

**THE EFFECTIVENESS OF HOMOEOPATHIC SIMILIMUM
TREATMENT IN CHRONIC FATIGUE SYNDROME (CFS)**

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I, Wayne Saul, do hereby declare that this dissertation represents my own work, both in conception and execution.

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**AN OPEN MIND IS ABLE TO IMBIBE MANY VERSIONS OF THE
TRUTH, UNTIL THE DEEPEST TRUTH, THE ONLY TRUTH, IS
SOUGHT.... MEANWHILE, BE IT A LIFETIME OR MORE, WE CAN
EITHER CHOOSE TO FOLLOW THE ILLUSION OR TO
CHALLENGE IT**

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ABSTRACT

Chronic fatigue syndrome (CFS) remains a medically unexplained syndrome, with differing aetiological models, case definitions and treatment recommendations (Ranjith, 2005:13). Sharpe & Wessely (1997:179) state that the current case definition for CFS has assumed acceptance as representing nothing more than a working definition of a clinical problem, pending further understanding. CFS has subsequently become the focus of much research and debate (Wessely, Hotopf & Sharpe, 1999:13). Notwithstanding, the definition in terms of diagnostic criteria is adequate in meeting the needs of research studies (Rutherford, 2003).

Anecdotal reports, espousing the effectiveness of homoeopathic treatment of CFS, points to the use of the similimum. (Bailey, 1995:189; De Schepper, 2001:6-7; Hardy, 2005:8-10). However, the limited research available on the subject suggests that more research needs to be conducted in this regard (Wessely, Hotopf & Sharpe, 1999:371; Walach, 2004:210-211).

This double-blind placebo-controlled study was conducted to determine the effectiveness of homoeopathic similimum treatment in chronic fatigue syndrome (CFS).

A total of 30 participants with the clinical diagnosis of CFS, according to the Centres for Disease Control and Prevention criteria (Appendix A), were selected for the study on the basis of inclusion and exclusion criteria (chapter 3). Participants were randomly divided into 2 groups (15 for each of the treatment and placebo groups) according to the randomisation sheet.

Each participant attended 3 consultations with the researcher over a 3-month period. The second consultation was arranged in week four of the trial, and the third at 3 months, for each respective participant.

The treatment following each of the first and second consultations, consisted of 3 powders containing either an active ingredient (i.e. similimum) or matching placebo. Each participant was required to take, via sublingual administration, one powder daily for three days, 30-45 minutes before and/or after meals.

Each participant was required to complete a self-report chronic fatigue syndrome (CFS) questionnaire (Appendix C1) and 100mm fatigue visual analogue scale (VAS) (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) following each consultation.

Various Descriptive and Inferential statistical techniques were used for the CFS questionnaire and for the VAS. Due to the sample size quantitative analyses were conducted using non-parametric methods. Intra-group tests were

conducted on both treatment and placebo groups using Friedman Tests, and were followed-up by multiple Wilcoxon Signed Rank Tests for matched pairs. Inter group comparisons were made using the Kruskal Wallis Test. The results were analysed at a 95% confidence rating with $p \leq 0.05$. Data was analysed using the SPSS (version 13[®]) for Windows[®], statistical software suite.

According to the results obtained from the CFS questionnaire total, the treatment group showed a significant intra-group improvement in the post treatment period, from baseline to both the second ($p = 0.001$) and third consultations ($p=0.002$). The placebo group did not show any significant differences for these periods. The fatigue visual analogue scale revealed a 38.2% improvement in levels of energy across the treatment group, whilst the improvement of the placebo group was 25.6%. Inter-group analyses failed to reveal any statistical significance for both outcome measures. Therefore, the conclusion is that homoeopathic similimum was not effective in the treatment of chronic fatigue syndrome (CFS).

Nevertheless, the results point toward promising improvement of a condition that is otherwise difficult to treat with any other modality (Walach, 2004:211). It is the researcher's contention that similar trials, given a larger sample group over an extended period of time, and given fewer medicinal limitations, would yield less equivocal results.

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DEFINITION OF TERMS

ACTH: adrenocorticotrophic hormone; is involved in the hypothalamic pituitary adrenal (HPA) - mediated stress response (Wessely, Hotopf & Sharpe, 1999:257).

Affective disorder: also known as a mood disorder; it comprises of a disturbance in mood or affect. Examples are depression, extreme elation or mania, or bipolar conditions in which both depression and mania are exhibited. Mood disorders are classified in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (Sue, Sue & Sue, 2000:88-90).

Allopathy / Allopathic Medicine: name given (by Samuel Hahnemann, founder of homoeopathy) for conventional medicine's therapeutic philosophy, in contrast to homoeopathy (Carlston, 2003:3). Origin: Greek "*allos*" = other, "*patheia*" = suffering. It involves treatment of disease using pharmaceuticals whose action is directly opposed to, or incompatible with the effects of the disease (Swayne, 1998:207).

Alternative medicine: term given to the group of nonorthodox therapeutic disciplines. "*Alternative*" implies a replacement of, or substitute for other orthodox procedures (Kayne, 2003:47). The term is often used interchangeably with complementary medicine. See *Complementary medicine* (pp. xx)

Autonomic: involves the unconscious control of the body's physiology (Allen & Lueck, 2001:927).

Behavioural interventions: (as it relates to CFS) offering patients practical help to implement the advice they have been given about sleep, rest and activity (Wessely, Hotopf & Sharpe, 1999:400).

Central nervous system (CNS): consists of the brain and spinal cord. Its principal role is to integrate and coordinate incoming and outgoing neural signals, and to carry out higher mental functions such as thinking and learning (Moore & Dalley, 1999:38).

Classical homoeopathy: the homoeopathic method of using a single substance to treat the whole person (encompassing the mental, emotional and physical state), and followed by sufficient time allowance to permit a healing response (Gray, 2000:159).

Cognitive-behavioural therapy (CBT): refer to chapter 2

Cognitive dysfunction: may include deficits in attention, concentration, sequencing, spatial perception, and verbal memory as well as a fall in IQ (Wessely, Hotopf & Sharpe, 1999:250).

Complementary medicine: term given to the group of nonorthodox therapeutic disciplines implemented to complement other orthodox procedures, rather than to replace them (Kayne, 2003:47). *C.f. Alternative medicine (pp. xviii)*

Cytokines: are pleiotropic hormones that amplify the host immune response against viruses. Among the list of cytokines are interferons, interleukins, tumour necrosis factor and transferring growth factor (Wessely, Hotopf & Sharpe, 1999:195).

DNA: (deoxyribose nucleic acid) is the fundamental molecular machinery of the cell. "... contains all of the information required to synthesise cellular and extracellular structures, and to regulate the cell's development in the environment of the whole organism." (Shovlin, Lamb & Haslett, 2001:2).

Emotional centres: referring to collections of cells in the depths of the cerebral hemispheres that deal with emotion and memory - also known as the limbic system (Allen & Lueck, 2001:925). *See Limbic system (pp. xxii)*

Fatigue: word used to describe the subjective symptom of malaise or tiredness, and is associated with aversion to activity and/or to objectively impaired performance (Sharpe & Wilks, 2002:480).

Fibromyalgia: a syndrome characterized by diffuse musculoskeletal pain and, associated with anatomically-designated tender points on palpation (Demitrack, 1997:76).

Functional somatic syndromes: term given to a number of medically unexplained conditions, experienced by patients as clinically important symptoms but which cannot be shown or proved objectively, (Wessely, Nimnaun & Sharpe, 1999:936).

Healing: restoration of health or wholeness. It involves a creative change in the organism towards a greater state of health by mobilizing latent resources, enhancing new tissue growth, and conferring competence and strength to the organism (Swayne, 1998:210).

Homoeopathy: an alternative system of medical practice officially founded in the early nineteenth century, by the German physician Dr Samuel Hahnemann. *Homoeopathy* means “*similar to disease*” or “*similar to suffering*”. It advocates using remedies that stimulate the body’s own healing capacity (Carlston, 2003:7-10).

Homoeopathic materia medica: see *Materia medica* (pp. xxii)

Hypothalamo-pituitary-adrenal (HPA) axis: is the primary long-term mediator of the body's stress response (Cleare & Wessely, 1997:104-105).

Limbic system: the entire neuronal circuitry that controls emotional behaviour and motivational drives (Guyton, 1992:450).

Magnetic resonance imaging (MRI): this neuroimaging technique provides good resolution and distinction of the brain and its tissues, by producing a magnetic field around a patient and using radio waves to detect abnormalities (Sue, Sue & Sue, 2000:84).

Materia medica (homoeopathic): is a text of the formal compilation of guiding symptoms of medicines obtained from “*provings*” (Vithoulkas, 1987:76-77). Different materia medica texts vary widely from each other in terms of length and utility, and its use is guided primarily by educational and clinical experience (Gordon, 2003:112).

Medical orthodoxy: synonym for conventional medicine (Swayne, 1998:212).

Mind-body medicine: an interactive approach to healthcare, which bridges the mind-body dichotomy by dealing with a patient and his illness from a holistic biopsychosocial perspective. It is antithesis to the Cartesian dualism of medicine (Schlebusch, 1990:3-5).

Mononuclear cells: form part of the mononuclear phagocyte system, consisting of blood monocytes, and tissue macrophages. Their capability is to “seek out and destroy” any presenting pathogen (Guyton, 1992:254).

Myalgia: muscle pain, and is closely related to fatigue (Wessely, Hotopf & Sharpe, 1999:95).

Myalgic encephalomyelitis (ME): otherwise known as chronic fatigue syndrome (CFS). The term is used by those who favour a viral aetiology of CFS (Lloyd, 2001:1091-1092).

Natural killer (NK) cells: antibody cells (Shovlin, Lamb & Haslett, 2001:32) that play a role in nonspecific immunity (Bishop, 1994:432).

Neuraxis: encompasses the various levels of the central nervous system that are responsible for the control of skeletal muscle; also known as the motor axis of the nervous system (Guyton, 1992:331).

Neuroimaging: various techniques available for visualizing (imaging) the nervous system of a patient. It is crucial to identifying lesions of the nervous system in disease (Allen & Lueck, 2001:929-930). Another important use of these procedures is to delineate possible brain damage or abnormal brain functioning to facilitate the diagnosis of cognitive impairment (Sue, Sue & Sue, 2000:83).

Neuroimmunomodulatory pathways: consists of two pathways (autonomic and neuroendocrine) and are of fundamental importance in immune regulation as it relates to maintaining health and fighting disease (Watkins, 1997:1-5).

Neuropeptides: is one of many neurotransmitter substances (Allen & Lueck, 2001:526) that are released in response to action potentials (Guyton, 1992,335).

Neuropsychological testing: comprises of numerous tests used to assess a wide range of functions (including language, cognition, motor functioning, and visual-motor functioning), in order to facilitate or refute a diagnosis of cognitive disorder or brain dysfunction (Sue, Sue & Sue, 2000:450-451).

Neurotransmitters: are molecules that are released from nerve cells (neurons) to facilitate nerve conduction (Allen & Lueck, 2001:925).

Placebo: Latin for “*I shall please*” (Bishop, 1994:30), and refers to a chemically inert, or inactive substance administered to a patient, and which has no direct chemical impact on the condition for which it is applied (Sue, Sue & Sue, 2000:106,521).

Polymerase chain reaction (PCR): a technique utilized in molecular biology. “It allows specific amplification of up to 10^{10} copies of a particular stretch of DNA from a single DNA template” (Shovlin, Lamb & Haslett, 2001:48).

Polysomnography: an investigatory tool for physiological measures of sleep. It encompasses the measurement of gross electrical activity of the brain (electroencephalogram / EEG) and measures of muscle tone and eye movements during sleep (Wessely, Hotopf & Sharpe, 1999:55).

Potency: the biophysical property of a homoeopathic medicine, conferred by serial dilution, succussion and/or trituration (Swayne, 1998:214). The potency indicates the specific strength of a homoeopathic medicine. Remedies of a 30CH potency or less are considered low potency remedies. (Ullman & Reichenberg-Ullman, 2000:101).

Primary adrenal insufficiency: clinically known as Addison's disease. Initially, it is characterized by a deficiency of either glucocorticoids or mineralocorticoids, and later there is failure of corticosteroid secretion (Edwards, Toft & Walker, 2001:589).

Prolactin: hormone, known for initiating lactation. It is secreted by the anterior pituitary gland and is under hypothalamic control (Guyton, 1992:632).

Proving: term used in homoeopathy that defines an experiment in which a substance or medicine is taken repeatedly, by a volunteer subject, and its effects carefully documented (Ullman & Reichenberg-Ullman, 2000:101).

Psychoneuroimmunology: term given to the study of the interrelationships between psychosocial influences and the immune, nervous, and endocrine systems (Bishop, 1994:432).

Repertorisation: involves translating important aspects of the patient narrative into symptom rubrics, as found in the repertory (Gordon, 2003:112-115).

Repertory: a book or computer programme designed to aid a homoeopath in his/her selection of a homoeopathic medicine. Each chapter of the repertory contains alphabetically arranged symptom rubrics and subrubrics that are correspondingly assigned to a list of alphabetically arranged remedies (Gordon, 2003:112-115).

Resonance: transference of energy between two substances vibrating with identical frequencies (Gray, 2000:161).

Serotonin: is a small molecule, rapidly acting neurotransmitter that acts as an inhibitor of pain pathways in the spinal cord. It is also believed to assist in mood regulation, perhaps causing sleep (Guyton, 1992:335).

Similimum: a single remedy homoeopathic prescription given at a time to a patient. It covers the totality of symptoms of a patient, and produces the greatest relief (Ullman & Reichenberg-Ullman, 2000:101).

Single photon emission computed tomography (SPECT): a neuroimaging technique used to assess and detect abnormalities in cerebral function and blood flow (Allen & Lueck, 2001:930).

Syndrome: refers to a constellation of potentially related signs and symptoms attributable to a disease or illness of unknown cause (Gordon, 1993:2).

T-lymphocytes: are activated lymphocytes responsible for cell-mediated immunity. They are preprocessed in the thymus gland (Guyton, 1992:262).

Totality of symptoms: a comprehensive symptomatic picture, as divulged by the patient and observed by the homoeopath. It comprises of a whole-person expression: physical, mental and emotional (Ullman & Reichenberg-Ullman, 2000: 102).

Type-A behaviour pattern (TABP): a behaviour pattern characterized by high levels of competitive drive, reflected in terms of time urgency (Bishop, 1994:434) perfectionism and over-achievement (Cleare & Wessely, 1997:104).

CHAPTER ONE

1.1. INTRODUCTION

Chronic fatigue syndrome (CFS) is a sporadic illness (Straus, 2004:1234). It is characterized by debilitating symptoms of unexplained fatigue of at least 6 months, and accompanied by several other symptoms. The latter may include unrefreshing sleep, sore throat, tender lymph nodes, muscle and/or joint pain, and/or headaches. CFS patients experience significant functional impairment that is not resolved by rest (Skinner, 2004:28). They may also report difficulty in everyday physical and mental tasks, reflected in terms of painful muscle exertion and painful cognitive processing (Wessely, Hotopf & Sharpe, 1999:417).

Despite much research, the cause of CFS remains unknown. Pathophysiological abnormalities have been noted across many domains, suggesting that CFS is a heterogeneous condition of multifactorial aetiology (Afari & Buchwald, 2003:223). According to Gray (2001:8) CFS is a complex illness pointing to physiological, environmental and psychological influences on its aetiopathogenesis.

As no biological marker has been found (Mostert, 1999:81), there are no tests to confirm or refute a diagnosis of CFS. Careful history and examination of the patient is needed to exclude an underlying organic cause, or severe psychiatric disorder (Cleare & Wessely, 1997:102,106). Thereafter diagnosis is made on the

basis of symptoms using a clinical case definition (Afari, van der Meer, Bleijenberg & Buchwald, 2005:351).

Much professional and public non-acceptance surrounds the diagnosis of CFS (Welch, 1999:1). According to the likes of Gray (2001:2) and Tucker (2004:164), many physicians do not believe that CFS exists, despite its official recognition. Further problematic, is that nosological debate continues with unresolve, on whether CFS is a somatic or psychological based illness (Hyland, 2001:273). CFS is hence conceded, in point, a diagnostic and management challenge for healthcare providers (Mostert, 1999:72; Solomon & Reeves, 2004:2241).

Whilst pharmacological approaches have failed to resolve CFS, two strategies have emerged beneficial to many sufferers: that is cognitive-behavioural therapy and graded exercise (Straus, 2004:1234). However, these modalities do not render patients symptom free (Wessely, Hotopf & Sharpe, 1999:416).

The prognosis for all CFS sufferers is variable as no treatment has yet been significantly effective (Rutherford, 2003). Although not associated with mortality, CFS renders considerable morbidity to its sufferers and complete recovery is rare (Mostert, 1999:92).

Whilst biomedical confirmation remains crucial to legitimising the care and support needed by CFS sufferers (Featherstone, 1998:105), the interactional

approaches offered by mind-body medicine and cognate, homoeopathy, may provide importance to illness management in CFS (Hyland, 2001; Featherstone, 1998).

Homoeopathy is a natural pharmaceutical system that utilizes microdoses of substances, from plant, mineral or animal kingdoms, in order to stimulate the innate healing response of the human being. It is a system disposed to strengthening the organism's immune and defense capacity so as to establish health and prevent disease. This is achieved without producing the side effects common to other conventional drug treatments (Ullman, 1991:xxiii-xxix).

Reports of homoeopathy's effectiveness for CFS have been conflicting (Wessely, Hotopf & Sharpe, 199:387; Bailey, 1995:189): A research study co-ordinated by Awdry (1996) was deemed inconclusive due to inadequate statistical analysis (Afari & Buchwald, 2003:228). Another, more recent randomised controlled study, conducted in the UK, found equivocal evidence for the effectiveness of homoeopathic treatment for CFS (Weatherley-Jones Nicholl, Thomas, Parry, McKendrick, Green, Stanley & Lynch, 2004). From both accounts, and of evidence hitherto available, the question of effectiveness lies unresolved and further research was therefore warranted.

1.2. OBJECTIVES

1.2.1. 1ST OBJECTIVE

To determine the effectiveness of homoeopathic similimum treatment in the management of chronic fatigue syndrome (CFS), in terms of the symptoms of CFS, by use of a self-report CFS questionnaire.

1.2.2. 2ND OBJECTIVE

To determine the effectiveness of homoeopathic similimum treatment in the management of chronic fatigue syndrome (CFS), in terms of the levels of fatigue experienced, by use of a fatigue visual analogue scale (VAS).

1.2.3. 3RD OBJECTIVE

To determine the effectiveness of placebo treatment in the management of chronic fatigue syndrome (CFS), in terms of the symptoms of CFS, by use of a self-report CFS questionnaire.

1.2.4. 4TH OBJECTIVE

To determine the effectiveness placebo treatment in the management of chronic fatigue syndrome (CFS), in terms of the levels of fatigue experienced, by use of a fatigue visual analogue scale (VAS).

1.3. STATEMENT OF HYPOTHESES

1.3.1. THE FIRST HYPOTHESIS

It is hypothesised that the homoeopathic similimum treatment will not be effective in reducing the symptoms of chronic fatigue syndrome, as measured by the CFS questionnaire scores.

1.3.2. THE SECOND HYPOTHESIS

It is hypothesised that the homoeopathic similimum treatment will not be effective in reducing levels of fatigue, as measured by fatigue visual analogue scale (VAS) scores.

1.3.3. THE THIRD HYPOTHESIS

It is hypothesised that there will be no difference in effect between the homoeopathic similimum and placebo in reducing symptoms of chronic fatigue syndrome, as measured by the CFS questionnaire scores.

1.3.4. THE FOURTH HYPOTHESIS

It is hypothesised that there will be no difference in effect between the homoeopathic similimum and placebo in reducing levels of fatigue, as measured by fatigue visual analogue scale (VAS) scores.

CHAPTER TWO - REVIEW OF THE RELATED LITERATURE

2.1. FATIGUE: AN OVERVIEW

2.1.1. DEFINITION OF FATIGUE

Sharpe & Wilks (2002:480) define fatigue as “a subjective symptom of malaise and aversion to activity, or to objectively impaired performance.” Fatigue in the corporeal sense, means “inability to sustain force”, and alludes to dysfunction in the neuraxis or neuromuscular apparatus, whether physiologic (following strenuous exercise) or pathologic (Lane, 2000:416).

Fatigue is a poorly defined feeling of tiredness or exhaustion, and is by definition distinct from lack of energy, loss of motivation, or sleepiness; the latter being cause for enquiry into other specific diagnoses (Sharpe & Wilks, 2002:480). ‘Feeling tired’, as is often synonymous with fatigue, is so common that it may be considered normal ¹. However, there is no simple way of separating normal from abnormal fatigue, as it cannot be objectively measured. Many variables are attributable to this distinction. These include the duration of the fatigue, its severity and associated disability, and the presence of other symptoms. Hence,

¹ Fatigue is a commonly experienced symptom in the community, with up to half of the general population reporting fatigue in large surveys. It is also reported by at least 20% of patients seeking medical care (Afari & Buchwald, 2003:221). See *Fatigue As Illness* (pp. 8)

the concept of fatigue is multidimensional (Wessely, Hotopf & Sharpe, 1999:27-40). Normal fatigue is thought to be transient, self-limiting and explainable by prevailing circumstances (Afari & Buchwald, 2003:221). Furthermore, rest permits recovery (Lane, 2000:416). According to Wessely, Hotopf & Sharpe (1999:27-28) fatigue may be viewed as illness when the sufferer regards it as a problem sufficient enough to seek help.

2.1.2. FATIGUE AS ILLNESS

Fatigue is one of the most common presenting symptoms in primary care, being the main complaint of 5-10% of patients, and an important ancillary symptom in a further 5-10%. Fatigue may present in association with known medical and psychiatric conditions (as shown in tables 2.1.2a and 2.1.2b). However, for the majority of patients with fatigue, the symptom remains unexplained or idiopathic. Statistically, of all patients in primary care presenting with fatigue as a main complaint, 90% of cases are not due to a recognizable medical disease. This figure is found to be even lower in patients seen in secondary care (Sharpe & Wilks, 2002:480).

Without treatment, the prognosis of patients with idiopathic fatigue is poor, as half of those seen in general practice are still fatigued six months later (Sharpe & Wilks, 2002). In the context of clinical practice and research, fatigue seems

elusive to both measurement and management (Straus, 2004:1234), and requires a multidimensional approach (Wessely, Hotopf & Sharpe (1999:19).

When persistent and debilitating fatigue cannot be explained by a medical condition, it may represent chronic fatigue syndrome (Afari & Buchwald, 2003:221). A cross sectional British study conducted by Darbishire, Ridsdale & Seed (2003), indicated that only a third of those chronically fatigued had chronic fatigue syndrome.

Table 2.1.2a illustrates common medical conditions that may present with fatigue

TABLE 2.1.2a
Medical conditions that may present with apparently unexplained fatigue
<ul style="list-style-type: none">- General - Anaemia, chronic infection, autonomic disease, cancer- Endocrine disease - Diabetes, hypothyroidism, hypoadrenalism- Sleep disorders - Obstructive sleep apnoea and other sleep disorders- Neuromuscular - Myositis, multiple sclerosis- Gastrointestinal - Liver disease- Cardiovascular - Chronic heart disease- Respiratory - Chronic lung disease
Taken from Sharpe & Wilks, 2002:480

Table 2.1.2b illustrates common psychiatric conditions that may present with fatigue

TABLE 2.1.2b
Psyhiatric diagnoses commonly associated with fatigue
<ul style="list-style-type: none">- Depression- Anxiety and panic- Eating disorders- Substance misuse disorders- Somatisation disorder
Taken from Sharpe & Wilks, 2002:481

2.2. CHRONIC FATIGUE SYNDROME

2.2.1. DEFINITION

In recent years, the concept of fatigue as a specific illness has become encapsulated in the controversial disorder, termed 'chronic fatigue syndrome' (Ranjith, 2005:13).

Chronic fatigue syndrome (CFS) is a condition characterised by persistent medically unexplained fatigue of at least six months (Parker, Wessely & Cleare, 2001:1331), and which is often accompanied by muscular pain, along with various other symptoms. It overlaps with another descriptive term, fibromyalgia (a fatigue-related condition) that has often been used when muscle pain is the predominating feature (Sharpe & Wilks, 2002:481). Although fibromyalgia and

CFS are regarded as separate diagnostic entities, differentiating the two is often sought with difficulty (Demitrack, 1997:76). According to Wessely, Nimnuan & Sharpe (1999) both conditions could be viewed as the same; subsumed under the umbrella term of functional somatic syndromes.

2.2.2. INCIDENCE AND PREVALENCE

CFS, also known as myalgic encephalomyelitis (ME), has been previously and numerously dubbed neurasthenia, immune dysfunction syndrome and “yuppie flu”, amongst others (Mostert, 1999:71). It is a concerning health problem worldwide (Rutherford, 2003) with its prevalence being estimated at 0.5 to 1.5% of the population in primary care (Cleare & Wessely, 1997:102). It is said that there are about as many as 200 000 people with CFS in the UK alone (Rutherford, 2003), whilst the Centres for Disease Control and Prevention (2005) estimates that as many as 500 000 Americans may have the condition. According to Gray (2001:5) no official epidemiological estimates have been provided for South Africa, albeit its prevalence is reportedly on the incline (Schlebusch, 1990:79).

Contrary to the erroneously assumed stereotypical “yuppie flu” (Cleare & Wessely, 1997:102), CFS is found in all ages and socioeconomic groups, with highest rates found among women (Afari, van der Meer, Bleijenberg & Buchwald, 2005:351). According to Gallagher, Thomas, Hamilton & White (2004:575), it is

rare in children. However, new research suggests that sedentary children are at greater risk for developing CFS in later life (Viner & Hotopf, 2004:941). According to Gordon (1993:9) most patients with CFS seem to be adults between the ages of 25 and 50.

2.2.3. HISTORICAL PERSPECTIVE OF CFS

In 1869 a New York neurologist, George Beard, was first to recognize the occurrence of fatigue as an illness in the absence of disease. He labelled the condition 'neurasthenia' (Wessely, Hotopf & Sharpe, 1999:13). Neurasthenia's symptoms seemed analogous to today's description of CFS. "For several years in the late 1800s, Dr Beard's new disease was the country's most diagnosed malady, but the medical community eventually grew more sceptical, and the whole notion of neurasthenia fell into disrepute." (Gordon, 1993:9) This was due to the dissent of and antipathy between differing interpretations of the condition. Evidence could adduce no basis that neurasthenia was a physical illness; hence it constituted no legitimacy. Critics had to define it as psychological. This insinuated that neurasthenia was unreal, imagined, or an illness of the malingering. No satisfactory answers were ever given to these dilemmas, and neurasthenia gradually 'disappeared' (Wessely, Hotopf & Sharpe, 1999:118-119).

The demised neurasthenia was later to resurface when reports emerged from various parts of the world, of syndromes similar in nature, all characterized by chronic debilitating fatigue (Gordon, 1993:9). Two episodes that attracted the most attention took place at the Los Angeles County Hospital (LAC) in 1934, and the Royal Free Hospital (RFH) in London, 1955. The symptoms of these epidemics remain unclear but were referable to the central nervous system. It was proposed as an explanation for a series of outbreaks of a contagious condition. However, the laboratory tests available to the clinicians of the day, failed to provide objective evidence of infection. Consequently, some critics attributed the epidemics to emotional distress or 'mass hysteria'. The 'mass hysteria' hypothesis led to acrimonious debate, which continues to this day. This did not deter initial authors however, from branding an organic aetiology to these syndromes. The names neuromyasthenia and myalgic encephalomyelitis (ME) emerged (Wessely, Hotopf & Sharpe, 1999:127-130).

Epidemics of neuromyasthenia or ME gradually disappeared from the literature during the 1960s and 1970s (Wessely, Hotopf & Sharpe, 1999:131).

In the 1980s, chronic fatigue returned to prominence and drew the attention of the mass media. "Yuppie flu" was conceived by the lay press, since the majority of patients at the time were accomplished individuals in their thirties. Patients were diagnosed as either suffering from chronic mononucleosis, or chronic infection with the Epstein-Barr (EBV) virus (Mostert, 1999:71). These

abstractions left the research and medical communities in a dilemma, which resulted in a need for resolution of consensus. Discourse followed and resulted in the sanctioning of a new condition - chronic fatigue syndrome (CFS) (Wessely, Hotopf & Sharpe, 1999:134). This was first defined in 1988 by the Centres for Disease Control (CDC) and Prevention, in Atlanta. It delineated a symptom of chronic fatigue, of at least six months and associated with at least 50% reduction in the patient's functional capacity. Included in the definition was the occurrence of other coexisting symptoms (Gordon, 1993:2).

The original CDC criteria were then revised in 1991 and again in 1994 (Fukuda, Straus, Hickie, Sharpe, Dobbins & Komaroff, 1994:957). *See Diagnosis and Classification Criteria (pp. 27)*

According to Wessely, Hotopf & Sharpe (1999:132) the link between neuromyasthenia (ME) and modern CFS is largely historical. Professional literature views them as largely synonymous, but the two conditions as they are described are very different.

Chronic fatigue syndrome has subsequently become the focus of much research and debate (Wessely, Hotopf & Sharpe, 1999:13). Many still question the credibility of the condition despite its official recognition (Gray, 2001:2).

2.2.4. AETIOLOGY OF CFS

Despite more than a decade of research, CFS remains a heterogeneous condition, as no specific cause has yet been identified (Afari & Buchwald, 2003:222)². Studies have revealed possible factors implicated in triggering and/or maintaining the disorder (see table 2.2.4). These include viral infections, neuroendocrine changes, pre-existing psychological disorders (depression, anxiety), stress, and personality type (Type A behaviour pattern) (Cleare & Wessely, 1997:104). New evidence beginning to emerge, suggests that CFS may also be familial. Pathophysiological abnormalities have thus been observed across many domains, suggesting that CFS is a condition of complex and multifactorial aetiology. (Afari & Buchwald, 2003:223).

Agreement has not yet been reached on whether CFS is a psychological or a physical illness (Mostert, 1999:80; Hyland, 2001:273). Patients with CFS generally attribute their illness to physical causes (Butler, Chalder & Wessely, 2001) but according to Mostert (1999:81) it is the absence of biological markers that favour a psychogenic aetiology. There exists considerable similarity between the symptoms of CFS and an affective disorder, consequently many psychiatrists

² Recent clinical evidence cited in a University of Alberta study, believes to have established a biological basis for CFS. This research may provide independent verification for CFS sufferers (Pazderka-Robinson, Morrison & Flor-Henry, 2004). The lead author on the study, Pazderka-Robinson (Kirshner, 2005:32), is optimistic that her research will lead to larger-scale work. See *Sympathetic Nervous System Dysfunction* (pp. 22)

regard CFS as a variant of depression (Lloyd, 2001:1092). Moreover, the psychogenic model is supported by the frequency of psychiatric symptomatology in CFS (Hyland, 2001:274). Several lines of research however, suggest that CFS may be separate from psychiatric disorders (Demitrack, 1997:72; Komaroff & Buchwald, 1998:4).

Other researchers steer away from a primarily physical or psychological perspective, and provide an interactional model of conceptualising CFS, viewed through the paradigm of psychoneuroimmunology (Welch, 1999; Hyland, 2001; Gray, 2001).

2.2.5. PATHOGENESIS / PSYCHOGENESIS OF CFS

The pathogenesis of CFS is not clear. Investigations have documented diverse abnormalities, but none are reproducibly present in the majority of CFS patients. Several theories have been proposed (Afari, et al. 2005:352-356) (refer to table 2.2.5. overleaf):

Table 2.2.5 illustrates the numerously diverse abnormalities detected across much of the CFS population. The factors indicated, represent suggested aetiopathogenic correlations to the condition.

<p>TABLE 2.2.5</p> <p>CFS: FACTORS CONSIDERED CAUSATIVE</p> <ul style="list-style-type: none"> - <i>Viral infection</i> - Infectious mononucleosis (EBV); viral hepatitis; viral meningitis - <i>Immune dysfunction</i> - Overactuation / deficiencies - <i>HPA-axis and serotonin pathway abnormalities</i> – Hypocortisolism - <i>Central 5-HT dysfunction</i> - <i>Cerebral blood flow abnormalities</i> - Hypoperfusion problem - <i>Sympathetic Nervous System Dysfunction</i> - <i>Sleep Disorder</i> – difficulty falling asleep; unrefreshing sleep; daytime napping - <i>Genetic Factors</i> – still to be identified - <i>Personality</i> - Type-A Behaviour pattern (TABP) - <i>Psychological disorders</i> - Depression; anxiety; Somatoform disorders - <i>Stress and life events</i> - Work; relationship; trauma <p>Adapted: Cleare & Wessely, 1997:104; Afari & Buchwald, 2003:222-226; Kirshner, 2005:32; Afari, <i>et al.</i>, 2005:352</p>

2.2.5.1. VIROLOGICAL / SEROLOGICAL EVIDENCE

Most CFS patients recall their illness to have started with an influenza-like episode (Gow, Simpson, Behan, Choudhuri, McKay & Behan, 2001:2080). A posteriori, infectious mononucleosis, influenza and hepatitis have all been implicated as precursory to CFS. In many cases however, there is no convincing evidence of viral infection, either from the history or antibody titres (Lloyd,

2001:1092). Furthermore, much of the general population may also test positive for the same ubiquitous virus found in a CFS sufferer (Gordon, 1993:10).

Antithetically, White, Thomas, Sullivan & Buchwald (2004:499) were able to document a “*postsystemic infection fatigue syndrome*” in American primary care patients. The results of their study support the existence of two discrete chronic fatigue syndromes following infectious mononucleosis. Their work however has not been replicated, and it appears more research is needed to resolve the apparent ambiguities in the CFS-infection relationship.

2.2.5.2. IMMUNOLOGICAL DYSREGULATION

Non-specific immunologic abnormalities have been detected in people with CFS, raising the possibility of defects in general virus-handling mechanisms (Gow, et al. 2001:2080). Of the many described, the most consistently reported are depressed natural killer cell function and increased expression of T-lymphocyte activation markers. However, the results of such findings have been inconsistent, non-specific and poorly correlative to the severity of symptoms in CFS sufferers (Wessely, Hotopf & Sharpe, 1999:207; Afari, et al. 2005:354). Nevertheless, subsequent support for the immune dysregulation hypothesis has given rise to the term chronic fatigue and immune dysfunction syndrome, or CFIDS (Gordon, 1993:10).

Confounding to current clinical evidence, researchers have recently developed a method for identifying potential biomarkers in CFS. The markers discovered comprise of ten genes known to have functions in defence and immunity. Notably, it supports the immune dysregulation pathogenesis in CFS. It was identified by means of a differential-display Polymerase chain reaction (PCR) of peripheral blood mononuclear cells. Further studies will be required to determine the validity of these potential biomarkers (Method to identify biomarkers in chronic fatigue syndrome developed, 2005:904) ³.

2.2.5.3. NEUROENDOCRINE ABNORMALITIES

➤ **Hypothalamic-pituitary-adrenal Axis Abnormalities**

Research has brought to light abnormalities of the hypothalamic-pituitary-adrenal (HPA) axis in CFS patients, suggested by mild hypocortisolism (Cleare & Wessely, 1997: 104-105). Subsequent studies have however concluded, that primary adrenal insufficiency is unlikely to play a significant role in the aetiology of CFS (Gaab, Huster, Peisen, Engert, Heitz, Schad, Schürmeyer & Ehlert, 2003:113). Instead, evidence suggests that the hypocortisolism may be the result of a central nervous system - serotonin problem (Demitrack, 1997:73-76). Nevertheless, hypocortisolism has only been exhibited in about one-third of CFS patients (Parker, Wessely & Cleare, 2001:1331).

³ The source publication was not officially available at the time this research study went to print.

➤ **Abnormalities in Serotonin Neurotransmission**

Some studies have demonstrated abnormalities of the central nervous system (CNS) serotonin physiology in CFS patients (Demitrack, 1997; Parker, Wessely & Cleare, 2001): A significant increase in serum prolactin levels, relative to other non-CFS sufferers, followed administration of serotonin agonists. This suggests a CNS up-regulation of the serotonergic system, resulting in hypocortisolism (Cleare, Bearn, Allain, McGregor, Wessely, Murray & O’Kearn, 1995:283-289).

2.2.5.4. CENTRAL NERVOUS SYSTEM ABNORMALITIES

Several symptoms reported by CFS sufferers (impaired concentration, attention and memory, and headache) suggest central nervous system involvement in the pathogenesis of CFS (Afari & Buchwald, 2003:223-224). Researchers have investigated this vinculum by use of structural and functional neuroimaging and neuropsychological evaluation (Afari, et al. 2005:354).

➤ **Cerebral Hypoperfusion Theory**

A neuroimaging study of CFS, conducted in 1995, found numerous abnormalities including lowered blood perfusion of the brainstem (Costa, Tannock & Brostoff, 1995). A South African study conducted by Welch (1999), also found radiological evidence of lowered blood brain perfusion in CFS sufferers. Other studies have

not been able to duplicate these findings due to technical difficulties (Cleare & Wessely, 1997:105).

➤ **Non-specific Neuroimaging Abnormalities**

Magnetic resonance imaging (MRI) and single photon emission computed tomography (SPECT) studies have been generally consistent in demonstrating some abnormalities in CFS patients. “However, the functional significance and clinical utility of these findings remain uncertain and await further clarification.” (Afari & Buchwald, 2003:224)

➤ **Neuropsychological Deficits**

As many as 85% of CFS patients report impairments in attention, concentration, and memory abilities. However formal neuropsychological studies have failed to yield consistent results. De facto, CFS sufferers appear to possess normal cognitive and global intellectual abilities (Afari & Buchwald, 2003:224).

➤ **Sympathetic Nervous System Dysfunction**

Recent clinical evidence cited in a University of Alberta study, believes to have established a scientific basis for CFS. In a study of 112 people, Pazderka-Robinson, Morrison & Flor-Henry (2004) found that patients with CFS had higher

skin temperatures, and produced less sweat in response to stress, than either clinically depressed or healthy participants. These findings indicate that CFS patients exhibit a lower rate of stress reactivity, which is suggestive of sympathetic nervous system dysfunction. According to Pazderka-Robinson, Morrison & Flor-Henry (2004:178-180), the results indicate that CFS onset may be attributable to severe physical or mental stressor exposure. Furthermore, the outcome, as measured by electrodermal analysis, may be of potential benefit in the diagnosis of CFS. The authors are optimistic that their research will lead to larger-scale work (Kirshner, 2005:32). For the interim however, this will stand as a finding pending further investigation and verification.

2.2.5.5. GENETIC FACTORS

Recent evidence is supportive of a familial predisposition to CFS, but genetic loci have yet to be identified. Routine genetic testing is also unavailable (Afari, et al. 2005:354).

2.2.5.6. SLEEP DISORDER

CFS patients experience more difficulty falling asleep, more interrupted sleep and more daytime napping than in healthy or chronically ill comparison subjects. Yet the results of polysomnography in CFS have failed to reveal a consistent or diagnostic sleep disturbance. Nevertheless, sleep disturbance does not appear

to correlate with fatigue severity per se. Moreover, if a severe sleep disorder was identified the diagnosis of CFS would be excluded (Afari & Buchwald, 2003:225).

2.2.5.7. PSYCHOLOGICAL THEORIES

A psychogenic basis towards CFS has been proposed: some studies have shown that certain personality traits (Type A behaviour pattern - TABP) set-up premorbid psychogeneses to chronic fatigue syndrome (Mostert, 1999; Cleare & Wessely, 1997:104). TABP is characterized by perfectionism and over-achievement. It is thought that such a personality type induces high levels of psychological distress, which may preclude recovery from an otherwise self-limiting post-infectious fatigue (Cleare & Wessely, 1997:104). The fact that fatigue often accompanies excessive stress, anxiety, and depression is also well documented (Gordon, 1993:11). Further, a significant proportion of the CFS population will also fulfil criteria for a psychiatric disorder, such as depression or somatization (Lane, 2000:416). A recent study found that lack of social support in CFS sufferers is yet another perpetuating factor of fatigue severity and functional impairment (Prins, Bos, Huibers, Servaes, van der Werf, van der Meer & Bleijenberg, 2004).

Chatham (1991) conducted a study to investigate the relationship between immunosuppressive emotional trauma and the onset of CFS. CFS sufferers were asked to describe their emotional state immediately preceding the onset of

physical symptoms, whilst the control divulged their emotional state (as it was) two years prior to the study. The results suggested a correlational relationship between pre-existent emotional trauma and subsequent development of CFS. Although intriguing, authors Wessely, Hotopf & Sharpe (1999:233-339) warn that such studies are conducive to retrospective biasness of the CFS narrative. Further, it is currently estimated that between 40% and 70% of children and adults in the general population will experience at least one major traumatic stressor in their lifetimes (Berliner & Briere, 1999:3); discordant to the estimated prevalence of CFS. Other studies have however concurred with Chatham (1991): CFS being associated with severe stressors such as experiences of childhood abuse or combat related trauma (Heim, Bierl, Nisenbaum, Wagner & Reeves, 2004:672).

2.2.5.8. AN INTERACTIVE MODEL: PSYCHONEUROIMMUNOLOGY

“This brings us to the subject of the relationship between viral infection, immune disorder, stress, and psychiatric disorder, exemplified by the term ‘psychoneuroimmunology’. This has many potentially important lessons for our understanding of CFS...” (Wessely, Hotopf & Sharpe, 1999:178)

It has been recognised in a local South African study, in which clinical hypnotherapy for CFS has shown encouraging results, that CFS falls into the realm of psychoneuroimmunology, or PNI (Welch, 1999).

PNI investigates the pathways connecting mind and body, and is a burgeoning field of research in its own right (Watkins, 1997:2). Anatomical, physiological and biochemical evidence all suggest that the body's autonomic, endocrine and immune systems are not autonomous, but engage in an interactive dialogue with each other and with higher perceptual and emotional centres to maintain health and combat disease (Vollmer-Conna, 1994; Watkins, 1997:1). Hence, it is recognized that psychological factors, such as emotions, stress, or distress, play a role in modulating immunity and/or disease processes (Vollmer-Conner, 1994; Pitts & Phillips, 1998:61-65; Mate, 2003).

According to Hyland (2001:282) CFS should be viewed as neither psychological, nor physical, but considered as a '*general dysregulation syndrome*' whereby communication within an extended self-regulatory brain-body network is compromised. Hence this would suggest that all mechanisms, as cited above, contain an element of truth, and that CFS is the final common pathway of some complex interaction between psychological, hypothalamic and immune mechanisms (Hyland, 2001). See *Mind-Body Medicine* (pp. 38)

2.2.6. CLINICAL PRESENTATION OF CFS

In terms of clinical features, fatigue is the hallmark symptom of CFS (Afari & Buchwald, 2003:222). Sufferers may show an incapacitating degree of physical malfunction and cognitive dysfunction (Welch, 1999:18). The spectrum of

impairment may vary from being modest, in which the affected person retains the ability to carry out most normal activities, including work (provided it is paced and sufficient rest is allowed), through to the most severely affected, who are bed-bound and require total nursing care (Rutherford, 2003). Various clinical studies have described CFS impairment as more severe than in persons with untreated hyperthyroidism, end-stage renal disease, heart disease, multiple sclerosis (Solomon & Reeves, 2004:2241) and cancer (Servaes, Prins, Verhagen & Bleijenberg, 2002).

Various symptoms, such as headaches, muscle pain and/or sore throats are typically known to coexist with the fatigue (Beers & Berkow, 1999:2482). Additionally, patients may report fever (Pazderka-Robinson, Morrison & Flor-Henry, 2004:171), anorexia, nausea, night sweats, dizziness and multiple chemical sensitivities (Afari & Buchwald, 2003:222). The sleep pattern is also altered, with frequent waking or hypersomnia, and sufferers may present with various autonomic symptoms affecting the cardiovascular or gastrointestinal systems (Lloyd, 2001:1091). Depression is frequently noted as a coexisting disease (Lane, 2000:416; Frey, 2002:1838-1839). However in some patients, it is secondary to the debility of the fatigue itself (Demitrack, 1997:71). In terms of physical signs most reports do not confirm objectively assessed abnormalities on examination (Wessely, Hotopf & Sharpe, 1999:149).

Most CFS patients describe symptoms suggestive of marked cognitive disturbance. Questionnaire studies have confirmed these clinical observations, however many studies involving neuropsychological testing have failed to elucidate such impairments. It is thus conceded that neuropsychological deficits in CFS are minor, and disproportionate to the severity of the subjective complaints (Wessely, Hotopf & Sharpe, 1999:250-253).

2.2.7. DIAGNOSIS AND CLASSIFICATION CRITERIA OF CFS

As no biological marker has yet been found, there are no tests to confirm or refute a diagnosis of CFS (Mostert, 1999:72). Diagnosis is made on the basis of symptoms and involves exclusion of a discernible cause (Afari & Buchwald, 2003:222). The latter of which involves a complete patient history, physical examination and normal screening laboratory tests (Katz, 2002:741) (Appendix F). Some conditions to be considered for exclusion include hypothyroidism, anaemia, sleep disorder, Addison's Disease (Sharpe & Wessely, 1997:180), brucellosis, myeloproliferative disorders (Lewith, 1996:43) and occult malignancy (Komaroff & Buchwald, 1998:3) (Appendix B).

Although a diagnostic model for CFS has been met, its use has been of more value to research than to clinical assessment (Rutherford, 2003). A few case definitions for CFS have been debatably recognized in various parts of the world. These include the Centres for Disease Control (CDC) diagnostic criteria,

Australian, American and UK criteria, and the 'Oxford' criteria for CFS (Wessely, Hotopf & Sharpe, 1999:141-144). However, major criticisms lie in these definitions of CFS:

First, there exists considerable overlap between the criteria for CFS and those for neuropsychiatric syndromes, such as depression anxiety, and somatoform disorders (Fukuda, et al. 1994:953-954). In a Zurich population survey, Angst, Dobler, Mikola & Binder (1984) found a consistent and linear relationship between the severity of depression and a number of somatic symptoms. These included gastrointestinal, respiratory and circulatory symptoms, as well as backache, headache and exhaustion. In another separate study, myalgia, muscle weakness and post-exertional malaise did not differentiate CFS from severe depression (Manu, Lane & Matthews (1996).

Second, according to Wessely, Hotopf & Sharpe (1999:142-144), most symptoms included in the definition of CFS are not specific to it, thus cannot differentiate CFS from other causes of chronic fatigue. Moreover, the case definition does not delineate a discrete condition that is identifiable by the same pathophysiology (Komaroff & Buchwald, 1998:4); hence it is not easily differentiated from other diagnostic entities (Fukuda, et al. 1994:953).

Third, the requirement for the fatigue to be present for six months does not accommodate the possibility of an abrupt onset of the disorder. Hence some

patients are unwillingly required to wait-it-out, before such time as a diagnosis can be made (Rutherford, 2003). In others whose CFS-like descriptions abate short of six months, they fail to acquire the CFS diagnosis (Pawlikowska, Chalder, Hirsch, Wallace, Wright & Wessely, 1994:746).

In terms of research however, the criteria are adequate in meeting the needs of studies (Rutherford, 2003). The most commonly utilized criteria in South Africa (Welch, 1999:6) and internationally are those revised by the CDC of Atlanta, Georgia, 1994. This definition requires at least six months of persistent fatigue that substantially reduces a person's level of activity. Additionally four or more of the following symptoms must present concurrently within a six-month period: impaired memory or concentration, sore throat, tender lymph nodes, muscle and/or multi-joint pain, new headaches, unrefreshing sleep, and post-exertional fatigue. Certain medical and psychiatric conditions are further exclusionary. These are eating disorders, psychotic disorders, bipolar disorder, melancholic depression, and substance abuse within two years of fatigue onset Afari & Buchwald, 2003:222) (refer to Appendix A). Those who do not meet the fatigue severity or symptom criteria have recourse to the diagnosis of 'idiopathic chronic fatigue' (Fukuda, et al. 1994:957; Afari & Buchwald, 2003:222).

CFS remains a medically unexplained syndrome. It seems for now, in the absence of any objective evidence, that CFS assumes a dualistic view to classification. According to the current International Classification of Diseases

(ICD-10) system, post-viral fatigue syndrome, or ME falls under neurology, whilst neurasthenia comes under psychiatry (David & Wessely, 1993:1247). CFS's resultant straddling between the mutually exclusive medical and psychiatric classification systems has become problematic (Welch, 1999:6). According to the World Health Organization, the classification is merely to enable both sides of the divide to record a diagnosis when faced with a chronically fatigued patient. It is recognized however, that the current classification for CFS stands inadequate and unresolved (Wessely, Hotopf & Sharpe, 1999:220-221).

It must be noted further, that neither CFS, nor its analogues are listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-4) (Welch, 1999:12).

2.2.8. MANAGEMENT OF CFS

Cleare & Wessely (1997:102) consider the treatment of CFS to be far from satisfactory. They believe that, for many years, sufferers have received no advice nor help, but have been told, "...to rest, 'live within your limits', and wait for the medical breakthrough." Many sufferers are liable to stigmatisation from physician, family and friends, who doubt the veracity of their condition (Featherstone, 1998:98-105). In a South African thesis examining the illness narratives in CFS, Gray (2001:2-3) cited the following patient frustrations:

"My GP refuses to believe ME exists, never mind that I have it. Should I try to convince him or look for another doctor?"

“I used to get on okay with my family but since I’ve been ill my relationship with them has deteriorated. Not only are they unsupportive but some of them are actually cruel. Why have they become like this?”

Patients admit that such above experiences are common (Ware, 1992; Featherstone, 1998). For this reason, fundamental in the approach towards a CFS patient, is to establish a positive working relationship (as shown in table 2.2.8). The doctor’s beliefs and attitudes are important in facilitating a therapeutic alliance (Wessely, Hotopf & Sharpe, 1999:352).

Table 2.2.8 lists the strategies a practitioner should take in order to aid the facilitation of a good working relationship with a CFS patient

TABLE 2.2.8
CFS: Establishing a positive working relationship
<ul style="list-style-type: none">- Take the patient’s physical complaints seriously- Respect the patient’s illness beliefs (without necessarily agreeing with them)- Empathize with experiences of being ‘disbelieved’ by others- Empathize with effects of illness and express willingness to help- Allow plenty of time, and allow the option of breaks/rest periods if needed
Taken from Wessely, Hotopf & Sharpe, 1999:352

The management of CFS patients must be based on the available evidence of what has been shown to be effective (Wessely, Hotopf & Sharpe, 1999:365). Albeit, despite a multitude of claims, the only treatment modalities to have shown significant effect in randomised trials, and to be considered beneficial to CFS patients are cognitive-behavioural therapy (CBT) and graded exercise therapy (Straus, 2004:1234-1235; Lloyd, 2004:437). Least of all, patients require

education about CFS and how to cope with it (Wessely, Hotopf & Sharpe, 1999:397). Patients need to establish realistic goals for managing their lives and restructuring activities (Afari, et al. 2005:353-354). Moreover, the management of CFS should be multidimensional and tailored to the needs of each patient (Sharpe & Wessely, 1997:181; Afari & Buchwald, 2003:230).

2.2.9. TREATMENT INTERVENTIONS FOR CFS

Treatment per se is symptom-based and includes pharmacological and behavioural strategies (Afari & Buchwald, 2003:230). However, no pharmacological agent has yet been shown to be convincingly helpful for CFS (Wessely, Hotopf & Sharpe, 1999:399; Straus, 2004:1235). Various treatment options are explored below.

2.2.9.1. CONVENTIONAL MEDICAL TREATMENT

In terms of conventional medicine, drug therapies have included anti-depressants, anticholinergics, hormones (Afari & Buchwald, 2003:229) corticosteroids, anti-viral medications, as well as immunologically targeted drug treatments. Research has concluded that the aforementioned approaches have not been significantly effective (Wessely, Hotopf & Sharpe, 1999:374-388).

Due to the close association between depression and CFS, antidepressants are often the suggested drug of choice, for its potential benefits in pain reduction, sleep, increased energy and mood improvement. However, for unknown reasons, CFS patients are particularly sensitive to the side effects of antidepressant drugs. Therefore, if given, these drugs should be started in the lowest possible dose and increased gradually to achieve compliance. It is recognized that its use is largely empirically based and is not clearly indicated in CFS (Wessely, Hotopf & Sharpe, 1999:399-400).

Other treatments are largely symptomatic (Lewith, 1996:45-49). Analgesics (non-steroidal anti-inflammatory drugs / NSAIDS) may be given for myalgia. However, many CFS sufferers have reported that this affords them little relief (Rutherford, 2003).

Multifarious pharmacologic agents have been assessed by means of randomised controlled trials (Afari & Buchwald, 2003:228). Whilst evidence is limited, most outcomes have been unconvincing to its cause (Reid, Chalder, Cleare, Hotopf & Wessely, 2000:292). Recently Blacker, Greenwood, Wesnes, Wilson, Woodward, Howe & Ali (2004) compared the efficacy and tolerability of galantamine hydrobromide in patients with CFS. The trial however, did not demonstrate any benefit of the drug over placebo.

2.2.9.2. BEHAVIOURAL INTERVENTIONS

“By behavioural intervention is meant offering patients practical help to implement the advice they have been given about sleep, rest, and activity.”

(Wessely, Hotopf & Sharpe, 1999:400)

Disturbed sleep patterns are commonly reported in CFS (Afari & Buchwald, 2003:225). There is sufficient circumstantial evidence to support regularization of sleep patterns. This is achieved by monitoring of ‘getting up times’ and avoidance of daytime napping. In terms of exercise, importance is given to implementing a stable continuum of rest and sustainable activity. Thereafter, gradual increases of activity can be planned (Wessely, Hotopf & Sharpe, 1999:400-401). Education regarding the benefits of exercise has been shown to be effective in increasing levels of activity in CFS (Powell, Bentall, Nye & Edwards, 2001).

2.2.9.3. PSYCHOTHERAPY

Psychological interventions have been explored: Individual and group behaviour therapies have helped some patients (Beers & Berkow, 1999:2482). There is increasing evidence for the effectiveness of cognitive behavioural therapy (CBT) in CFS (Cairns & Hotopf, 2005:20; Rimes & Chalder, 2005:32). The amenity of this therapy is to helping patients achieve a more constructive view of their illness, whilst adopting more effective coping strategies (Sharpe & Wessely, 1997:182). This approach in treating CFS patients is based on the premise that cognitive attributions and behavioural patterns act as perpetuating factors of the

condition (Lloyd, 2004:437). Although CBT has been effective in reducing disability in CFS, it does not render patients symptom free (Wessely, Hotopf & Sharpe, 1999:416). One study revealed that counselling may be as useful as CBT for treating CFS patients in primary care (Ridsdale, Godfrey, Chalder, Seed, King, Wallace & Wessely, 2001). Clinical hypnotherapy has also been utilized with some success (Welch, 1999).

2.2.9.4. GRADED EXERCISE THERAPY

An increase in fatigue following exertion is a major symptom of CFS. Consequently, many sufferers reduce their physical activity to avoid exacerbations (Skinner, 2004:28). However, there is evidence to suggest that “*graded*” increases in physical activity are helpful in improving function and relieving symptoms of CFS (Sharpe & Wessely, 1997:182; Rimes & Chalder, 2005:33). Sufferers are thence advised to engage in graded exercise regimes that are sensitive to each of their particular circumstances (Rutherford, 2003). However, Lloyd (2004:579-580) asserts caution to the boon of graded exercise, as severely ill CFS sufferers, unable to participate in exercise studies, are likely to be underrepresented in published data. Likewise, Scroop & Burnet (2004:579) state that graded exercise studies, in CFS, have not provided compelling evidence of improvement in either physiological or clinical status of patients. Nevertheless, it is recommended that those with CFS make exercise a regular part of their lifestyle (Skinner, 2004:29).

2.2.9.5. DIETARY AND VITAMIN SUPPLEMENTS

Other avenues of treatment have been directed at diet, vitamins and supplements (Beers & Berkow, 1999:2482). Vitamin B12 has long been used as a 'treatment' for fatigue and as a 'goad' to energy. NADH (nicotinamide adenine dinucleotide) has been given as an oral supplement. Carnitine and Co-enzyme Q10 (ubiquinone), obtained from health food stores have been advocated. Results however have been disappointing (Rutherford, 2003). According to Wessely, Hotopf & Sharpe (1999:380-381), there seems little rationale for their use in the absence of clear dietary deficiency or malabsorption syndrome.

2.2.9.6. COMPLEMENTARY MEDICAL TREATMENT

A wide range of complementary therapies, appearing to have affinity for the immune system (in CFS) have included acupuncture, nutrition, intramuscular magnesium, evening primrose oil and homoeopathy⁴. The evidence to support them is limited and largely descriptive (Lewith, 1996:45-49). Clinical trials with evening primrose oil and intramuscular magnesium have produced conflicting results (Rutherford, 2003). According to Wessely, Hotopf & Sharpe (1999:387),

⁴ 'Homeopathy' as it is referred to here is complex homoeopathy. This adopts a different approach to classical (similimum) homoeopathy. The former utilizes mixtures of herbal and homoeopathic remedies called 'complexes', targeted at the organs appearing to function least well. In CFS this is frequently the liver and colon (Lewith, 1996:45-49). Many classical homoeopaths however, question the integrity of this approach in terms of its classification as a homoeopathic medicine (Carlston, 2003:11,13). See *Homoeopathic Treatment* (pp.43)

more research needs to be conducted within the domain of complementary medicine.

2.2.10. PROGNOSIS OF CFS AND SOCIETAL IMPLICATIONS

The prognosis for CFS sufferers is variable as no treatment has yet been significantly effective (Rutherford, 2003). Unemployment is common, with loss of income and productivity in relatively young people being considerable (Lloyd & Pender, 1992; Bombardier & Buchwald, 1996). A recent study found that CFS costs the United States over \$9 billion each year in lost productivity. Furthermore, this estimate is not inclusive of healthcare costs, which are likely to be considerable (Reynolds, Vernon, Bouchery & Reeves, 2004).

A literature search conducted by Cairns & Hotopf (2005) identified all studies describing the clinical follow-up of patients following a diagnosis of chronic fatigue or CFS. The results showed that the median full recovery rate was 5%, and the median proportion of patients who improved during a follow-up was 39,5%. Good outcomes were associated with a sense of control over symptoms and not attributing the illness to a physical cause. Return to work at follow-up ranged from 8 to 30% in the three studies that considered this outcome. Conclusions drawn from the study suggested that full recovery from untreated CFS is rare. The prognosis given for an improvement in symptoms is less poor (Cairns & Hotopf, 2005:20).

If spontaneous recovery is going to occur, it usually takes place within the first few months (Lewith, 1996:43). Poor prognostic factors include older age, longer illness duration, fatigue severity, comorbid psychiatric illness, and a physical attribution for CFS (Afari & Buchwald, 2003:230). Although not associated with excess mortality, CFS renders considerable morbidity to its sufferers (Mostert, 1999:92). Suicide resulting from disability has been reported (Lewith, 1996:43).

“Chronic Fatigue Syndrome has become a new challenge for health care professionals and needs increased attention in the diagnosis, assessment and treatment.”

(Mostert, 1999:72)

2.3. MIND-BODY MEDICINE

2.3.1. THE MIND-BODY DICHOTOMY

Cartesian mind-body dualism represents current biomedical models (and many psychological models) in healthcare that are functionally dualistic and reductionistic, espousing the separate entities of psyche and soma. This results in healthcare that is not whole-person orientated and is bound to the value in medical specialization and technological advancement (Schlebusch, 1990:3-5).

2.3.2. SYNOPSIS OF MIND-BODY MEDICINE

According to the likes of Schlebusch (1990:3-4), Benson and Friedman (1996:195) health sciences provide clear evidence of the limitations of assuming

a narrow biomedical approach to health, disease and treatment. Consequently, modern healthcare is steering away from this Cartesian mind-body dualism in adoption of a renewed approach ⁵, called mind-body medicine (Schlebusch, 1990:3). Watkins (1997:1-2) defines mind-body medicine “as an approach to health that does not focus solely on the conscious mind and physical body, but incorporates unconscious emotional life and an individual’s spiritual dimension”.

The role of psychological factors and stress in the aetiology and maintenance of numerous medical and psychiatric disorders confirms this model. Conversely, the mind, being associated with chemical and electrical activity in the brain, is also a biological phenomenon (Schlebusch, 1990:5).

Current mind-body interventions cover a broad range of therapeutic practices, from counselling and cognitive behavioural therapy (CBT), to various alternative medical practices such as homoeopathy. It has been suggested that homoeopathy may produce an effect through direct activation of mind-body pathways (Watkins, 1997:2).

⁵ The mind-body approach is not new; rather it is a re-emergence of psychology’s relation to medicine of the past (Schlebusch, 1990:5).

2.3.3. PSYCHONEUROIMMUNOLOGY (PNI)

A substantial amount of research evidence suggests that mind and body intercommunicate by means of a multidirectional network of hormones, neuropeptides and cytokines (Adder, Cohen & Felten, 1995:100). Further, PNI research has adduced irrefutable evidence that virtually all of the body's defense systems are piloted by the central nervous system (CNS) (Watkins, 1997:3).

“Thus, every idea, thought and belief has a neurochemical consequence, and neuropeptides flow from the CNS, impinging on specific receptors on virtually all leukocytes, regulating their function.” (Watkins, 1997:3)

The ability to inhibit or enhance immunity, under the directive of the CNS, is achieved through two major neuroimmunomodulatory pathways: neuroendocrine and autonomic. These two pathways are thought to be critically important in maintaining health and opposing disease amidst immunological or psychological threat (Berczi & Nagy, 1991:3-19).

According to Mostert (1999:137) and Welch (1999:248-249), the transactional model of psychoneuroimmunology, which suggests complex interactions between multiple biological and psychological factors, should be an essential focus for the therapeutic intervention of CFS.

2.4. THE PLACEBO EFFECT

A placebo is a harmless treatment thought to have no measurable effect on the condition to which it is applied (Watkins, 1997:256), but which is used for its non-specific psychological or psychophysiological effects (Bishop, 1994:432).

According to Benson and Friedman (1996:194-195) the placebo effect is “the aspect of treatment not attributable to specific pharmacologic or physiologic properties”. They have proposed three determinants of the placebo effect: that is a positive belief and expectation on the part of the patient, a positive belief and expectation on the part of the physician, and a good relationship existing between both the patient and physician.

Generally, the placebo effect can be defined as an effect that occurs following the administration of a therapeutically inactive substance. Placebo has been shown to be as effective as certain forms of surgery, and influence the action and effectiveness of medications (Watkins, 1997:234). Further, the effectiveness of placebo has been documented in a wide variety of conditions, including angina pectoris, asthma, congestive cardiac failure and mortality in coronary artery disease. Herein, its efficacy has been shown to exceed 35% (Benson and Friedman, 1996:196). Controversy still resides over the relationship of alternative medicine to placebo effects; it is still unclear to what extent the effects of an

alternative therapy used, is the result of a placebo and to which is attributable to specific effects (Donnelly, 2004:238-241).

In recent times, “placebo” has assumed derogatory connotations, possibly reducing the power of non-specific effects. This has been the result of conditioning, within the conceptual framework of medicine, by its focus on specific pharmacologic and surgical interventions (Benson & Friedman, 1996:195). Consequently, some authors have pressured for a “placebo” name change (Benson & Friedman, 1996:195; Basmajian, 1999:107-116).

Those conducting research on any treatment modality (i.e. pharmacotherapy or psychotherapy) must control for placebo effects. This is because the patient’s expectancy of improvement and the attention received by the doctor could influence improvement rates. The treatment in question is usually considered effective if its results show greater improvement than that produced by placebo (Sue, Sue & Sue, 2000:521).

Contrary to common belief ⁶, patients with CFS respond to placebos at a lower rate than people with many other illnesses. In a recent review and meta-analysis, Cho, Hotopf & Wessely (2005) showed that 19,6% of CFS patients improved from placebo, compared to the widely accepted figure of about 30% for other

⁶ The placebo effect seems to be the strongest in diseases with highly subjective symptoms. A priori, some researchers believed that its effect could be as high as 50% among CFS sufferers (Cho, Hotopf & Wessely, 2005:301-302).

conditions. A possible explanation given was that patients might have had low expectations due to the reality that CFS is difficult to treat and often persists for years.

2.5. HOMOEOPATHIC TREATMENT

2.5.1. INTRODUCTION

“The physician’s highest and only calling is to make the sick healthy, to cure, as it is called.”

- Samuel Hahnemann ⁷

Homoeopathy is a 200 year-old system of therapy that was developed and formally authored by German physician Samuel Hahnemann (Vithoukas, 1987:15-16). It is a medicinal system which advocates the use of remedies to stimulate the innate healing response of the human being (Carlston, 2003:7-8). Homoeopathy is one of many nonorthodox disciplines collectively termed complementary or alternative medicine (Kayne, 2003:47). It is an approach that is considered safe, and there are no side effects to treatment (Vithoukas, 1987:25-26; Ullman, 1991:xxix, 3). However, a biological basis towards its mechanism still remains elusive – a fortiori, it has held little credibility in orthodox medicine (Gray, 2000:51; Carlston, 2003:8). Hitherto, it is a phenomenon that is

⁷ Quotation from Samuel Hahnemann’s Organon of the Medical Art, 1810. This was the first formal publication entailing the homoeopathic method. The sixth and final edition was completed in 1842, the year before his death (O’Reilly, 2001:xvii, 60).

conceded as poorly understood, and which is poorly described in contemporary medical literature (Swayne, 1998:2).

2.5.2. HOMOEOPATHIC SIMILIMUM TREATMENT

'Homoeopathy' is derived from *'homoio-'*, which means *'similar'*, and *'-pathos'*, meaning *'suffering'* (Gray, 2000:160). The word betokens the Law of Cure, as laid down by Hahnemann, known as *'Similia Similibus curanter'* or *'Like Cures Like'* (Mathur, 1998:xiii), and is noted as the defining principle on which prescriptions are based (Swayne, 1998:17).

The similimum is a single-remedy homoeopathic prescription administered at a time to the patient; the purpose of which is to improve the patient's condition, if not cure the present malady. This prescription, as mentioned, is based on the premise of *'Like Cures Like'* (De Schepper, 2001:26-31). *Like Cures Like* is based on the principle that a substance, once ingested, produces certain symptoms in healthy people, analogous to that which it can cure in the sick (De Schepper, 2001: 26). The medicine is then selected for its "similarity" to the totality (physical and psychological symptoms) of a person's presenting complaint (Ullman, 1991:12-13); hence *"homoeopathy"* – *"similar to disease"* or *"similar to suffering"* (Carlston, 2003:8).

“This fundamental principle of homoeopathy makes more sense as our scientific understanding of human physiology advances. When my medical school microbiology

professor lectured to our class about evidence that the symptoms we experience in acute infectious diseases are the result of the immune system's mobilization to combat the disease and are not the direct effect of the microorganism, I recognized the 'homeopathy' in the physiology. It makes sense, then, that a substance that accentuates the symptoms already produced by the body could assist the healing process by augmenting the already operating source of those symptoms – the immune response.” (Carlston, 2003:3)

The similimum-remedy selection is based primarily on a thorough understanding of the materia medica, and the use of a repertory (Gordon, 2003:113) ⁸. These reference materials are the result of documented symptom manifestations of healthy people, from 'provings' (homoeopathic drug trials), and subsequent verification of the information in practice (Swayne, 1998:170-171). As is apparent, a prescription is patient-based (see below), and not nosologically dependant (De Schepper, 2001:6-7).

Another tenet of homoeopathic philosophy involves administering these individualized medicines in infinitesimally small doses (De Schepper, 2000:38; Gray, 2000:53-58). Often these medicinal doses are diluted beyond the point of containing even one molecule of the original substance, thereby precluding any possibility for pharmacologic action. This process, or tenet in homoeopathy has been the *raison d'être* for fervent opposition from the scientific establishment. A priori, critics have passed-off homoeopathic treatment as being solely placebo. Unfortunately, this bias against homoeopathy has been so unyielding that even

⁸ Refer to *Definition of Terms* (pp. xxiii-xxvii).

positive evidence from well-conducted randomised controlled trials, has been ignored (Carlston, 2003:4). In homoeopathy however, it is empirically recognized that the smaller the dose given, the greater the efficacy of the medicine (Ullman & Reichenberg-Ullman, 2000:47; Gray, 2000:12-13). Some scientific theories have been proposed to explain this miniscule-dose controversy (Carlston, 2003:4). According to Ullman (1991:12-13), small doses may work by means of a biological analogue to sound resonance:

“In explaining how small doses act, an analogy to music is helpful. It is commonly known that when one plays a ‘C’ note on a piano, other ‘C’ notes reverberate. Even on another piano at the other end of a room, ‘C’ notes still have a hypersensitivity to the ‘C’ resonance. In music theory (and physics), there is a basic principle that two things resonate if, and only if, they are ‘similar’.” (Ullman, 1991:12-13)

When the organism receives the resonant message of the medicine, its immune and defence systems may be catalysed into initiating a curative process (Ullman, 1991:11-22). Hence, unlike medical orthodoxy, which prescribes medicines to oppose or obstruct a patient’s symptoms, homoeopathic medicine acts in concert with those symptoms (Carlston, 2003:3).

The totality of symptoms (both physical and mental), crucial to the selection of the homoeopathic similimum, is underpinned by a particular mind state (Ullman, 1991:19-22). The mind state, representing a deeper level of disorder (Swayne, 1998:72), is rooted in biographical mental or emotional trauma. A corollary to the given mind state disturbance, is thence vulnerability to disease (Ullman &

Reichenberg-Ullman, 2000:16-17). According to Chappell (1997:72-79) this biographical trauma prevents one's flexible human intelligence from responding to appropriate reality thereafter, and represents an existential core '*stuckness*'. He believes that the remedy frees the maladaptive state from the individual, thereby facilitating psychological and physical health.

Sankaran (1997b:11-15) likens this maladaptive state to, what he calls, "*delusion*"⁹, to which a remedy is given. He proposes that the remedy corrects a psycho-neuro-endocrine-immunological (P.N.E.I.) or central disturbance, facilitating improvement of the patient's condition.

"Pathology grows on the central disturbance like a creeper on a stick. What we have to do is to remove the central disturbance." (Sankaran, 1997b:8)

For this reason, the choice of remedy in terms of the homoeopathic similimum (particularly for chronic conditions) has rested predominantly upon the mental state or personality subtype of the patient (Ullman, 1991:19-22; Sankaran, 1997b:11-15). Further, according to Swayne (1998:71), it is the mind, personality and creativity that define a person most completely.

⁹ A delusion is a false perception of reality. This is created by significant biographical events (in the life of an individual, or from previous generations) and may manifest a disease state. The delusion forms part of the central or P.N.E.I. disturbance of an individual (Sankaran, 1997b:11-15).

In recent years however, Sankaran (2002:38-39) has proposed a newer model for understanding the mind-body connection and its amenability towards more effective similimum prescribing. It is his belief that a person's "*delusion*" does not limit itself to the mind, but in fact expresses itself on the physical sphere as a manifestation of a more deeper underlying state, called the "*Vital Sensation*" (central feeling). If the homoeopath can identify the specific "*Vital Sensation*" (psycho-sensory construct), through focused case taking as it applies to homoeopathic materia medica, the better the chance for understanding the patient's central disturbance (Sankaran, 2002:38-39) (Appendix I).

"As for example when a person says that he feels jealous or suspicious or expresses something mental and emotional then we might ask him for the experience behind that. He may feel he is being attacked and is frightened. In this way an emotional situation is perceived behind the mental symptom, which is good enough, but if you want to take it one step further you ask him how he experiences the attack. At this point you come to the intersection or cross point where the mind and body meet. Here they may have the feeling that something is breaking or burning or twisting. This is the common point between body and mind (The Vital Sensation) and here he will describe his emotional symptoms and physical symptoms in the same terms. This is a very deep level and if you reach this point there is a much better chance of success." (Sankaran, 2002:38).

"...mind and body both express the same phenomena, same disturbance, and the same vital problem." (Sankaran 2002:48)

In concurrence, Chappell (1997:79) states that most thoughts are feelings veiled in, or expressed through the medium of thoughts, and if one were to examine closely it would be seen that many thoughts are basic feelings.

“This ‘*stuckness*’ has thinking, feeling and physical components acting together synchronously and this perpetual reinforcement is what keeps the pattern alive. It becomes part of our posture, our cellular chemistry, our attitudes... our whole way of being in the world.” (Chappell 1997:79)

Scholten (1999:17) also confirms that ‘*feeling*’ is energy, which is linked to and bound by a belief (“*delusion*”). Mathur (1998:128), another homoeopathic physician, also alludes to the possibility that feeling is an underpinning factor of a mind state disturbance. His explanation, below, exemplifies the approach.

“Each human being makes his own disease, better said, he forms a pathology both of his psychic personality and of his physical organism in accordance with an unconscious determinism originating from a dynamic miasmatic alteration of his vital force. That morbid determinism is contained in his biographical history, in his hereditary and particular antecedents, in his way of feeling, thinking and living and in all subjective symptoms that reveal his personality and make him a unique and personal case.”
(Mathur, 1998:128)

According to Swayne (1998:1), and what is evident above, the homoeopathic approach involves an exceptionally complete and detailed description of the patient, the illness and its evolution. This is because the homoeopath inevitably seeks to select a single remedy out of a vast number of potential homoeopathic medicines (Carlston, 2003:2-3). Hitherto, there are over 3000 homoeopathic medicines with specific clinical indications and with a repertoire of multifarious symptomatology (Swayne, 1998:188).

In light of all the above, as pertaining to homoeopathic similimum treatment, it must be emphasized that there are various methods of prescribing for patients (Mathur, 1998:v). Regardless of the methodology used, the ultimate aim of the homoeopathic enquiry and analysis is to arrive at the similimum (Bloch, 2002:16).

2.5.3. HOMOEOPATHIC LITERATURE OF CFS TREATMENT

Brief mention has been made about the use of homoeopathy for CFS, but this is mostly anecdotal.

A cohort of well-known homoeopathic doctors have made reference to CFS's amenability to homoeopathic similimum treatment.

According to De Schepper (2001:6-7) practitioners are not aware of the power of homoeopathy for CFS. He has claimed to have helped hundreds of patients with this condition. "The results were a consistent restoration of the patient's energy and overall health, such as they never experienced even with the best antiviral medications."

Bailey (1995:189) has found homoeopathy to be greatly effective in treating CFS. He claims to have helped most of the CFS patients in his practice. He goes on further to state: "It is the perfect sickness to catch if you are a workaholic and need to stop and feel your feelings."

Hardy (2005:9) has also made mention of homoeopathy's role in treating CFS patients. In a recent article, he cites a number of successfully treated cases from his practice.

Featherstone (1998) has reviewed (in the British Journal of Therapy and Rehabilitation) an informal study, in which 24 of 36 CFS patients found symptom relief using homoeopathy.

However, according to Walach (2004:210-211) homoeopathy is purportedly not always effective with chronic fatigue patients.

Wessely, Hotopf & Sharpe (1999:371) state that anecdotal reports and case series should only be considered as suggestive evidence, which should encourage further research. It is for this reason that this research study was undertaken. Such evidence needs to be substantiated by double-blind randomised study.

2.5.4. HOMOEOPATHIC RESEARCH ON CFS

The London Homoeopathic Clinic, under the auspices of the London College of Classical Homoeopathy, conducted the first known study of utilising homoeopathic similimum against placebo in CFS. The randomised double-blind trial involved 64 participants, each of whom attended at least 12 clinic visits, over

a 12-month period. The study outcome rested upon the results of two outcome measures: a daily (wellness) graph, and an end of trial self-assessment chart, both of which required completion by each participant. According to the trial coordinator, Awdry (1996:12-16), the results appeared encouraging, with outcomes revealing noticeable improvement in only the treatment group. However no statistical tests were performed.

Later, authors Wessely, Hotopf & Sharpe (1999:387) conducted a statistical analysis of the above study data, which indicated a 33% improvement in the treatment group compared to 3% in the placebo group. However, these authors asserted scepticism over the study's interpretation of results, stating that internal validity was questionable and insufficient to render reliable results.

Critical analyses by authors to follow, Afari & Buchwald (2003:228) and Rimes & Chalder (2005:34), considered Awdry's study to be of poor quality and have conceded the outcome to be inconclusive.

A more recent study, reported in 2004, evaluated the efficacy of individualized homoeopathic treatment (similimum) for CFS. Weatherley-Jones, Nicholl, Thomas, Parry, McKendrick, Green, Stanley & Lynch (2004) conducted a carefully designed triple-blinded placebo-controlled trial. One hundred and three patients meeting the Oxford criteria for CFS were recruited to two specialist hospital outpatient departments in the UK, and attended monthly consultations

with a professional homoeopath. Outcomes were made at six months using the Multidimensional Fatigue Inventory (MFI), Fatigue Impact Scale (FIS) and the Functional Limitations Profile (FLP). Ninety-two patients completed the trial (47 similimum treatment and 45 placebo) with eighty-six patients completing post-treatment outcome measures. Results revealed that 47% of patients in the treatment group showed a clinically significant improvement, compared to 28% of individuals in the placebo group ($d=0.4$). Although group differences were not statistically significant for most outcome measures, more people in the treatment group showed clinically significant improvement.

One author's appraisal of the above study concluded the following: "The study certainly hasn't conclusively answered the question of whether the effects are purely due to placebo or if there is a specific component in homoeopathic remedies." (Walach, 2004:211) According to Weatherley-Jones, et al. (2004:190) the study reflected equivocal evidence that homoeopathic medicine was superior to placebo. The researchers believe further studies of this nature are needed to determine whether the differences noted would hold for larger samples.

2.6. OUTCOME MEASURES IN THE EVALUATION OF TREATMENT RESPONSES IN CFS

2.6.1. OUTCOME MEASURES IN CFS

Due to the descriptive nature of CFS, subjective outcome measures are currently conceded as the only means by which treatment responses can be evaluated by clinicians. It is known that the feeling of fatigue cannot be objectively measured; it can however, be estimated by fatigue questionnaires (Naschitz, Rozenbaum, Shaviv, Fields, Enis, Babich, Manor, Yeshurun, Sabo, & Rosner, 2004:167-168). According to Wessely, Hotopf & Sharpe (1999:371) the only outcomes that are likely to matter to patients are those that rely on self-reporting of symptoms and levels of activity - this entailing how they feel and how much they can do. In referring to measurement of exercise studies in CFS, Scroop & Burnet (2004:578) also state that outcomes should lie in self-reporting of symptom severity or functional status.

2.6.2. OUTCOME MEASURES UTILISED FOR THIS RESEARCH STUDY

Participants were given a self-report chronic fatigue syndrome (CFS) questionnaire (Appendix C1) and a single-item (100mm) fatigue visual analogue scale / VAS (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) to complete at each consultation.

2.6.2.1. THE SELF-REPORT CFS QUESTIONNAIRE

➤ **The self-report CFS questionnaire was adapted from various sources:**

- The fatigue scale of Chalder, Berelowitz, Pawlikowska, Watts, Wessely, Wright & Wallace (1993),
- The Welch symptom checklist questionnaire (Welch, 1999:197, appendix G), and
- The CFS Emotional Symptom Scale (CFS-ESS) (Stoff & Pellingrino, 1992:169,170).

➤ **The adaptations made were for the following reasons:**

First, the researcher was unable to find a definitively suitable questionnaire for effective assessment of CFS. According to Scroop & Burnet (2004:578) subjective measurement of outcomes in intervention studies of CFS are vague but necessary.

Second, of each of the various scales and questionnaires found, none encapsulated all dimensions of the condition, i.e. cognitive, affective and physical, which would be appropriate for assessing outcomes of homoeopathic treatment. Adaptations were then made in order to amalgamate the multiaxial

dimensions of recognised fatigue and CFS scales, into a single comprehensive questionnaire.

➤ **To exemplify the selected sources of the CFS questionnaire:**

The checklist questionnaire of Welch (1999:197) covers a broad spectrum of malfunction for diagnostic purposes, and has the advantage of providing a baseline for monitoring results of therapeutic intervention. Welch (1999:8,11) recognized however, that the checklist was limited in its extent of covering cognitive dysfunction. Hence, the fatigue scale of Chalder, et al. (1993) was chosen for its separate physical and mental (cognitive) subscales. However, this scale is also restricted, but to mental and physical fatigue (Naschitz, et al. 2004:167-172). Finally, the researcher (Saul) located the CFS Emotional Symptom Scale (CFS-ESS) (Stoff & Pellingrino, 1992:169,170) to provide assessment of the affective aspects of the condition.

2.6.3. THE FATIGUE VISUAL ANALOGUE SCALE (VAS)

Considering that fatigue is the main component of CFS, emphasis was made thereof, and a second separate scale, a 100mm fatigue visual analogue scale / VAS (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) was used to assess the degree of fatigue per se, contiguous to the other scale.

“In the management of patients with CFS, the severity of fatigue is the main parameter used in monitoring the patient’s course and evaluating the effectiveness of therapeutic interventions.” (Naschitz, et al. 2004:167-168)

These outcome measures were used to determine the effectiveness of homoeopathic similimum treatment in CFS, in terms of each participant’s perception of the treatment.

2.7. SUMMARY

While chronic fatigue is a common complaint for which individuals seek medical attention, chronic fatigue syndrome (CFS) is relatively rare (Ranjith, 2005:13). Notwithstanding, CFS poses a considerable worldwide public health problem (Rutherford, 2003).

Chronic fatigue syndrome (CFS) is, in the current state of knowledge, a descriptive term for a condition of unknown aetiology (Sharpe & Wilks, 2002:481). Disability and incapacity of such patients is paramount (Welch, 1999:18) and the costs to health services and society in terms of health resources used, and poor productivity is considerable (Wessely, Hotopf & Sharpe, 1999:149). Moreover, CFS is poorly managed and presents a considerable challenge to healthcare providers (Solomon & Reeves, 2004:2241).

Whilst biomedical confirmation remains crucial to legitimising the care and support needed by CFS sufferers (Feathersone, 1998:105), the interactional approaches offered by mind-body medicine and cognate, homoeopathy, may provide importance to illness management in CFS (Hyland, 2001; Featherstone, 1998).

“CFS is an important reminder of the limitations of the narrow biomedical approach to illness, and the consequent limitations of medical thinking and practice.”

(Wessely, Hotopf & Sharpe, 1999:419-420)

CHAPTER THREE - MATERIALS AND METHODS

3.1. OBJECTIVE

The objective of this double-blind placebo-controlled trial was to determine the effectiveness of homoeopathic similimum treatment in the management of chronic fatigue syndrome (CFS). This was to be assessed by means of a self-report CFS questionnaire (Appendix C1) and fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2).

3.2. STUDY DESIGN

A sample group of 30 participants were voluntarily selected for the study on the basis of inclusion and exclusion criteria (as detailed in section 3.3.2). These participants were then randomly divided into 2 groups (15 patients for each of the treatment and placebo groups). Each participant had to attend a total of 3 consultations with the researcher, over a 3-month period, at the Durban Institute of Technology (DIT) Homoeopathic Day Clinic. Permission was granted by the clinic director, for the use of the facility over this period.

At the commencement of the first consultation each participant received the subject information letter (Appendix D) for perusal and the informed consent form (Appendix E) to sign. Following this, the researcher took a full, detailed case

history (integrating both the medical and homoeopathic approach; Appendix F-G) and performed a physical examination (Appendix H) of each patient. At this point, if no significant clinical findings were noted in a previously diagnosed CFS patient, then that participant qualified for the study. In a patient previously undiagnosed with CFS, basic second line investigations were conducted (under the patient's consent, and at his/her own expense) to exclude other possible illnesses before accepting them into the research study.

Participants were required to complete a CFS questionnaire (Appendix C1) and a fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) at the end of each of 3 consultations.

The Homoeopathic Day Clinic laboratory technician dispensed medication to the respective groups according to the randomisation sheet drawn up by the research supervisor. This followed the first and second consultations for each participant.

The treatment consisted of a total of 6 powders containing either an active ingredient (i.e. similimum) or matching placebo. Each participant received 3 powders (doses) following each of the first and second consultations and was directed on how to take them.

Participants were asked to return for the second consultation 4 weeks following the first. At the second consultation the researcher reassessed the participant, in terms of the homoeopathic similimum approach before prescribing the next 3 powders. Hence, the second similimum prescription (homoeopathic remedy) could change from the first, depending on the individual (see chapter 2).

If improvement of a participant's condition was noted at the second consultation the researcher would then suggest to that participant that he/she only take the next 3 doses if again needed. This was done in accordance with the homoeopathic principle of minimum dose (Ullman, 1991:11-15).

The third and final consultation took place 3 months following the first, and involved the participant again completing the CFS questionnaire (Appendix C1) and fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2).

The duration figure for this study (of 3 months) was derived from randomised controlled trials of Interferon- α , and evening primrose oil in CFS sufferers (Wessely, Hotopf & Sharpe, 1999:378,381).

3.3. PARTICIPANTS

3.3.1. SELECTION OF PARTICIPANTS BY CONVENIENCE SAMPLING

Participation in this study was on a voluntary basis. Participants were obtained by means of advertising: Posters detailing the research and inviting participation were positioned on notice boards of local libraries, health shops and at the Durban Institute of Technology. Advertisements were placed in school newsletters, local newspapers, and in the quarterly MESA (ME Association of South Africa) Journal. The researcher recruited participants according to the selection criteria listed in 3.3.2.

3.3.2. SELECTION CRITERIA

3.3.2.1. INCLUSION CRITERIA

Participants had to be between 18 and 60 years of age and satisfy the Centre for Disease Control (CDC) of Atlanta, Georgia (1994) diagnostic criteria for chronic fatigue syndrome (Appendix A).

Preferential intake was given to those who had been previously diagnosed with CFS. Those that required a diagnosis were thoroughly evaluated to exclude a discernible cause (Appendix B). If pathology testing was required, to screen for

exclusionary aetiologies, participants were referred out (at their own will and cost) and were only accepted into the study if, or once the results of the tests had refuted such.

3.3.2.2. EXCLUSION CRITERIA

➤ **Participants who were:**

- pregnant, or who fell pregnant during the study were excluded.
- illiterate were excluded, as they were required to fill in a questionnaire.
- unable to speak the English language were excluded, as the homoeopathic consultation for this research was facilitated in English.

Participants could not be on any other treatment (except the chronic medication used for unrelated conditions, such as hypertension, diabetes, hypercholesterolaemia) and/or intervention for CFS whilst in the study, and one week prior to the study. If participants were on treatment for a separate symptom or disease entity that fell within the ambit of CFS, then conditions of inclusion would apply. If, for example, a participant was on anti-depressants at the time of the study, then one of two options would be afforded to that participant: That was either to withdraw from the medication (after being given consent from the prescribing physician) at least 2 weeks prior to his/her inception into the study, or

to remain on that treatment for 3 months prior to, and for the entire duration of the trial.

Depression is known to coexist with CFS (Frey, 2002: 1838), as it does with many illnesses. Consequently some patients are given antidepressants. In this study participants with a history of severe depression antecedent to CFS were excluded, as a diagnosis of CFS could not be assured (see Appendix A-B).

3.3.3. RECRUITMENT AND COMPLETION OF THE STUDY

Approximately 68 individuals, showing interest in the study, contacted the researcher and were subsequently screened via brief telephonic interview. 46 Prospective participants were then invited to attend the first consultation with the researcher. Out of this number, 37 participants qualified for the study, based on the inclusion and exclusion criteria above (3.3.2). Of these, 30 participants managed to complete the study. Reasons for non-compliance were attributable to pregnancy, family crises, scheduling conflicts, and in one instance, a conflict of interest on part of the participant's family physician.

3.4. ETHICS

The researcher explained the nature of the study to each participant who met the selection criteria. Each participant was given the subject information letter

(Appendix D) for perusal, and all participants gave informed consent (Appendix E). Free treatment was offered to participants in the placebo group at the end of the study.

3.5. TREATMENT

3.5.1. EXPERIMENTAL MEDICINES

The medicines utilised for the study were prepared by, and provided by the Durban Institute of Technology Homoeopathic Day Clinic Dispensary. All medicines comprised of individually wrapped sachets of lactose powders (0.5g), labelled by number (1-3). Contained within each of these powders were approximately 10 white lactose granules that were either non-medicated or medicated for both the placebo and active treatments respectively.

3.5.2. HOMOEOPATHIC SIMILIMUM (ACTIVE) TREATMENT

The medicated granules of homoeopathic similimum (active) were produced in accordance with method 10 of the German Homoeopathic Pharmacopoeia (British Homoeopathic Association, 1991). The granules underwent triple impregnation, at 1% v/v, with the medicating potency in 96% ethanol base.

Medicating potencies were not standardized as it varied for each participant. This was due to the tenets of the similimum principle of individualization, and due to the limited potency variations of many medicines utilised for the study. This however, made no impact on differentiation between the active and placebo medicaments.

3.5.3. PLACEBO TREATMENT

The placebo granules underwent triple impregnation, at 1% v/v, with 96% ethanol base alone. This was done to render the placebo treatment indistinguishable in its appearance and taste from that of the similimum treatment. The placebo medication was dispensed in the same manner as the homoeopathic similimum medication.

3.5.4. INTERVENTION

The researcher took a full, detailed homoeopathic case history (Appendix F-G) and performed a physical examination of each participant (Appendix H). The case history narrative extruded resulted in the researcher arriving at a '*central disturbance*' or '*psycho-sensory*' construct and/or symptom totality for each participant. This became the basis upon which medicine was to be selected for the respective participant (refer to chapter 2). The researcher used the homoeopathic materia medica and repertory to confirm the selection of each

appropriate similimum medicine. Following this, participants were randomly assigned to receive the homoeopathic similimum medicine (n = 15) or matching placebo (n = 15), according to the randomisation chart, as administered by the Homoeopathic Day Clinic dispensing technician.

Each participant was given 3 powder-unit-doses, following the first and second consultation (6 powders in total), as advised by Maharaj (2003). Participants were directed to take one powder daily: sublingually and in numerical order, approximately 45 minutes away from meals. It was assumed that all participants took their medicine and administered it in the correct way, as directed.

3.6. OUTCOME MEASURES (Appendix C)

Participants were given a self-report chronic fatigue syndrome (CFS) questionnaire (Appendix C1) and a single-item (100mm) fatigue visual analogue scale / VAS (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) to complete at all three consultations ¹.

3.6.1. THE SELF-REPORT CFS QUESTIONNAIRE

➤ **The self-report CFS questionnaire was adapted from the following sources:**

¹ Refer to chapter 2 (pp. 54) for a more detailed explanation of these outcome measures.

- The fatigue scale of Chalder, Berelowitz, Pawlikowska, Watts, Wessely, Wright & Wallace (1993),
- The Welch symptom checklist questionnaire (Welch, 1999:197, appendix G), and
- The CFS Emotional Symptom Scale (CFS-ESS) (Stoff & Pellingrino, 1992:169,170).

Robert (2003) validated the CFS questionnaire for its statistical acuity by incorporating the Somantic differential scale (Aarker, Kumar & Day, 2001:285-286) into this outcome measure.

➤ **The self-report CFS questionnaire (Appendix C1) consisted of a total of 22 variables:**

- 14 Variables indicating a subjective feeling of the psychological (mental and emotional) well being and/or distress of each participant,
- 7 variables indicating non-specific physical symptoms associated with fatigue, and
- 1 variable comprising of a spectrum of 12 sub-variables, each pertaining to specific CFS symptoms. Only the symptoms experienced and recorded by each participant in this 12 variable subcategory were used for data analysis.

Each symptom variable was allocated a rating of 1 (*“Not at all”* experienced) to 7 (occurs *“extremely often”*), giving the participant the opportunity to choose the number that best applied to his/her symptom severity.

3.6.2. THE FATIGUE VISUAL ANALOGUE SCALE (VAS)

A 100mm fatigue visual analogue scale / VAS (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) was used to assess the severity of symptoms of chronic fatigue using a two-anchor scale of 0-10. The first anchor, *“zero”*, represented *“not at all fatigued”* and the second, *“ten”*, *“completely fatigued”*. Participants were asked to place a mark on the line provided to indicate their level of fatigue, at that moment in time.

These outcome measures were used to determine the effectiveness of homoeopathic simillimum treatment in CFS, in terms of each participant's perception of the treatment.

3.7. STATISTICAL ANALYSIS

Only data collected from the CFS questionnaire (Appendix C1) and the fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2) were used for analysis.

3.7.1. DATA ANALYSIS

Various Descriptive and Inferential statistical techniques were used. The Descriptive procedures used were various tables and graphs, and a few summary statistics including but not limited to means, proportions and percentages. Inferential Statistics included various hypothesis-testing techniques. Due to the size of the samples, namely 15 in each group, non-parametric statistical tests were used. All tests set the type 1 error at 5%, or mentioned differently, $\alpha = 0.05$. If the p value reported was less than, or equal to 0.05 a significant result would be declared and the null hypothesis would be rejected.

3.7.1.1. PROCEDURE 1 (Intra Tests for Treatment and Placebo Group)

There were 2 subjective measurement scales. For each type of scale Friedman Tests were conducted to test for a significant difference in population means between all three readings. If these tests proved to be significant they would be followed-up by multiple Wilcoxon Signed Rank Tests for matched pairs. The former test would reveal if there was a significant difference between any of the three means, and the latter would indicate where that significant difference occurred.

➤ **Hypothesis Testing**

The null hypothesis H_0 , states that there is no significant difference between the three consultations being compared at the $\alpha = 0.05$ level of significance. The alternative hypothesis H_a , states that there is a significant difference between the three consultations being compared.

➤ **Decision rule**

At the $\alpha = 0.05$ level of significance, the null hypothesis is rejected if $p \leq \alpha$ where p is the observed significance level. Otherwise, the null hypothesis is accepted at the same level of significance.

3.7.1.2. PROCEDURE 2 (Inter Tests between both Groups)

The different values between all readings was calculated for each measurement scale within each group. These common differences were then compared across groups per each measurement scale using the Kruskal Wallis Test, which allowed one to test for significant differences in population means between both groups. This test would not only determine if any significant differences occurred, but also where they occurred.

➤ Hypothesis Testing

The null hypothesis H_0 , states that there is no significant difference between the three consultations being compared at the $\alpha = 0.05$ level of significance. The alternative hypothesis H_a , states that there is a significant difference between the three consultations being compared.

➤ Decision rule

At the $\alpha = 0.05$ level of significance, the null hypothesis is rejected if $p \leq \alpha$ where p is the observed significance level. Otherwise, the null hypothesis is accepted at the same level of significance.

3.7.2. STATISTICAL PACKAGE

The statistical analysis of data entry was conducted using the Statistical Package for Social Sciences[®] (SPSS for Windows[®], version 13 software suite). This statistical software program is manufactured by SPSS Inc, 444N. Michigan Avenue, Chicago, Illinois, USA.

CHAPTER FOUR – RESULTS

4.1. INTRODUCTION

The following chapter encompasses both demographic and statistical data, as well as the medicines utilised for this clinical trial. The results of the study were obtained after statistically analysing the data collected from the CFS questionnaire (Appendix C1) and fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2), using the SPSS for Windows[®], statistical software suite (Version 13[®])

The statistically analysed data sought to determine the effectiveness of homoeopathic similimum treatment over placebo via various Descriptive and Inferential statistical techniques. Friedman and multiple Wilcoxon Signed Rank Tests were conducted for intra-group analyses, and inter-group comparisons were made using the Kruskal Wallis Test. The null and alternative hypotheses were either accepted or rejected based on the *p* value outcome of these tests. All tests set the type 1 error at 5%, or mentioned differently, $\alpha = 0.05$. If the *p* value reported was less than or equal to 0.05 a significant result would be declared and the null hypothesis would be rejected.

Pie charts were used to reflect demographics (gender, age and remedy kingdom) and Bar charts were used to demonstrate the differences in the means for each of the CFS questionnaire and fatigue visual analogue scale.

4.2. **KEY**

Baseline: consultation one (week 1)

FU1: follow-up one / consultation two (week 4)

FU2: follow-up two / consultation three (week 13 / month 3)

QM: mental symptoms

QE: emotional symptoms

QP: physical symptoms

Total: entirety of the CFS questionnaire

VAS: fatigue visual analogue scale

p value: observed significance level (p value ≤ 0.05)

* indicates a significant *p* value

H₀: The null hypothesis states that there is no statistical difference with regard to the variables in concern. This indicates that there was no statistically significant improvement of the condition, as the *p* value was greater than 0.05.

H_A: The alternative hypothesis states that there is a statistical difference with regard to the variables in concern. This indicates that there was a statistically

significant improvement in the condition, as the p value was less than or equal to 0.05.

4.3. CRITERIA GOVERNING THE ADMISSIBILITY OF DATA

Data was only admissible if participants attended all consultations within the specified parameters of time, and met the inclusion criteria (chapter 3) for the duration of the trial period.

Only the data obtained from the CFS questionnaire and fatigue visual analogue scale was admitted for data analysis. The data was only admissible if the scales were correctly completed for all three consultations.

The data obtained from the CFS questionnaire and fatigue visual analogue scale consisted of differences between “before treatment” and “after treatment” scores which were reflected in terms of one baseline reading and two follow-up readings (FU1 and FU2). Significant improvement was considered if a significant reduction of symptoms (mean score) was noted.

4.4. DEMOGRAPHIC DATA OF THE SAMPLE

4.4.1. GENDER

There were 30 participants in the study, consisting of 8 males (27%) and 22 females (73%). See Figure 4.4.1 below

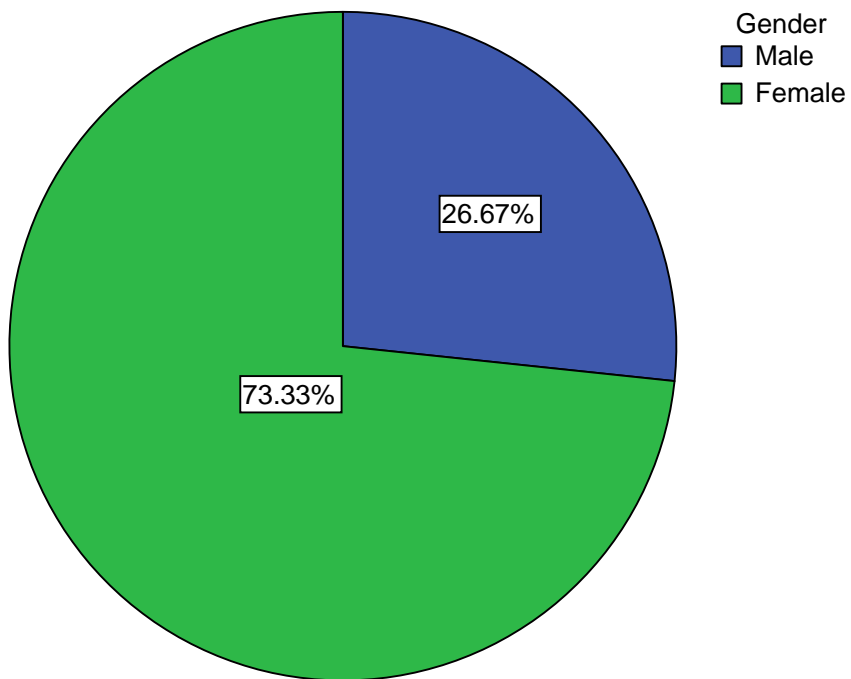


Figure 4.4.1. Pie chart: Gender distribution of participants (%)

4.4.2. AGE

The study consisted of participants between 18 and 60 years of age. There were 4 participants (13%) between the ages of 18 and 26 years, 5 participants (17%) between 27 and 35 years, and 7 participants (23%) between 36 and 44 years. 11 Participants (37%) were between 45 and 53 years of age, and 3 participants (10%) between 54 and 60 years of age. See figure 4.4.2 below

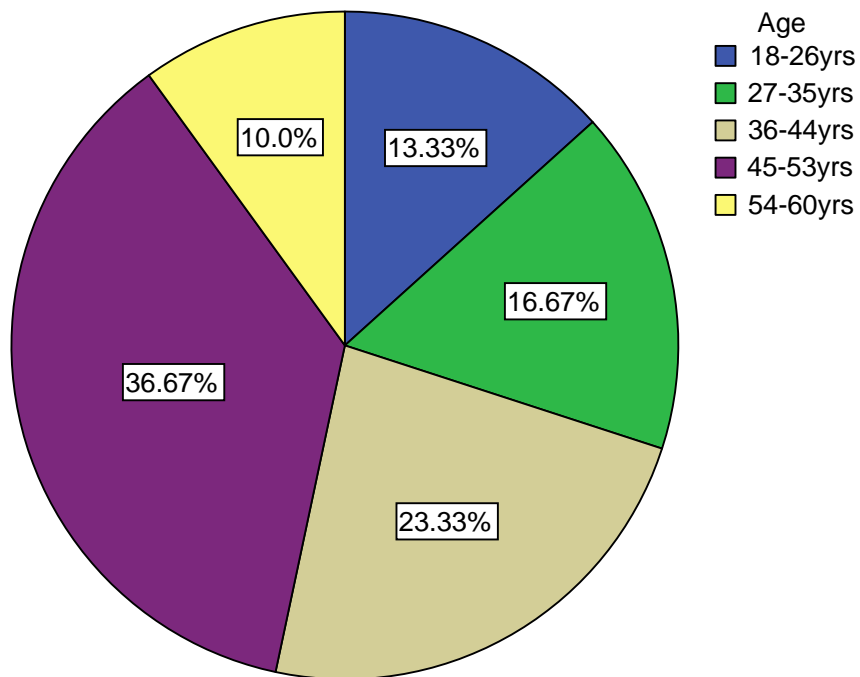


Figure 4.4.2. Pie chart: Age distribution of participants (18-60yrs) (%)

4.5. CFS QUESTIONNAIRE DATA (APPENDIX C1)

4.5.1. DATA ANALYSIS

The CFS questionnaire comprised of groups of variables for each of the mental, emotional and physical symptoms associated with CFS. The mean values for each of these three symptom categories were analysed separately, and then in totality.

4.5.2. PROCEDURE 1 (INTRA-GROUP): WILCOXON SIGNED RANK TEST

The Wilcoxon Signed Rank Test was only conducted if the null hypothesis was rejected for the corresponding Friedman Test. For view of the Friedman tests conducted for the CFS questionnaire refer to Appendix J, table J-4.5.

4.5.2.1. MENTAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.2.1. CFS Questionnaire: Comparison of reduction in mental symptoms (QM)

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.002*	0.682	0.03*
PLACEBO (<i>p</i> value)	WILCOXON SIGNED RANK TEST NOT CONDUCTED		

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.5.2.1 reveals the following:

Treatment Group: There were significant differences between baseline and FU1 and baseline and FU2 of the study. There was no significant difference between FU1 and FU2.

Placebo Group: There were no significant differences between any of the means, as revealed by Friedman's Test (Appendix J). Therefore the Wilcoxon Signed Rank Test was not conducted.

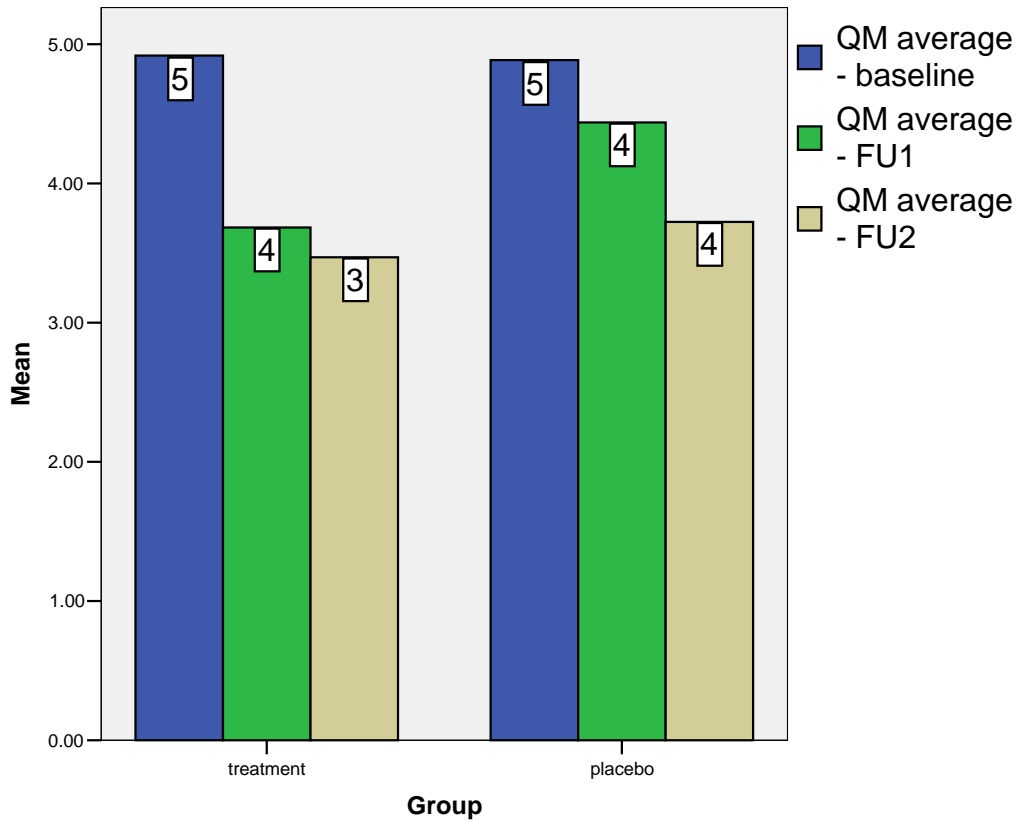


Figure 4.5.2.1. Bar chart comparing means: reduction of mental symptoms in CFS (CFS Questionnaire)

Figure 4.5.2.1 reveals that baseline values of mental symptoms was similar between both groups. The treatment group demonstrated a marked reduction in mental symptoms for the study period, whereas the placebo group did not. Although the placebo group response was also favourable, the symptom reduction was not significant in this group.

4.5.2.2. EMOTIONAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.2.2. CFS Questionnaire: Comparison of reduction in emotional symptoms (QE)

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.002*	0.807	0.04*
PLACEBO (<i>p</i> value)	0.027*	0.023*	0.006*

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.5.2.2 reveals the following:

Treatment Group: There were significant differences between baseline FU1 and baseline and FU2 of the study. There was no significant difference between FU1 and FU2.

Placebo Group: There were significant differences between all readings: between baseline and FU1, FU1 and FU2, and between baseline and FU2 of the study.

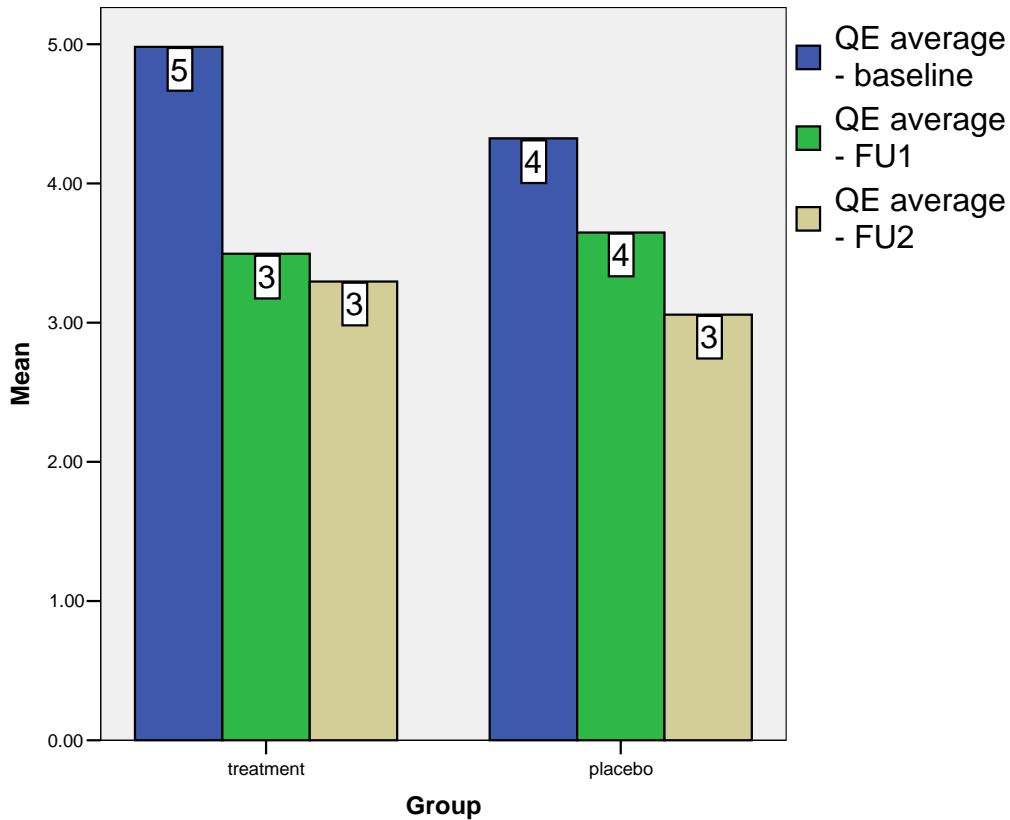


Figure 4.5.2.2. Bar chart comparing means: reduction of emotional symptoms in CFS (CFS Questionnaire)

Figure 4.5.2.2 reveals that baseline values of emotional symptoms was greater in the treatment group than the placebo group. A marked reduction in emotional symptoms, from baseline reading to FU1, was evident in the treatment group. However, no further significant difference occurred thereafter; rather, improvement reached a plateau between FU1 and FU2. In comparison, the placebo group showed a more modest, but consistent reduction in emotional symptoms throughout the trial (baseline – FU1 – FU2).

4.5.2.3. PHYSICAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.2.3. CFS Questionnaire: Comparison of reduction in physical symptoms (QP)

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.01*	0.532	0.11
PLACEBO (<i>p</i> value)	0.04*	0.570	0.08

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.5.2.3 reveals the following:

Treatment Group: There was a significant difference between baseline and FU1 of the study. There were no significant differences between FU1 and FU2, and baseline and FU2 of the trial.

Placebo Group: There was a significant difference between baseline and FU1 of the study. There were no significant differences between FU1 and FU2, and baseline and FU2 of the trial.

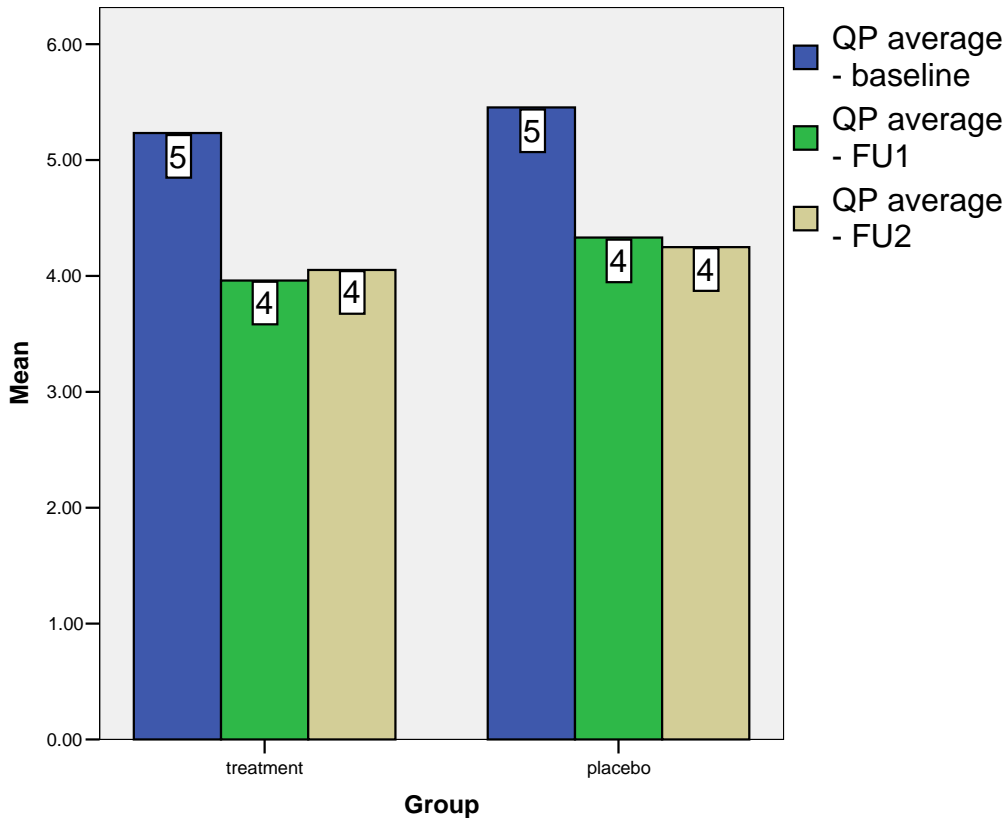


Figure 4.5.2.3. Bar chart comparing means: reduction of physical symptoms in CFS (CFS Questionnaire)

Figure 4.5.2.3 reveals that baseline values of physical symptoms was similar between both groups. A marked reduction in physical symptoms, from baseline reading to FU1 occurred in both groups. Neither group showed a significant difference between FU1 and FU2, which is reflected by a levelling off of symptom reduction in the bar chart, above. Although not significant, the chart shows an increase in physical symptoms between FU1 and FU2 in the treatment group, suggesting a minor symptom relapse.

4.5.2.4. TOTALITY OF THE CFS QUESTIONNAIRE

Table 4.5.2.4. CFS Questionnaire Total: Comparison of reduction in the symptoms of CFS

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.001*	0.778	0.002*
PLACEBO (<i>p</i> value)	WILCOXON SIGNED RANK TEST NOT CONDUCTED		

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.5.2.4 reveals the following:

Treatment Group: There were significant differences between baseline and FU1 and baseline and FU2 of the study. There was no significant difference between FU1 and FU2.

Placebo Group: There were no significant differences between any of the means, as revealed by Friedman's Test (Appendix J). Therefore the Wilcoxon Signed Rank Test was not conducted.

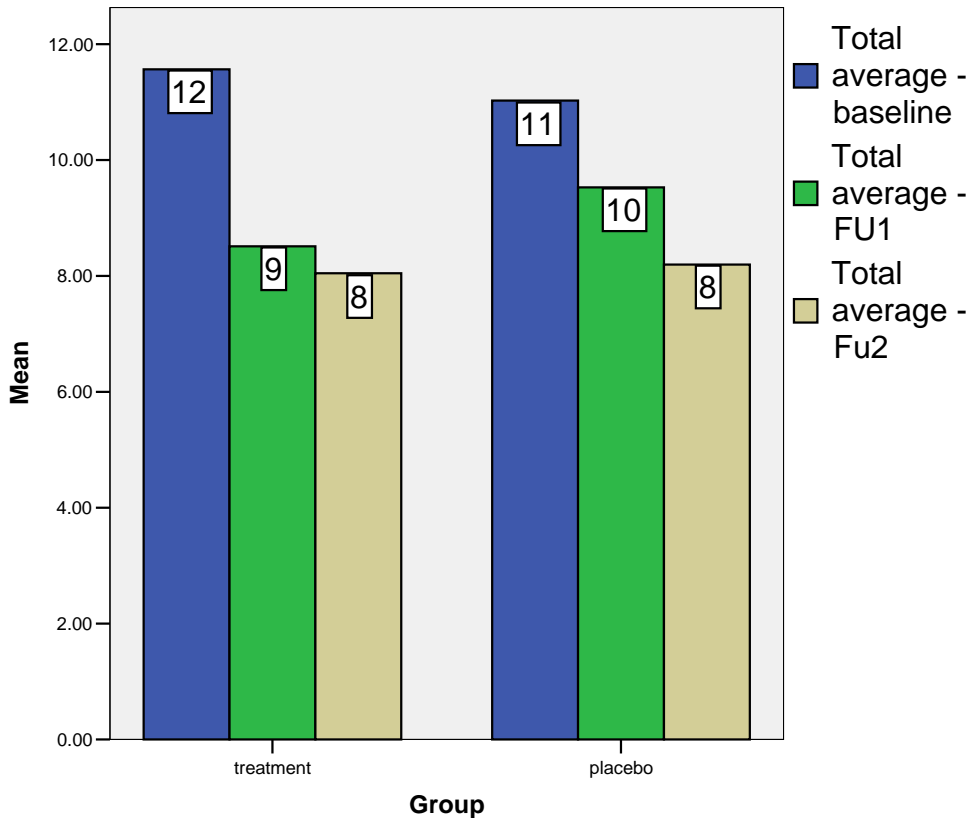


Figure 4.5.2.4. Bar chart comparing means: reduction of symptoms in CFS (CFS Questionnaire Total)

Figure 4.5.2.4 reveals that baseline values of mental symptoms was marginally greater in the treatment group than the placebo group. The treatment group demonstrated a marked reduction in symptoms for the study period (most notable between baseline and FU1). Although the placebo group response was also favourable, as seen by consistent reduction of symptoms, its value was non significant.

4.5.3. PROCEDURE 2 (INTER-GROUP): KRUSKAL WALLIS TEST

4.5.3.1. MENTAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.3.1. CFS Questionnaire: Comparison of reduction in mental symptoms (QM) between both groups

	QM: Baseline	QM: FU1	QM: FU2
p value	0.835	0.49	0.662

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.5.3.1 there are no significant differences between any of the three readings.

4.5.3.2. EMOTIONAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.3.2. CFS Questionnaire: Comparison of reduction in emotional symptoms (QE) between both groups

	QE: Baseline	QE: FU1	QE: FU2
p value	0.280	0.835	0.901

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.5.3.2 there are no significant differences between any of the three readings.

4.5.3.3. PHYSICAL SYMPTOMS OF THE CFS QUESTIONNAIRE

Table 4.5.3.3. CFS questionnaire: Comparison of reduction in physical symptoms (QP) between both groups

	QP: Baseline	QP: FU1	QP: FU2
p value	0.678	0.373	0.619

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.5.3.3 there are no significant differences between any of the three readings.

4.5.3.4. TOTALITY OF THE CFS QUESTIONNAIRE

Table 4.5.3.4. CFS Questionnaire total: Comparison of reduction in the symptoms of CFS between both groups

	Total: Baseline	Total: FU1	Total: FU2
p value	0.290	0.221	0.760

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.5.3.4 there are no significant differences between any of the three readings.

4.6. FATIGUE VISUAL ANALOGUE SCALE (APPENDIX C2)

4.6.1. PROCEDURE 1 (INTRA-GROUP): FRIEDMAN TEST

Table 4.6.1. VAS: Comparison of reduction in fatigue

GROUP	<i>p</i> value
TREATMENT	0.002*
PLACEBO	0.112

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.6.1 reveals the following:

Treatment Group: *p* value is significant, hence the null hypothesis was rejected.

Placebo Group: *p* value is non significant, hence the null hypothesis was accepted.

4.6.2. PROCEDURE 1 (INTRA-GROUP): WILCOXON SIGNED RANK TEST

Table 4.6.2. VAS: Comparison of reduction in fatigue

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.002*	0.156	0.05*
PLACEBO (<i>p</i> value)	WILCOXON SIGNED RANK TEST NOT CONDUCTED		

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.6.2 reveals the following:

Treatment Group: There were significant differences between baseline and FU1 and baseline and FU2 of the study. There was no significant difference between FU1 and FU2.

Placebo Group: There were no significant differences between any of the means, as revealed by Friedman's Test. Therefore the Wilcoxon Signed Rank Test was not conducted.

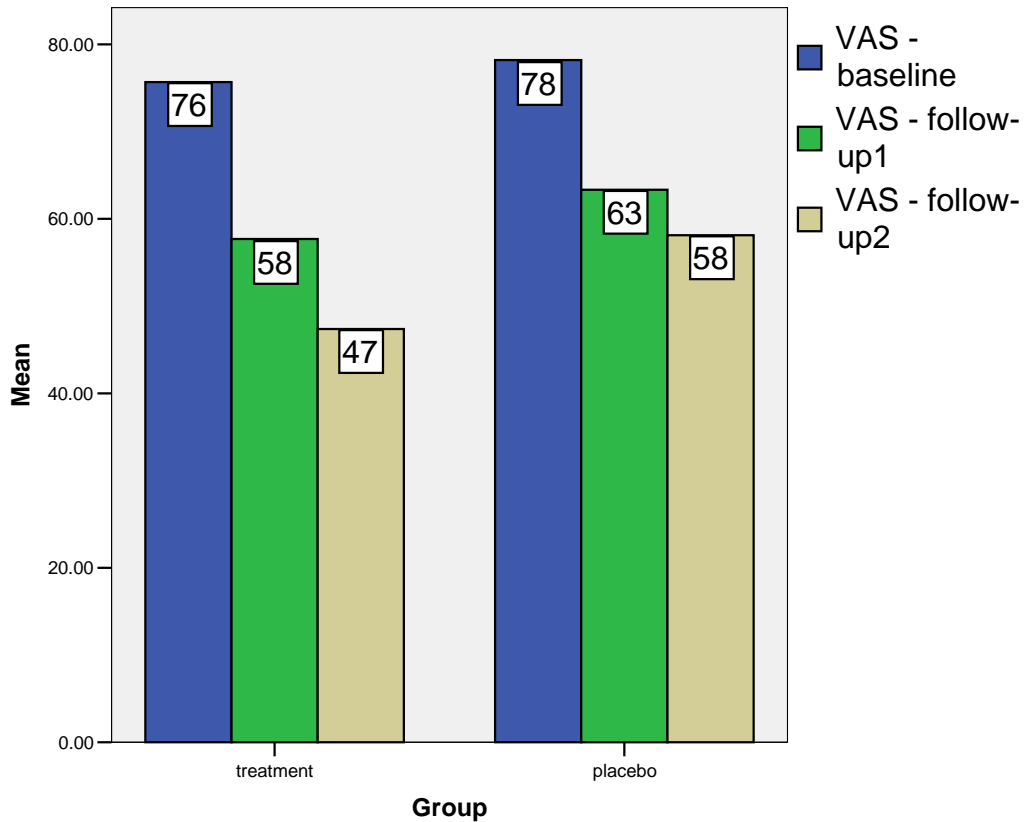


Figure 4.6. Bar chart comparing means: reduction of fatigue in CFS (VAS)

Figure 4.6 reveals that baseline values of fatigue were similar between both groups. A marked reduction in levels of fatigue, from baseline reading to FU1 and FU2 was evident in the treatment group. No significant differences occurred between FU1 and FU2 in this group. Whilst no significant differences were noted in the placebo group, improvement was observable.

As calculated by VAS means, the range of improvement in the treatment group was between 23.7% and 38.2%. Improvement in the placebo group ranged from 19.2% – 25.6%.

4.6.3. PROCEDURE 2 (INTER-GROUP): KRUSKAL WALLIS TEST

Table 4.6.3. VAS: Comparison of reduction in fatigue between both groups

	VAS: Baseline	VAS: FU1	VAS: FU2
p value	0.934	0.443	0.351

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.6.3 there are no significant differences between any of the three readings.

4.7. CONCLUSION

The null hypothesis was accepted because at a 5% level of significance there was no statistically significant difference between the placebo and treatment group for any of the inter-group comparisons, mentioned above.

4.8. MEDICINES PRESCRIBED

The medicines utilised for the study were selected on the basis of thorough case analysis, as pertaining to the central disturbance, psycho-sensory construct, and/or symptom totality for each research participant (refer to Appendix I).

Table 4.8.1 below, illustrates the simillimum medicines prescribed in the treatment group for the duration of the study. The table shows that the most commonly prescribed medicine was Natrum muriaticum (3/15 = 20%), with the remainder of prescriptions being multifarious.

Table 4.8.1. Medicines Prescribed and Dispensed in the Treatment Group

CASE NO.	CONSULTATION ONE		CONSULTATION TWO (FU1)	
	MEDICINES	POTENCIES	MEDICINES	POTENCIES
2	Calcarea silicata	30CH / 1-2; 200CH /3	<i>REPETITION</i>	1M /1; SL /3
3	Natrum muriaticum	30CH /1-2; 200CH /3	<i>REPETITION</i>	1M /1; SL /2-3
8	Natrum muriaticum	200CH /1; 1M /2; SL /3	<i>REPETITION, BUT WAIT</i>	1M /1-2; SL /3
17	Saccharum officinale	30CH /1-3	<i>REPETITION</i>	30CH /1-3
20	Pulsatilla nigricans	200CH /1; 1M /2; SL /3	<i>REPETITION</i>	10M/1; SL /2-3
23	Argentum nitricum	200CH /1;	<i>REPETITION, BUT</i>	30CH /1-3

		1M / 2; SL /3	<i>WAIT</i>	
25	Kalium carbonicum	30CH /1; 200CH /2; 1M /3	<i>REPETITION</i>	1M /1; SL /2-3
28	Natrum muriaticum	1M / 1 SL /2-3	<i>REPETITION, BUT WAIT</i>	1M /1; SL /2-3
31	Crocus sativus	30CH /1-3	<i>REPETITION</i>	30CH /1-3
32	Baptisia tinctoria	200CH /1-2; SL /3	<i>REPETITION, BUT WAIT</i>	30CH /1; 200CH /2; SL /3
34	Ornithogalum umbellatum	30CH /1-3	<i>REPETITION, BUT WAIT</i>	30CH /1-3
35	Actaea spicata	30CH /1-3	Ranunculus sceleratus	30CH /1-3
36	Colchicum autumnale	1M /1; SL /2-3	<i>REPETITION, BUT WAIT</i>	1M /1-2; SL /3
38	Nux vomica	1M /1; SL /2-3	<i>REPETITION, BUT WAIT</i>	1M /1; SL /2-3
39	Viola odorata	30CH /1-3	<i>REPETITION, BUT WAIT</i>	30CH /1-3

REPETITION = denotes immediate administration of a repeated dose of the aforementioned medicine

REPETITION BUT WAIT = denotes administration of a repeated dose of the aforementioned medicine, which the patient is to take only when needed. This approach follows improvement of the patient's condition from the initial dose.

Table 4.8.2 below, illustrates the similitimum medicines dispensed to the placebo group in the post-trial period. The table shows that the most commonly prescribed medicine was Natrum muriaticum (3/15 = 20%), followed by an equal distribution of multifarious remedies (1/15 x 12 = 80%).

Table 4.8.2. Medicines Dispensed in the Placebo Group

CASE NO.	MEDICINES PRESCRIBED	POTENCIES
1	Ornithogalum umbellatum	30CH /1-3
5	Ferrum metallicum	30CH /1; 200CH /2; 1M /3
7	Adamas	200CH / 1; 1M / 2; SL /3
9	Lac equinum	30CH /1; 200CH /2; 1M /3
10	Natrum muriaticum	1M / 1-2; SL /3
11	Iodum	1M /1-2; SL /3
15	Natrum muriaticum	1M /1-2; SL /3
19	Clematis erecta	30CH /1-3
22	Niccolum metallicum	30CH /1-3
24	Natrum muriaticum	1M /1-2; SL /3
26	Sepia officinalis	1M / 1-2; SL /3
27	Magnesium carbonicum	1M /1-2
29	Gelsemium sempivirens	200CH /1; 1M /2; 10M /3
33	Calcarea carbonica	200CH /1; 1M /2; 10M /3
40	Cannabis indica	200CH /1-2; 1M /3

Homoeopathic remedies are classified according to their source, and in the main, are obtained from mineral, plant and animal kingdoms (Sankaran, 1997a:229-233). Figure 4.8 below provides a kingdom distribution for the various similimum prescriptions made in both treatment and placebo groups for the duration of the study. As can be seen, 15 (50%) participants received a mineral remedy, 13 (43%), a plant remedy and 2 (7%), an animal-based remedy. The most commonly prescribed medicines in the mineral and plant kingdoms were Natrum muriaticum (6/30 = 20%), and Ornithogalum umbellatum (2/30 = 7%) respectively. Lac equinum and Sepia officinalis were the only two remedies of the animal kingdom, and both of which were placebo group prescriptions.

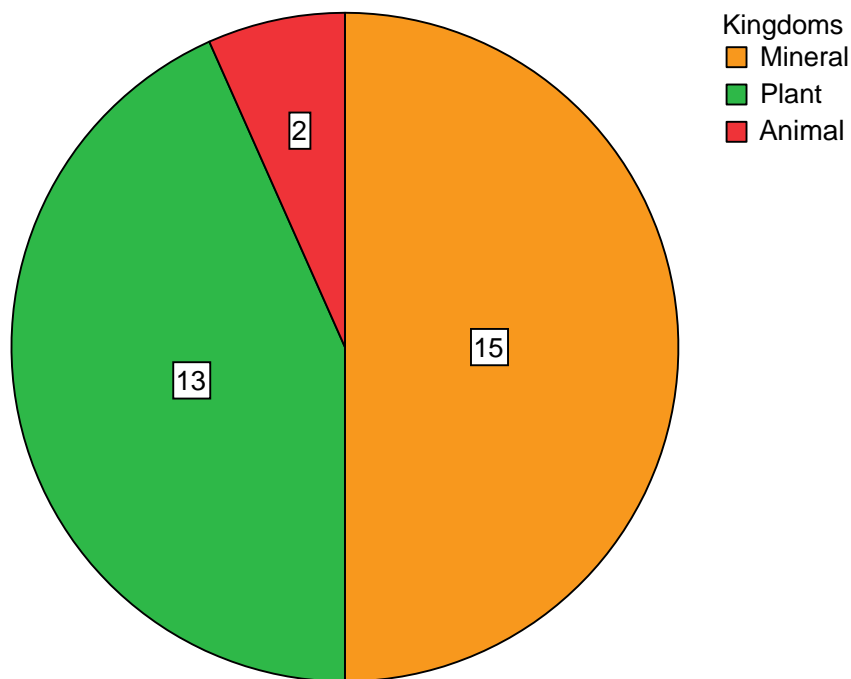


Figure 4.8. Pie chart: Distribution of remedy kingdoms (mineral, plant and animal) for both treatment and placebo groups

4.9. DATA ANALYSIS: A REMEDY KINGDOM GROUP ANALYSIS

This section covers a data analysis for each of the remedy kingdoms (mineral, and plant), with subsequent evaluation of treatment responses. The animal kingdom was not analysed due to there being no treatment group for the study. The pre-existing data obtained from the fatigue visual analogue scale (VAS) was used for this analysis. The VAS was the outcome measure of choice, due to it being most sensitive to assessing the severity of fatigue for the study. Moreover, fatigue severity is the main parameter used in monitoring the effectiveness of therapeutic interventions in CFS (Naschitz, et al. 2004:167-168).

4.9.1. THE MINERAL KINGDOM

4.9.1.1. PROCEDURE 1 (INTRA-GROUP): FRIEDMAN TEST

Table 4.9.1.1. VAS: Comparison of reduction in fatigue (Mineral)

GROUP	<i>p</i> value
TREATMENT	0.030*
PLACEBO	0.124

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.9.1.1 reveals the following:

Treatment Group: *p* value is significant, hence the null hypothesis was rejected.

Placebo Group: *p* value is non significant, hence the null hypothesis was accepted.

4.9.1.2. PROCEDURE 1 (INTRA-GROUP): WILCOXON SIGNED RANK TEST

Table 4.9.1.2. VAS: Comparison of reduction in fatigue (Mineral)

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.116	0.173	0.028*
PLACEBO (<i>p</i> value)	WILCOXON SIGNED RANK TEST NOT CONDUCTED		

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.9.1.2 reveals the following:

Treatment Group: There were no significant differences between baseline and FU1 and between FU1 and FU2 of the study. However, there was a significant difference between baseline and FU2.

Placebo Group: There were no significant differences between any of the means, as revealed by Friedman's Test. Therefore the Wilcoxon Signed Rank Test was not conducted.

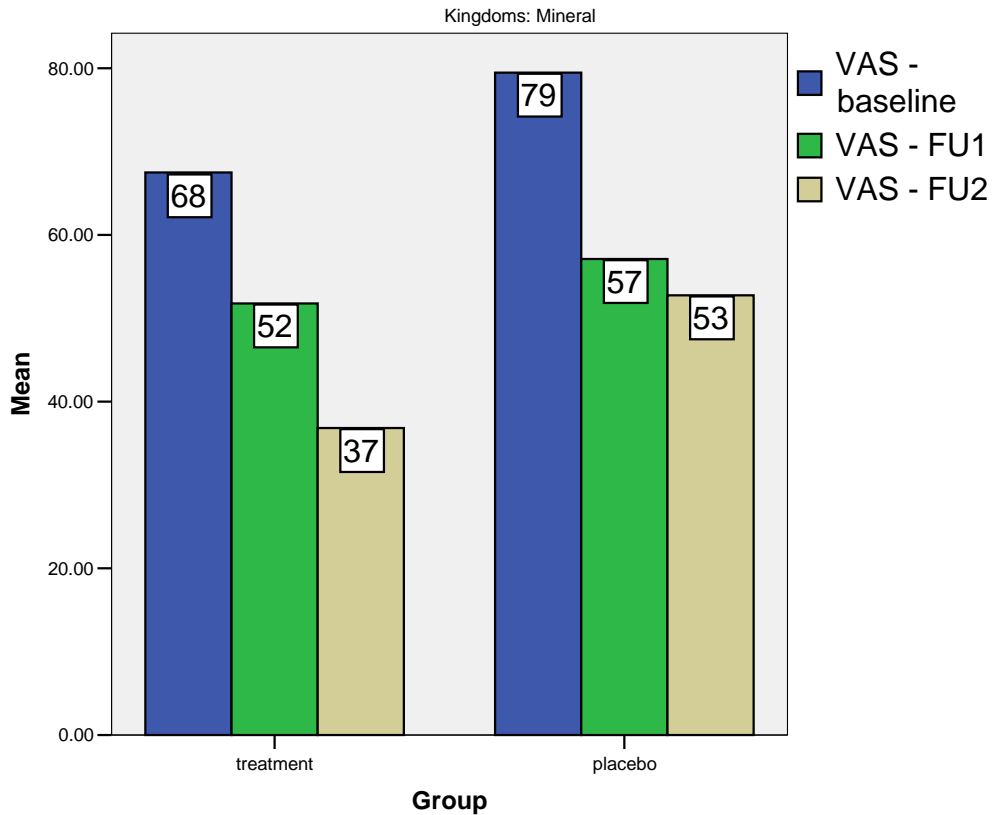


Figure 4.9.1. Bar chart comparing means: reduction of fatigue in CFS (VAS - Mineral)

Figure 4.9.1 reveals that baseline values of fatigue was greater in the placebo group than the treatment group. A marked reduction in levels of fatigue, from baseline to FU2 was evident in the treatment group. No significant differences occurred between baseline and FU1, and FU1 and FU2 in this group. Whilst no significant differences were noted in the placebo group, a favourable response appears observable.

As calculated by VAS means, the range of improvement in the treatment group was between 23.5% and 45.6%. Improvement in the placebo group ranged from 27.9% – 32.9%.

4.9.1.3. PROCEDURE 2 (INTER-GROUP): KRUSKAL WALLIS TEST

Table 4.9.1.3. VAS: Comparison of reduction in fatigue between both groups (Mineral)

	VAS: Baseline	VAS: FU1	VAS: FU2
p value	0.126	0.724	0.239

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.9.1.3 there are no significant differences between any of the three readings.

4.9.2. THE PLANT KINGDOM

4.9.2.1. PROCEDURE 1 (INTRA-GROUP): FRIEDMAN TEST

Table 4.9.2.1. VAS: Comparison of reduction in fatigue (Plant)

GROUP	<i>p</i> value
TREATMENT	0.016*
PLACEBO	0.779

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.9.2.1 reveals the following:

Treatment Group: *p* value is significant, hence the null hypothesis was rejected.

Placebo Group: *p* value is non significant, hence the null hypothesis was accepted.

4.9.2.2. PROCEDURE 1 (INTRA-GROUP): WILCOXON SIGNED RANK TEST

Table 4.9.2.2. VAS: Comparison of reduction in fatigue (Plant)

GROUP	FU1 – BASELINE	FU2 – FU1	FU2 – BASELINE
TREATMENT (<i>p</i> value)	0.008*	0.515	0.051
PLACEBO (<i>p</i> value)	WILCOXON SIGNED RANK TEST NOT CONDUCTED		

All tests were performed at $\alpha = 0.05$ level of significance

* indicates a significant *p* value

Table 4.9.2.2 reveals the following:

Treatment Group: There was a significant difference between baseline and FU1 of the study. There were no significant differences between FU1 and FU2, and between baseline and FU2.

Placebo Group: There were no significant differences between any of the means, as revealed by Friedman's Test. Therefore the Wilcoxon Signed Rank Test was not conducted.

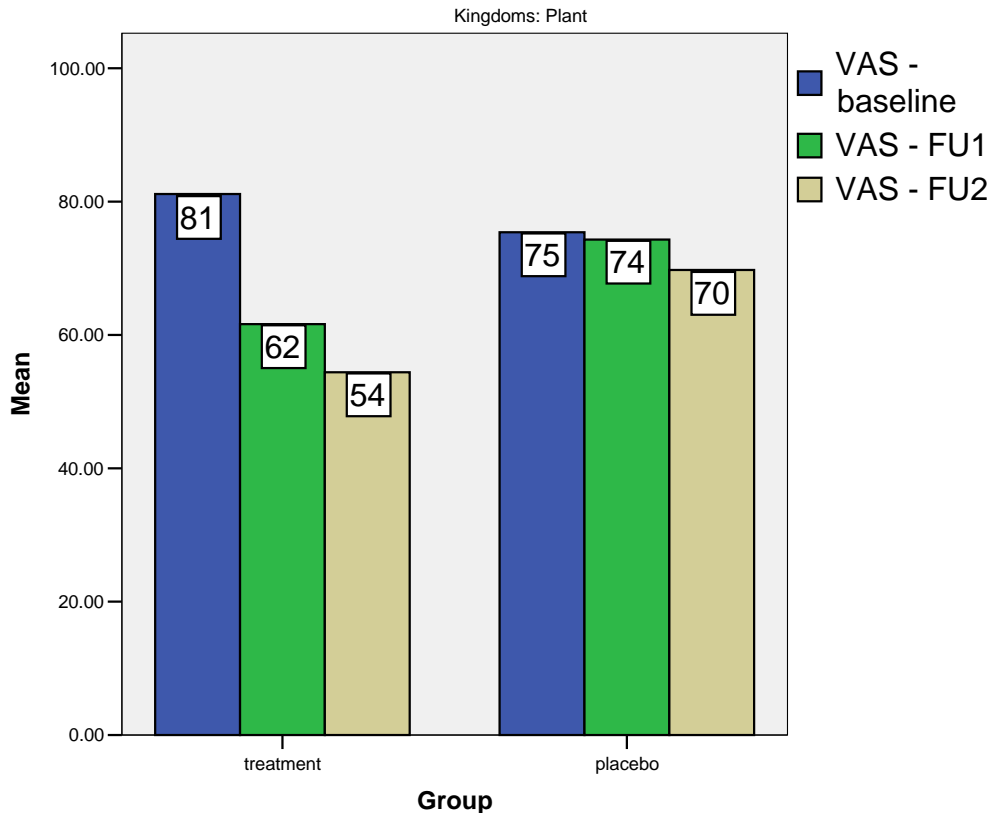


Figure 4.9.2. Bar chart comparing means: reduction of fatigue in CFS (VAS - Plant)

Figure 4.9.2 reveals that baseline values of fatigue was marginally greater in the treatment group than the placebo group. A marked reduction in levels of fatigue, from baseline reading to FU1 and FU2 was evident in the treatment group. No significant differences occurred between FU1 and FU2 in this group. No observable differences were noted in the placebo group. As calculated by VAS means, the range of improvement in the treatment group was between 23.5% and 33.3%. Improvement in the placebo group ranged from 1.3% – 6.7%.

4.9.2.3. PROCEDURE 2 (INTER-GROUP): KRUSKAL WALLIS TEST

Table 4.9.2.3. VAS: Comparison of reduction in fatigue between both groups (Plant)

	VAS: Baseline	VAS: FU1	VAS: FU2
p value	0.216	0.280	0.440

All tests were performed at $\alpha = 0.05$ level of significance.

As can be seen from table 4.9.2.3 there are no significant differences between any of the three readings.

CHAPTER FIVE – DISCUSSION

“In my clinical experience, I have found that CFS is among the most difficult conditions to improve at all, with either physical or psychological interventions.”

- Dr Lucinda Bateman ¹

5.1. STUDY OBJECTIVE

This double-blind placebo-controlled study was conducted to determine the effectiveness of homoeopathic similimum in the treatment of chronic fatigue syndrome (CFS). Outcomes were assessed in terms of participant perception of treatment, using a CFS questionnaire (Appendix C1) and a fatigue visual analogue scale (Wessely, Hotopf & Sharpe, 1999:15).

5.2. THE CFS QUESTIONNAIRE

➤ **Intra-Group Analyses**

Table 4.5.2.4 demonstrates that the treatment group showed a significant difference in the reduction of symptoms in the CFS questionnaire total, between baseline and follow-up one ($p = 0.001$), and baseline and follow-up two ($p =$

¹ Dr Lucinda Bateman serves on the American Association for chronic fatigue syndrome and has worked with about 500 CFS patients over the past 15 years. She is an internist who specializes in CFS and fibromyalgia (Chronic fatigue patients show lower response to placebos, 2005:421).

0.002). No significant difference was noted between follow-ups one and two ($p = 0.778$) of this group. As is evident, no significant difference occurred between any of the intervals in the placebo group for the CFS questionnaire total.

➤ **Inter-Group Analyses**

Inter-group analyses for all aspects of the CFS questionnaire revealed no statistically relevant results (tables 4.5.3.1 to 4.5.3.4), and hence the null hypothesis was accepted.

➤ **Conclusion – The CFS Questionnaire**

As can be seen throughout intra-group analyses, the initial response to treatment, revealed at follow-up one, was significant for all symptom categories of the CFS questionnaire. In comparison, the placebo group response at the first follow-up was only statistically relevant for the emotional ($p = 0.027$; Table 4.5.2.2) and physical ($p = 0.04$; Table 4.5.2.3) symptom variables of the questionnaire. Whilst no significant differences were noted between follow-ups one and two of the treatment group for any of the symptom categories, the outcome of the mental ($p = 0.03$; Table 4.5.2.1) and emotional ($p = 0.04$; Table 4.5.2.2) symptom variables suggested that treatment group improvement continued throughout the study (baseline to follow-up two). The physical symptom category (Table 4.5.2.3) of this group, measured at follow-up two ($p =$

0.11), revealed no significant difference, and this may be suggestive of a possible relapse in condition status (only for this category).

The interpretation of the treatment group response can be deduced by rational explanation. In homoeopathy, the degree of health or disease in an individual is evaluated by surveying the three-plane construction of the human being. The three planes are characterized by a mental, emotional and physical hierarchal order, whereby of the mental state is of most importance, and physical the least. Hence, the centre of gravity in terms of good prognostic outcome is weighted mostly upon the mental and emotional state of an individual - at least initially. Sustained improvements on the physical level usually occur later on, depending on the nature of the condition treated (Vithoulkas, 1981:23).

The nature of chronic fatigue syndrome (CFS) is such that most sufferers experience debilitating symptoms of mental and physical fatigue, cognitive dysfunction and psychiatric disturbance (Afari & Buchwald, 2003:221). Its depth of causation has not been identified, resulting in debate over whether the illness is physical or psychological (Hyland, 2001:273). Research conducted by the likes of Pazderka-Robinson, Morrison & Flor-Henry (2004:178) and Heim, et al. (2004:672) suggest that CFS may be a reactional consequence to severe biographical trauma, most notably psychological.

From what is evident in the literature, it is apparent that the psychobiological nature of CFS, and the neuropsychiatric consequences thereof, requires critical observation and evaluation in any treatment approach.

It is then inferred, that the paradigm of similimum homoeopathy would place more emphasis on the mental and emotional response to CFS treatment. After all, if subjective outcome measures remain most crucial to assessing the response of CFS patients (Naschitz, et al. 2004:167-168), then mental and emotional variables should be of most value.

The study outcome revealed that participants, of the treatment group, experienced some relief in their mental and emotional symptoms of chronic fatigue syndrome, whilst physical symptom relief was less notable. This would appear prognostically encouraging.

Be that as it may, the conclusion of the study, as drawn from inter-group analysis, is that homoeopathic similimum was not effective in reducing the symptoms of CFS.

5.3. THE FATIGUE VISUAL ANALOGUE SCALE

➤ **Intra-Group Analyses**

Table 4.6.2 demonstrates a before (baseline), during (follow-up one) and after (follow-up two) treatment response for the study, as measured by the fatigue visual analogue scale (VAS). A significant reduction in levels of fatigue for the similitum treatment group occurred between baseline and follow-up one of the study ($p = 0.002$). No significant difference occurred between follow-ups one and two for this group ($p = 0.156$). However, at the end of the study (follow-up two), treatment group improvement, as indicated by a reduction of fatigue from baseline levels, was sustained, and conferred significant ($p = 0.05$).

As can be seen in Table 4.6.1, no significant differences occurred in the placebo group for the study period ($p = 0.112$)

VAS means revealed a 19.2% – 25.6% improvement for the placebo group, whereas the treatment group showed a 23.7% – 38.2% improvement for the study. This range in efficacy, for both groups, reflects reduction in levels of fatigue from baseline to follow-up one, and from baseline to follow-up two respectively. Whilst a diminuendo of fatigue also occurred in the placebo group, the range of means was less than that of the treatment group.

➤ **Inter-Group Analyses**

Inter-group comparisons of the fatigue visual analogue scale revealed no statistically significant result (Table 4.6.3). Hence, the null hypothesis was accepted, indicating that homoeopathic similimum was not effective in reducing levels of fatigue in CFS.

➤ **Conclusion – CFS Questionnaire and Fatigue Visual Analogue Scale**

Whilst treatment group improvements were sustained for the primary outcome measures (CFS questionnaire total and VAS), there appears to have been a general plateau of symptom relief between follow-ups one and two of the study. The dramatic reduction of symptoms, evident between baseline and follow-up one, did not continue further into the study. The reasons for this occurrence may be explainable by limitations in the study design.

5.4. LIMITATIONS OF THE STUDY DESIGN: A POST-HOC ANALYSIS

➤ **Research Parameters**

The study should have had the first follow-up consultation at six weeks (not four weeks) following the first consultation. This, the researcher felt, would have allowed for more accurate and conclusive deductions about the patient's initial

response to treatment, before repetition or change of the simillimum medicine. It is the researcher's contention that the timing of the second script may have been premature, causing a disruption of the healing process. Although this approach would have been contrary to the law of minimum dose (Gray, 2000:12-13), it could not have been avoided; the study required dispensation of medicine at the four-week interval. To add further, some participants felt that the designated four-week follow-up was too early to reflect conclusive outcomes in the penultimate measurement scales. Hence, the '*during treatment*' outcome measures were not ideal, nor optimal for those reflecting improvements in the study. Some participants mentioned that improvement only began in the fifth or sixth week of the study. According to Vithoukas (1981:224) the ideal interval for initial treatment assessment in chronic cases would be at least two months. In his opinion, the response at this period would be reliably evaluated in most cases. Be that as it may, Vithoukas has also suggested a compromise interval of one month for evaluating initial treatment responses.

The study duration was three months. According to Vithoukas (1987:54) a rough guide to determining the time taken for a positive simillimum response is as follows: resolution of a chronic condition may take as long as a month for every year the condition is experienced. In the study, some participants had suffered from CFS for as much as 28 years. Vithoukas' theory would then suggest that such participants might require 28 months (2,3 years) of treatment to reveal optimal improvements.

According to Swayne (1998:43) the longer the duration of illness before treatment, or the more deep rooted a condition, the longer the recovery phase is likely to be. Prolonged treatment with regular or high doses of conventional medication prior to the introduction of homoeopathic treatment may also prolong the recovery phase and make treatment more difficult. He believes, for example, that an average recovery phase of two years might be expected for severe long-standing conditions such as eczema or asthma.

Hence, the study parameter of a three-month follow-up, from the initial dose of medicine, may have been too soon for an optimal study outcome for some participants. This may have explained the plateaued response to treatment later in the study. If the study had been carried out over an extended period of time, further and/or sustained improvements in participants' condition would have been noted. In a similar research study for CFS, the trial period was set at six months (Weatherley-Jones, et al. 2004). This researcher (Saul) recommends the same for future studies.

➤ **Sample Size**

A larger sample group size should have been used to get more significant results, and obviate the type II error (the sample size was too small to yield cogent statistical power). According to Wessely, Hotopf & Sharpe (1999:371)

large treatment effects are unrealistic in chronic conditions of uncertain aetiology, yet sample sizes of 30 are not uncommon in CFS trials.

➤ **Homoeopathic Methodology of Intervention**

This study utilised three single unit homoeopathic powders, which was administered to each patient following each of the first two consultations. This medicine was to be taken once daily for three consecutive days. The researcher believes that the study outcome was substantially hindered by this format of intervention. The reasons for this are twofold: first, a major limitation of the study was the unavailability of higher potencies (greater than 30CH) for certain medicines prescribed. Consequently, some participants failed to respond fully, or relapsed on the 'weaker' 30CH potency (see figure 4.5.2.3). Second, is that some participants would have benefited from more repetition of the medicine than that which was allowed. According to Carlston (2003:116) a favourable response followed by a relapse of some or all symptoms indicates the need for repetition of that remedy. Hindsight reveals that medicaments in the form of a single 10 - 25ml dropper-bottle of aqueous or hydroalcoholic potency, termed *30Ch-plussed*² or *LM*³ potency, should have rather been used. This could be taken once daily for the duration of the study, or as directed by the researcher. It

² A 30Ch-plussed remedy involves dissolving the 30CH dose in water and shaking (succussing) the solution prior to each intake. This method raises slightly the potency level between each dose and is indicated for refractory cases (Hubbard, 1990:313). P.T.O.

is believed that the *30Ch-plussed* or *LM's*, given more frequently, would have obviated this problem and revealed greater efficacy of the treatment. According to Hubbard (1990:308) illnesses that are considered functional and subjective (i.e. chronic fatigue syndrome) respond better to higher potencies.

➤ **Homoeopathic Research Medicines**

As can be seen in Appendix I, the similimum medicines indicated for four of the participants were unavailable at the time of the study. The researcher thence resorted to prescribing a differential similimum medicine - that nearest to the totality of symptoms. This may have been an obstacle to achieving an optimal outcome. According to Swayne (1998:2) the correct choice of homoeopathic prescription is essential to achieving the best results in homoeopathic treatment.

Additionally (seen in Appendix I), and mentioned above, a further five research prescriptions were only available to the dispensary in a limited 30CH potency; consequently participants reported relapses in their condition later into the study. It is the researcher's contention, that if higher potencies were available to these five participants, further improvements in their condition may have been reported.

³ An LM potency is made by diluting the remedy in a ratio of 1 to 50 000 at each step, instead of 1 in 100 of the centesimal (CH) scale. The method allows the remedy action to penetrate quickly and deeply to the mental-emotional level of an individual, and facilitates a more permanent restoration to health. Its action is equivalent to that of a high centesimal potency (i.e. greater than 30CH) (De Schepper, 2001:88).

➤ **Allopathic Medicine**

Most participants were taking numerous conventional pharmaceuticals during the course of the trial (i.e. antidepressants, non-steroidal anti-inflammatory drugs, anxiolytics, antibiotics, hormone replacement therapy, etc). It is possible that for some, this may have been an impediment to cure, as it is known in homoeopathy that some conventional pharmaceuticals (i.e. antibiotics) inhibit the full effectiveness of homoeopathic remedies (Ullman & Reichenberg-Ullman, 2000:60).

Swayne (1998:166) believes that the concurrent use of conventional pharmaceuticals do not contraindicate the use of homoeopathy. However, its use requires of the practitioner hard work and patience. The prognosis is proportional to the resources of the individual. Hubbard (1990:310) states that such individuals require either remedies of high potency or remedies of low potency, provided the latter is administered frequently.

➤ **Outcome Measures**

Although the subjective outcome measures seemed adequate in assessing most participants, an important aspect of the condition was not well evaluated; that is functional impairment or disability. According to Lloyd (2004:437), a measure of disability scale should be included in the primary outcome measures of CFS, as

would be typical of all studies of chronic medical illness. In this light, a measure such as the composite Fatigue Impact Scale (FI) could have been used. This examines the patient's perception of the functional limitations that fatigue causes them (Naschitz, et al. 2004:167-172).

Both outcome measures assessed participant symptoms at the moment of consultation. This was found to be a little ambiguous for some participants, whose condition wavered through variability in its severity from day-to-day, and sometimes even within the same day. This may have reflected equivocal results for both the treatment and placebo groups.

It is believed that the limited frequency at which the outcome measures were utilised (thrice for the study) may have been conducive to the recording of false positive results. Hence, false positive results may have been reflected during the course of the study, and attribute to the placebo response. If the outcome measures were completed more frequently, the internal validity of the study may have been increased.

➤ **Inexperience of the Researcher**

Lastly, although the researcher had an understanding of the similimum approach, he was still inexperienced in homoeopathic practice. The approach to and analysis of the patient requires of the practitioner an insight that is experientially

obtained, and will vary from practitioner to practitioner. Swayne (1998:41) and Scholten (2002:825) state that the skill and experience of the individual homoeopath is an important factor in determining the use of remedies, and application of the similimum method; consequently it will influence treatment outcome.

5.5. THE PLACEBO EFFECT

The study suggests that there may have been non-specific benefits from the homoeopathic consultation, and the placebo effect requires exploration.

➤ **The Placebo Group**

Intra-group analyses revealed significant improvements in the placebo group for the emotional and physical symptom variables of the CFS questionnaire. This must be accounted for, as it appears contrary to recent clinical evidence.

A systematic review and meta-analysis conducted by Cho, Hotopf & Wessely (2005) revealed that patients with CFS respond to placebos at lower rates than people with many other illnesses. According to the new analysis, 19.6% of patients with CFS improved after receiving inactive treatments, compared with a consensus figure of about 30% for other conditions. A possible explanation given

was that CFS sufferers have low expectations, founded in the reality that the condition is difficult to treat and often persists for years.

For the similitum research study, levels of fatigue, as measured by the VAS, in placebo participants reduced by as much as 26%.

It is speculated that the homoeopathic consultation facilitated in itself, a therapeutic response, and this raises a number of considerations: It is known that much professional and public non-acceptance surrounds the diagnosis of CFS (Welch, 1999:1), and sufferers are liable to stigmatization and delegitimization of their illness experience (Tucker, 2004). Moreover, research has adduced evidence that such experiences are perpetuating factors for fatigue severity and functional impairment in CFS (Prins, et al. 2004). Consequently, evidence lends credence to supporting a good doctor-patient relationship in CFS (Afari, et al. 2005:356).

The context of the similitum research was such that it provided an environment for mutual understanding, acceptance and support for CFS sufferers. This may have had a healing effect. It is also possible, that the very process of extruding the patient illness narrative (often entrenched in psychological trauma) may have been a psychotherapeutic process in itself. Further, it is common knowledge in placebo research that the giving of time, attention and empathy to the sufferer will strengthen non-specific effects (van Weel, 2001:733).

According to Swayne (1998:6-7,36) the clinical method of homoeopathy is conducive to establishing a good practitioner-patient relationship, and the consultation is at the heart of this process. This provides strong grounds on which to maximize placebo effects (Carlston, 2003:67).

A final point to this argument is consideration to the possibility of entanglement theory in homoeopathy, as expounded by Hyland (2005:105-106). The author proposes that the therapeutic response in homoeopathy may be attributable to the remedy's entanglement with the therapeutic intent of the person who prescribed and/or manufactured it. Although this theory is heretical to homoeopathy, it does liken homoeopathic practice to a spiritual activity, whereby the prescriber's spiritual awareness would influence healing responses, regardless of whether the mechanical agent was treatment or placebo.

“... the capacity of the mind and body to heal, whatever the stimulus, exceeds our usual expectations” (Swayne, 1998:175).

➤ **The Treatment Group**

If the therapeutic potential of the consultation played a role in the placebo group, it is only fair to consider the possibility of influence it may have had in the treatment group. Assuming this to be the case, this would make it considerably difficult to tease the specific from non-specific effects of the medicine. It is in this light that two points need to be raised. Firstly, the treatment group response

appeared more favourable to placebo in most of the outcome measures. Second, much of the positive effects experienced by participants, subsequent to medicine intake, were not in any way anticipated or expected. In fact, positive responses were reported in less optimistic individuals with longstanding histories of CFS and treatment attempts. Additionally, many symptoms that were not reported to the researcher, initially, were revealed to have improved or resolved in the post-treatment period. That is, participants only became consciously aware of those previous symptoms following their improvement.

According to Swayne (1998:194), until the question of specific and non-specific effects is clarified we cannot interpret with confidence the full significance of all that we observe. Hence, the outcome of interventions is always going to encompass a combination of both specific and non-specific effects. This reinforces the need for well conducted double-blind, placebo-controlled trials in homoeopathic research.

“One of the lessons to be learned from homeopathy or from the working of the placebo response is that, given the right stimulus, the capacity of the body and mind to heal is greater than we commonly suppose” (Swayne, 1998:51)

5.6. HOMOEOPATHIC ANALYSIS

➤ **Research Medicines Prescribed**

The participant medicine profile, seen in tables 4.7.1 (treatment group) and 4.7.2 (placebo group), shows that the most commonly indicated similimum medicine for the study, was Natrum muriaticum (20%). This concurs with the anecdotal evidence presented by Bailey (1995:189): he has found Natrum muriaticum to be the most commonly prescribed homoeopathic remedy for CFS, in his practice. A brief description of a person requiring the remedy, Natrum muriaticum (Nat-m), is alluded to below.

The nature of the person is such that emotional pain is central to their existential core attachment (see chapter 2) – often originating in childhood when the unconditional love required as a child, was not freely given (Bailey, 1995:175-222). Consequently, the person develops an inner fear of being emotionally hurt or disappointed by others, to which he/she responds by reservedness or unapproachability (Sankaran, 1997a:144-145). According to Bailey (1995:220) this avoidance of feeling may also be achieved by retreating into the intellect, resorting to humour and hilarity, keeping busy, caring for others, being a perfectionist, dramatizing emotions, or positive thinking.

Further, there may be inability of handling emotions. This may be expressed as an aversion to affection, difficulty in giving and/or receiving, being aloof, or assuming a browbeater persona. They are one of the most predisposed to depression, resulting from suppressed sadness (Bailey, 1995:175-222).

“It is difficult to get them to express their real feelings but when they ‘break’ a little, they can get sentimental and there may be a flood of grief.” (Sankaran, 1997a:144-145)

According to Scholten (1999:65-66) the central theme of Natrum muriaticum is that *‘there is no mother and no care’*. This is confirmed by the repertory symptom “delusion his mother is dead”. It is the theme of being alone in the world, akin to the absence of nurturing. The standard situation is that of bereavement.

According to Bailey (1995:189) ‘Nat-m illness’ (particularly chronic fatigue syndrome) is acquired as an unconscious means of emotional healing. That is their illness may only be resolved once the suppressed feelings are felt. This is seemingly in accord with a theory by Pert (1999:192). Pert states: “Since emotional expression is always tied to a specific flow of peptides in the body, the chronic suppression of emotions results in a massive disturbance of the psychosomatic network.”

In a study conducted by Dowsett (1990), it was reported that emotional lability, including depression, elation and frustration occurred in 98% of CFS patients. Evident from the description above, Dowsett could also be describing an

analogue to Nat-m at a more superficial level. To exemplify, the following extract has been taken from Gibson's materia medica on Nat-m:

“There is a tendency to oscillate emotionally from one extreme to the other. Either the subject is very depressed, terrified and miserable, or else over-excited, very bright and gaily laughing.... The mere idea of one type of emotion arouses its opposite....”
(Gibson, 2000:350-352).

Please refer to Appendix I, research case numbers 3, 8 and 28, for case example analysis themes, of the remedy Natrum muriaticum.

Of interest, according to Hardy (2005:9), one group of homoeopathic medicines particularly useful in chronic fatigue syndrome patients is the acids (i.e. Phosphoricum acidum, Picricum acidum, etc). The researcher however found this not to be the case, with no research patient requiring an acid remedy for the study. ⁴

➤ **Demographics of Homoeopathic Prescriptions**

As can be seen from the demographics of remedy kingdom analyses (Figure 4.7.2), 50% of participants received a mineral remedy, 43%, a plant remedy, and 7%, an animal-based remedy.

⁴ A patient requiring an acid remedy is involved in an intense struggle of effort, which is made in a particular direction in that person's life. The specific direction of struggle depends on which acid the patient requires. The consequence of which is 'collapse' or fatigue (Hardy, 2005:9).

➤ **Data Analysis of Homoeopathic Prescriptions: A Kingdom Group Analysis**

According to homoeopaths Sankaran (2002:20) and Scholten (2002:813), kingdom classification and understanding is emerging as a beneficial tool for similimum selection. Hence, it was decided that data analysis should be further angled at differentiating treatment responses within kingdom groupings (i.e. mineral, plant, animal). However, the animal kingdom was unamenable to analysis as no prescriptions fell into the treatment group. Inter and intra-group comparisons were made using the fatigue visual analogue scale (VAS). The VAS was chosen due to it being most sensitive to assessing fatigue severity for the study. Moreover, fatigue severity is regarded as the main parameter for which the effectiveness of therapeutic interventions of CFS are generally evaluated (Naschitz, et al. 2004:167-168).

Intra-group analyses of the treatment group revealed significant improvements for both the mineral ($p = 0.030$) and plant ($p = 0.016$) kingdoms in the study period (see tables 4.9.1.1 and 4.9.2.1 respectively). In comparison, the placebo group showed no significant intra-group differences for either mineral ($p = 0.124$) or plant ($p = 0.779$) kingdoms. Inter-group analyses of each remedy kingdom, revealed no statistically significant values for the study period (see tables 4.9.1.3 and 4.9.2.3).

It is worth noting however, that the strength of the study's placebo response, as calculated by VAS means, resided mostly with the mineral kingdom, ranging from 23.5% to 45.6% (Figure 4.9.1). In comparison, the plant kingdom's placebo response ranged from 1.3% to 6.7% (Figure 4.9.2). Both responses appear contrary to what is understood from current literature.

According to Sankaran (1997a:229-232) the central theme of the mineral kingdom revolves around structure and organization. "Mineral" personalities are often revealed as organized, systematic and logical, with a predilection for facts and figures, and a need for fixity in way of thinking. One would expect then that such constitutions are more resistant to placebo effects.

The basic quality common to a remedy of the plant kingdom is sensitivity, as they are sensitive to changes in their external environment and are easily influenced (suggestible) by many things. "Plants" are generally disorganized and would be regarded as being more impressionable than the "Minerals" (Sankaran, 1997a:230-233).

Hence, the study's placebo response was inversely proportional to a priori kingdom assumptions. One possible explanation is that these effects, labelled as placebo and perceived as non-specific, did not influence much of the study's outcome. Instead, it is hypothesised that these effects were the result of entanglement between homoeopathy, the researcher's therapeutic intent and a

cognitive behavioural strategy. If the “Minerals” process their world and inner existence (themselves and their illness) on a more cognitive level, the case taking process may have excited renewed meaning to their illness experience. This knowledge may have allowed them to further process causal attributions of their CFS (release the existential “*stuckness*”) and in turn facilitate a self-healing process. If this were to be true, then the study may have been comparing a cognitive behavioural strategy to homoeopathic similimum, with the former supplanting the placebo arm of the study. Nevertheless, this is solely conjectural.

5.7. DEMOGRAPHICS OF THE CFS TRIAL

The demographic data, although representing a small sample, is supportive of the current literature.

Most studies of gender differences report higher rates in women than in men (Ranjith, 2005:16). The pie chart (Figure 4.4.1) distribution, illustrates that 8 (26.7%) men and 22 (73.3%) women participated in the trial, representing a ratio of 1 to 2.75 in favour of female preponderance.

Most people having received a diagnosis of CFS are between 30 and 40 years of age (Afari & Buchwald, 2003:222). Although the study age range was limited (18-60 years), the distribution varied. The greater portion of participants (36.7%) however, were between 45 and 53 years of age (Figure 4.4.2).

5.8. CONCLUSION

The study adds further to a limited body of evidence evaluating the effectiveness of individualised homoeopathic treatment of chronic fatigue syndrome. The findings of this study appear similar to that of Weatherley-Jones, et al. (2004). Whilst both studies failed to yield statistically cogent results, outcomes have revealed significant intra-group differences, with the latter indicative of improvements in the treatment group. This is promising considering that CFS is currently conceded as poorly treatable with any therapeutic intervention (Afari, et al. 2005:356-357). On the matter of placebo effects, the trial has also concurred with that of Weatherley-Jones, et al. (2004): that there may be benefit for CFS patients in the non-specific effects of a homoeopathic consultation.

Despite the study's encumbrances (methodological limitations and complexity of the placebo response) it is stated de facto that good homoeopathic research is not easy to conduct, and is often seemingly unamenable to scientific protocols (Carlston, 2003:97). However, with perseverance and experiential knowledge it is believed that these obstacles can be overcome (Ernst & Canter, 2005:67).

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. CONCLUSION

Chronic fatigue syndrome (CFS) is a concerning health problem worldwide (Rutherford, 2003). It is an illness characterized by profound disabling fatigue of at least 6 months and accompanied by numerous rheumatological, infectious, and neuropsychiatric symptoms (Afari & Buchwald, 2003:221).

The aim of treating patients with CFS is to reduce the suffering of their condition so that they are able to return to normal activity and lead fulfilled meaningful lives. This would be achieved through reduction of symptoms and annihilation of abnormal fatigue.

The purpose of this double-blind, placebo-controlled study was to determine the effectiveness of homoeopathic similimum treatment of CFS, in hope of homoeopathic inclusion into the therapeutic management of the condition. Outcomes were assessed in terms of participant perception of the treatment, using a CFS questionnaire (Appendix C1), and a fatigue visual analogue scale (VAS) (Wessely, Hotopf & Sharpe, 1999:15; Appendix C2).

Intra-group analyses of the data showed significant improvements occurring in the treatment group, for both the CFS questionnaire total and VAS. The placebo group did not reveal any significant improvement for the same two outcome measures. At the end of the trial (follow-up two), overall improvement in terms of levels of energy was 38.2% for the treatment group and 25.6% for the placebo group. This appears promising for a condition that is otherwise refractory to both pharmacologic and non-pharmacologic interventions (Straus, 2004:1234-1235), and typically resistant to placebo effects (Cho, Hotopf & Wessely, 2005:306-305).

Although homoeopathic similimum posed therapeutically beneficial for the treatment of chronic fatigue syndrome, the net outcome revealed that its effectiveness was not statistically significant. Bearing cognizance to the shortfalls of the study (chapter 5), it is suggested that more research be undertaken to establish the role of homoeopathy in the treatment of CFS.

6.2. RECOMMENDATIONS

Provided below, are the recommendations for future research studies:

- i. A study should be carried out over an extended period of time; six months may be more appropriate.
- ii. A larger sample group size should be used to get more reliable results.

- iii. The first follow-up consultation should be planned at six weeks (not four weeks) of the study.
- iv. The measurement scales should be utilised with more frequency.
- v. Both measurement scales could be altered to assess participants' symptoms over a more specifically stated period of time, rather than at the moment of consultation – "now". The proposed change: "for the past week".
- vi. The composite Fatigue Impact Scale (FI) (Naschitz, et al. 2004:167-172) and/or a measure of disability scale (Lloyd, 2004:437) could be used as secondary outcome measures.
- vii. If uniform treatment regimes are required, lactose powders are not recommended for future study use (particularly in the treatment of chronic conditions). Medicaments in the form of a single 10 - 25ml dropper-bottle of aqueous or hydroalcoholic potency (i.e. *30ch-plussed* or *LM* potency) should rather be used. This could be taken once daily for the duration of the study, or as directed by the researcher.
- viii. An addition to the selection criteria should be made regarding exclusion of a participant if he/she requires, as a similitum, a remedy that is not in

- accession to the homoeopathic research dispensary. Alternatively, that participant may only be introduced into the study, once the required remedy becomes available to the dispensary.
- ix. The aforementioned study could introduce into its management a uniform approach, whereby those participants, certain of their own improvements, could reduce their intake of conventional pharmaceuticals (i.e. antidepressants, anxiolytics, non-steroidal anti-inflammatory drugs / NSAIDS, etc) as guided by their primary care physician, during the study. Further, a participant without drug side effects may report feeling better, and this may allow for a more optimal assessment of study outcomes.
 - x. A study could compare the efficacy of homoeopathic similimum to cognitive behavioural therapy and/or graded exercise therapy in CFS
 - xi. Future studies could compare other approaches of homoeopathic treatment for CFS (i.e. miasmatic prescribing, complex remedies, clinical remedies).
 - xii. Other than the researcher, more homoeopathic case takers or observers could be brought in to a study, to evaluate and confirm by consensus, each participant's similimum prescription.

- xiii. If similar types of studies are conducted again, it is recommended that another province of South Africa be chosen as a locale (The researcher experienced much difficulty in recruiting sufferers from KwaZulu-Natal).

- xiv. Future research studies could compare the efficacy of different methodologies of homoeopathic similimum prescribing (for any specific condition).

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APPENDICES

- APPENDIX A** DIAGNOSTIC CRITERIA FOR CHRONIC FATIGUE
 SYNDROME
- APPENDIX B** CONDITIONS TO BE CONSIDERED WHEN MAKING
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APPENDIX A

TABLE A-2.2.6
DIAGNOSTIC CRITERIA: CHRONIC FATIGUE SYNDROME (Centre for Disease Control (CDC), Atlanta, Georgia)
INCLUSION CRITERIA (Welch, 1999:6-7) 1. Clinically evaluated, unexplained, persistent or relapsing chronic fatigue that is of new or definite onset (has not been lifelong); is not the result of ongoing exertion; is not substantially relieved by rest; and results in substantial reduction in previous levels of occupational, educational and social, or personal activities; And 2. The concurrent occurrence of four or more of the following symptoms, all of which must have persisted or recurred during six or more consecutive months of illness and must not have predated the fatigue: <ul style="list-style-type: none">▪ Impaired short-term memory or concentration (self-reported) severe enough to substantially reduce previous levels of occupational, educational, social, or personal activities;▪ Sore throat▪ Tender cervical or axillary lymph nodes▪ Muscle pain▪ Headaches of new type, pattern, or severity▪ Unrefreshing sleep▪ Post-exertional malaise lasting more than 24 hours▪ Multi-joint pain without swelling or redness.
EXCLUSION CRITERIA (Sharpe & Wilks, 2002:481) <ul style="list-style-type: none">▪ Active, unresolved, or suspected medical disease or psychotic, melancholic, or bipolar depression (but not uncomplicated major depression), psychotic disorders, dementia, anorexia or bulimia nervosa, alcohol or other substance misuse, severe obesity

APPENDIX B

CONDITIONS TO BE CONSIDERED WHEN MAKING THE DIAGNOSIS OF CHRONIC FATIGUE SYNDROME

Illustrated below are the exclusionary and inclusionary guidelines for the clinical evaluation and diagnosis of prolonged fatigue and chronic fatigue syndrome (CFS).

The following conditions, according to Fukuda, Straus, Hickie, Sharpe, Dobbins & Komaroff (1994:955-956), should be excluded from the diagnosis:

- Certain medical conditions such as untreated hypothyroidism, sleep apnoea, narcolepsy, and the side effects of medication that may account for the fatigue.
- Certain unresolved medical conditions, for example unresolved cases of the hepatitis B/C virus and previously treated malignancies.
- Diagnoses of major depressive disorders with psychotic features, bipolar affective disorders, schizophrenia, delusional disorders, dementia, anorexia and bulimia nervosa.
- Alcohol or other substance abuse two years prior to the onset of the chronic fatigue.
- Severe obesity.

The following conditions, according to Fukuda, et al. (1994:955-956), do not exclude a diagnosis of CFS:

- Conditions that are primarily defined by symptoms, but cannot be confirmed by diagnostic laboratory tests, for example fibromyalgia, anxiety disorders, somatoform disorders, non-psychotic depression and multiple chemical sensitivity disorder.
- Certain conditions, such as hypothyroidism and asthma, that are under sufficient treatment to alleviate all related symptoms.
- Lyme disease and syphilis, provided it has been appropriately treated before the onset of CFS.
- In circumstances where the findings of the physical examination and laboratory tests do not sufficiently exclude the exclusion criteria.

APPENDIX D

SUBJECT INFORMATION LETTER

TITLE OF RESEARCH PROJECT:

The effectiveness of homoeopathic similimum treatment in chronic fatigue syndrome (CFS)

NAME OF SUPERVISOR: Dr M. Maharaj, M.Tech.Hom. (TN)

NAME OF CO-SUPERVISOR: Dr I. Couchman, M.Tech.Hom. (TN)

NAME OF RESEARCHER: Wayne Saul

DATE: _____

Dear participant

Thank you for your time and interest in reading this letter. With your help the effectiveness of homoeopathy in the treatment of chronic fatigue syndrome (CFS) can be determined.

I am currently a Master's Degree student, of homoeopathy, at the Durban Institute of Technology. In order to obtain my degree I am required to complete a dissertation. This study will evaluate the effectiveness of homoeopathic treatment in alleviating the symptoms of chronic fatigue. In order to do this, we appeal to you for your assistance by becoming actively involved and informing us about your condition, before and during the study, as well as its effect on your daily lives.

This clinical trial will be conducted at the Homoeopathic Day Clinic during morning sessions, under the supervision of qualified and registered homoeopathic doctors.

What is required of the participant?

Individuals must:

- a) be between the ages of 18 and 60 years
- b) satisfy the CDC diagnostic criteria for CFS (Individuals must have been suffering from chronic fatigue for a period of at least 6 months).
- c) not be on any medication for CFS during the study, and 1 week prior to the study.
- d) be literate, and fully conversant in the English language.

What participants should know:

- a) Pregnant females will be excluded from the study.

- b) For the duration of the study, no other treatment will be permitted except the chronic medication used for unrelated conditions (e.g. hypertension, diabetes, hypercholesterolaemia).

Once you have fulfilled these selection criteria, and are willing to participate, you will be accepted into the study group. The study will last for 3 months and the researcher will need to see you for a total of 3 consultations during this time. At these consultations you will be required to fill in a short symptom questionnaire and fatigue visual analogue scale.

Confidentiality:

Your privacy will be respected. All information given by participants will be kept confidential. Once the dissertation is published the case files will be destroyed and no names will appear in the dissertation.

Nature of the Study:

In order for this research to be scientifically validated, it must conform to what is called a *double-blind, placebo-controlled trial*. This means that 50% of participants will receive the active homoeopathic medicine, and the other 50% will receive placebo (that which have no medicine in them).

Neither the researcher nor participants will know who is receiving what, as all medicines will appear alike. Thus all participants will be approached in the same way. *Unblinding* will only be revealed at the end of the trial, and those participants who fell into the placebo group will all be offered free treatment at the end of the trial.

Each participant will receive 3 medicines (powders) following the first and second consultation, and will be instructed on how to take them.

Your participation in this study is on a voluntary basis and the consultation and treatment costs will be covered by the Durban Institute of Technology.

If you have any questions or experience any problems during the course of the study, please feel free to contact me, or my research supervisor on the following numbers:

Dr M Maharaj – (031) 204 2041
Wayne Saul – 083 997 6325

Thanking you for the courtesy of your assistance

Wayne Saul
(Dept of Homoeopathy, Durban Institute of Technology)

APPENDIX E

INFORMED CONSENT FORM

(To be completed in duplicate by the patient)

TITLE OF RESEARCH PROJECT:

The effectiveness of homoeopathic similimum treatment in chronic fatigue syndrome (CFS)

NAME OF SUPERVISOR: Dr M. Maharaj, M.Tech.Hom. (TN)

NAME OF CO-SUPERVISOR: Dr I. Couchman, M.Tech.Hom. (TN)

DATE OF FIRST APPOINTMENT: _____

PLEASE CIRCLE THE APPROPRIATE ANSWER:

1. Have you read the research information sheet? YES / NO
2. Have you had the opportunity to ask questions regarding this study? YES / NO
3. Have you received satisfactory answers to your questions? YES / NO
4. Have you had the opportunity to discuss this study? YES / NO
5. Have you received enough information about this study? YES / NO
6. Who have you spoken to? _____
7. Do you understand the implications of your involvement in this study? YES / NO
8. Do you understand that you are free to withdraw from this study? YES / NO
 - a) at any time, and
 - b) without having to give reasons for withdrawing
9. Do you agree to voluntarily participate in this study? YES / NO
10. Do you understand that you may receive a placebo during the study? YES / NO
11. Do you understand the difference between a placebo and homoeopathic treatment? YES / NO

PATIENT NAME: _____ SIGNATURE: _____

WITNESS NAME: _____ SIGNATURE: _____

RESEARCH STUDENT: Wayne Saul SIGNATURE: _____

(If you have answered **NO** to any of the above please obtain the information before signing)

APPENDIX F

ASSESSMENT AND FORMULATION OF CFS

(Taken from Sharpe & Wilks, 2002:481)

History – The nature of the fatigue is an important clue to diagnosis, and it is therefore important to clarify patients' complaints. Fatigue described as loss of interest and enjoyment (anhedonia) points to depression. Prominent sleepiness suggests a sleep disorder. The history should also cover

- Systematic inquiry for diseases often associated with fatigue
- Symptoms of depression anxiety and sleep disorder
- Patients' own understanding of their illness and how they cope with it
- Current social stresses

Examination – Both a physical and mental state examination must be performed in every case, to seek medical and psychiatric diagnoses associated with fatigue.

Routine investigations – If there are no specific indications for special investigations, a standard set of screening tests is adequate.

Special investigations – Immunological and virological tests are generally unhelpful as routine investigations. Sleep studies can be helpful in excluding other diagnoses, especially obstructive sleep apnoea and narcolepsy.

Psychological assessment – It is important to inquire fully about patients' understanding of their illness (questions may include "What do you think is wrong with you?" and "What do you think the cause is?"). Patients may be worried that the fatigue is a symptom of a severe, as yet undiagnosed, disease or that activity will cause a long term worsening of their condition.

Formulation – A formulation that distinguishes predisposing, precipitating, and multiple perpetuating factors is valuable in providing an explanation to patients and for targeting intervention.

APPENDIX G

CASE HISTORY FORM

Surname: _____ Date: _____
First name/s: _____ M:S:W:D _____
Address: _____ Children: _____
Tel: _____ Date of Birth: _____
Occupation: _____ Age: _____
Referred by: _____

MAIN COMPLAINT:

Past Medical History / Treatments / Surgery:

Childhood Development / Milestones:

Vaccination History:

Family History:

Present Medication / Supplements:

Allergies:

GENERALITIES:

Perspiration:

Energy / metabolism:

Libido:

Alcohol:

Smoking:

Weather Modalities:

Sleep:

SYSTEMS REVIEW:

HEAD:

E.E.N.T:

(Eyes, ears, nose, throat):

G.I.T:

Bowel movements:

Appetite:

Desires:

Aversions:

Thirst:

CARDIO-RESPIRATORY:

MUSCULOSKELETAL:

INTEGUMENTARY:

NEPHRO-UROLOGY:

Urine:

APPENDIX H

PHYSICAL EXAMINATION

VITAL SIGNS:

Temperature: _____

Pulse rate: _____

Respiratory rate: _____

Blood pressure: _____

Height: _____

Weight: _____

GENERAL EXAMINATION:

(Jaundice / Anaemia / Cyanosis / Clubbing / Dehydration / Oedema / Lymphadenopathy)

E.E.N.T:

CHEST EXAMINATION:

ABDOMINAL EXAMINATION:

NEUROLOGICAL EXAMINATION:

MUSCULOSKELETAL EXAMINATION:

APPENDIX I

CENTRAL DISTURBANCES AND VITAL SENSATIONS OF CFS PARTICIPANTS: THE TREATMENT GROUP

2. *Calcarea silicata*

Uncertain about his role in the family
Indolence leads to fewer decisions

Δ Δ: Beryllium oxydatum (remedy unavailable)

3. *Natrum muriaticum*

Shutting out the hurt
Controlling and braving the insults, injuries and beatings

Δ Δ: Bellis perennis

8. *Natrum muriaticum*

Walling-off emotional pain
Loss of independence due to care

Δ Δ: Sepia officinalis (complementary remedy)

17. *Saccharum officinale*

Immaturity due to lack of nourishment as a child
A little girl
Nourishing her own child

Δ Δ: Natrum lacticum (remedy unavailable)

20. *Pulsatilla nigricans*

Avoidance of vexation
Rejection leads to hurt

Δ Δ: ?

23. *Argentum nitricum*

Art leads to interaction and learning
Exertion is under looming pressure of failure

Δ Δ: Technetium nitricum (remedy unavailable)

25. Kalium carbonicum

Executing the task without question
Inability for work means confronting the relationship

Δ Δ: Kalium metallicum (remedy unavailable)

28. Natrum muriaticum

Oppressed by emotion
Movement allows escape from emotion

Δ Δ: Tuberculinum (complementary remedy)

31. Crocus sativus

Excluded by loss of business acuity
Excluded by unattractiveness
Consequential avoidance of business and social gatherings

Δ Δ: ?

32. Baptisia tinctoria

Urgent need to get all pieces together
Scattered in "intoxication"

Δ Δ: ?

34. Ornithogalum umbellatum

In control to prevent exclusion
Keeping busy to allow inclusion

Δ Δ: NA

35. Actaea spicata
Ranunculus sceleratus

Trying to avoid vexation
Persecuted by vexation

Δ Δ: Ranunculaceae (?)

37. Colchicum autumnale

*Persecuted by exclusion
Empowered by inclusion*

Δ Δ: Physostigma

38. Nux vomica

*Shocked, shattered and torn to pieces
Upsurge of sensitivity and down-regulation of the material chase*

Δ Δ: Pulsatilla (complementary remedy)

39. Viola odorata

*Enforced optimism leads to control of vexation
Losing control of vexation
Intellectualising exerts control over vexation
Disturbed by vexation*

Δ Δ: NA

Δ Δ: denotes a differential similimum medicine for the respective participant

? : researcher unable to derive a differential similimum for the respective participant

NA: differential similimum medicine non applicable

APPENDIX J

DATA ANALYSIS: INTRA-GROUP - THE FRIEDMAN TEST FOR THE CFS QUESTIONNAIRE

PROCEDURE 1 (INTRA-GROUP): FRIEDMAN TEST

Table J-4.5. CFS Questionnaire: Comparison of reduction of symptoms within respective symptom categories of chronic fatigue syndrome

GROUP	<i>p value</i>			
	MENTAL	EMOTIONAL	PHYSICAL	TOTAL
TREATMENT	0.002*	0.006*	0.001*	0.002*
PLACEBO	0.057	0.030*	0.006*	0.074

All tests were performed at $\alpha = 0.05$ level of significance.

Table J-4.5 reveals the following:

* Significant *p* value: null hypothesis rejected

APPENDIX C1

PATIENT NO: _____

OUTCOME MEASURES:

DATE: _____

QUESTIONNAIRE:

Please place a tick [\surd] over a space provided, to show how often you now experience the following symptoms:

eg:

NOT AT ALL $\frac{\quad}{1}$ $\frac{\quad}{2}$ $\frac{\quad}{3}$ $\frac{\quad}{4}$ $\frac{\quad}{5}$ $\frac{\quad}{6}$ $\frac{\quad}{7}$ EXTREMELY OFTEN

Physical Symptoms

1. I have problems with tiredness

NOT AT ALL $\frac{\quad}{1}$ $\frac{\quad}{2}$ $\frac{\quad}{3}$ $\frac{\quad}{4}$ $\frac{\quad}{5}$ $\frac{\quad}{6}$ $\frac{\quad}{7}$ EXTREMELY OFTEN

2. I need to rest more

NOT AT ALL $\frac{\quad}{1}$ $\frac{\quad}{2}$ $\frac{\quad}{3}$ $\frac{\quad}{4}$ $\frac{\quad}{5}$ $\frac{\quad}{6}$ $\frac{\quad}{7}$ EXTREMELY OFTEN

3. I feel sleepy or drowsy

NOT AT ALL $\frac{\quad}{1}$ $\frac{\quad}{2}$ $\frac{\quad}{3}$ $\frac{\quad}{4}$ $\frac{\quad}{5}$ $\frac{\quad}{6}$ $\frac{\quad}{7}$ EXTREMELY OFTEN

4. I have problems with starting things

NOT AT ALL $\frac{\quad}{1}$ $\frac{\quad}{2}$ $\frac{\quad}{3}$ $\frac{\quad}{4}$ $\frac{\quad}{5}$ $\frac{\quad}{6}$ $\frac{\quad}{7}$ EXTREMELY OFTEN

5. I have poor motivation for activity NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

6. I am lacking in energy NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

7. I feel weak NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

8. I have:
▪ Muscle pain NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

▪ Joint pains NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

▪ Sore throats NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

▪ Swollen glands NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

- Low grade fevers

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Night sweats

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Headaches

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Gastro-intestinal disturbances

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Candida problems

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Low sex drive

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Disturbed sleep patterns

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

- Other?

NOT AT ALL	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	EXTREMELY OFTEN
	1	2	3	4	5	6	7	

→ _____

Mental Symptoms

- | | | | | | | | | | |
|--|------------|----------|----------|----------|----------|----------|----------|----------|-----------------|
| 1. I have difficulty concentrating | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 2. I have problems thinking clearly | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 3. I make slips of the tongue when speaking | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 4. I find it more difficult to find the correct word | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 5. I have problems with memory | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 6. I lose interest in the things I used to do | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |
| 7. I have disturbing dreams | NOT AT ALL | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | EXTREMELY OFTEN |

Emotional Symptoms

1. I feel sad

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

2. I feel discouraged about my future

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

3. I feel worthless

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

4. I feel disappointed in myself

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

5. I feel anxious

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

6. I feel disconnected from other people

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

7. I feel helpless

NOT AT ALL 1 2 3 4 5 6 7 EXTREMELY OFTEN

P.T.O.

CFS Questionnaire Adapted from:

- i. The fatigue scale of Chalder, Berelowitz, Pawlikowska, Watts, Wessely, Wright & Wallace (1993)
- ii. Welch symptom checklist questionnaire (Welch, 1999:197)
- iii. CFS Emotional Symptom Scale (CFS-ESS) (Stoff & Pellegrino, 1992:169,170)
- iv. Somantic differential scale (Aaker, Kumar & Day, 2001:285-286)

P.T.O.

APPENDIX C2

PATIENT NO: _____

OUTCOME MEASURES:

DATE: _____

Single-Item Visual Analogue Scale (VAS)

(Wessely, Hotopf & Sharpe, 1999:15)

Instruction:

Please read the anchor phrases below and make a mark on the line to indicate your level of fatigue.

NOT AT ALL FATIGUED

0



10

COMPLETELY FATIGUED

THANK YOU
END