which is the element of fire and water.”*

[RP7-A]

*“Taking your history from your patient, you need to first take into account what what's their occupation, are they eating, what they're eating. So first you have to take a complete history and get that history right, get them talking about GORD and then talking about hyperacidity then gastritis. The disintegration of food if it's up to the stomach region, we would recommend something called Vamana, sort a medicated vomiting. If it's further than the stomach, it's moved itself into the intestines then we would recommend something Virechana which is purgation or giving them medicated diarrhoea. So we want to purify the body before we give them medication. So once you've given them that purification then we'd give them medication for promoting the digestion of their food and to keep that that digestive fire or Agni healthy. So I recommend him to take certain medication or to even add certain spices to the food because spices such as dried ginger, long pepper and black pepper are actually very beneficial and that helps with that fire. We would also recommend them to take a proper diet which isn't too hot or too oily or too heavy. When it comes to problems*

*with digestion, and you would look for things that are more common native or digestive or increase that appetite Cinnamon, cardamom clove and bay leaf is also very good. If you feel like you need the body to remove the toxins from the body, then you'd have to take a laxative in properties such as Triphala or this combination that we use is called avipattikar churna.”*

[RP8-A]

### Homeopathy

*“So, my treatment approach is quite classical. I'll take a whole case, but even if the remedy is not there, if the constitutional remedy is the right one, often it will fix itself. If someone is really struggling with it, then I would consider giving low potency remedies.*

*Long term I'd probably really look at diet, patients are normally quite good at knowing what's caused it, whether it's spices or breads. In long term patients I think there is a lot of inflammation and gastritis and I would recommend that they cut out those foods totally until we have it under control, let's do it for a month or for two months, and we see how it goes. And with the help of the remedy, we can get changes like eating earlier at night, not going to bed with a full stomach, sleeping with a few more pillows so you're not quite as flat.”*

[RP9-H]

*“So depends on the state that they are in. I found that Nux vomica, Arsenicum Album and other homeopathic treatment works especially if it is constitutionally prescribed. I am quite strict with my patients, we know that with progression of the or the untreated Gastroesophageal reflux and the chances of Barrett's oesophagus, so I am quite strict with them, and changing things that we can change.*

*The only time that I like to use an adjunct is when it is severe, not for the babies only for the adults. When symptoms are really severe, instead of taking something like Gaviscon, rather introduce some slippery elm.*

*Even apple cider vinegar is one of the things that have been shown to work beautifully. My recommendation is also melatonin, anything between three to six milligrams at night; it works on that counterbalance of the cortisol.”*

[RP10-H]

*“My approach to all patients is very much classical, but I incorporate a lot of supplementations, diet, lifestyle, stress management as well. I use very classical case taking, CLAMSIT the whole case and getting all the symptoms so I can come to similitum, but then it's also just looking at some physical things. The base of any treatment will always be the similitum. And then over and above that would be those lifestyle changes, the diet and then stress management.*

*For fast relief, you do need to prescribe a couple other things, not just your one remedy. Supplementations, probiotics, glutamine powder, gut health, eliminating certain things from their diet for gut repair if we need to do that.*

*Monitoring that patient, communicating with them after a week of starting the remedy and how are they are feeling, and then again after a month.”*

[RP11-H]

*“So typically, I try to give people symptomatic relief, because if you don't relieve their symptoms, they go somewhere else. I'm not a purist, classical Homeopath. So I do sometimes resort to homeopathic remedy as a last resort. But I do sometimes prescribe single remedies, which we will come back to, but my mainstay for sort of relief in the treatment of GORD is an insurer product called Magen Pulv. I also use Natura's Elmer liquid or syrup and I use her herbal capsule called slippery elm. And if the if it's more stress related, then I might look for more of a constitutional remedy, like your Arsenicum albums and maybe Nux vomica or lycopodium who are more sort of tense and stressed. Or I might use something like Mentat or stress away to sort of work on the greater nervous system.*

*I would advise that people don't eat the fried food and the junk food and too much spicy food, eat too late at night, try to exercise to reduce stress, manage their weight and those sorts of things.”*

[RP12-H]

#### 4.3.4. Theme 4, Sub-theme a, b, c: Most effective treatment and management plan according to CAM modality

Many CAM modality practitioners have added an aspect of individualization over their years of practice. Being a CAM practitioner in a western world, there can be many adaptations to incorporate their modality in the modern world such as allowing allopathic and alternative treatments combined, many modalities prefer just a holistic approach, this does not mean that other CAM modalities cannot be utilized. Today, CAM modalities can refer outside the scope of practice to western practices and alternative practices however it mostly narrows down to patient compliance. The opinions and effective management plans of the participants have been recorded below:

##### Reflexology

*"I am also an OT, and I do quite a lot of stress management. So then I give them ideas on how to manage stress better, including exercise and good sleep hygiene. I do believe in the more holistic treatments. Tissue salts, I sometimes use that and I think number 10 is the one for acidity. It depends on what they believe is what angle they would take. So if they are into holistic health practitioners, then I would suggest that they see the homeopath and if they're not, then I would suggest that this year GP as they need to find out if they've got an ulcer or something else do because symptoms are not going away."*

[RP1-R]

*"Most people are really are taking medication so I will say, look, continue with it. But just try and maybe reduce the amount that you're taking while we're doing the treatment. If they are much stressed then I suggest physical, not strenuous exercise. There's breathing exercises, that's also really important, especially if it's affecting the diaphragm.*

*You can maybe try ginger tea, type of remedies just based on my knowledge as an aroma therapist. I would often suggest if I find that if I'm working on their feet, and their liver area is really tender, then I would suggest maybe going to see homeopath."*

[RP2-R]

### Unani Tibb

*“So acute is more just your antacids, if we are going to more chronic cases, then I'm going to add the protein pump inhibitor. I do a lot of cupping, depending on the patient's temperament; we would decide whether it would be dry or wet, whether it would be back on the abdomen or the back, there's different areas. It works pretty successfully for the detoxification process and removes stagnation but it needs maybe a few consecutive sessions of cupping.”*

[RP3-U]

*“Any lifestyle factors like basic things that they can incorporate into their daily lives. Eating slowly, making sure to count the number of times you chew, people just cough down their foods. I prefer to do the cupping and acupuncture is really good for encouraging the detox processes of the body along with the lifestyle factors and the targeted diet approaches.”*

[RP4-U]

### Chinese medicine

*“Normally I just do diet, lifestyle and my treatment, acupuncture and herbal medicine. I don't normally recommend any other treatments from any other practitioners, other than if it's really stress related, then maybe a psychologist, just referring to psychologist for methods to help them cope.”*

[RP5-C]

*“How to eat the food is very important to recover, we give the herb that this is the only part of the treatment. I ask them eat in time, smaller portions, but more frequent like five times and eat not too spicy foods or sour foods. Then you can eat any food that you feel comfortable. It's the food control, lifestyle and their emotionally control that heals them. That's very important in Chinese medicine that we always said 30% for the treatment and 70% for the food. I like a ginger and all fresh ginger, if you got acute condition, normally fresh ginger. But if chronic conditions like cold in the stomach or cold pain and reflux we use dry ginger. Some herbs, very cold in nature and some have heat and inflammation.*

*We do acupuncture if the patients got heat, we need to clear the heat. So we use herbs, but if a patient feels cold, the stomach cold, we use a formula to reach the warmth, we got a warm gel with formula works very well. So we warm up and put on the special points up and down or we stick these herbs on the needles we burn so those patients feel stomach to feel warm.*

*If you feel much better, you can go off or slow down the herbs until they feel they are fine. I don't think we need a treat the stomach forever.”*

[RP6-C]

### Ayurveda

*“We introduce a lot of grounding, meditation, yoga, pranayama. So pranayama is yogic breathing that helps to rid the body of free radicals and it assists in oxygenation. Staying off the phone so much, like eliminating things that would cause the problem to worsen, so eliminating stress would be the number one thing.*

*I have seen that a lot of patients that have complained about taking PPIs and not get like temporary relief. Once they would see that change in their diet and lifestyle and follow an Ayurvedic protocol, it would be much more effective. You do get your one or two patients that are a bit difficult and lazy to do the work because everybody ultimately wants a quick fix, and sometimes it doesn't work that way.”*

[RP7-A]

*“When you're talking to any patient, you have to tell them like, this is your lifestyle, are you willing to change it? If they can give you a month, for example, or two months just to try the changes and see how it's helping you. If it's not helping you, then we can find another route, but you have to be willing to make the changes after they've accepted that, then you can explain to them the diet and their lifestyle.*

*I've got the treatment protocols, I suggest to patients like yoga and the meditation because they need to bring that body into control. You will try and include more vegetables in their diet, more fruits, also antioxidants and also increase the immunity because they their immune system is going to be taking a hit with all the changes to their body. Your treatment has to be changed over time, because you don't want*

*them to be stopping everything for the rest of their life, they want to get back to their life.*

*Patients now come to you when they don't have another resort. They want to feel better, they immediately go for allopathic medicines, because allopathic medicines, give them the help they need immediately. Unfortunately, allopathic medicines do symptomatic treatment.”*

[RP8-A]

### Homeopathy

*“I found that Magen Pulv (Natura) and slippery elm is quite nice in certain circumstances, especially with cramping and nausea, sometimes they can be nauseous with the pain,*

*I'm quite adaptive with my patients. There are certain patients who are very anxious about using complimentary therapies and they've maybe been on allopathic treatment for a while, and those patients who you can't just take off medication. So for me, it's very much a team effort between myself and my patients. I get better patient compliance when I get them to understand how they can assist with their problem. And as my remedies start working, we can start decreasing other meds.*

*I have a GP that I work closely with and I will refer to her with my concerns and she can then take over and follow up. I don't refer many patients unless there's some secondary issue that I'm really concerned about with, with an underlying medical problem. I might for other things, we have a kinesiologist, psychologist for some of my more emotional patients it's quite helpful to work on the background and the remedies do their thing.”*

[RP9-H]

*“We start working in conjunction with homeopathy to try and reduce the amount of the allopathic medication that they're taking the same for the babies*

*We know that we can't necessarily change the stresses in our life, but the way that we deal with the stresses we can do, I do. I teach them abdominal breathing. So I try and address it holistically. It's not just about taking something whether it's homeopathic or non-homeopathy, but I think it needs to be addressed from all sides.*

*Let's look at the adrenal gland, a little bit of the adrenal support and have some slippery arm in case of the acute flare ups, we start to correct the problem and we are always hoping to get the correct constitutional remedy for the patient.”*

[RP10-H]

*“As a homeopath, it's so individualized. So there's no hard and fast way that I do it. So most patients who come to you with GORD are already on allopathic medication, but they're still experiencing symptoms or they are asymptomatic when they're on it, to a point where when they try to come off then the symptoms come back. So you've got to monitor their symptoms while you start them on the remedy and then start to try and wean them off the allopathic medication.*

*I would say the success rate of treating a patient holistically works really well. I think if a patient was presenting with certain symptoms where I think there may be ulceration, I would like for them to have a scope done, then I would refer them.”*

[RP11-H]

*“I do get people who already had a scope and they're on Trustan or an antacid, and it is possibly easier because some cases of good are quite severe. So for the people that are having really active heartburn and reflux, it might be easier to actually have that have the symptom management and work hand in hand with it.*

*If people are not responding to treatment, or if they have really severe symptoms, I would possibly do a blood test or a stool test for H. Pylori or those sorts of bacteria. In my experience very resistant to natural medicine and may actually require a course or to have of antibiotics.”*

[RP12-H]

#### 4.3.5 Summary

Upon retrospect of the thematic analysis of various CAM practitioners' approaches to treating and managing Gastro Oesophageal Reflux Disease, many similarities and distinctions emerged. Most CAM philosophies are underpinned by the principle of a life force which is referred to as a Vital Force in Homeopathy, Qi in Traditional Chinese Medicine, *Prana* in Ayurveda, *Physis* in Unani Tibb and life force in Reflexology.

Each philosophy conforms to the idea that the body has an innate healing ability which must be augmented by therapy rather than suppressed or opposed. Most of these philosophies share the idea of each individual having a constitution or temperament which can be identified according to a set of personality traits and characteristics, and predisposition to certain medical ailments, this constitution guides the practitioner towards a certain therapeutic course of action and the form of remedies needing to be prescribed.

In Conclusion, this chapter had shed light on the interpretation of the data collected by transcribing raw data and thereafter grouping the data into themes and sub-themes. The next chapter dives deeper into the intricacies of the data, discussing the data collected and therefore answering the research question for the study.

## **CHAPTER FIVE: DISCUSSION**

The main thrust of the research study was to explore and document the approach in treating and managing GORD from diagnosis through the contributing factors within CAM modality through the lived experiences of each CAM practitioner.

In the previous chapter, thematic analysis was implemented to capture the CAM philosophies and therapeutic protocols of these CAM practitioners in the treatment and management of GORD. The following chapter provides a detailed discussion based on the findings obtained from the thematic analysis of the captured data. The discussion was carefully guided by the research questions namely: what is your understanding of the cause of GORD? In your opinion, what are the trends and patterns seen in the treatment of patients with GORD?

## Chapter Five: Discussion

This chapter discusses topics in relation to the identified themes which were presented in Chapter 4 follows. Sections are discussed as listed below:

- Demographic profile of participants
- Philosophy of GORD according to CAM Modality
- Demographic of GORD patients according to participants
- CAM specific treatments of GORD
- Management of GORD

### 5.1. Demographic profile of participants

There has been limited attention paid on the structural factors such as gender, age, occupation and other social factors. In the interview process, interactions between in the researcher and research participants are shaped by the social context within the interview.

#### 5.1.1. Gender

Gender is a key factor which influences the quality and content of qualitative research data, specifically on interpretation. The participants' gender can influence the emotional expressivity, conversation style, manner of discourse and the intent of the vernacular speech during the interview (Redman-MacLaren et al., 2014).

As presented in table 4.2, the representation of participation in the research study of male to female is a 1:5 ratio as there were 2 out of 12 participants that were male and 10 out of 12 participants that were female. Equal gender representation is noteworthy as female underrepresentation in research systems has been deemed undeniable (Abramo and D'Angelo, 2015). This research study is therefore not a misinterpretation and thus has a reduced risk of skewed data, elimination the possibility of gender bias.

### 5.1.2. Age

Age is another key demographic factor which influences research output. The ages of participants were categorized into 4 ranges. The first group ranged from 30-35 years, the second from 35-45 years, third ranged from 45-55 years and the fourth from 55-65 years of age as represented in table 4.2, the first and third age category represented 42% per group and the first and fourth age category represented 8% per group.

Having all age groups represented was crucial in ensuring that different generation groups of CAM practitioners were included in the study whilst falling within the inclusion criteria of the collected data. This ensured that practitioners with different lengths of experience were included in the study. Both younger and older practitioners produced advantages that benefited the quality of the research data.

Older practitioners have been in practice longer and have consulted with a larger number of patients and therefore have more experience with a wider scope of pathologies including GORD and the multiple diseases of conditions that increase the risk of GORD. Older practitioners are more classically trained in their profession and younger practitioners have more experience in a holistic approach with the up-to-date knowledge to aid in their diagnostic, treatment and management skills.

### 5.1.3. CAM practitioners

As shown in table 4.2, homeopathy had the highest representation of practitioners at 33.3% whilst Reflexology, Unani Tibb, Traditional Chinese Medicine and Ayurveda had an equal representation of 16.67%. Evidently, there is an unequal representation of the five CAM modalities. The researcher, being a homeopathic student had extensive access to homeopathic practitioners who were willing to participate in the study. Four homeopathic practitioners were qualified and registered as Homeopaths. 1 out of the 4 homeopaths had a second qualification in Sports Medicine with extensive knowledge in the practice. Many CAM practitioners in Reflexology, Unani Tibb and Ayurveda possess experience of other modalities or specializations such as Somatology, Acupuncture, and life coaching.

## 5.2. Philosophy of GORD according to the CAM modality

In order to fully address the research question *what is your understanding of the cause of GORD? In your opinion, what are the trends and patterns seen in the treatment of patients with GORD?* A list of sub questions with prompts were utilized in order to document information categorically and gain a well-rounded perspective on the CAM modality practices. Each CAM modality is steered by its own distinguishing and unique philosophy which was documented according to the individual practitioners' response which was sustained with further evidence. The knowledge, principles and theories regarding GORD and the extensive medical conditions that contribute to GORD as pathology is guided by the philosophy of each CAM modality.

### 5.2.1. Homeopathic Philosophy

The first modality discussed was Homeopathy- a system of medicine first described about 200 years ago (18<sup>th</sup> century) by a German physician, Samuel Hahnemann (1755-1843). The principles of homeopathy and its concepts of illness differ from those of conventional medicine (Aphale and Sharma, 2022). The treatment through Homeopathy is governed by the scientific principles of Homeopathy.

Hahnemann proposed the philosophy of a physical energy in the body called the Vital Force. The Homeopathic practice stresses the existence and operation of the vital force in a living organism, which is said to consist of mind, body and spirit. The 'spirit' or vital force when thrown off balance is responsible for the different manifestations of pathologies and abnormal sensations within the body Podder et al. (2020) the vital force is believed to maintain homeostasis physiology and is weakened by the external stressors and the remedies is therefore required to re-establish homeostasis within the body (Liu et al., 2022).

The first principle, being the cardinal or fundamental law of homeopathy is the law of similars or 'treating like with like', originates from the classical medical systems mentioned by Hippocrates and rediscovered by Hahnemann. This law states that a disease can be cured by administering the patient a substance that, in a healthy state, causes symptoms similar to those of the disease. Following this principle is the understanding of potentization which stems from the fact that many homeopathic

remedies is toxic in its original form and therefore is highly diluted to avoid side effects. The diluted remedy is then succussed many times to increase the potency/energy/ effect of the dilution (Kardile et al., 2015).

According to Saha et al. (2014) another key principle is individualization; different patients can suffer from the same pathology but can be treated by different homeopathic remedies in accordance with their specific symptomology and characteristic features.

A miasm signifies a profound level of the derangement of the vital force, which is categorized by a “totality of symptoms”. Miasms are negative influences in which the self-healing capacity of a human being is prevented on accordance of needing to overcome the negative morbidic traits. Each miasm is connected to a phase in or an aspect of human development, and therefore not only connected to pathology, but also the qualities it invokes (Zee and Chappell, 2012).

A miasm can also be transmitted through inheritance, or in modern science, epigenetic mechanisms. This view denotes an energetic point of view whereby chromosomes are carriers of ancestral energy. Homeopathic remedies or specifically anti-miasmatic treatments are necessary in order to disturb the expression of hereditary energy and drive out the miasm-induced disease (Vithoukias and Chabanov, 2023).

Hahnemann based 3 miasms on 3 diseases that were dormant in his time: scabies, gonorrhoea and syphilis which were described as three metabolic pathways of homeostasis Psora, Sycosis [anabolic], syphilis [catabolic] (Hatherly, 2016). In the 20<sup>th</sup> century homeopaths Rajan Sankaran and Vithoukias extended the three original miasms to include the Tubercular, Leprous, Cancer, Malarial, Typhoid and Ringworm miasms and had proposed the idea of miasmatic progressions concept of miasmatic identification is beneficial in detecting patterns of pathological tendencies after which the homeopathic remedies that the patient may need can be predicted and administered (Drew, 2004).

To reach a similimum, the remedy picture of the patient needs to be investigated and the following points are considered (Vithoukias and Chabanov, 2023):

1. The disease has to be considered holistically, not locally

2. The physician has to go in depth with the case taking to individualize the case
3. The fundamental cause should be established by having a clear concept of the miasm
4. To cure the chronic disease, the physician has to cure the inner miasm or other remedies and external applications would be futile

All 4 Homeopathic participants shared that the manifestation of GORD stems from multifactorial causes and the information given asserted two main miasms as a contributing factor, sycotic and cancerinic. All four participants indicated stress, Type A personalities, diet and existing diseases as a contributing factor. RP9-H had also indicated being overweight a cause, which is a typical sycotic manifestation however the cancerinic miasm was the most presented miasm.

The sycotic miasm is the miasm of excess on all levels; this includes weight, diet and hyper workaholics. The 'Hyper' theme in the sycotic miasm contributes to the manifestation of GORD (Stahl and Bagot, 2021) A type personalities such as doctors, journalists, lawyers, politicians and young students that feels above mediocre. The high stress lifestyle and poor diet related to the professions contributes to the excessive acid reflux (Loukas, 2005).

The mental status of a sycotic patient is nervous, emotional, irritable and anxiety and state of hypertension which gradually declines into confusion and forgetfulness. Physically, contributing factors include excessive acid, food, alcohol, stress and medication, these results in burning sensations and indigestion (Paterson, 1978).

From the extracted information from the participants, the cancerinic miasm is dominantly present in their GORD patients. The Cancerinic miasm is characterized by the idea of "perfectionism" and is associated with patients with an A-Type personality. This patient is highly ambitious and sets goals that exceed their capacity. In the chronic stages of this disease, the patient physically burns out and feels exhausted. The cancerinic miasm is a combination of the Psoric, Sycotic and Syphilitic miasm. The Psoric aspect pertains to a chronic, desperate struggle which the individual tries to overcome by exerting a superhuman effort. The Sycotic aspect is the uncontrolled proliferation of cells which symbolized rebellion and breaking free from restriction, this leads to a Syphilitic form of destruction of healthy tissue.

Physically, the skin is prone to moles, psoriasis/ichthyosis. This patient may experience insomnia, have a family history of cancer.

Drew (2004) studied the Canceric patient and their personality traits closely and described them as follows:

1. Highly conscientious, dutiful, responsible, caring, hardworking and possessing an above average intellect
2. Exhibiting a strong tendency to bear the weight of other people's burdens.
3. People pleasing constantly
4. Often there is a history of a strained or detached relationship with parents
5. Internalizing their emotions by bottling up anger, resentment and/or hostility
6. Poor coping mechanisms for their stressful lifestyle
7. Poor resolution of child-hood conflicts

The cancer miasm also has the affinity for the digestive tract therefore there may be problems with digestion, the stomach, and the elimination of waste. This is very often a trigger for anxiety and fear especially regarding one's health. A cancer miasm patient also has a special craving for high fat foods like butter, ice cream and chocolate and this affects the patient's diet greatly in times of stress (Tandy, 2021).

It is evident that the principle identification of the sycotic miasm is based on physical symptomology of excessive food, Alcohol and stress leading to increase acid production. It is also evident that the principle identification of the canceric miasm is based on the emotional and psychological grounds with the strong indication of stress related conditions, being overworked and instability mentally and physically within the body.

### 5.2.2 Reflexology Philosophy

Reflexology has ancient foundations and has evolved into the modern world, overlapping with other CAM modalities, specifically Tradition Chinese Medicine philosophies. Reflexology originated in China around 5000 years ago, and documented in Egyptian healing practices dating around 2500-2300 BC. This form of healing technique is well known in ancient history where pressure therapies were

recognized and accepted as a preventative and therapeutic system (Dougans and Ellis, 1992).

Reflexology is a philosophical base of holism aimed at treating an individual as a whole entity, incorporating the mind, body and soul. The modality is defined as a healing technique whereby the body is mapped out in the ears, hands and feet. The main focus of this specific pressure technique when treating GORD and the digestive system is in the feet and meridians of the body. Reflexology is based on the proposition that energy channels run throughout the entire human body. The energy is known by many names, Indian yogis call it 'Prana', Chinese call it 'Chi' or 'Qi' and homeopaths it is known as the 'Vital Force' or 'Life Force (Snyder and Lindquist, 2014).

There is a lesser degree of scientific research on reflexology; however there are theories and concepts within the practice that has the potential to become a well-developed and researched modality today. The Chinese had discovered the Meridian System around 3000 years ago. The meridians are a network of electrical channels or energy pathways that covers the entire body and is known as 'zones' in reflexology. There are 12 major meridians passing through the body, 6 on each side that is a mirror image of the other. A basic understanding of the meridians can assist the reflexologist in pinpointing the disease pathways and problematic areas. The electrical energy found within the meridians is derived from the food intake of the individual thus nourishing the mind and body. When congestion forms around the pathways, the meridians run on low current. This is caused by toxic molecules sticking together and obstructing blood flow causing pain and slowing down of body processes such as digestion (Whatley et al., 2022).

The 6 main meridians are found in the spleen/pancreas, stomach, gall bladder, liver, bladder and kidneys (Dougans and Ellis, 1992). Reflexology participants had emphasised on the liver meridian having a direct involvement in digestion and the stomach meridian having an involvement in GORD and the accompanying symptoms i.e. heartburn and indigestion. Reflexology treatment is said to stimulate reflex points/acupressure points to clear congestion, allowing energy to flow more freely and returning the body back to balance.

The philosophy behind reflexology also consists of 5 basic elements, fire, earth, metal/air and water, found in the universe and consequently also in man. These concepts are portrayed in seasons, physical traits, taste, body typology, emotion and sound. Each element is associated with a variety of factors such as body organs, senses and cellular tissues. Extreme reactions of any of these factors indicates an imbalance in the related elements (Tift, 2022), the combination of meridian theories and the 5 elements into the science of reflexology elucidates the sensitivity of the organ reflex points.

In a physiological version, reflexology improves nerve and blood supply to the body. When attempting to keep the body at a normal balance, the nerve and blood supply to every organ and gland would need to be at its maximum as this is essential for the wellbeing of the body with each part making contributions to maintain efficient operation of all networks within the body. A short circuit of these networks tension due to applying pressure on vital nerves and nerve plexuses supplying organs. Reflexology eases the tension, allowing more relaxed nerves and vessels thus improving the flow of blood and oxygen rich nutrients to all parts of the body (Anjoman Azari et al., 2020)

The rationale for reflexology is that the feet represent the energy of the body with the big toe corresponding to the head, reflex points are situated accordingly. The spine reflex area is located on the medial aspect of each foot. The reflex area for structures and organs on the right side is located on the right foot and the left side on the left foot. Reflex areas present on both plantar and dorsal aspects of the foot, the same rationale applies for the hands (Cai et al., 2022).

An electrical type of impulse triggered by a reflexology pressure on a tender reflex point within the muscles can produce a subtle flow of energy which replenishes the vitality of the body during treatment. The mechanism of action of reflexology can be unclear but has certainly shown to have profound physiological effects. The skin-to-skin contact during the massage releases endorphins and enkephalin which improves the sense of wellbeing (Liu et al., 2022). On average, feet are exceedingly more sensitive to pressure and movement as skin contains several types of sensory nerve receptors, that under stimulation, triggers and 'action potential' in skin cells and discharges an electrical current (Tiran and Chummun, 2005).

According to Tiran and Chummun (2005) there are two theories that explain the 'action potential' mode of action:

The nerve impulse theory/ autonomic-somatic integration theory advocates that applied pressure on the feet during reflexology compresses the receptors in the cells, opening ionic channels in its plasma membrane and triggering a local action potential to convey messages to the brain and/or spinal cord.

The contemporary theory suggests the workings of electromagnetism whereby the alpha brain waves vibrate in tandem with the Schuman Resonance of the earth. This allows synchronization of the human brain to function as biological organs. To put concisely, during treatment the energy flows from the healthy therapist (the conductor of the energy) to the patient (the receiver of energy) who has a lower energy threshold. This occurs until a homeostatic balance is achieved.

Reflexology has a direct effect on muscles as a result of a combination of sensory messages coming directly from the feet with motor instructions going out to the muscles via the interconnecting neurons in the spinal cord. As pressure is applied to different reflex points of the feet, different sensations would be felt. A patient's reaction to stimuli can range from a sharp sensation to a dull feeling. The basic principle of human reflexology states that reactions differ from one person to another. One patient may feel energized and another may experience deep relaxations (Embong et al., 2015).

Within the practice of reflexology, each treatment is a response to each individual and their symptoms and the underlying factors producing GORD.

### 5.2.3. Traditional Chinese Medicine Philosophy

Traditional Chinese Medicine (TCM) is thousands of years old with miniscule changes over the centuries. TCM is an ancient system of healing originating from oriental or eastern philosophies and culture which has been developing through a series of extensive research and experiments in order to ensure complete comprehension of ancient theories and methods. TCM is known for the holistic approach to illness and health, with therapeutic interventions committed to moderation and balance (Hsu, 2018).

The basic concept of TCM supports the idea that the human body is governed by a vital force of life called 'Qi' or 'Chi' that surges through the body. This Qi force is said to circulate along pathways in the body and its physiological function is related to the energy of the body, the production and propulsion of bodily fluids to viscera or organs as well as defend against foreign pathogens. Any imbalance in Qi can cause illnesses or diseases. Ancient Chinese believed that human beings are microcosms of the surrounding vast universe, interconnected by the nature and subject to its forces which includes *Yin and Yang*, *Wuxing* (5 elements) and Qi (Vital Force) (Qiu, 2015). Balance between disease and health is the key concept in the treatment of TCM as it is individualized. Treatments to regain balance include Acupuncture, Moxibustion (burning of herbal leaves near or on the body), Cupping, Massage, Herbal Remedies and exercise of movement and concentration [e.g. Tai chi] (Matos et al., 2021a).

According to (Wang, 2019b), the key theories of TCM the donates the alignment of various viscera according to the disembodiment sequence of bodily energy the Yin/Yang theory, five phase theory and the meridian system theory. These theories illustrate the dialectic relationship between the inside and outside of the body. The description of such theories is as followed below:

### *The Five Phase Theory*

The Five phase theory had been discovered by ancient sages and is all about adjusting and keeping balance in the body. The concept of 'partial components' can become too active and thus harmful if not controlled. The theory is about 'whole will' through competition and coordination among the components. The components attain support from the entire system and continuously develops produces and strengthen the system. When components oppose 'whole will', it is systematically debilitated in competition with numerous aligned elements. Connections within the body are processed through elements that continuously produce and perish. Thus, it can be concluded that every part of change within the human body is a miniature reflection of 'whole will'.

### *The Yin Yang Theory*

This theory forms a unification of the five phase theory. The idea behind this theory is that nature and man are united as one system, indicating that human beings exist to resist changes of their surroundings, including social relations and natural environments. Adaption to these changes in the surroundings is essential for normal bodily functions, if opposed a physiological alteration occurs and the patient would get ill or develop an ailment.

### *The Meridian system theory*

The theory as stated in section 5.6 combines matter of the body and electrical energy in an orderly fashion, which is changeable to be able to adapt to changes in the outside world.

The energy and information of each theory is incorporated in each TCM treatment option and can directly affect the energy circulation, the opening and closing of cells and the gathering and releasing of energy in the human body.

Chinese Medicine practitioners within the study have based their progression of GORD on the philosophical basis of TCM. Both participants agree that three key factors in the progression of GORD illustrate something happening in the stomach resulting in *Qi* deficiency. The factors are as follows:

1. Improper diet and food regimens- this includes spicy, cold and greasy foods that generate dampness, creating phlegm which acts as a prevention of food and fluid descending into the stomach. Every patient is different and genetically affected by many food substances.
2. Stress – along with emotional issues and being overworked, weakens the stomach. The Central Nervous System concentrates on the emotional aspects and not the stomach, thus decreasing the speed of digestion.
3. Serious illnesses/ loss of blood- this can be due to cancer, diseases or infections that weaken the body including the stomach. Ailments that are not cleared up cause an imbalance and generate internal heat. The effect of the imbalance causes food to be stagnating in the stomach, decreases *Qi* and digestion.

Acid reflux is a sign of poor digestion; fluids accumulate in the stomach and are known as stomach dampness. Dampness slows down the movement of blood and Qi in the body. The stomach in turn feels full and Qi moves in the wrong direction (upwards) leading to acid reflux. GORD along with its symptoms i.e. bloating are all signs of stomach dampness.

#### 5.2.4 Ayurveda Philosophy

Ayurveda is one of the most traditional Indian systems originating in India and consists of ancient Vedic knowledge of healing science. Ayurvedic medicine is an old holistic healing system, dating over three thousand years ago in India. The idea supporting Ayurveda depends on a healthy individual obtaining the balance between mind, body and soul. Everything in the universe is connected and the mind, body and spirit harmonize with the universe (Sivapuram et al., 2020). The philosophy behind Ayurveda is to prevent any unnecessary suffering and in turn allow the living of a long and happy life.

Ayurvedic practitioners within the study emphasizes the concept of individualization, to treat the cause one must remove the contributing factors of GORD within each patient. The purpose of the natural way of Ayurvedic practices and medicine is to undo suppression. However, a philosophical connection in Ayurveda extends beyond the concept of individualization and becomes universal.

This Philosophy can be expressed by seven phrases (Guha and Camerayn, 2016) as follows:

1. All things in the universe, living and non-living are joined together
2. There is a deep connection between oneself and the environment
3. Initially, we are all connected within ourselves, the people around us, the environment and the universe which ensures good health by being balance
4. We remain healthy if we retain balance
5. Our initial balance can be disrupted by lifestyle, thus creating physical, emotional and spiritual imbalances.
6. Lack of harmony from the imbalance allows for disease to manifest
7. Human beings are being responsible for both choices and actions, this promotes connectivity with oneself

The main focus of Ayurvedic treatment is to remove morbid factors to balance the Doshas, Vatta, Kapha and Pitta as mentioned in the literature review of this study. GORD or Ayurvedic acid reflux is a result of imbalance or aggravation Pitta Dosh(the energy of digestion and metabolism) specifically in the stomach and is termed Amla-Pitta (Amarprakash et al., 2021, Apaturkar et al., 2016). Ayurvedic practitioners believe that the medication given to a patient should promote digestion and keep the Digestive 'Agni' or fire healthy in the stomach; this is good energy/heat radiation.

Amla-pitta means the Pitta of sour taste and is a commonly known digestive disorder in Ayurvedic practice. It can be describes as a disease of modernization due to irregular eating habits and is known to be more of a psycho-somatic disorder due to contributing factors such as mental stress, strain from irregular diets and illnesses (Apaturkar et al., 2016). GORD is very much co-related to Amla-Pitta, as described In Ayurvedic text. Amla-Pitta is associated with digestive impairment (*Agnimandya*) and effects the channels that carry indigestive foods i.e. the oesophagus, leading to the primary symptoms of indigestion and exhaustion from the exertion of the body after eating, this is known as *Klama* (Amarprakash et al., 2021).

According to Ayurvedic practitioners, important factors related to the contribution to the pathogenesis of Amla-Pitta include:

1. Excessive consumption of spicy, greasy and acidic foods
2. Intake of stimulants such as alcohol, caffeine and nicotine
3. Keeping the stomach empty for long periods of time, increasing the acidity.
4. Stress, anger, anxiety and depression
5. Sleeping just after a meal
6. Medical confections such as hiatal hernias, pregnancy and obesity.

According to Apaturkar et al. (2016) one of the contributing factors include drinking excessive water, eating leafy vegetable in excess and continuous use of analgesics i.e. NSAIDS.

As the treatment of GORD is individualized, it is important to note the constitution of a patient that may experience GORD, the Pitta Dosh patient healthy pitta dominant constitution have robust appetites with a powerful metabolism and digestion rate.

Patients tend to gravitate towards hot and spicy foods and cold drinks. Pitta patients have a lower tolerance to heat, sunlight and physical work. They have many qualities of fire, thus can become agitated and short tempered yet still very alert and intelligent. The build of a Pitta patient may be of medium height with bodies that radiate heat.

#### 5.2.5 Unani Tibb Philosophy

Unani Tibb is based on three ionic/Greek pioneers of medicine namely; Hippocrates, Galen and Ibn Sina. This modality can be defined as a system of Greek medicine which developed during Arab civilization. Greek/Ionian is translated as Unani and medicine is translated as Tibb in Arabic (Yagüe et al., 2022).

Unani Tibb's philosophy is largely based on four key principles (Bhikha, 2022):

1. Temperament- this concept reflects a person's constitution or uniqueness and is essential for treatment protocol as all treatments are individualized.
2. Physis- describes the body's innate power to self-heal. The main objective in Unani Tibb is to treat and support Physis, initially by lifestyle changes, herbal treatments and therapeutic practices.
3. Qualities- an old concept given to a new perspective in Unani Tibb involving recent developments in clinical science. This indicates the disturbances to a person's qualitative balance are the source to the body's disharmony, thus a disease.
4. Lifestyle Factors- Unani Tibb believes that self destructing lifestyles result in aggravation of all ailments, and can progress to more serious diseases e.g. Cancer, Diabetes Mellitus and heart disease, thus modifications are necessary.

This holistic system provides great insight into the nature of man, the constitution and relationship with the environment. The philosophy Tibb is based on is that everything in the universe comprises of 4 elements, fire, air, water and earth in specific ratios. The balance of these elements is known as temperaments (Yuan et al., 2016a). Each element corresponds to qualities of heat, moistness, coldness and dryness. The bilious temperament (fire element) is hot and dry, sanguineous (air element) is hot and moist, Phlegmatic (water element) is cold and moist and the

melancholic (earth element) are cold and dry. Each individual would have dominance of one temperament, depending on one's combination of qualities. If the ideal temperament is maintained, a person should remain healthy (Bhikha - Vallee, 2007).

According to Unani Tibb practitioners within the study GORD is produced by excessive heat in the body. The excessive heat and dryness produces excess amounts of stomach acid causing excessive moisture. Individuals with GORD that are linked to heat and dryness are associated with the bilious temperament; RP4 had an increase prevalence of patients with this temperament. The form of GORD associated with moistness is found in people with phlegmatic/sanguineous temperament. All patients with GORD are treated individually; hence the symptomology of this condition provides a sense of the temperament (Tibb Institute, 2022).

The pathophysiology of GORD depends on its symptomology. However, Unani Tibb is a classical modality and GORD is a new era term. The clinical features of GORD corresponds with the signs and symptoms of *sue hazam* (dyspepsia), *bad hamzi* (indigestion) and *Hazm-ki-Kharaabi* (digestion disorder) mentioned in Tibb Classic literature. The deleterious effects of GORD occurs in the process of digestion of food, in which there could be malfunctioning in the stomach, irregular diets and food particles not being chewed properly. This causes food particles to remain in the stomach, resulting in nausea, vomiting, diarrhoea, abdominal pain, belching, flatulence, water brash and heartburn (Zafar et al., 2019).

Unani Tibb practitioners within the study collectively agree that the multifactor causing the deleterious effects of GORD are smoking, obesity, alcohol, stress, anxiety, pregnancy and with medical conditions such as hiatal hernias or oesophageal cancer.

From the data collected in this research study, the philosophy of Homeopathy, Ayurveda and Unani Tibb are very similar due to the concept of individualization or constitution.

### **5.3. Demographics of Patients with GORD According to CAM Modality**

The age, gender and ethnic group is an important aspect when treating or managing GORD as it is an indication of the way of life corresponding to the position in which a patient is in. demographics assist in the prescription of certain healing remedies and practices, allowing the CAM practitioner to utilize the sure lifestyle factors of a patient, thus making treatment of GORD more individualized.

#### **5.3.1. Age**

According to CAM practitioners within this study, the ages of 20-50 years of age had an increase incident of GORD, with an exception to the record of elderly persons. Most adults have an increased risk of GORD with no clear indication until it is seen that there is a physiological factor that co-exist with the lifestyle factors present with a certain age group. When a person is younger, the most common morbid factor resulting in GORD is an overindulgence of foods in an irregular diet, i.e. spicy, greasy, fast foods.

Muscles all around the body tends to weaken as one gets older; this includes the Lower Oesophageal Sphincter which is a critical muscle in the prevention of acid reflux. With age, the muscles and tissue fibres within the stomach weaken. The weakening of these parts of the digestive tract can result in a repositioning of the diaphragm, making it difficult to keep stomach contents in place (Greenwald, 2004).

Ageing increases the risk of minor to more moderate health conditions, in turn the prescription of allopathic medication increases. Potential chronic medication can be hypertension medicine, antidepressants, corticosteroids, and pain medicine such as NSAIDS. Weight gain can also increase with age, thus increasing bouts of reflux especially in lack of physical activity (GI Associates, 2019). Elderly patients, around the ages fifty to eighty years, experiencing GORD is usually due to the slowing down of metabolic functions, including digestion. However, it is not uncommon for elderly patients to have prolonged weakening of the diaphragm muscle, which allows the risk of the upper part of the stomach to be pushed through into the chest cavity causing a condition called Hiatal Hernia (Tsukanov et al., 2016).

### 5.3.2 Gender

According to participants, gender demographics depend on the basis of the practice as some can be more female and a male based practice. Almost half of the CAM practitioners within the study have a more male based practice, yet studies have shown that females have an increased risk of developing GORD and four Cam Practitioners in this study have agreed.

In the modern world, humans strive for equality in the positions of high stress careers or living statuses, thus women can have an equal set of risk factors contributing to GORD. This been said, a study by Kim et al. (2016) has shown that clinically, men suffer with pathologic diseases such as oesophagitis, Barrett's oesophagus, oesophageal adenocarcinoma more frequently than women. Men with these conditions have initial stages of GORD being asymptomatic or a silent reflux. Symptoms of GORD have been reported to be experienced by females more than males, in addition to cases of inflammation accompanying menopause. A decrease in oestrogen during and after the menopausal stage in women might be related to the increase in incidence and severity of GORD, however the mechanisms controlling this pathogenesis remains unclear. Five out of the 12 CAM practitioners agree with the increase incidence in females, with RP11-H seeing the effects of menopause in female patients with GORD.

### 5.3.3. Ethnic Group

This aspect is dependent on the location of the practitioner; however, half of the CAM practitioners interviewed have seen the Indian population with an increase prevalence of GORD. To analyse the ethnic component, one must consider both the clinical and lifestyle parameters of the Indian population.

According to Podder et al. (2020) clinically, the Indian population is at a higher risk of co-morbidities such as Diabetes Mellitus, Hypertension and Cardiovascular Disease thus medication for such conditions increase the bouts of reflux experienced by the patient and chronically can worsen to conditions such as Barrett's Oesophagus

## 5.4 CAM Specific Treatments of GORD

Each CAM modality has a unique approach to therapeutic intervention which distinguishes it from the other mentioned modalities, although there are aspects of each modality that overlap and an underlying principle of holism and individualization which governs each modality.

### 5.4.1. Treatment of Homeopathy

Based on the responses by the homeopathic practitioners' similar patterns of treatment emerged: (i) constitutional treatment/ similimum (ii) clinical homeopathic treatment based on a matching remedy picture to the presenting characteristics of the patient (iii) Adjunctive supplementation manufactured by homeopathic pharmaceutical companies.

When prescribing, the homeopath has to consider the totality of the patient and the disease as a whole and not as a local entity, then find a treatment using a Repertory and Materia Medica (tools a homeopath utilizes to prescribe remedies).

Half of the homeopathic practitioners prefer a more classical approach to homeopathic case taking and treatment. Classical Homeopathy is said to be about the individual and is the definition of the principle of 'like cures like'. A full case history is taken from the patient and once the practitioner feels he/she has understood the case, it is then repertorised and then the outcome is verified using the Materia Medica. A similimum is then given with the aim of being curative and not merely palliative.

The most common constitutional and/or clinical remedies prescribed by the homeopathic practitioners participants collectively are *Nux Vomica*, *Arsenicum Album* and *Lycopodium*. These homeopathic remedies are illustrated by the Materia Medica, specifically by Dr William Boericke (Boericke, 2002) and Dr.SR Phatak (Phatak, 2018) as communicated below:

#### *Arsenicum album* (arsenic powder)

*Arsenicum Album* is one of the most commonly used and deep acting remedy, affecting every organ and tissue. *Arsenicum Album* is a well indicated remedy for oesophagitis (inflammation of the oesophagus lining). This remedy for GORD is

accompanied by a burning pain in the throat which gets worse upon swallowing. Other symptoms of *Arsenicum album* related GORD is regurgitation of acrid matter, water brash, heartburn, intense nausea and weakness (Anureet and Kaur, 2023).

This remedy is known to be good for burning pains in the stomach, relieved by drinking sweet milk. The burning sensation feels like fire, hot needles or wires that become worse for heat.

The patient craves cold water and drinks it in small quantities at a time. There are cravings of coffee and acidic foods associated with heartburn and long lasting eructation. There is intense nausea, retching and regurgitation associated with this remedy with much soreness and tenderness in the epigastrium area. The stomach is irritable and raw as if tearing is occurring and dyspepsia from vinegar, ice-cream, tobacco and iced water.

Patients feel worse for cold foods, cold drinks, alcohol, and exertion, and for after midnight. Patients tend to feel better for hot or dry foods, sitting erect and lying down with head elevated.

The mind of the patient – most patients are associated with intense weakness, restlessness and a lot of debilitating anxiety. The patient's desires exceed their needs.

#### *Lycopodium Clavatum* (club moss/ vegetable sulphur)

This homeopathic remedy relieves discomfort, indigestion and bloating around the waist and gas after eating onions and garlic. Nutrition is affected due to weakness of digestion (Peace Health, 2023).

The typology of the *Lycopodium* patient is generally thinner or withered and full of gas and acidity. Digestion tends to be weak therefore there is a loss of appetite.

Eructation generally leaves a sour taste in the mouth. The burning eructation feels incomplete to the patient, thus is better for producing eructations. There is dyspepsia from fermentable foods such as cabbage and beans with an aversion to breads and pastry. Patient is worse off for dairy and farinaceous vegetables with a desire for sweet things, warm drinks and foods. Epigastric anxiety and pressure is experienced by the *Lycopodium* patient.

Mind of a *Lycopodium* person- patient is mentally active but grows weaker physically. There is either much sensitivity or is fearful, yet the lack of self-confidence produced from anticipation and afraid of being alone. *Lycopodium* patients can be very headstrong and domineering.

### *Nux Vomica*

*Nux vomica* is considered an everyday remedy which corresponds to many diseased conditions and ailments that a modern man is prone to. It is a useful treatment for those that lead a sedentary life, excessive mental work and businessmen under a lot of stress and strain from prolonged business hours yet still cares and worries extensively (Sitharthan, 2022).

*Nux vomica* is a highly effective remedy for over indulgence, one of the main risk factors for GORD. This remedy is known for a treatment of a gastric cough, GORD accompanied with a cough. *Nux vomica* also provides relief from cramps and indigestion associated specifically from excessive eating of spicy foods and drinking of alcohol (Sharma, 2023).

According to the *Materia Medica*, *Nux vomica* produces digestive disturbances thus very effective for patients with stomachs very sensitive to any pressure internally. The patient experiences *Gastralgia* with the pain extending into the back and chest causing the epigastrium to be bloated.

There is indigestion due to feeling of food lying like a heavy knot in the stomach, causing the patient to be hungry yet adverse to food. The patient craves piquant foods, especially fatty foods, alcohol or any stimulants. Eructations leave a sour, bitter taste in the mouth.

Mind of the *Nux Vomica* patient- tends to be mentally active, yet feels an aversion to food. Patient is a hypochondriac thus cares and worries about ones condition as all ailments affect patient greatly. *Nux vomica* patients are worse for mental aversions, fatigue and vexation especially for high living positions with a fear of poverty. These patients seem to be out of tune with inharmonious and spasmodic actions.

There are many well indicated homeopathic remedies used in the treatment and management of GORD, through the informative research by researcher, it is

common for homeopaths to have an affinity towards remedies such as *Iris Versicolor*, *Phosphorus*, *Pulsitilla Nigricans* and *Robania Pseudacacia*(Shah, 2023m). Homeopathy is a utilitarian for GORD in patients who don't see much improvement, despite making lifestyle changes.

Homeopathic research participants have conveyed two popular adjunctive treatments used with the prescribed remedies, Slippery Elm integrative herb or the Natura branded Magen liquid or powder formulation.

### *Slippery elm (ulmus fulva)*

Slippery elm is an integrative herb used by a few participants across all modalities and not just homeopathy within this research study.

The inner bark of the slippery elm is extracted, dried and powdered or preserved historically by Native Americans in North America and today by many herbal pharmaceuticals. There is limited research on the effects of slippery elm, however the natural remedy can be used, and proven effective, for sore throat, coughs, GORD, Chron's Disease, Ulcerative Colitis, Irritable Bowel Syndrome and externally skin conditions such as boils, burns and psoriasis (Mount Senai, 2023).

The claim behind slippery elm is a mucilage substance that has the ability to soothe and coat the lining of the oesophagus and stomach. The mucilage is said to act as a barrier against the damaging effects of acid on the oesophagus with a high calcium content that is associated with providing an ant-acid effect. Slippery Elm is said not to have any side effects, however research shows that the blanket effect of the substance on the digestive tract can slow down or prevent the absorption of other drugs, herbs and supplements (Joo, 2014).

### *Magen*

Magen is a homeopathic digestive formulation manufactured by a local South African homeopathic pharmaceutical company. The formula's mode of action is to assist in soothing the digestive mucosa and maintaining healthy digestive functions by treating symptoms such as heartburn, indigestion, flatulence, abdominal cramps and spasms, colic and digestive upsets with Nausea and Vomiting (Natura, 2018).

According to Natura, the Magen formula is a broad spectrum of medicine containing low potencies of homeopathic remedies. The composition of the Magen formula with remedy and potency is as follows (per 1ml of liquid):

Anamirta cocculus (Cocculus) Spag D8

Antimonium crudum D10

Arsenicum iodatum D6

Atropa belladonna (Belladonna) Spag D8

Carbo vegetabilis D30

Cephaelis acuminata (Ipecacuanha) Spag D8

Cinchona succirubra Spag D3

Daphne mezereum Spag D8

Magnesium phosphoricum D10

Strychnosnux-vomica (Nux vomica) Spag D4

Preservative: 20% Alcohol

#### 5.4.2. Treatment of Reflexology

The interview process with reflexology practitioners had endorsed three key points of which reflexology consults and treatments start:

1. Reflexologist believe that the body and feet mainly represents the energy of the entire body
2. The aim of reflexology is to restore balance to a person as a whole
3. The approach of each treatment is individualized

The reflexology practitioners collectively agree that the first step in treatment is a full patient history. Information of the patient's lifestyle, diet and mental condition determines what reflex points to work on. GORD along with the associated symptoms such as heartburn and dyspepsia can greatly reduce the quality of life if the patient.

The stomach meridian is called the sea of nourishment 'sea of nourishment' and is in charge of the elemental balance of the Digestive tract. The stomach uses the different types of foods that were eaten to balance the elemental energies. The

stomach works with the spleen to transport energy throughout the meridians. The stomach meridian begins next to the nose, under the eye, descends down to the jaw line up to the skull and then down to the throat, chest and abdomen and continues to run down the legs and feet, ending at the big toes outside edge. The numbers of accupoints / reflex points associated with the meridian specifically are 45 (Walther, 2022). Treating the stomach reflex points help to restore your digestive system. The treatment of GORD is specifically associated with pressure point 44, at the base of the toe. Treatment of this point clears fire/heat from the stomach providing great relief for acid reflux and burning epigastric pain (Slater, 2023).

Another reflex point is known as the 'Big Surge' (LV3) situated on the top of the foot below the big toe and its name is a good description of what it is like to have GORD. This specific pressure point is located in the liver meridian and is associated with other digestive imbalances including nausea, vomiting and diarrhoea. The liver meridian is associated with the Parasympathetic nervous system and the reflex points within this meridian are worked to stimulate the digestive system. The nerves stimulated are the phrenic nerve, the solar plexus and mainly the Vagus nerve (Acculief, 2023).

The goal of the reflexology treatment is to stimulate the parasympathetic nervous system to counteract the sympathetic nervous system. Information sourced from the reflexology participants directs a treatment plan for reflexes worked as stated below:

1. The Vagus nerve runs from the brainstem to your stomach thus affecting the diaphragm which plays a role in the prevention of reflux up the oesophagus.
2. The phrenic nerve runs from the shoulder to the stomach and is situated in the liver meridian. This nerve aids in digestion.
3. The solar plexus, when stimulated, reduces inflamed or agitated oesophagus symptoms and improve oesophageal tension.

When working on the pressure points of the feet, specific areas can reveal scarring, tenderness and sensitivity of the oesophagus. Illuminated aspects of these points show improvement in digestion and heartburn.

The characteristic treatment associated with reflexology for GORD is said to be the points on the feet and hands. There are 2 points associated with aiding in the stimulation of organs affected by acid reflux are (McCahon, 2017):

1. A line across the soles, just below the balls of both feet corresponds with the diaphragm and increase blood flow to heal this muscle.
2. The base of the hands at the beginning of the wrist can promote abdominal and stomach health.

#### 5.4.3. Treatment of Traditional Chinese Medicine

Traditional Chinese Medicine has a long history in treating digestive issues like GORD. TCM has the ability to treat the root cause of GORD. TCM practitioners implemented a two-pronged approach to treating a patient with GORD; Chinese herbal medicine and Acupuncture.

Chinese Herbal Medicine involves the utilization of a vast repertoire of herbal formulas to ameliorate a set of ailments or symptoms (Matos et al., 2021b). The objective of the formulas is to facilitate the ascending and descending functions of the *Qi* dynamic in order to unblock the proper flow (Scheid and Bensky, 2015).

Based on the information received from the TCM practitioners, there are many herbal formulations that are dependent on a patient's problem, which could either be nourishment, dampness, cooling or stagnation. The main herbs include ginger liquorice and Chinese orange peel.

#### *Ginger Root (Sheng Jiang/ Zingerbar officinalis)*

When a patient has a cold temperament, good/healthy heat radiation within the stomach could be helpful. Ginger can be used for heat radiation, fresh ginger when used acutely and dry ginger when used chronically. In small doses, ginger acts as an anti-inflammatory to relieve gastrointestinal irritation. Ginger can decrease the chances of acid flowing from the stomach back up the oesophagus. The phenolic compounds in the ginger are said to relieve GIT irritation, reduce stomach spasms and act as an ant-acid. Ginger can also relieve nausea and muscular spasms. For GORD, the fresh ginger can be used in cooking or steeped in water to make a tea. Dried ginger can be found in capsules or in oils. All the beneficial properties of ginger

also comes with precautions that should be taken with conditions such as peptic ulcers or allergies (Phuong, 2019).

#### Liquorice Root (*gancao/ Glychirrhzauralensis*)

Liquorice root is one of the oldest remedies used in tonics for Qi deficiency. Liquorice root has anti-inflammatory and antimicrobial properties with the ability to detoxify the body. Liquorice root may be able to relieve symptoms of GORD such as indigestion, upset stomach, heartburn and peptic ulcers caused by inflammation. It is recommended that Liquorice root, in tincture or dried form, should be taken before meals or before bed (Wang et al., 2013).

#### Chinese Orange Peel (*Chen pi/ immature mandarin peel*)

Chen pi is well known in TCM for its ability to improve digestion, relieve bloating and intestinal gas and resolve phlegm. Chinese Orange peel acts primarily on the liver and stomach to promote digestion relieve abdominal extension and food retention and promote good liver function. This herb is useful when there is a sense of distension and discomfort that lies under the rib cage rather than the abdomen (Matesz, 2010).

Many Chinese herbal medicines are standard herbal formulations that treat different diseases and not just GORD, however dosages of the relevant herbs are adjusted as per patient. TCM practitioner RP7 states the necessity of the Wen Dan Tang formula for clearing ailments in GORD.

Wen Dan Tang is a decoction to warm the gallbladder and is indicated for the removal of phlegm heat which causes different kinds of diseases. The composition of Wen Dan Tang includes:

Caulis bambusae in taeniis (*zhuru*) 6g, Fructus immaturus xitri urantii (*zhishi*) 6g, Rhizoma pinelliae ternatae (*ban xia*) 6g, Pericarpium citri reticulatae (*chen pi*) 9g, Sclerotium poriaecocos (*fu ling*) 4.5g, Radix glycyrrhiza euralensis (*gancao*) 3g, Rhizoma zingiberis officinalis recens (*sheng jiang*) 3 to 6g and Fructus zizyphi jujubae (*da zao*) three pieces (Pradhan et al., 2022).

Many traditional herbal medicine in GORD, including TCM in the modern world is said to produce better results in combination with the existing treatment of patient i.e.

PPI's. According to Dai et al. (2020) when TCM treatments show improvement with the symptoms of GORD, it is easier to wean the patient of allopathic medication.

Acupuncture is the most popular adjunctive to Chinese medicine treatment by the TCM practitioners within this study. The purpose is said to clear heat and is practiced with needles or/and accu-massage with gel or a herbal poultice.

Acupuncture is an ancient therapeutic practice in Chinese medicine and the theory behind it is the insertion of thin needles into the skin's acupressure points to stimulate different parts of the body to remove the obstruction of Qi flow through the meridian pathways (Liming et al., 2022).

Acid reflux is caused by excess heat in the stomach, thus acupuncture treatment clears heat from the stomach and decreases the uprising of acid. Acupuncture is meant to provide a longer lasting relief on the GIT system when performed regularly (Orloff, 2023).

Acupressure points that can help reduce problems associated with GORD are as follows (Acculief, 2023):

1. Top of the foot, below the big toe (Tai Chong) - this point lies in the liver meridian (LV3) and assists with relief of acid reflux and other digestive symptoms such as constipation, nausea, vomiting and diarrhoea.
2. Between the belly button and sternum (Zhong Wan) - known as the 'middle cavity' situated in the conception vessel meridian (CV12) and is known to create harmony within the stomach. This point can also assist with the accompanying reflux symptoms such as vomiting and general stomach pain.
3. Below the kneecap (Zu San Li) - known as the 'Three Mile Point' lying in the stomach meridian (ST36). This is the most common point used for treatment of GIT discomfort and is effective for nausea, stress and fatigue.
4. Temple, behind the ear- point is useful for the relief of reflux in the throat, yet not very common for any GIT symptoms.

TCM believes that Qi regulation through therapeutic treatment and herbal medicine has the ability to harmonize the digestive disorders and demonstrates curing effects for symptoms of GORD.

#### 5.4.4 Ayurvedic Treatment

Ayurvedic treatment depends on the body constitution, for GORD this would be the Pitta Dosha (fire element), diet and lifestyle. Ayurvedic practitioners within the study all agree that a full patient history should be taken before treatment; this includes occupation, diet and mental status, as well as determining the patients' affected Dosha.

The baseline treatment for Amla-Pitta mainly consists of purification of the body. Practically, the patients' adaptability to such treatment modality is not always feasible due to fast paced lifestyles, therefore the most appropriate and effective therapy is prescribed according to the patient (Amarprakash et al., 2021).

The treatment used is Panchikarma, a unique method of cleansing the body of unwanted toxins after lubrication with certain herbs. This treatment includes a preventative, curative and promoting actions of various diseases. There are five karmas to cleanse the body completely. Vamanam (therapeutic emesis), Virachanum (purgation), Anuvasana(enema), Nasyam (inhalation) and Astapana Vasti (decoction enema).the two karmas used to treat GORD is Virechanum and Vamanam. Vamanam is induced vomiting or therapeutic vomiting to help clear the upper digestive tract. Virechanum or purgation involves induced bowel removal to clear the lower digestive tract (Conboy et al., 2009).

The medicine prescribed by Ayurvedic practitioners for GORD is aimed at the promotion of digestion and to keep the digestive 'Agni' or fire healthy. RP8 prefers to initiate treatment of the digestive system with the removal of toxins with Ayurvedic formulations. Both Ayurvedic practitioners collectively believe the following herbs and foods treat GORD symptoms and aid in recovery of the digestive system (Karwa, 2023):

1. Amla (Indian Gooseberry) – an Indian fruit loaded with anti-inflammatory and antioxidant properties. This Ayurvedic medicine reduces excess heat, thus reduces the Pitta Dosha. This fruit can be eaten raw and taken in the form of a juice.
2. Cumin seeds- this is a great acid neutralizer, aids in digestion and reduces stomach pain. This can be taken in powder form.

3. Mulethi (Licorice root) - this herb has the ability to neutralize acid for a fast relief of GORD and can be taken with honey.
4. Cardamom- a multiuse remedy in Ayurveda that has the ability to stimulate digestion, prevent excessive acid production, soothe the stomach lining and reduce stomach spasms.
5. Basil Leaf- boosts mucus production in the stomach with antiulcer properties to ease any discomfort. Can be chewed daily.
6. Ginger- a very well-known Ayurvedic cure for acid reflux. This remedy aids in digestion, assists in the absorption and assimilation of essential nutrients. Ginger can also boost mucus production, protecting the stomach lining from damage caused by hyperacidity.
7. White pumpkin juice- assists in fast recovery from hyperacidity and gastritis

Ayurvedic formulations to remove toxins, assisting in the treatment of GORD include:

#### *Triphala*

This medicine is an all-rounder treatment due to the complexity of herbs and is also known as the pillar of gastrointestinal treatment. The main constituents of this remedy are certain polyphenol acids that are powerful antioxidants, which are transformed by the gut microbiota into bioactive metabolites that prevent oxidative damage. Other therapeutic uses for *Triphala* include anti-inflammatory, immunomodulating, appetite stimulation, gastric hyperacidity, and hepato-protective and anti-stress effects. This remedy promotes digestion, absorbs foods in the gut, relaxes bile ducts and improves circulation. *Triphala* replenishes proteins in the GIT muscular wall and has a gastro-protective effect on stress-induced ulcers and hyperacidity (Peterson et al., 2017).

#### *Avipattikar Churna*

A herbal formulation used for the treatment of GORD, IBS, bloating and obesity. This formula is helpful for quick relief of gastritis, constipation, indigestion and is clinically used often for liver disorders and alcoholism. Some key ingredients include long pepper, black pepper, ginger, Triphala, Amla, cinnamon, cardamom and clove (Debar, 2011).

Ayurvedic practitioners treat the root cause of the patient by providing adjunctive practices for lifestyle management along with herbal medicine. Breathing techniques are one of the common practices along with yoga and meditation. In Ayurveda, GORD can be very much stress related therefore a breathing technique called *Pranayama* is very effective in the treatment regimen.

'*Prana*' is the breath/vital energy of the body and '*ayama*' translates to control, thus *Pranayama* is 'controlled breath'. This holding of breath technique helps one to achieve a healthier body and mind. Pranayama helps to improve the digestive system with belly breathing; the diaphragm is activated allowing better breathing and digestion (Ansari, 2016).

#### 5.4.5 Unani Tibb Treatment

Tibb practitioners within the study have emphasized on the uniqueness and individualization in the treatment of GORD. The foundation of Unani Tibb is a lifestyle reform, and the combination of modern medical science and herbal formulations. Tibb practitioners collectively involve allopathic practices as both participants are medical doctors or general practitioners. This said when a patient embraces changes in diet where necessary, physical exercise, better breathing methods and better sleep quality, more effective detoxification and treatment occurs (Bhikha, 2022).

Treatment and management of GORD aims at reducing the excess qualities associated with the clinical features of GORD. Implementing the Tibb lifestyle factors depends on qualities of the patients' temperament i.e. increase in qualities of coldness with moistness in a bilious temperament (hot and dry) or increase dryness in symptoms of excess moistness. This process is assisted by physis when addressing both symptoms and cause of GORD (Tibb Institute, 2022).

According to the Tibb Institute (Tibb Herbal Medicine, 2023), Lifestyle factors according to the specific temperaments in the treatment of GORD are as follows:

### Qualities of heat and dryness

1. Eat mostly cold and moist foods ( rice, cucumber, milk), followed by cold and dry foods (yogurt, potato, coconut oil)
2. Recommended medication includes cardamom and fennel.
3. RP4 prefers a more natural treatment, thus cardamom is one on the preferred treatment

### Qualities of Moistness

1. Eat mostly hot and dry foods (chicken, avocado, bitter gourd or bitter melon), followed by cold and dry foods ( yogurt or potatoes)
2. Recommended medicinal herbs include basil, cloves, garlic and ginger of which both research participants prefer as treatment

Other lifestyle advice associated with the above-mentioned qualities:

1. Avoid lying down immediately after a meal
2. Wearing loose and comfortable clothes
3. Quit smoking and weight loss changes if necessary
4. Avoid eating and drinking at the same time

Tibb's *Gastrone* formulations in pill form were utilized by RP3, which promotes normal digestion and tones the digestive tract. *Gastrone* includes antispasmodic and anti-flatulence properties and helps with relief of GORD symptoms such as heartburn, indigestion, belching and bloating (Tibb Herbal Medicine, 2023).

Honey has proven to be a popular treatment between both Tibb practitioners and is taken with either milk or warm water depending on temperament as it said to neutralize acid in the stomach. Honey has anti-inflammatory and antibacterial properties. Due to the viscosity of honey, it has the ability to protect the stomach lining for immediate relief of symptoms. Honey also has the ability to reduce inflammation in the oesophagus. GORD can worsen due to the damage in the lining of the oesophagus and stomach, thus its powerful antioxidant properties removes free radicals that damage the cells of the described lining (Math et al., 2013).

Cupping is a big component in Unani Tibb as a specific adjunctive to the medicinal treatment and lifestyle adjustments. Unani Tibb practitioners emphasize the importance of detoxification process of cupping as it revitalizes and rebalances the body by increasing circulation.

Cupping treatments comprise of either dry or wet cupping techniques, depending on the temperament of the patient. Dry cupping is the most common technique and involves applying a glass, plastic or silicone cup to the skin, creating a vacuum using heat. This expands the capillaries under the skin improving oxygen supply by increasing the amount of fluid entering and leaving the tissues, thus promoting blood supply to the area. Wet cupping is believed to have longer lasting effects with the all the benefits of dry cupping but superficial incisions are made to the skin using a surgical blade under the area of the cup. Heat is applied to the cups with a flame and applied on the skin to draw out 'bad blood' or toxins. GORD is better treated by wet cupping, especially if the reflux is chronic (Tawwab, 2023). Other benefit of cupping includes reduction of anxiety, clears congestion in the lungs and colon, and aids in digestion. Cupping over the abdomen engages the parasympathetic nervous system and stimulates blood flow to the digestive tract which helps digestion and peristalsis, thus relieving indigestion (Writer Resolution Health, 2019).

### **5.5. Management of GORD**

GORD is usually managed through medication, herbal intervention and most importantly lifestyle changes

Patient compliance is a major factor with any CAM modality and an even bigger factor in the set back of treatment regimen for most patients. Long term treatment can be tricky, thus symptomatic relief is essential or patient satisfaction and compliance. Most CAM practitioners believe that symptomatic relief is merely an assurance that patients does not give up on a specific modality before the treatment protocol is completed. Symptomatic treatments include herbal pharmaceuticals or interventions that quickly relieve digestive symptoms. Thereafter a CAM practitioner can look deeper with individual or constitutional prescribing, elimination of triggers, diet alterations and lifestyle factors.

A holistic approach is another agreed upon strategy across the CAM modalities. If a patient is on any allopathic medication, completely removing the medicine can cause a shock, rebound or withdraw effect to the patients' body, worsening the symptoms of GORD. Therefore, an initial combination of both allopathic and alternative therapies ensures patient compliance. Once a good response to a treatment modality is seen, the practitioner can then wean his/her patient of the allopathic medication. Managing patients in general the natural way is a slower process, thus requires patience.

The management of GORD requires upkeep with adjunctive therapies and lifestyle protocols for chronic relief and possible curative effects. General adjunctive treatments across the border of CAM modalities in the management of GORD include interventions in Gut Health, Stress Management and Digestive Relief.

Therapies are as follows:

#### 5.5.1 Stress management

Stress management includes the concepts of sleep hygiene and adrenal support. Sleeping too late can cause imbalances in the body, including the digestive system. CAM practitioners within this study emphasise specific sleep protocols in the management of GORD. These protocols include eating the last meal of the day at least four hours before sleeping and elevating pillows to sleep. This collectively assists in the prevention of indigestion and up rise of reflux at night.

Adrenal support goes hand in hand with a restful sleep. Managing the adrenals decreases cortisol levels and in turn reduces stress and anxiety mentally and physically (Hirotsu et al., 2015). Herbal therapies recommended by CAM practitioners within this study include *passion flower* and *melatonin* supplements.

Passion flower or *passiflora incarnate* is a great herb especially for woman who struggle from anxiety and insomnia. Alkaloids within the passion flower have been found to increase inhibitory neurotransmitters, used by the brain to prevent overexcitement, decrease activities of depression and attain balance. Passion flower also has sedative effects and can improve sleep. In addition to these benefits, passion flower has an antioxidant and anti-inflammatory effects on the body which may be beneficial in the direct management of GORD (Indigo Herbs, 2014).

Melatonin is a hormone that plays a role in the regulation of the circadian rhythm within the body, also known as the sleep/wake cycle. Supplementation of this hormone may help improve sleep quality. Melatonin is also responsible for managing immune functions and cortisol levels (Claustrat and Leston, 2015). Studies have shown that melatonin releases nitric oxide which can block the secretion of stomach acid and tightens the junction between the stomach and the oesophagus, i.e. Lower oesophageal sphincter. The supplement is recommended to be taken at night, allowing the reduction of reflux at night ensuring better sleep. This is effective as melatonin is naturally produced at night (Pereira Rde, 2006).

Calming the nervous system with breathing techniques and meditation may regulate internal functions of the body; this includes control of acid production and functioning of the stomach and the oesophagus along with its benefits for stress and anxiety (Mohiuddin, 2019).

#### 5.5.2 General Gut Health

According to all CAM modalities, Gut Health is essential for the overall wellbeing of the patient. From the data collected within this study, gut health can assist with a healthy lining of the digestive tract, reducing inflammation within the gut and thus reducing the bouts of reflux associated with GORD. CAM practitioners have suggested three supplementation regimen that may assist in general gut health; probiotics, L-glutamine and collagen. These supplements can be categorized as modern or newer therapeutic treatments as opposed to traditional adjunctive therapy.

##### Probiotics

The gut microbiome affects the body from birth and throughout life as it plays a role in the digestion of foods, the Central Nervous System, the Immune System and other bodily processes. In terms of GORD, probiotics are said to reduce symptoms such as regurgitation and heartburn. When the gut microbiome is unbalanced, there is an increased risk of an H.Pylori bacterial infection which causes the decrease in digestion and an increase in stomach acidity in turn, resulting in the dysbiosis of the Gastrointestinal System. Allopathic medicine for GORD such as PPI's can increase the risk of H.Pylori infection. Probiotics supplements the 'good bacteria' in the gut, a decrease in gastrointestinal irritation and inflammation caused by the dysbiosis, thus

a decrease in symptoms of GORD and an overall increase in digestive health (Cheng and Ouwehand, 2020).

### L-Glutamine

Kim and Kim (2017) states that L-Glutamine/ Glutamine is an amino acid that is said to be beneficial in strengthening and rebuilding the intestinal lining. Glutamine is an anti-inflammatory, thus reducing inflammation in the digestive tract and protecting against heartburn flare ups making it a chosen adjunctive supplements for CAM practitioners. Yet, research does show that glutamine powder alone can be harmful in patients with GORD due to its ability to increase pH levels in the stomach (Hatami et al., 2020).

### Collagen

Collagen is said to soothe, repair and strengthen the gut lining. Collagen contains large amounts of amino acids, including glutamine which may be beneficial to the intestinal tract and the stomach. A collagen supplement can improve mild digestive symptoms and reduces bloating (Abrahams et al., 2022).

#### 5.5.3 Acid Reflux Amelioration

CAM practitioners within the study have suggested two prominent adjunctive to reduce the GORD symptoms; peppermint tea and apple cider vinegar. Benefits are as follows:

### Peppermint Tea

Peppermint tea may relieve digestive symptoms such as bloating, flatulence and indigestion, thus used for symptomatic relief of Irritable Bowel Syndrome and GORD (Silva, 2020).

### Apple Cider Vinegar

Apple cider vinegar is acidic in nature, therefore not famously recommended for GORD even in a diluted form as it can irritate the oesophagus, however apple cider vinegar may relieve other digestive issues such as indigestion and bloating. Apple cider vinegar is also known for its weight loss benefits (Schulz et al., 2022).

#### 5.5.4 Diet Management

Collective information on dietary management by all CAM modalities within this study has narrowed the specific changes for patients with GORD.

According to Obert et al. (2017) a detox diet is essential for resetting the digestive system in order for CAM medicines to work efficiently. Detox diets are said to eliminate toxins from the body, improve overall health and promote weight loss. Other CAM changes according to CAM practitioners are to cut out spicy, greasy and fried foods, and the inclusion of alkaline forming foods such as non-starchy foods, coconut oil, almonds, green leafy vegetables and blueberries. It is recommended to consider a temporary or permanent dairy and gluten free diet. Going gluten and dairy free can improve overall health by reducing inflammation, fight chronic diseases and manage food sensitivities that can possibly aggravate GORD or other digestive conditions (Stuart, 2021). In addition to these dietary alterations, Ayurvedic and Chinese Medicine practitioners suggest drinking room temperature water versus cold water. Cold water is said to constrict blood vessels and restricts digestion by hindering the absorption of nutrients (Rennard et al., 2000).

This chapter has concluded the exploration into the main research questions pertaining to the treatment and management practices of the CAM practitioners interviewed in this research study, facilitating intricate discussion of the raw data collected. This chapter has shown valuable insights of the CAM modalities according to the treatment GORD. The next Chapter concludes this research study, summarising the baseline of the findings of the study with recommendations on how to further explore the research topic.

## **CHAPTER SIX: CONCLUSIONS AND RECCOMENDATIONS**

This chapter summarises the conclusions and recommendations emanating from this study drawn from the results and analysis of the research data. Recommendations were based on the conclusion and the purpose of this study.

## Chapter Six: Conclusion and Recommendations

### 6.1. Summary

The main aspiration of the research study was to explore and document the approach to treatment and management of Gastro-oesophageal Reflux Disease (GORD) by selected Complementary and Alternative Medicine (CAM) Practitioners within South Africa. Thematic content analysis was implemented to capture the contributing factors through philosophies, demographics of GORD patients and therapeutic protocols of these CAM practitioners in the management of GORD. Furthermore, the study aimed to bridge the gap and create a baseline for treatment and management of GORD between CAM modalities by documenting information specifically across five common modalities: Homeopathy, Traditional Chinese Medicine, Reflexology, Ayurveda and Unani Tibb. The research discussion was carefully guided by the Research Question, namely *what is your understanding of the cause of GORD*.

The demographic characteristics of patients within each CAM modality significantly influenced the treatment formulation and management plan. Age introduce contributing factors that pertaining to the type of lifestyle the patient lives and their predisposition due to their age. Collective examples include old age causes weakening of muscles and tissues in the body including the digestive tract, higher incidence of GORD due to overindulgence of food and irregular diets, an increase prevalence within the female gender group and in the Indian population. The demographical data collected and collated is based on the practices of CAM practitioners that were interviewed.

A typical qualitative approach was used to document the perceptions and protocols used in the treatment and management of GORD by five selected CAM modalities within the provinces in South Africa. Stratified purposive sampling was implemented to select the sample frame of twelve participants. Data was collected through personalized and open ended semi structured interviews and the analysed using Tesch (1990) eight steps of data analysis and Creswell and Creswell (2022) approach. The previous chapter presented findings from the study by drawing

from various literature sources that were relevant to support the results. This chapter concludes by providing recommendations which can direct the future endeavours.

## **6.2 Conclusions derived from the analysis**

Each CAM philosophy is governed by a set of factors which requires individualization in order to produce optimum health. Traditional Chinese Medicine is governed by the concept of Yin and Yang as well as the meridian system, which must remain in equilibrium. Similarly, Homeopathy has miasms and the concept of individualization or constitution. Ayurvedic philosophy is based on three doshas which represents the 5 elements. Reflexology works on the reflex points and the Chinese meridian system and finally Unani Tibb is governed by temperaments of an individual. All CAM modalities collectively work on dietary and lifestyle changes.

The findings from this study showed that GORD can be interpreted by various modalities according to different CAM philosophies such as the theme of excess, accumulation of heat and moisture, imbalanced stomach fire and excessive coldness. Despite the different philosophical interpretations, all CAM modalities were underpinned by the same understanding of GORD as being a constitutional imbalance characterises by diet and lifestyle factors as well as a derangement of stress related physiological activity or medicinal contributing factors.

All CAM modalities and their respective practitioners instituted the contributing factor based on clinical diagnostic reasoning and CAM-specific philosophical diagnosis in order to establish the patient's constitution or weakened areas within the body. The clinical aspect guides the practitioners in the prescription of herbal medication generally used in the treatment of GORD. CAM specific diagnosis is guided by the practitioner for medication and therapies that may benefit the patient individually based on their unique presentation of GORD.

It can be concluded that GORD treatment and management requires multidimensional approach: Medication, dietary counselling, emotional support, physical therapies and lifestyle interventions in order to improve the metabolic parameters, reduce acid production naturally, facilitate weight loss and overall improve the quality of life for the patient. Each modality "adopted" from other modalities in order to enhance the efficacy of the treatment. This includes practices

such as cupping, acupuncture, breathing techniques, meditation and yoga. The most commonly used herbal therapeutics used across all CAM modalities was slippery elm, ginger and honey.

### **6.3 Recommendations**

A limitation of this research study relies on self-reporting in the data collection process and thus has an uneven representation of CAM modalities. Within the limitations of this study, it can be suggested that:

1. This study was focused on a South African perspective only, and thus all conclusions and recommendations may only be applied to this geographic region. A future study should expand the study location internationally or within the continent of Africa in order to document a larger variety of participants from diverse ethnic groups, socioeconomic backgrounds and dietary lifestyles.
2. This study should include all remaining CAM modalities such as: Naturopathy, Osteopathy, Chiropractic Medicine etc. Registered by the Allied Health Professional Council of South Africa.
3. This study should also include CAM modalities indigenous to South Africa such as Traditional African Medicine (TAM), which was not represented due to the difficulty and inability to source of TAM practitioners.
4. Future studies should increase the sample size to increase the quantity and variety of information as well as to draw more consistent conclusions.

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## Appendices

### Appendix A: Letter of Information



### LETTER OF INFORMATION

**Title of the Research Study:**

The treatment practices of Complementary and Alternative Medicine (CAM) practitioners in the treatment Gastro Oesophageal Reflux Disease (GORD)

**Principal Investigator/s/researcher:** Ashadre Naidoo (BHSc: Homoeopathy)

**Co-Investigator/s/supervisor/s:** Dr I. Couchman (M. Tech: Hom), Mrs. JF Ducray (MMedSci)

**Brief Introduction and Purpose of the Study:**

**Outline of Procedures:**

Due to the fast-paced lifestyle that the majority of the populations have with the use of stimulants, bad eating habits and the amounts of stress, there is an increase incidence of Gastro Oesophageal Reflux disease (GORD). I believe CAM can be very helpful in the treatment and management of GORD, therefore receiving honest and detailed information in this aspect is necessary for my study.

You are kindly requested to take part in an interview at a time and location that is at your earliest convenience regarding my research. The interview will be approximately 20-30 minutes and will be recorded for the purpose of the study. The expected outcome from these interviews is finding a baseline on the treatment and management of GORD. Your name will not be used, you will be allocated a code. The interview will be conducted in a secure and private location and thus confidentiality will be maintained.

**Risks or Discomforts to the Participant:**

There are no known risks when taking part in this research study

**Benefits:**

There are no benefits involved in this study; there is merely a need for information. The participants may gain knowledge of how a personal approach is necessary. The CAM practitioners who treat GORD will enhance the treatment protocol available for the sufferers.

**Reason/s why the Participant May Be Withdrawn from the Study:**

Non-compliance of participant during the interview process

If there is an illness involved or an unexpected situation occurs

There will be no adverse consequences for participant should you choose to withdraw.

**Remuneration:**

There will be no remuneration in this study.

**Costs of the Study:**

There will be no cost for participant of any kind when taking part in the research study.

**Confidentiality:**

For the purpose of the study, a code will be given to each practitioner, no names will be used and this secures the confidentiality of participant. The location of the interview can also be confidential for the convenience of the participant.

Participants will be anonymous, and can review the purpose, personal risks and benefits of taking part in the research study before making an informed decision. The participation in this study is voluntary and participants will not be put under any pressure or coercion when making a decision.

**Research-related Injury:**

There is no likelihood of injury for this particular study

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

Please contact the researcher (Ashadre Naidoo 071 8933 794), my supervisor (Dr Couchman on 031 373 2482) or the Institutional Research Ethics Administrator on 031 3732375. Complaints can be reported to the DVC: Research, Innovation and Engagement Prof S Moyo on 031 3732577 or [moyos@dut.ac.za](mailto:moyos@dut.ac.za)

## Appendix B



### CONSENT

#### Statement of Agreement to Participate in the Research Study:

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

\_\_\_\_\_

Full Name of Participant Thumbprint	Date	Time	Signature /	Right
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I, Ashadre Naidoo (name of researcher) adhere with confirm that the above participant has been fully

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

_____	_____	_____
<b>Full Name of Researcher</b>	<b>Date</b>	<b>Signature</b>
_____	_____	_____
<b>Full Name of Witness (If applicable)</b>	<b>Date</b>	<b>Signature</b>
_____	_____	_____
<b>Full Name of Legal Guardian (If applicable)</b>	<b>Date</b>	<b>Signature</b>

## Appendix C: Interview Guide

### Research study

#### Complementary and Alternative Medicine (CAM) practitioner interview

##### Fact sheet information

Name and Surname:

Age:

Gender:

Primary CAM practice/ qualification:

Years of practice:

Other CAM specializations/ qualifications:

##### Research Topic:

The treatment practices of Complementary and Alternative Medicine (CAM) practitioners in the treatment of Gastro Oesophageal Reflux Disease (GORD)

##### Research Problem:

This qualitative research aims to investigate the management and treatment practices and complementary and alternate medicine practitioners in the treatment of GORD in the eThekweni area.

##### Research Questions:

The questions are merely a guide for semi structured interviews with 12 CAM practitioners

#### **INTERVIEW GUIDE:**

##### Questions

- What is your understanding of the cause of GORD?  
In your opinion, what are the trends and patterns seen in the treatment of patients with GORD?  
**Patient profile (Increase, decrease, constant prevalence. Young old, students, corporate workers, male, female. Demographics such as age, gender, ethnic group)**
- Describe your experience of treating patients with GORD.
- Please describe your management for patients presenting with GORD  
**(Long term, short term, chronic, acute, diet, lifestyle, special techniques or recommended practices, adjunctive therapy, complementary methods and patient compliance)**
- In your experience , what was your most effective treatment and management plan for a patient with GORD  
**(Holistic, alternate and allopathic combined, patient compliance)**
- Describe your referral patterns for your patients with GORD  
**(out of your scope of practice)**

## Appendix D: Interview Summaries

Table A: Interview summary of Research Participant 1: Reflexologist (RP1-R)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>• Counterintuitive</li> <li>• When acidity is low in the stomach there is a rebound reaction that causes an increase in acid.</li> <li>• This occurs generally due to ant-acids, PPI's and other suppressants</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>:40-80 years</li> <li>• <u>Gender</u>: male and female equally split</li> <li>• <u>Ethnic group</u>: white and Indian populations</li> <li>• <u>Occupation</u>: working class, high stress jobs, housewives and mothers</li> <li>• Increase prevalence of patients with GORD</li> </ul>	<p><b>CAM Specific</b></p> <ul style="list-style-type: none"> <li>• Reflexology that focuses on the digestive system and the Vagus nerve specifically.</li> <li>• Need to break the stress cycle-reduce stress on the digestive system and activate the whole Parasympathetic Nervous System.</li> <li>• Specific points on the feet reveal the scarring and sensitivity of the oesophagus.</li> <li>• Working on these points show improvement in digestion and heartburn.</li> </ul>	<p><b>Adjunct</b></p> <ul style="list-style-type: none"> <li>• Main adjunct – Apple Cider Vinegar (1tbs in a glass of water)</li> <li>• Alkalisng diet-green vegetables, gluten and dairy free (less acid forming foods)</li> <li>• Biochemic tissue salts-for acidity. Nat Phos for acidity and rheumatism.</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Occupational Therapist (secondary CAM Qualification) for stress management, this includes exercise and sleep hygiene.</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• A holistic approach to ensure patient compliance.</li> <li>• Depends on the belief of a patient , referrals to a homeopath or general practitioner</li> </ul>

Table B: Interview summary of Research Participant 2: Reflexologist (RP2-R)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>• Main factor is stress causing an infliction on the nervous system, specifically the Vagus nerve.</li> <li>• Generally goes hand in hand with depression</li> <li>• The Vagus nerve affects the gut-brain relationship contributing to digestive issues</li> <li>• Smoking and being overweight results in increase acid levels.</li> <li>• Diet- high in acid forming foods, stimulants, fast foods and alcohol.</li> <li>• Woman in menopause and weight gain result in induce acid reflux</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: 40-55 years</li> <li>• <u>Gender</u>: men more than woman. Increase in women with menopause</li> <li>• <u>Ethnic group</u>- Indian population due to diet.</li> <li>• <u>Occupation</u>: non-specific</li> <li>• Constant prevalence, in a secondary diagnosis</li> </ul>	<p>A full patient history is taken to determine patient's lifestyle and stress level; this determines what reflexes to work on.</p> <p><u>Reflexes worked to stimulate the digestive system :</u></p> <ul style="list-style-type: none"> <li>• <b>The Vagus nerve</b>: runs from the brainstem to the stomach. Affects your diaphragm which plays a role in the prevention of reflux up the oesophagus</li> <li>• <b>The phrenic nerve</b>: runs from the shoulder to the stomach and is situated in the liver meridian. Aids in digestion and the function of the liver in the digestion process</li> <li>• <b>The Solar plexus</b>: situated in and around the stomach region. Helpful to improve and reduce inflammation of an agitated oesophagus.</li> </ul> <p>A one month treatment for every year of having GORD for 3 years as it is not a quick fix with an underlying cause. Starts with 2 treatments every 2 weeks, 3-4 days apart.</p>	<p><b>Adjunct</b></p> <ul style="list-style-type: none"> <li>• Aromatherapy (secondary specialization)-ginger tea for digestion</li> <li>• Tender liver- Himalaya's Liv52 supplement</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Very individual assessment to balance the body</li> <li>• Posture plays a big role specifically for when eating.</li> <li>• 30/70 diet – 30% acidic foods and 70% alkaline foods</li> <li>• Detox diet if stimulants are involved</li> <li>• Non-strenuous exercise- walks and breathing techniques</li> </ul> <p><b>Referrals</b></p> <p>Most patients are already on allopathic medication, thus a holistic approach (alternate and allopathic) and decrease medication as treatment goes</p> <p>If a physical and mental approach is needed , generally always a homeopath</p>

Table C: Interview summary of Research Participant 3: Unani Tibb (RP3-U)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p>Risk factors are dependent on stress levels and lifestyle.</p> <ul style="list-style-type: none"> <li>• smoking, heavy meals, overweight patients</li> <li>• Diabetes and pregnancy</li> <li>• Underlying medical causes such as hiatal hernias and oesophageal cancer</li> <li>• Diet –vinegar saturated foods, pickles, fizzy drinks, sour foods and citrus</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: non-specific, younger and elderly</li> <li>• <u>Gender</u>: female based practice</li> <li>• <u>Ethnic group</u> : Indian population</li> <li>• <u>Occupation</u>: dominantly housewives and mothers</li> <li>• Increase prevalence</li> </ul>	<p><i>The medical way</i></p> <p>The aim is to reduce heat in the body, this is the Tibb way.</p> <ul style="list-style-type: none"> <li>• Plenty of cold and dry foods to reset the stomach and decrease reflux rate.</li> <li>• Honey in water or warm milk (dependant on patients aggravations with dairy) before bed to neutralize acid in the stomach.</li> <li>• Infused mint tea to aid in digestion and decrease acid reflux rate.</li> </ul> <p><b>Cupping</b></p> <ul style="list-style-type: none"> <li>• A few consecutive sessions</li> <li>• Wet or dry on abdomen and back depending on patient temperament</li> <li>• Removes stagnate blood, increases circulation to detox , revitalize and rebalance body</li> <li>• Detox and reduces heat in body</li> </ul>	<p><b>Adjunct</b></p> <p>The general medical practitioner way – treatment in conjunction with PPI’s and ant-acids.</p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Patient compliance is an issue, thus treatment is rooted and symptoms are managed</li> <li>• Lifestyle modification – decrease acid producing foods , weight loss if necessary</li> <li>• Last meal before sunset and alleviate pillows when sleeping</li> <li>• Treat holistically ( alternate and allopathic), treat underlying cause</li> </ul> <p><b>Referrals</b></p> <p>Underlying conditions</p> <ul style="list-style-type: none"> <li>• Gastroenterologist- barium swallow or endoscopy</li> <li>• Cardiac specialist- ECG, maintenance of type 2 Diabetes Mellitus</li> <li>• Chiropractor, reflexologist, homeopath for excessively suppressed patients</li> </ul>

Table D: Interview summary of Research Participant 4: Unani Tibb (RP4-U)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p><b>Multifactorial causes</b></p> <ul style="list-style-type: none"> <li>• Biliious constitution- patients are more prone to GORD due to the temperament predisposition and imbalance within the body</li> <li>• Lifestyle causes- incorrect diet , smoking , obesity, alcohol</li> <li>• Stress and anxiety</li> <li>• Younger- driven, type A personalities and fast paced lifestyles</li> <li>• Elder – overweight</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: 20-70 years</li> <li>• <u>Gender</u>: a more male based practice</li> <li>• <u>Ethnic group</u>: Indian population</li> <li>• <u>Occupation</u>: businessmen and corporate workers</li> <li>• Increase prevalence</li> </ul>	<p><i>The natural way</i></p> <ul style="list-style-type: none"> <li>• Unique and individualized herbal tea formulations and digestive complexes</li> <li>• Fresh herbs used – ginger, fennel, cardamom, cinnamon, basil</li> <li>• Bitter herbs used- slippery elm, dandelion , okra(bindhi) and bitter melon(karela)</li> <li>• In the case taking – look for any food triggers/intolerances, cravings and aversions</li> <li>• A very diet based treatment to improve digestion and aid with the prevention of GORD</li> </ul> <p><b>Cupping</b> Wet/dry-depending on patient temperament. Aids in the regulation of acid dysfunction</p>	<p><b>Adjunct</b></p> <ul style="list-style-type: none"> <li>• Acupuncture</li> <li>• Emotional healing through counselling if GORD is stress related</li> <li>• Reflexology</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Diet- small food portions, relaxed eating, reducing liquid drinks with food</li> <li>• Diet restricted to gut health</li> <li>• Walks after a meal to aid in digestion</li> <li>• Breathing techniques for mental and emotional clarity</li> <li>• Encourage weight loss with a budgeted diet</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• Generally no referrals for GORD</li> <li>• A more holistic approach with homeopathy for a mental, emotional and physical treatment, especially for children</li> </ul>

Table E: Interview summary of Research Participant 5: Chinese Medicine (RP5-C)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p><i>'Chi' Deficiency</i> Generally a side effect of something happening in the stomach</p> <p><b>3 main reasons :</b></p> <ul style="list-style-type: none"> <li>• <u>Improper diet</u>- spicy foods, greasy foods, fizzy drinks. These foods generate dampness that creates phlegm which blocks food and fluid descending to the stomach</li> <li>• <u>Stress</u>- along with emotional issues and being overworked weakens the stomach thus decreases the speed of digestion.</li> <li>• <u>Serious illness/ loss of blood</u>- weakens the body thus decreasing the Chi and generating heat causing a burning sensation associated with GORD</li> </ul> <p>If food is sitting too long in the stomach , 'internal heat' is generated</p>	<ul style="list-style-type: none"> <li>• <u>Age</u>: 30-40 years</li> <li>• Gender: evenly based</li> <li>• <u>Ethnic group</u>: non-specific. More based on the education level of the community, patients are unaware of the causes of GORD</li> <li>• <u>Occupation</u>- non specific</li> <li>• Constant prevalence</li> </ul>	<ul style="list-style-type: none"> <li>• Often a full patient history is taken thus treatment is individualized and based on the main complaint</li> <li>• A long term treatment of 1-2 months of herbal complexes to fix imbalances in the stomach</li> <li>• Standard herbal formulations and its dosages are adjusted according to patient as the medicine is to treat different diseases with the symptom of acid reflux</li> <li>• <u>Main formula</u> used is the <i>men dan tang</i> formula</li> <li>• <u>Herbs used in Chinese medicine for GORD</u>- <i>chen pi, ban xia, fu ling, zhiqico, huanlian, gancao, zhuru, wuzuyu</i></li> </ul>	<p><b>Adjunct</b> Acupuncture for pain and nausea</p> <p><b>Management</b> Balanced diet and lifestyle is important:</p> <ul style="list-style-type: none"> <li>• Moderate stress levels</li> <li>• Decreased spicy and acid forming foods</li> <li>• Room temperature water , not iced water</li> </ul> <p><i>Chi deficiency</i>- include a more nourishing foods diet ( warmer cooked foods) , avoid cold foods</p> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• Stress related- seek professional help (psychologist), specifically for emotional grief and family dynamics</li> <li>• If herbs fail to work alone- gastroenterologist for an endoscopy</li> <li>• Patient compliance is important with herbal medicine and patients are already on medication and PPI's therefore an allopathic and alternate approach is needed</li> </ul>

Table F: Interview summary of Research Participant 6: Chinese Medicine (RP6-C)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>• <u>Food regimen</u>-every patient is different and genetically could have a food allergy of cold foods and spicy foods.</li> <li>• <u>Stress related</u>- Central nervous system starts to focus on emotional aspects and not the stomach to aid in the digestion of food.</li> <li>• <u>Disease and infections</u> that are not cleared up and causes an imbalance.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: +/-40 years</li> <li>• <u>Gender</u>: males</li> <li>• <u>Ethnic group</u>: non-specific</li> <li>• <u>Occupation</u>: business workers (mentally inclined)</li> <li>• Stable prevalence</li> </ul>	<ul style="list-style-type: none"> <li>• Initiate consult with a patient history( diet, lifestyle and occupation)</li> <li>• Diagnosis determines the herbs used in formulations to heal reflux</li> <li>• 10 formulations of Chinese herbs dependant on the problem ( nourishment, coldness, dampness, stagnation)</li> <li>• Herbs: ginger, ginseng, liquorice for digestion and improve body functions.</li> <li>• Heat temperaments – avoid ginger</li> <li>• Cold temperament- fresh ginger(acute) dry ginger(chronic)</li> <li>• GORD with indigestion and bloating- Chinese orange peel dried and powdered.</li> </ul>	<p><b>Adjunct</b> Acupuncture – clear heat, acupressure massage with gel or poultice and applying herbs on acupuncture needles</p> <p><b>Management</b> 30% treatment and 70% foods</p> <ul style="list-style-type: none"> <li>• Every patient is different therefore only foods that are comfortable for the stomach to be eaten( aversions of the body)</li> <li>• Cooked foods and raw foods are beneficial for GORD</li> <li>• Sleeping too late will aggravate imbalances in the body</li> <li>• A change in diet is needed ( eat on time and in smaller portions)</li> <li>• Change herbs in formula according to the constitution, some herbs can have no effect</li> <li>• Holistic approach- (allopathic and alternate) phase out allopathic meds as treatment starts to work.</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• Patient compliance is good initially, treatment has worked</li> </ul>

			<p>then there is a break taken by the patient.</p> <ul style="list-style-type: none"><li>• No results with herbal medicine referral to a homeopath</li><li>• More serious conditions- gastroenterologist ,especially for bleeding and suspicion of cancer</li></ul>
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Table G: Interview summary of Research Participant 7: Ayurveda (RP7-A)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>• <u>Main causes</u> – stress, poor lifestyle, irregular diets, lack of sleep</li> <li>• Aim is to fine the root cause to fix any imbalances</li> <li>• <u>Medical conditions</u> – hiatal hernias</li> <li>• <u>Diet</u>- spicy foods, fried foods, oily foods, fast foods, frozen foods , vinegar emerged foods and acidic foods( tomatoes)</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: 20-50 years</li> <li>• <u>Gender</u>: female based practice</li> <li>• <u>Ethnic group</u>: Indian and African populations</li> <li>• <u>Occupations</u>: highly stressed students, corporate workers, housewives and mothers</li> <li>• Increase prevalence</li> </ul>	<ul style="list-style-type: none"> <li>• Aim of treatment is to remove morbid factors (Doshas) causing distress and imbalances.</li> <li>• Treatment dependant on body constitution, diet and lifestyle</li> <li>• The correct foods can counteract the condition. Food is dependent on the constitutional Amla Pita( stomach pita)</li> <li>• Recommended foods for GORD- white pumpkin, coconut water, curcumin and ginger.</li> <li>• Recommended purging ( inducing vomiting and diarrhoea ) with Ayurvedic herbs to remove the doshas</li> <li>• Formulations such as Amlaki, Himcocid (Himalayan brand) or special preparations with liquorice root, cumin and raisons all soaked in water</li> <li>• Cardamom with rose milk or water , rose jam, amla fruit or shankavati formulation capsules for disturbed gut micri biome</li> </ul>	<p><b>Adjunct</b> Practices within Ayurveda to assist in treating the root cause</p> <ul style="list-style-type: none"> <li>• Chronically , Panchikarma (detoxification cleanse) to rejuvenate mind and body</li> <li>• Stress related- yoga, meditation and pranayama(breathing techniques) for a sense of balance and calmness</li> <li>• Shirodara (a therapeutic practice) to aid in the distress.</li> </ul> <p><b>Management</b> Lifestyle practices to remove morbid factors – change routines, grounding through yoga , meditation and stress management</p> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• Initially good patient compliance however patients want a quick fix, this is not the Ayurvedic way</li> <li>• 2<sup>nd</sup> qualification – life coach, helpful for stress</li> </ul>

			<p>rooted beyond physical treatment</p> <ul style="list-style-type: none"><li>• Gastroenterologist – severe/ advanced conditions</li></ul>
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Table H: Interview summary of Research Participant 8: Ayurveda (RP8-A)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p>Completely related to a person's lifestyle and habits</p> <ul style="list-style-type: none"> <li>Irregular diet- excess of spicy and oily foods</li> <li>Eating too late/ sleeping after eating</li> </ul>	<ul style="list-style-type: none"> <li><u>Age</u>: 20-40 years</li> <li><u>Gender</u>: mixed gender practice. Females have a tendency towards GORD</li> <li><u>Ethnic group</u>: Indian population</li> <li><u>Occupation</u>: postdoctoral students, high stressed career positions and professional fields</li> <li>Increase prevalence</li> </ul>	<ul style="list-style-type: none"> <li>Treatment of the cause – purpose of the natural way is to undo the suppression</li> <li>A full case history is taken- occupation, diet and mental status</li> <li>Purification of the body before treatment through processes Vamana and Virechana(medicated vomiting and diarrhoea)</li> <li>Medication prescribed to promote digestion and keep digestive fire/ 'Agni' healthy within the stomach(good heat)</li> <li>Herbs used: powder form in capsules or mixed with honey.</li> <li><u>Digestive herbs</u>: dried ginger, long ginger, cardamom to increase appetite</li> <li>Ayurvedic formulations to remove toxins: Triphala( decreases inflammation, laxative effect)</li> </ul> <p>Avipattikar Churna(important for hyperacidity, indigestion and gastric conditions)</p>	<p><b>Adjunct</b> Yoga and meditation to balance the body</p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>Patient needs to be willing to have a change of lifestyle</li> <li><u>Diet</u>- lessen heat producing foods and oily foods, smaller meals and eating 3hours before bed</li> <li><u>Acute</u> -2-3 remedies for fast treatment (symptomatic treatment)</li> <li><u>Chronic</u> – change treatment over time and adjust diet to patients temperament</li> <li>If patient is already on allopathic medication, treat in combination with Ayurvedic medication and decrease as treatment starts to improve patient symptoms.</li> </ul> <p><b>Referrals</b> As a last resort, patients are already been diagnosed. Refer to integrative practitioner if patient is on allopathic treatment.</p>

Table 1: Interview summary of Research Participant 9: Homeopathy (RP9-H)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>GORD is often a secondary complaint of GIT issues</li> <li><u>Diet</u>- foods that cause aggravations ( wheat, bread, cakes and pastries)</li> <li>Linked to anxiety and being overweight</li> </ul>	<ul style="list-style-type: none"> <li><u>Age</u>: 35-60 years</li> <li><u>Gender</u>: males</li> <li><u>Ethnic group</u>: non-specific</li> <li><u>Occupation</u>: type A personality, businessmen, high strung perfectionists</li> <li>Constant prevalence</li> </ul>	<ul style="list-style-type: none"> <li>A classical approach to treatment</li> <li>Rubrics play a big role in finding a homeopathic remedy</li> <li>If symptoms are severe, quality of life is affected, thus a constitutional prescription is necessary. If the right remedy is give, the condition can fix itself</li> <li>Low potencies, generally pillules 3 times a day.</li> <li>Best treatment for GORD- homeopathic remedy and an adjunct simultaneously</li> </ul>	<p><b>Adjunct</b></p> <ul style="list-style-type: none"> <li>Very useful if a remedy does not have a desired effect</li> <li>Magen Pulv( Natura formula) for digestive upsets</li> <li>Slippery elm – anti-inflammatory , digestive aid and ant-acid effect</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>Diet- cut down gluten and dairy until GORD is under control</li> <li>Depending on presentation of patient, intermittent fasting can be useful</li> <li>Sleep with a few more pillows so patient is not sleeping flat</li> <li>Eat dinner early and not go to bed with a full stomach.</li> <li>Holistic approach- if patient is on allopathic medication, use together with remedies to ensure better patient compliance</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>Work close with a general practitioner- refer to surgeons for an endoscopy to rule out underlying medical conditions</li> <li>Refer to a professional for anxiety.</li> </ul>

Table J: Interview summary of Research Participant 10: Homeopathy (RP10-H)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p>Depends on the age group</p> <ul style="list-style-type: none"> <li>• <u>Paediatric</u> – Lower oesophageal sphincter has not matured. If patient born from caesarean section there is a possibility of an immature sucking reflex</li> <li>• <u>Adults</u> – irregular diet, stress, anxiety and certain medication</li> <li>• Sympathetic Nervous System overdrive and parasympathetic nervous system underdrive ( governs sleep, healing and digestion)</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: paediatric 1-6 months. adults- 40-60 years</li> <li>• <u>Gender</u>: female patients</li> <li>• <u>Ethnic group</u>: non-specific</li> <li>• <u>Occupation</u>: non-specific</li> <li>• Constant prevalence</li> </ul>	<p>A more modern approach</p> <ul style="list-style-type: none"> <li>• Constitutional remedies common for GORD- Nux Vomica, Arsenicum album</li> <li>• Acute- address triggers</li> <li>• Long term- address damage</li> <li>• Chronic patterns – constitutional treatment</li> <li>• Prescription of remedies to support adrenals</li> <li>• Best not to over prescribe, small quantity prescriptions</li> </ul>	<p><b>Adjunct</b></p> <ul style="list-style-type: none"> <li>• Digestion aids- slippery elm, apple cider vinegar in warm water</li> <li>• Adrenal support- glychirriza (balance), passiflora( decrease cortisol levels and anxiety)</li> <li>• Melatonin,3-6mg (cortisol balance)</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Diet- small changes assist in stopping progression of GORD</li> <li>• Abdominal breathing for stress reduction</li> <li>• Holistic approach- if patient is on allopathic medicines , use in conjunction with remedies and reduce as treatment goes along</li> <li>• Educate patients, efficient to reduce the stress about the many remedies that can be given</li> </ul> <p><b>Referral</b> Advisable not to make</p>

			assumptions about the diagnosis ,endoscopy and colonoscopy , especially after the age of 45
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Table K: Interview summary of Research Participant 11: Homeopathy (RP11-H)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<p>Patient dependant</p> <ul style="list-style-type: none"> <li>Stress magnitude</li> <li>Irregular diet – processed, oily, spicy and fast foods</li> <li>Type A personality- healthy and exercise , yet very high strung and stressed , which triggers a response</li> </ul>	<ul style="list-style-type: none"> <li><u>Age</u>: 25-40 years</li> <li><u>Gender</u>: more common in males. Females with reproductive issues,</li> <li><u>Ethnic group</u>: on-specific</li> <li><u>Occupation</u>: highly stressful careers</li> </ul>	<ul style="list-style-type: none"> <li>Classical approach in conjunction with diet, supplements and stress management</li> <li>The aim of treatment is to get to a point where the patient would not need a remedy and the body is healing itself</li> <li>Throughout treatment, communication and monitoring, changing of remedies or potencies.</li> <li>If remedy is taken correctly, the similimum (patient’s constitutional remedy) will be revealed.</li> <li>For faster relief , prescribing a remedy and an adjunct/supplementation is more effective</li> </ul>	<p><b>Adjunct</b></p> <p>Supplements are symptom dependant</p> <ul style="list-style-type: none"> <li>Gut health- probiotics, L- glutamine powder, collagen to heal gut</li> <li>Acid reflux relief – liquorice root herb, peppermint tea</li> <li>Ulcerations- oregano oil</li> </ul> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>Eliminating aggravating factors from diet assists with gut repair</li> <li>Communicating and monitoring after a week, then again after a month.</li> <li>Increase effectiveness if treatments are more holistic. If patient is on allopathic medication, continue with the allopathic treatment and remedy at first.</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>No referrals generally homeopathy is the last resort of treatment and patients always improve</li> </ul>

Table L: Interview summary of Research Participant 12: Homeopathy (RP12-H)

Contributing factors to GORD	Demographics of patients	CAM Specific Treatment	Management plan
<ul style="list-style-type: none"> <li>• Linked to greater digestive problems, being overweight</li> <li>• Stress component- mucous membrane is not healthy due to stress and H. Pylori infection</li> <li>• Medical conditions- hiatal hernias , GIT issues that increase pressure upwards, distorted cardiac sphincter\</li> <li>• Irregular diet- fried, spicy and junk foods</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Age</u>: 25-50</li> <li>• <u>Gender</u>: male based practice</li> <li>• <u>Ethnic group</u>: non-specific</li> <li>• <u>Occupation</u>: corporate workers, high responsibility positions ‘</li> <li>• Constant prevalence</li> </ul>	<p>Classical approach , however it is a slow process , thus symptom relief is important</p> <ul style="list-style-type: none"> <li>• Symptomatic relief is necessary for patient compliance. Magen Pulv for the ant-acid effect, slippery elm and Iberogast ( herbal formulation for digestive issues)</li> <li>• Looking deeper to understand the triggers of GORD , the underlying causes relates to the constitutional remedies</li> <li>• Remedies commonly used : Lycopodium, Nux vomica , Arsenicum album</li> </ul>	<p><b>Adjunct</b> Symptomatic relief through herbal supplements Stress related triggers- Mentat (Himalaya) stress away (Tibb)</p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• Diet and lifestyle- avoid triggers in diet, avoid sleeping late, non-strenuous exercise to reduce stress and manage weight</li> <li>• Holistic approach – allopathic and alternate treatment is more successful until all triggers of GORD if found</li> </ul> <p><b>Referrals</b></p> <ul style="list-style-type: none"> <li>• Increase patient compliance due to symptomatic relief</li> <li>• Patients are generally already on ant-acids and PPI's</li> <li>• Bacterial infections(H. Pylori is common) – a stool test and blood test</li> </ul>