Identification, assessment and management of mood disorders in clients by osteopathic practitioners in New Zealand

Kesava Kovanur Sampath

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Kesava Kovanur Sampath

2008
Declaration

Name of candidate: Kesava Kovanur Sampath

This Thesis/Dissertation/Research Project entitled: “The identification, assessment and management of mood disorders in clients by osteopathic practitioners in New Zealand” is submitted in partial fulfilment for the requirements for the Unitec degree of Masters of Osteopathy.

Candidate’s declaration:

I confirm that:

• This Thesis/Dissertation/Research Project represents my own work;
• The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.
• Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee. Research Ethics Committee Approval Number: 2007.719.

Candidate Signature: ........................................Date: ......................

Student number: 1230902
Abstract

**Background:** Mood disorder with its high global prevalence rate is a major public health issue imposing a considerable burden on the community. Early detection and intervention of mood disorders in the primary care setting can help prevent the progression of illness. An osteopath, being a primary care practitioner, may play an important role in early identification and appropriate management of clients with mood disorders.

**Objectives:** Exploration and description of how osteopaths (in New Zealand):

1. Identify mood disorders in clients,
2. Assess mood disorders in clients, and
3. Manage mood disorders in clients.
4. Exploration and description of previous education osteopathic practitioners have had previously of psychological issues such as mood disorders, and
5. Identification of further education needs.

**Methods:** The present study was done using a descriptive/explorative survey design combining quantitative and qualitative methods for data collection and analyses. A total of 216 New Zealand registered osteopaths whose email addresses were publicly available were invited to complete the online survey. Descriptive and inferential analytical techniques were used to analyse the quantitative data. Qualitative data were analysed thematically.

**Results:** Out of 216 participants invited to participate in the study, 62 (29%) completed the survey. The preferred assessment tools include questioning the clients, tissue palpation and cranial rhythm, with least preference for mood disorder questionnaires. However, there exists a clinical dilemma among osteopathic practitioners in managing clients with mood disorders. A majority of the practitioners reported of having had no specific education content regarding mood disorders and felt that further education in this regard would be of value to their practice.
Conclusion: Osteopathic practitioners in New Zealand who participated in the present study reported that they ‘often’ come across clients with a history of mood disorders. With an apparent lack of specific education in identifying, assessing and managing clients with mood disorders, a clinical dilemma seems to exist among practitioners with regard to treating clients with mood disorders. Given that osteopaths are primary care practitioners, the perceived gap in education may impact on their ability to identify, assess and manage clients with mood disorders. Hence further knowledge and education with regard to mood disorders is recommended.
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Chapter One - Introduction

Introduction to Mood Disorders

Mood, in accordance to the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR) can be defined as "pervasive and sustained emotion that colours the perception of the world" (American Psychiatric Association APA, 2000, p.345). The impact of mind on the body has been well known to man since ancient times. Greek philosopher Homer states that: “To one man a god has given deeds of war, to another the dance, to another the lyre and song, and to another the wide – sounding Zeus puts a good mind” (cited in Bradley, Osborn, Jerome, & Williams, 2003, p. 246).

This statement by Homer is quite significant in today’s world where the extent of mood disorders and mood problems are widely prevalent. According to the New Zealand Mental Health survey released in 2006, mental disorders such as major depressive episodes are relatively common (Browne, Wells, Scott, & McGee, 2006). Furthermore, a study in New Zealand shows that suicidal behaviours are associated with mental disorders (Beautrais, Wells, McGee, & Browne, 2006). Hence there is an urgent need to address mood disorders and this study is considered to be relevant and timely.

The present research is a descriptive and exploratory study of how osteopaths in New Zealand identify, assess and manage clients with mood disorders. It identifies the importance osteopaths place on the identification of mood disorders in clients and the various assessment tools used by osteopathic practitioners. The various management strategies used by osteopathic practitioners are outlined and discussed. Furthermore, the study explores the level of specific education on mood disorders and the attitude of osteopathic practitioners to further education with regard to mood disorders.
Background

1.1 Mood disorder – defined

Mood disorder is considered as a unique, broad diagnostic category by traditional and present psychiatric classifications (Faravelli, Ravaldi & Truglia, 2005). Mood disorders are usually divided into two main types: unipolar and bipolar. According to DSM-IV-TR, Unipolar disorders are characterised by depressed mood, whereas bipolar disorders involve manic (up) and depressed (down) phases (APA, 2000).

1.2 Prevalence of mood disorders

Mental disorders are found to be common in New Zealand, with many people with a diagnosis of current disorders not receiving any form of treatment (Wells et al., 2006). According to a New Zealand mental health survey, the life time prevalence of mood disorders is 20.2%. Within the category of mood disorders, major depressive episode is the most prevalent disorder with a life time prevalence rate of 16.0% (Browne et al. 2006). In South Australia, 2.2% (out of 3010 respondents) had double depression (combination of major depression and dysthymia) with poor functioning and health related quality of life (Goldney & Fisher, 2004).

Depression has been identified as the main cause of disability in the United States, around 17% of Americans experience major depression in their life time; 2% of those have or will develop bipolar disorders (Lewis, Kass, & Klein, 2004; Morris, 2003). The lifetime prevalence of mood disorders ranged from 5.4 per 100 in Korea to 31.3 per 100 in Montreal (5.8-fold difference), with the lowest rates being reported in Asian countries. Bipolar spectrum disorders have a life time prevalence of about 2.6% to about 6.5% (Hirschfeld et al., 2000). According to a national survey done in Finland in terms of 12-month prevalence, the most common disorders are depressive disorders (4.6-8.3%) and alcohol use disorders (1.4-7.3%) (Pirkola et al., 2005). High rates of mental disorders have been found in people making serious suicide attempts; around 33-38% of those have mood disorders (Beautrais et al., 1996; Lesage
et al., 1994. Fifteen percent of deaths of people with major mood disorder occur from suicide, 10-15% of those with bipolar disorders commit suicide (Lewis et al., 2004; Morris, 2003). A study undertaken in New Zealand shows that around 70% of those attempting suicide have affective mood disorders (Beautrais, Joyce, & Mulder, 1998). The risk of suicidal ideation, plan and attempt has been shown to be associated with mental disorders. The life time prevalence of suicidal ideation in New Zealand has been found to be 15.7% (Beautrais et al., 2006). Men and women hospitalized for affective disorders have elevated mortality rates from suicide (Angst, Angst, Clayton, & Stassen, 2002). About 90% of suicides in children are associated with mood disorders, which frequently include major depressive, dysthymic, and bipolar disorders (Morris, 2003).

1.3 Why a study on mood disorders?

The high global prevalence rate and the associated co-morbidity makes mood disorders a major public health issue imposing a considerable burden on the community (Goldney & Fisher, 2004). The treatment of mood disorders can be long-term and can be categorized into three phases: acute, continuation, and maintenance (Prien & Kocsis, 2000). If left untreated patients suffering from mood disorders may become “rapid cyclers” (Baron, Hay, & Easom, 2003). Hence, early intervention and treatment of mood disorders in the primary care setting can help prevent the progression of illness, reducing potential patient morbidity and mortality (Baron et al., 2003; Morris, 2003). An osteopath, being a primary care practitioner may play an important role in early identification and appropriate management and referral of clients with mood disorders. From personal experience as a physiotherapist previously and a student of osteopathy now, I often come across clients (presenting with bodily symptoms) who do not get better even after trying almost all treatment options available. The role of psychological variables on bodily pain has always been a topic of interest for me. Informal discussions with fellow students and tutors led to contrasting information and kindled the curiosity to explore mood disorders.
Rationale for this study

Early observations made by Dr. A.T. Still (founder of osteopathic medicine) were among the first to support the view that there is an integration between the nervous system, behaviour and the immune system (Plotkin et al., 2001). Psychiatry became one of the earliest osteopathic specialties and Dr. A.T. Still strongly believed that osteopathy would be beneficial when used to treat the whole person – body, mind and spirit. Still observed that: “I have always contended that a majority of the insane patients could be treated successfully by osteopathy, and I am very anxious for the entire profession to know of the work that is being done” (cited in Bradley et al., 2003, p. 245). Osteopaths may be most focused on somatic concerns (body structure) and any co-morbid psychiatric symptoms of mood, behaviour and thought disturbances may be over-looked (Baron et al., 2003). Around 38% of patients presenting with physical symptoms have no discernible medical basis; the disturbances of the mind can psychosomatically affect the body (Baron et al., 2003). Studies have shown that approximately 30% of elderly patients who committed suicide had visited their primary care physician within one week of their death (Baron et al., 2003). Being a primary care practitioner, an osteopath may help decrease these suicide rates if they can identify and help with psychiatric issues (like mood disorders) in their clients.

Furthermore, the principle of osteopathy describes that the body is a unit; dysfunction arises when normal adaptability is disrupted or when environmental changes overcome the body’s capacity for self maintenance (Searle-Barnes & Sammut, 1998). It is believed that osteopathic intervention can have positive influence on the above (Searle-Barnes & Sammut, 1998). Hence it is important to explore how osteopaths in New Zealand identify, assess and manage mood disorders in patients they treat and to explore the practitioners’ educational background in this respect.

Although, a number of psycho-pharmacological studies have been done on mood disorders, the influence of procedural touch, including Osteopathic Manipulation
Treatment (OMT), on psycho-neuroimmunologic status has been largely ignored (Plotkin et al., 2001). There is neither a literature that reports how osteopaths identify mood disorders in their clients nor a discussion of how mood disorders once recognised influence the treatment plan. A search for these issues through electronic databases like PUBMED, EBSCO, MEDLINE, AMED and CINAHL yielded no relevant citations or articles. For example, a search using keywords “osteopathy and mood disorders” in EBSCO database (available online at http://web.ebscohost.com/ehost/search ) retrieved no citations or articles. This study begins to fill this gap in the literature.

**Aims of this study**

The aims of this study are as follows:

a) Exploration and description of how osteopaths in New Zealand identify mood disorders in patients.

b) Exploration and description of how osteopaths in New Zealand assess mood disorders in patients.

c) Exploration and description of how osteopaths in New Zealand manage mood disorders in patients.

d) Exploration and description of the kinds of specific education osteopathic practitioners had previously in terms of psychological issues such as mood disorders.

e) Identification of education they wish to receive further in this respect.

f) To consider the implications of the findings in the context of the discipline of Osteopathy.
An overview of the chapters to follow

This thesis has been written in six chapters. Chapter two reviews the literature which discusses the aetiology of mood disorders, the co-morbidity associated with mood disorders and management of mood disorders (pharmacological and manual therapy).

Chapter three details the methodology used, the sampling techniques, the methods for data collection, the design for data analysis and ethical issues involved in this research study.

Chapter four presents the findings (quantitative and qualitative) of this study. In Chapter five, the findings are discussed with relation to the literature reviewed in Chapter two and relevant emerging literature.

Chapter six presents the implications of this study to the osteopathic profession, the strengths and limitations of this study and suggestions for further research.
Chapter Two - Review of Literature

Introduction

This literature review introduces the reader to the aetiology, pathophysiology and management of mood disorders. Further it shows the link between mood disorders and a number of physical/mental conditions. Except for a study done by Plotkin et al. (2001), there is a general scarcity in osteopathic literature with regard to mood disorders. Hence literature from allied health disciplines such as massage, nursing and chiropractic have been reviewed.

2.1 Aetiology of mood disorders

The aetiology and pathophysiology of mood disorders is poorly understood. Studies indicate that genetic and environmental factors contribute to the risk for developing depressive disorders and bipolar disorders (Drevets, 2001). Mood disorders are among the most prevalent diagnostic category of all mental health diagnoses and major depressive disorders (MDD) has been found to be the most prevalent of mood disorders (Waraich, Goldner, Somers, & Hsu, 2004). Compared with the general population anxious youngsters have an increased rate of behavioural and mood problems (Puskar, Sereika, & Haller, 2003). Depression is found to be common after cerebro-vascular accidents (CVA), affecting around 50% of CVA patients (Eastwood, Rifat, Nobbs, & Ruderman, 1989). Patients with organ system disease are frequently troubled by co-morbid mood disturbances (depression, anxiety), agitation and difficulties in thought processing (Baron et al., 2003).

2.2 Traumatic brain injury and mood disorders

Traumatic brain injury (TBI) often results from serious injury/physical trauma and almost half of them are caused by motor vehicle accident (Jones, Harvey, & Brewin, 2005). About 1.5 million Americans sustain TBI each year with 80,000 to 90,000 of patients experiencing long-term disability (Jorge & Starkstein, 2005). Jorge and
Starkstein (2005) studied the frequency of mood disorders with major depressive features during the first year following TBI and found that around 37% of people with TBI experienced major depression. Depression and anxiety are common in outpatients with TBI; patients with depression or anxiety tend to perceive their injury and cognitive impairment as more severe (Fann, Katon, Uomoto, & Esselman, 2000).

### 2.3 Schizophrenia and mood disorders

Mood disorders are found commonly in patients with schizophrenia and are associated with a poor outcome, an increased risk of relapse and a high rate of suicide (Azorin, 1995). Some studies have shown that 60% of individuals suffering from schizophrenia develop major depression at some point of time; whereas other studies state that 25% of people with schizophrenia may experience depression (Levinson, Umapathy, & Musthaq, 1999). Anti-psychotic medication appears to be the most effective treatment for acute exacerbations of schizoaffective disorder and schizophrenia with mood symptoms. Adjunctive anti-depressant treatments were also found to be effective (Levinson et al., 1999).

### 2.4 Mood disorders following cerebro-vascular accidents (CVA)

According to a study done over the 12 months following a CVA, mood disorders were more common in the stroke (CVA) patients than controls (House et al., 1991). In patients studied during the acute stroke period, around 50% had clinically significant depressions and a quarter had symptom clusters found in major depressive disorders (Robinson, Starr, Kubos, & Price, 1983). Some of the problems encountered included social withdrawal, apathy, self-neglect, irritability and pathological emotionalism (House et al., 1991). Post-stroke depressive disorders are multi-factorial and include both neurophysiological-neurochemical mechanism and psychological factors in their aetiology (Robinson et al., 1983).
2.5 Depression, mood and anxiety disorders

A person with Post Traumatic Stress Disorder (PTSD) is frequently diagnosed with concurrent depression, anxiety and mood disorders (Wang, Tsay, & Bond, 2004). Grinage (2003) opines that PTSD is more likely to develop in an individual with pre-existing depression or anxiety disorder. Depression may lead to emotional symptoms like feeling of low spirit, hopelessness, loss of interest, guilt, suicidal tendencies, and physical symptoms like changes in appetite, sleep and body movements (Wang et al., 2004). There is a positive correlation between PTSD and anxiety, between PTSD and depression, and a negative correlation between PTSD and quality of life (Wang et al., 2004). PTSD may contribute directly to mood disorders (anger, impulsivity and mood episodes), social isolation and these factors may enhance the risk of suicidal tendencies (Otto et al., 2004).

2.6 Mood disorders and physical complaints

The role of somatic (physical) symptoms in patients with depression is thought to be under-estimated and under-recognized (Lecrubier, 2006). Lack of energy and fatigue is observed in approximately 73% of patients with depression. In addition, patients with depression commonly suffer from a number of somatic symptoms including back and chest pain, abdominal pain, headache, fatigue and weakness (Lecrubier, 2006). The majority of patients with somatic symptoms improve with in weeks; however, an important minority suffer from chronic or recurrent symptoms. Symptoms such as low back pain, headache and musculoskeletal pain has been found to have an even higher persistence rate of 35% to 40% (Kroenke, 2003). Presence of somatic symptoms may present an ‘opening’ for the primary care practitioner to inquire about co-existing psychological distress (Kroenke, 2003).
2.7 Mood disorders and regional pain syndromes

Many patients with psychological distress may present with individual somatic symptoms such as back pain, dizziness or dyspnöea whereas others present with common functional syndromes such as irritable bowel syndrome (IBS), fibromyalgia (FM), chronic fatigue syndrome (CFS) and temporomandibular disorder (TMD) (Kroenke, 2003). Fibromyalgia is a common musculoskeletal pain disorder characterised by widespread pain and muscle tenderness and often accompanied by sleep disturbances, fatigue and depression (Arnold, Keck, & Welge, 2000). Patients with fibromyalgia have been found to report elevated rates of depressive symptoms. Conversely, elevated rates of myalgia and musculoskeletal pain have been reported by patients with depression (Arnold et al., 2000). Presence of tender/trigger points is a characteristic feature of fibromyalgia and the diagnosis of fibromyalgia is made if 11 of 18 possible tender points are found during examination (American College of Rheumatology ACR, 1990). Kroenke (2003) suggests that the presence of somatic symptoms should heighten the practitioner’s suspicion of a depressive or anxiety disorder.

2.8 Mood disorders and headaches

The association between psychiatric disorders and headaches has been long explored; anxiety and depression being the common psychiatric disorder present in people experiencing headache. Migraine headaches are found to be more frequent in patients with a combination of anxiety disorders and major depression (Monginia, Cicconeb, Deregibus, Ferreroa, & Mongini, 2004). It was found that depression increases the vulnerability to tension type headaches and was associated with increased pericranial muscle tension (Janke, Holroyd, & Romanek, 2004). Monginia et al. (2004) conclude that the presence of anxiety and depression in patients with migraine increases the level of muscle tenderness in the head and even more in the neck. Hence it can be seen that mood disorders are not only associated with various headache patterns but also found to increase muscle tension which may be clinically palpable.
2.9 Identification and assessment of mood disorders

Identifying mood disorders in primary care has been shown to be difficult (Baron et al., 2003) and reports have confirmed that primary care practitioners identify less than half of the patients who meet the criteria for major depressive disorders and adequately treat only a portion of those they identify (Klinkman, 1997). Early identification and intervention is required to prevent hospitalisation or premature institutionalisation (Baron et al., 2003).

According to Kroenke (2003) a focused medical history and physical examination may provide most of the prognostic and diagnostic information in the majority of primary care patients with somatic symptoms. Hence good case history taking skills are essential for a primary care practitioner. According to Baron et al. (2003) primary care practitioners should be aware of the importance of “other” ABC’S (Affect, Behaviour and Cognition). They further suggest that a thorough evaluation of a patient involves asking a few basic screening questions. For example, “How are things at home?” “How is your sleep?” In his study, Nasrallah (2003) reported that osteopaths in New Zealand are good in identifying clients with psychosocial stress. However, there is no literature available to understand how osteopaths identify mood disorders in their clients.

Assessment plays a key role in managing clients with mood disorders. Numerous validated and reliable scales are available to evaluate the psychological status of an individual and many of these tests are self-administered (Baron et al., 2003). Psychiatric screening questionnaires (SQ) have been suggested as possible instruments for improving clinical decision making for clients with mood disorders (Christensen et al., 2005). Lucas (2005) reviewed the role of psychosocial factors in osteopathic practice. He suggests the use of questionnaires in patients with sub-acute pain; however he opines that questionnaires may not be helpful while assessing patients with acute symptoms.

Spinal palpation has been utilized by manual therapists including osteopaths, chiropractors and physiotherapists for assessing neuro-musculoskeletal dysfunction
As shown previously, depression and regional pain syndromes such as fibromyalgia are interrelated with characteristic trigger point formation (Clauw & Crofford, 2003). Hence, the presence of clinically palpable tender points may provide useful clues and tissue palpation may serve as an assessment tool for manual therapy practitioners such as osteopaths.

Cranial rhythm or cranial rhythm impulse (CRI) can be described as a slow pulsatile movement that the body exhibits. The CRI is held at the centre stage by osteopaths practising cranial osteopathy/cranio-sacral therapy. It is believed that the cerebrospinal fluid (CSF) is produced in pulses; this pulse of fluid against the compliant skull is the source of CRI (McPartland, 1996). The rate of CRI has been shown to be reduced in individuals with depression (Lay & King, 2003; Plotkin et al., 2001). In their study, Plotkin et al. (2001) found that CRI increased in patients with depression who received osteopathic treatment (8.83 cycles/min post-treatment as against 6.2 cycles/min pre-treatment). Plotkin et al. (2001) further opine that CRI may serve as an assessment tool in dealing with individuals with depression.

2.10 Treatment for mood disorders

Assisting people to recover from a mood disorder remains a major challenge in mental health rehabilitation (Powell, Yeaton, Hill, & Silk, 2001). Continuing symptoms and recurrent episodes are common even with state-of-the-art care and strict adherence to the recovery program (Powell et al., 2001). The American Psychiatric Association (APA) published guidelines for the treatment of bipolar disorders in 2002, which recommend a series of steps including diagnostic evaluation of the patient, safety assessment and therapeutic alliance with the patient (Lewis, Kass, & Klein, 2004).

Bipolar disorders present a formidable challenge to the clinician making a treatment plan as its course tends to be chronic, complex and episodic (Sachs, 1996). The treatment is not always completely effective and is never curative. The goal of treatment should be to modify symptomatic expression of the illness so that fewer, briefer and milder episodes occur (Sachs, 1996).
2.11 Pharmacological and psychological therapies

The pharmacotherapy approach can include the use of tricyclic antidepressants, benzodiazepines anticonvulsants, anti-psychotic medication and mood stabilizers (Baron et al., 2003). More recently prescriptions of selective serotonin reuptake inhibitors (SSRIs), Divalproex sodium and atypical antipsychotic medications are gaining popularity (Baron et al., 2003). Newer agents such as valproate and olanzapine are being frequently used (Morris, 2003). A meta-analysis done by Bauer, Dopfmer and Franklin (1999) concluded that for depressed patients who fail to respond to anti-depressant therapy, lithium augmentation to the treatment regimen is the procedure of choice.

Weissman and Markowitz (2003) report that psychotherapy visits for patients with a primary diagnosis of mood disorder have become more common in the last decade. The efficacy of interpersonal psychotherapy (IPT) and cognitive behavioural therapy (CBT) in reducing symptoms comparable to psychotropic medication have been demonstrated (Prien & Kocsis, 2000; Weissman & Markowitz, 2003). Weissman and Markowitz (2003) conclude that psychotherapy will remain a strong component of the clinical treatment for mood disorders.

2.12 Innovative methods for treating mood disorders

Although Electroconvulsive Therapy (ECT) remains widely used, several new non-pharmacological treatments for depression are under investigation (Eitan & Lerer, 2006). All these novel techniques involve brain stimulation by different technological methods. Transcranial magnetic stimulation appears to be closest to the threshold of clinical acceptability; however its efficacy has still to be definitively established (Eitan & Lerer, 2006). Other modalities include magnetic seizure therapy (MST), deep brain stimulation (DBS) and vagus nerve stimulation (VNS) (Eitan & Lerer, 2006).
2.13 Complementary medicine and mood disorders

A complementary medicine is one which involves practices and beliefs that are not generally upheld by the dominant health system in the western world (Jorm et al., 2004). These therapies include massage, acupuncture, homeopathy, exercise therapy, yoga and meditation. Anxiety and depression show considerable co-morbidity: prolonged anxiety is considered to be an important factor in the aetiology of depression. Hence it is expected that treatment that works for anxiety would also work for depression (Jorm et al., 2004).

2.14 Massage therapy and mood

Massage is usually done by a trained massage therapist or physiotherapist; it involves smooth muscle rubbing and soft tissue techniques, especially the back, shoulders and neck (Jorm et al., 2004). Few studies have been identified in demonstrating the effectiveness of therapeutic massage in patients with mood variations. Three studies which were considered relevant are discussed below.

Study 1:

Therapeutic massage has been shown to improve short-term mood and long-term behavioural problems in children and adolescents (Khilnani, Field, Reif, & Schanberg, 2003). Khilnani et al. (2003) demonstrated the effectiveness of massage in students diagnosed with attention deficit/hyperactive disorder (ADHD). 30 students between the ages of 7-18 were randomly assigned to massage group and control group. Massage therapy was administered twice per week for a period of one month (8 sessions). Short term measures included the measurement of oral cortisol levels (for stress) and pictorial self reports (for mood). A long-term measure used was the Conners teacher rating scale. Students who received massage therapy showed short-term improvement in mood state and long-term improvement in class room behaviour (Khilnani et al., 2003). The study seems to have addressed the issues of internal validity, selection bias and blinding; however the sample size is very small to be able
to make any significant conclusions. Further, it was not done on patients with mood disorders. Khilnani et al. (2003) suggest that further studies are required to determine the effectiveness of massage in patients with chronic mood disorders.

Study 2:

Massage therapy has been shown to effectively reduce stress, improve mood and better sleep (Field, Diego, Reif, Schanberg, & Kuhn, 2004). Eighty four pregnant women with depression were recruited during the second trimester of pregnancy and randomly assigned to a massage therapy group, a relaxation group and a standard care group. These groups were compared to each other and to a group without depression at the end of pregnancy. Field et al. (2004) proposed that massage therapy would be beneficial to pregnant women and their off-spring by decreasing anxiety and depression. However this study was done on women who were pregnant, hence the external validity or the generalisibility of these findings for women who are not pregnant and men may be debatable.

Study 3:

In another study, Field, Seligman and Schanberg (1996) assigned sixty grade school children into massage and video attention control groups to study the effectiveness of massage in alleviating PTSD following hurricane Andrew. After an intervention period of one month they found that massage therapy group was superior on several measures of anxiety. The children in massage group reported being happier, less anxious and had lower salivary cortisol levels. The researchers also suggested that massage could be a cost-effective treatment if it could be taught to parents (Field, Seligman, & Schanberg, 1996). A limitation of this study is its generalisability in adults, as more study is warranted to find the effectiveness of massage in adults with PTSD and mood disorders.
2.15 Osteopathy and mood disorders

The principles of osteopathy emphasise that good clinical care does not focus solely on specific dysfunctional organ systems rather the entire patient is treated (Baron et al., 2003). The biopsychosocial model of illness explains that ill health and disease are the result of an interaction between biological, psychological and social factors (Brown, Bonello, & Pollard, 2005). Treatments including osteopathy comprise physical, social and psychological components. The beneficial effect of massage is believed to be mediated by positive expectation, caring touch and interaction with the therapist (Taylor et al., 2003). A treatment session in osteopathy involves all the three (positive expectations, caring touch and interaction with therapist). Therefore osteopathy may have similar effects to those of massage.

Plotkin et al. (2001) assessed the impact of OMT as an adjunct to standard psychiatric treatment of women with depression. Seventeen pre-menopausal women with newly diagnosed depression were randomly assigned to either control (osteopathic structural examination) or treatment (OMT) group. The study was undertaken over a period of 8 weeks, participants’ immunological and psychological statuses were measured before and after treatment. The psychological status was measured using the Zung Depression Scale and the immunological status was assessed by measuring endogenous patient levels of cytokines (IL-1, IL-10, IL-2, IL-4, and IL-6).

OMT treatment included a wide range of techniques. Low-impact techniques, such as soft tissue and fascial release techniques were opted by most clinicians and were performed on a find and fix basis. After 8 weeks, 100% of the OMT treatment group and 33% of control group tested normal by psychometric evaluation. However, there were no significant differences between the control and treatment groups at the end of the study in terms of immunological status. Plotkin et al. (2001) opined that it would be too early and presumptory to make conclusions concerning the efficacy of OMT as an adjunctive therapy for treating depression. They recommended the use of a broader patient population in future studies and also to focus more closely on the changes observed in cranial rhythm. Notwithstanding the small sample size and the limited
generalisability of the findings, the study is a starting place for further investigation into the question of OMT as a treatment for mood disorders.

Chapter Summary

This chapter reviewed and presented the literature available in terms of mood disorders and its management. It also presented and discussed the various studies done in manual therapy with regard to mood disorders. From the literature available it is clear that early identification of mood disorders is extremely important and the use of psychiatric screening tools is recommended to primary care practitioners. The next chapter presents the methodology used in conducting this study.

Chapter Three - Methodology and Methods

Introduction

This chapter describes the methodology and methods used in this study. It describes the research design and the mixed methods used for collecting data. The ways in which data were collected and the instrument used are described. Further the data analysis procedure used and the validity in using those procedures are outlined. The chapter concludes by explaining the various ethical issues involved in this study.

3.1 Methodology

3.1.1 Research design

The present study was based on a descriptive/exploratory survey design combining quantitative and qualitative methods for data collection and analyses. Descriptive studies examine one or more characteristics of a specific population, on the other hand exploratory studies allow the researcher to do an in-depth exploration of a single process (Wood, Kerr, & Brink, 2006). Since the aim of this research is to describe as well as critically explore a specific population of osteopaths, this design was selected.
Advantages of descriptive research design are as follows,

- In descriptive research a phenomenon is specified, delineated or described without experimental manipulation (Seliger & Shohamy, 1990). Hence this design accentuates the aims of this study.
- Descriptive research shares characteristics of both qualitative and quantitative research designs (Seliger & Shohamy, 1990). Using this design yielded rich data which was then analysed.
3.1.2 Mixed methods

The present study can be considered a mixed method research study as it combines both quantitative and qualitative research methods. The advantages of this integrated design as outlined by the Polit and Beck (2006) are as follows:

*Complementarity:* The strengths and weaknesses of these two types of data and the associated methods are complementary to each other.

*Incrementality:* Qualitative findings can generate hypothesis that can be subsequently tested quantitatively, and quantitative findings can be clarified through in-depth probing. In this study qualitative data were used along with quantitative data (deleted so has) to enhance the findings.

*Enhanced validity:* The researcher can be confident about the validity of the result as the findings are supported by multiple and complementary types of data.

*Suggesting new frontiers:* When the findings from a single study using mixed method are inconsistent, such discrepancies can lead to insights that need further inquiry (Polit & Beck, 2006, p. 245).

3.2 Sampling

3.2.1 Sampling frame for the present research

Sample frame refers to the set of people who have the chance of being selected and a sample can be only representative of the population included in the sample frame (Fowler, 2002). According to Bradley (1999) two ways of constructing a sample frame has been identified.

- ‘Internal’ whereby potential participants/respondents are identified via the internet itself – either as visitors to websites or amongst listings of email addresses.
• ‘External’ whereby respondents are identified elsewhere – paper directories, advertisements in newspapers/magazines.

**Inclusion criteria**: A combination of both internal and external ways was used in this study to construct the sample frame. The sample frame was drawn from the target population of all registered osteopaths in New Zealand whose email addresses were listed in the public domain. A total of 216 email addresses of osteopaths that were publicly available were identified and a database was created. To ensure that potential participants were registered osteopaths and currently practising, their names were cross-checked as listed in the register of Osteopathic Council of New Zealand (OCNZ). The osteopaths who fitted the inclusion criteria were invited to participate in this study.

### 3.3 Method for data collection

#### 3.3.1 Surveys

Survey is the most common descriptive research method used and may include questionnaire, interview and normative surveys. The survey tool that was used to collect information in this research project was a questionnaire (with closed and open ended questions) with web-based mode of delivery. When existing information is not available to answer the question posed, a questionnaire may be considered as an appropriate method of data collection (Thomas, 2004). The advantages of using a questionnaire as outlined by McNabb (2004) are as follows.

**Advantages of using a questionnaire:**

- Considerable flexibility so as to meet the objectives of any research project
- Questionnaires can be designed to gather information from any group of respondents
- They can be easily administered through various ways (face-to-face, over the telephone, by mail and over computer networks).
- They can be used to measure respondent’s factual knowledge about a thing or can be used to measure peoples’ attitude, opinions or motives.
3.3.2 Internet survey tool

Internet surveys have become increasingly popular and are a relatively new form of self administered survey with many similarities to mail surveys, but also with some important differences (Czaja & Blair, 2005). Data collection using websites has been done before in many studies. For example, Thomas et al. (2001) established a website with a questionnaire to collect data from an international sample of women about their perceptions of breast health education and screening (as cited in Polit & Beck, 2004).

Advantages of internet surveys:

Reach: One of the main advantage of online questionnaires is the ability of the internet to provide access to individual or groups who are otherwise difficult to reach (Wright, 2005).

Convenience: The respondent can choose their convenient time to complete the questionnaire whenever they want to. No scheduled appointment is necessary (Woods & Zemke, 1998).

Cost: Internet surveys not only eliminate the cost of interviewer in face-to-face and telephone surveys, but also paper, questionnaire reproduction, postage and data entry costs of mailed surveys. Irrespective of the sample size, the cost of data collection is relatively less compared with mail surveys. Follow-ups can be done with little extra cost.

Speed: Another advantage of internet surveys over other survey methods is the speed of data collection. Typically 10 to 20 days is the standard data collection period for internet surveys.

Special features: Web-based questionnaires have many specialised features which are easy to follow for the respondent. These features include number of visual aids such as pop-up instructions, drop down lists, pictures, videos and animations.
Qualitative information: Web-based questionnaires increase the ability to obtain reasonably complete and detailed responses for open ended questions (as cited in Czaja & Blair, 2005, p. 41-42).

3.3.3 “Survey monkey”™ – The internet host:

The internet service/web site that was used to host the questionnaire for this research was “survey monkey”™ available online at [http://www.surveymonkey.com/](http://www.surveymonkey.com/). The basic features of this website include designing the survey, collecting responses and analysing the response.

Designing the online survey using “survey monkey”™:

The website allows three easy ways to create a new survey and this can be done by clicking the ‘create survey’ button. Though there are standard templates available, the survey used in this research was custom-made by the researcher. The website allows over a dozen types of questions to choose from (Eg: multiple choices, rating scales, matrix of choices, etc) and various themes (font size, style, colour and effects) which were effectively made use of in this study.

Collecting responses using “survey monkey”™:

The website allows three different ways of collecting responses. The first way is by creating a web link and sending an email message to the respondents or by placing the link on a web page that most people often visit. The second option is by uploading all the respondents’ emails and creating a database with their name and their custom value. The custom value is a unique number allocated to every respondent, so as to track and delete their replies if they decided to pull out at a later stage. The website also has features which highlight whether a respondent has been sent a message or as he/she replied or he/she opted out of the study. An example of how the database looks is shown in Table 3.1
Table 3.1: Example of the Database (Address Book) Feature

<table>
<thead>
<tr>
<th>Opt-Out</th>
<th>Sent Msg</th>
<th>Responded</th>
<th>Email Address</th>
<th>First name</th>
<th>Last name</th>
<th>Custom Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️️️️️️️</td>
<td>✔️️️️️️️</td>
<td>✔️️️️️️️</td>
<td><a href="mailto:dizzle_osteo@yahoo.com">dizzle_osteo@yahoo.com</a></td>
<td>Simbu</td>
<td>Watson</td>
<td>2309</td>
</tr>
<tr>
<td>✔️️️️️️️</td>
<td>✔️️️️️️️</td>
<td>✔️️️️️️️</td>
<td><a href="mailto:starosteo@xtra.co.nz">starosteo@xtra.co.nz</a></td>
<td>Thambi</td>
<td>Clarke</td>
<td>2310</td>
</tr>
</tbody>
</table>

(Note: The email addresses and the names listed in table are fictitious)

Once the address book was completed with all details of the respondents (216 in this case), a message of request to participate in this study along with the information sheet was sent. In this second option, the website (survey monkey TM) sends the emails to the respondents. This was the method used in this study as it was easy and fast.

The third way is by creating a pop-up invitation on the researchers own web page or a website that people commonly visit. The website provides the code that can be used to create a pop-up invitation so that when respondents go through a web site the invitation will pop-up attracting their attention.

Analytical features provided by the online survey provider:

Various options such as browsing responses, filtering responses, sharing responses and downloading responses are provided to subscribers. Furthermore, an “edit response” option is also available. Data from a particular respondent could be traced back and deleted (if required) by using their unique custom value. Although it is easy to track back responses using the unique custom value that was allotted to each respondents, it was decided to use this option only if a respondent/s decided to withdraw from the study.

The online survey tool also provides summary of analysis reports. However the biggest advantage for a student researcher is that all the data are coded, facilitating the raw data being downloaded in suitable formats to export to statistical software for in-depth analysis.
Internet surveys do have some disadvantages as well (Czaja & Blair, 2005). The biggest disadvantage is the difficulty in identifying the frequency of internet access by the respondents. It is extremely difficult to know how often respondents access the internet. An additional problem is the accuracy/currency of email addresses available. As many as 17 respondents who volunteered to participate in this survey had permanent errors in their email system. It is unknown whether their email ids were erroneous or changed and not updated since registration on OCNZ, or whether there were server problems or whether they had not accessed their emails for long periods of time. Low response rate and potential response bias is another disadvantage for internet surveys. Hence, a combined approach was used to collect data in this study using both internet survey and mailed survey.

3.3.4 The questionnaire

Construction of the questionnaire for this study was guided by the recommendations outlined by Czaja and Blair (2005, p. 43). An internet survey:

- Should be relatively short
- Should take no longer than 15 minutes to complete
- Should be completely self-explanatory as there is no interviewer to explain the confusing or complex questions or instructions
- Should appear the same to all respondents.

Construction of the questionnaire:

The questionnaire consisted of 46 questions, divided into three sections, comprising yes/no type, multiple choice items, rating scales and open ended questions (See Appendix A). A similar questionnaire designed by Nasrallah (2003) guided the construction of this questionnaire.
Demographic section: Seven questions were designed to ascertain gender, years in osteopathic practice, country and institution of osteopathic training, qualifications other than osteopathic training and region of practice in New Zealand.

Practice in relation to mood disorders: Twenty-eight questions were sequentially framed with an aim to explore how osteopaths identified the need to address mood disorders while taking the case-history of clients, and the process of assessing and managing clients with mood disorders. Some questions were designed to identify how osteopaths modify their assessment and management plans. For example, Question 35 asked respondents, from your experience what are the difficulties in managing these clients?

Education in relation to mood disorders: This section comprising eleven questions, explored respondents’ previous education with regard to mood disorders and their attitude towards further education with regard to mood disorders.

3.3.5 Pilot study

A pilot study was undertaken before the actual data collection process. Pilot studies are a crucial element of a good study design and allow specific pre-testing of a particular research instrument (Teijlingen & Hundley, 2001). Thomas and Nelson (1990) opine that a pilot study is recommended for any type of research but is imperative with a survey. Teijlingen, Rennie, Hundley and Graham (2001, p. 293) explain the importance of conducting a pilot study. The reasons are summarized below.

Reasons for conducting a pilot study:

- Developing and testing adequacy of research instruments.
- Assessing the feasibility of a (full-scale) study/survey.
- Designing a research protocol.
• Assessing whether the research protocol is realistic and workable.
• Establishing whether the sampling frame and technique are effective.
• Assessing the likely success of proposed recruitment approaches.
• Identifying logistical problems which might occur using the proposed methods.
• Estimating variability in outcomes to help determining sample size
• Collecting preliminary data.
• Determining what resources (finance, staff) are needed for a planned study.
• Assessing the proposed data analysis techniques to uncover potential problems.
• Training a researcher in as many elements of the research process as possible.

Though conducting a pilot study does not guarantee success in the main study, pilot studies can provide useful insights for the principal researcher and other researchers. In accordance with this principle, a pilot study was done not only to test the instrument (questionnaire) but also to get feedback as what osteopaths feel about the questionnaire and ways to improve it.

For the pilot study, the questionnaire was administered on a selected sample of few osteopaths. Six osteopaths were selected from Unitec New Zealand’s osteopathic clinic for this purpose. A feedback sheet was provided for the respondents to comment on (see Appendix C). The osteopaths who completed the pilot questionnaire expressed satisfaction and gave some interesting feedback. Based on the feedback from the pilot study a few questions were re-worded and a few questions were re-arranged.

One osteopath did feel that mood disorders are out of scope of osteopathic practice and felt that not many osteopaths come across clients with mood disorders. However considering that osteopathy addresses the body as a single unit and minimal research on this topic, this research may be considered timely and relevant, for both the national audience, and internationally.
3.3.6 Data collection

Following the pilot study, an email containing an information sheet and a web link to the questionnaire was sent to all 216 potential respondents. Initially a time frame of 14 days was set for respondents to complete the online questionnaire. The response rate after a week was very low, so a reminder email was sent to all the potential participants who had not responded.

The response rate even after 14 days was still not encouraging (only 10%); hence a second email requesting participation was sent to all participants and the deadline further extended by two weeks. It was vital for the validity of the study to have more respondents, so the hardcopy version of the questionnaire and information sheet (refer Appendix B) were mailed (with postage-paid return envelopes) to participants who had not responded. In this way attempts were made to reduce response bias and overcome the emerging trend of a lower response rate. Following these measures, the response rate steadily increased and the final response rate was 29% (n = 62). Those participants who wished to withdraw from the study were requested to do so within two weeks of submitting the questionnaire (i.e. before the process of data analyses). However, none of the participants made this request.

3.4 Data analysis

Quantitative data analysis was based on descriptive and inferential analytical techniques. Descriptive analysis can be used when data from specific samples (osteopaths in this study) are analysed (Buchsel & Whedon, 1995). Descriptive statistics describes or characterizes the data by summarizing them into more understandable terms without losing too much information (Munro, 2004). Summary tables, frequencies, charts and percentages are used for this purpose (Munro, 2004). In contrast, inferential statistics provide predictions about population characteristics based on the information provided by the samples (Munro, 2004). In the present study, the non-parametric technique of Chi square test for relatedness or independence was the preferred option for inferential analysis (Coakes, 2005), to assess the
emerging relationship between the major independent and dependent variables. The
data were processed into nominal and ordinal scales which yield non-parametric data.
Non-parametric data are derived from a sample of population where few or no
assumptions are made about its characteristics or distribution (Cohen, Manion, &
Morrison, 2000). The authors state that questionnaires and surveys often yield non-
parametric data as is the case with this internet survey. Further, exploratory analysis
using Shapiro-Wilk test revealed that the normality assumption cannot be considered.
The assumptions underpinning the choice of Chi square as the statistical technique are
as follows (Coakes, 2005; Peers, 1996):-

- Data is in the form of frequency counts
- Interest focuses on how many participants fall into the different categories
- Independence of observations
- Observations are representative of the population of interest
- The overall sample size should be equal or greater than twenty

The software package of Statistical Package for the Social Sciences (SPSS) for
Windows was used to analyse the quantitative data. Thematic analysis was the
method of choice to analyse qualitative data given the exploratory nature of this
research (Rice & Ezzy, 1999). Thematic analysis is a process for encoding qualitative
information and allows a researcher using quantitative methods to incorporate open
ended measures or forms of information collection into their design (Boyatzis, 1998).
Thematic analysis is a process used as a part of many qualitative research methods
(Boyatzis, 1998). Although this study did not involve interviewing the participants,
rich qualitative data was retrieved from the survey that required repeated immersion
into the data before any coding occurred (Thorne, Kirkham, & MacDonald-Emes,
1997). Repeated immersion into the data allows for synthesising, conceptualizing and
re-contextualizing rather than merely sorting and coding (Thorne et al., 1997). This
process of repeated refinement enhances the thought, reflection and research (van
Manen, 1997). Further more Thorne et al. (1997) recommend ‘immersion’ into the
data for deeper and meaningful analytic interpretation.
According to Boyatzis (1998, p. 4) thematic analysis can be used for a variety of purposes. It can be used as:

- A way of seeing
- A way of analysing qualitative information
- A way of making sense out of seemingly unrelated material
- A way of systematically observing a person, an interaction, a group, a situation, an organisation, or a culture
- A way of converting qualitative information into quantitative data.

The two most important questions as outlined by Thorne et al. (1997) that were used to guide thematic analysis were “What is happening here?” and “What am I learning about this?” A chart was prepared with all major themes and sub themes and a repeated in-depth analysis of the data was performed.

3.5 Ethical issues

3.5.1 Participation and implied consent

This research study was conducted following approval from Unitec New Zealand’s research ethics committee (UREC registration number: 2007. 719). All participants were informed about the aims of the study when they were invited to participate. The definitions of mood disorders used for the study were also included (refer Appendix A). Once they volunteered to participate, implied consent was applicable, which was stated in the information sheet (refer Appendix B). Hence no separate consent form was provided.

3.5.2 Anonymity and confidentiality

The participant’s right to privacy (anonymity and confidentiality) was respected at all stages during this research. Considering the study was done using the internet, one could argue that it is easy to identify the participants. However, every effort was taken in order to maintain a degree of anonymity. Also, since the respondents can choose
whether or not to provide their names web-based surveys like this study do allow for anonymity (Seale, 2004). Confidentiality was guaranteed by assigning unique identification numbers (custom value) for each participants, restricting the access to these identification numbers between the student, supervisors and participants and making sure that any participant’s identity is well disguised as described by Polit and Beck (2004).

3.5.3 Withdrawal from the study

All participants had the right to withdraw from the study and they were requested do so within two weeks of submitting their questionnaire prior to the data having been analysed. However none of the participants withdrew from the study after submitting the questionnaire.

3.5.4 Storage and destruction of study materials

All information regarding the study was stored in locked cabinets, accessible only by the researcher and supervisors. All computer files regarding this research have been password protected and are accessible only by the student. In accordance with Unitec New Zealand’s regulations on research project, the data collected and computer files will be kept for five years before secure disposal.

3.5.5 Dissemination of findings

The findings of this study will be disseminated in the following ways,

- The abstract of the study will be emailed to all participants.
- A copy of the whole study will be held at Unitec library.
- Presentation will be made within the school and to external stakeholders at conferences.
- An article will be submitted for publication.
Chapter Summary

One of the major strengths of the present research has been a rigorous attempt to invite all practising osteopaths from New Zealand as respondents, thereby enhancing the validity of the study. This study is both topical and timely since minimal research has been undertaken in exploration of mood disorders among osteopathic patients. The next chapter presents the results from data analyses. Data were analysed using both quantitative and qualitative methods. The findings are described and interpreted to illustrate how osteopaths in New Zealand identify, assess and manage clients with mood disorders.
Chapter Four: Results

Introduction

This chapter is divided into six sections. The first section presents descriptive analysis of demographic information of the respondents in terms of gender, years of osteopathic experience, country of training and institution of training. The second section presents the analysis of assessment procedures (case history, use of assessment tools) adopted by respondents. In the third section, the management of mood disorders by respondents is analysed inclusive of adopting and or adapting treatment approaches, advice and referral. The fourth section focuses on analysis of previous education of respondents in areas related to mental health, responses to the assessment and management of mood disorders and their views on further education. The fifth section presents the findings of cross tabulation (inferential analysis) of demographic data with major variables. The final (sixth) section presents the findings of descriptive and thematic analysis of the qualitative data presenting the major themes and sub-themes.

4.1 Demographic data analysis

4.1.1 Participation rate and gender

Out of 216 participants invited to complete the survey, 58 completed the online version and 4 opted to complete the hardcopy survey. This equates to a return rate of 29%. Fifty two percent (n=36) of respondents were males and 48% (n=26) were females.

4.1.2 Years in osteopathic practice

The majority of the respondents, 73% (n= 45), who participated in the study had more than 6 years of experience. Fifteen percent (n= 9) of respondents had 3 to 6 years of experience. The rest, 13% (n= 8) of osteopaths had 0 to 3 years of experience.
4.1.3 Country and institute of education

More than half the respondents, 55% (n=34) received their osteopathic education in the United Kingdom (UK). The majority of these respondents received their education in one of the three institutions, the British School of Osteopathy (BSO), British College of Naturopathy and Osteopathy (BCNO) or the European School of Osteopathy (ESO). Twenty three percent (n=14) of respondents received their education in New Zealand of which majority of them were educated at Unitec New Zealand. Nineteen percent (n=12) received their education in Australia, most of them at the Royal Melbourne Institute of Technology (RMIT). Table 4.1 summarizes the details of various institutes/schools of education of the respondents.

Table 4.1
Institute/School of Education of Respondents (N= 62)

<table>
<thead>
<tr>
<th>Institute/school of education</th>
<th>Number of respondents (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>British College of Naturopathy and Osteopathy</td>
<td>10</td>
</tr>
<tr>
<td>British College of Osteopathic Medicine</td>
<td>02</td>
</tr>
<tr>
<td>British School of Osteopathy</td>
<td>10</td>
</tr>
<tr>
<td>College of Osteopaths Educational Trust</td>
<td>01</td>
</tr>
<tr>
<td>European School of Osteopathy</td>
<td>07</td>
</tr>
<tr>
<td>International College of Osteopathy</td>
<td>01</td>
</tr>
<tr>
<td>London School of Osteopathy</td>
<td>03</td>
</tr>
<tr>
<td>Osteopathic College of New Zealand</td>
<td>05</td>
</tr>
<tr>
<td>Oxford School of Osteopathy</td>
<td>01</td>
</tr>
<tr>
<td>Pacific College of Osteopathy</td>
<td>01</td>
</tr>
<tr>
<td>Philip Institute of Technology</td>
<td>01</td>
</tr>
<tr>
<td>Royal Melbourne Institute of Technology</td>
<td>06</td>
</tr>
<tr>
<td>Unitec New Zealand</td>
<td>09</td>
</tr>
<tr>
<td>Victoria University</td>
<td>02</td>
</tr>
</tbody>
</table>

4.1.4 Qualifications other than osteopathic education

Nearly half of the respondents, 45% (n=28) had education only in osteopathy. However 50% (n=31) of respondents had qualifications in addition to osteopathic
training. These included courses or programmes in sociology, psychology (e.g. Diploma in Sociology, Masters in Psychology). Twelve (n=12) of these respondents (39%) with additional qualifications had a Bachelor’s degree, 29% (n=9) had diploma, 16% (n=5) had post-graduate diploma, 10% (n=3) had a National level Certificate and 7% (n=2) had Master’s degree. Some of the courses include Masters in Pain Management, Diploma in Naturopathy, Bachelors in Chemistry (BSc chemistry), Post-graduate Diploma in Sports Medicine and National Certificate in Teaching.

4.1.5 Years and region of practice in New Zealand

More than half the respondents 55% (n=35) had been practising in New Zealand as osteopaths for more than six years, 23% (n=14) with 3 to 6 years and 20% (n=12) for 0 to 3 years. The majority of the respondents had their practice located in Auckland (37%, n= 23) or Wellington (15%, n= 9). Other regions of practice include Hamilton, Whangarei, Christchurch, Wellington, Dunedin and Nelson.

4.2 Assessment

This section details analyses of the following variables:

- Reported frequency of clients with mood disorders.
- Perceived need to identify mood disorders.
- Consideration given to mood disorders.
- Influence on assessment of a documented history of mood disorders.
- Assessment procedures used by osteopathic practitioners.
- Use of specific osteopathic tools for assessment.
4.2.1 Frequency of clients with a reported or known history of mood disorders

Half of the respondents (50%, n= 31) were treating clients with mood disorders ‘often’, 10% (n = 6) of respondents were treating client’s ‘very often’ and 31% (n = 19) were treating clients with mood disorders ‘rarely’. The remaining respondents were treating patients with mood disorders every ‘now and then’ or ‘occasionally’. (See Figure 4.1 for details).

![Frequency of treating clients with mood disorders](image)

*Figure 4.1: Frequency of clients with mood disorders as reported by respondents*

4.2.2 Identification and consideration of mood disorders:

Almost two-thirds of the respondents (73%, n = 45) felt the need to identify mood disorders that may not be reported in the case history. The rest 27% (n = 17) reported various reasons for not investigating this issue further. Of those respondents who felt
a need to identify mood disorders in their clients, 82% (n = 36) of respondents gave moderate consideration to this need. Five respondents (11%) gave maximum consideration whereas three respondents (7%) gave minimum consideration. All respondents with qualifications in the field of mental health reported the need to identify mood disorders in their clients compared to respondents without qualifications in mental health.

4.2.3 Influence on assessment

Most of the respondents (79%, n = 49) reported that a client’s history of mood disorders will influence the way they assess the client. Nineteen percent (n = 12) of respondents, however, felt otherwise. The reasons given by respondents for lack of influence on assessment are discussed in detail in section 4.6.1.

4.2.4 Assessment procedures used

*Questioning*: More than two-thirds of respondents (84%, n = 52) questioned the clients regarding mood disorders. Seven respondents (12%) reported that they did not question clients on this issue. All female respondents reported questioning their clients about this issue compared to 78% of male respondents.

*Screening tools*: Only seven respondents (11%) used specific mental health screening tools; 86% (n = 53) did not use any. The screening tools used included standard mood questionnaires, psychometric tests and ‘other tools’. Mood disorder questionnaires were found to be used more by practitioners with qualifications in the field of mental health. One possible explanation for this is that these practitioners would be more familiar with these questionnaires than other practitioners.
4.2.5 Use of specific osteopathic/manual diagnostic tools by osteopaths in clients with mood disorders

Almost half of the respondents (45%, n = 28) reported using specific osteopathic/manual diagnostic tools for assessment of clients with mood disorders, while 54% (n = 33) reported that they did not use specific tools. The gender of practitioners was found to be a significant variable in terms of using specific osteopathic tools for assessment. While 64% of female respondents reported using specific osteopathic diagnostic tools in assessing clients with mood disorders, only 32% of male respondents were using specific osteopathic tools for assessment. Respondents with qualifications in the field of mental health were also found to use cranial rhythm as a diagnostic tool more often than practitioners without qualifications in mental health.

*Tissue palpation:* More than one-third (79%) of respondents reported using tissue palpation as a specific diagnostic tool in clients with mood disorders.

*Cranial rhythm:* Cranial rhythm was used as a specific diagnostic tool by 79% of the respondents. Fifty two percent of female practitioners preferred to use cranial rhythm as a diagnostic tool compared with 26% of male practitioners.

*Other tools:* The other tools used by respondents included hair element analysis, body talk system, decompression evaluation of lumbar/sacral area and sub-occipital region, Fulford’s concept, kinesiology, neuro-links, neuro integration system, observation, posture, range of motion and sense of integration.

4.3 Management of mood disorders

In this section the variables analysed include:

- Reported frequency of management of clients with mood disorders by osteopaths
- Treatment approaches adopted
- Advice given to clients with regard to management of mood disorders
• Adapting treatment approaches in clients with mood disorders
• Practitioner beliefs in the efficacy of osteopathic treatment in dealing with clients with mood disorders
• Referring clients to other programme/practitioner
• Difficulties in managing clients with mood disorders

4.3.1 Reported frequency of management by osteopaths

Where a client had a documented history of (or ongoing) mood disorders, most of the respondents (74%, n = 46) reported that in the course of providing osteopathic treatment they helped their clients in dealing with mood disorders. However, 21% (n = 13) reported otherwise. The reasons for not helping clients in managing mood disorders are presented in section 4.6.1.

4.3.2 Treatment approaches

Of the respondents who intended to help the clients with their mood disorders, 31% (n = 19) preferred specific treatment approaches for these clients. Thirty nine precent (n = 24) of respondents did not adopt any specific treatment approaches, rather they used the same treatment approaches they would use for any of their clients. Among those who intended to help their clients, a combination of treatment techniques was preferred by the majority of practitioners (61%) followed by cranial techniques (53%), structural techniques (32%) and visceral techniques (16%). See Figure 4.2. This augurs well for the fact that osteopaths are taught a range of different techniques and osteopathy philosophy emphasises using different/combination of techniques depending on patient presentation.

The other ways used by respondents to manage these clients included discussion about the coping mechanisms used by clients, establishing a good environment of communication, general suggestions, setting goals for clients, yoga, philosophy of living, referral, supplementation and nutritional advice.
Figure 4.2: Treatment techniques preferred by respondents in clients with mood disorders.

4.3.3 Advice given to clients

More than half of the respondents (65%, n = 40) stated that they offered advice to their clients regarding treatment options of mood disorders as part of the management process. However, 10% (n = 6) of the respondents stated that they did not give advice to their clients. The rest 25% (n = 16) did not answer this question. Of those who offered advice to their clients, 83% advised relaxation techniques, (38%) advised behavioural therapy and 38% advised psychological therapy. Twenty-nine percent of respondents advised pharmacological therapy. Other therapies advised include Fulford’s concept, yoga, meditation, exercise, diet, nutrition, neural integration system, trigger recognition and life skills, visualization, life style and Rongoa Maori (traditional Maori healing). See Figure 4.3 for details.
Figure 4.3: Advice given by respondents to clients with mood disorders.

4.3.4 Adapting treatment approach

Fifty-five percent of respondents (n = 38) stated that they adapt their treatment approach when treating clients with mood disorders. The adaptations made by practitioners are summarised in section 4.6.1. Those who reported they did not adapt their treatment approach cited practitioner skills (lack of training & scope of practice) and client barriers as reasons.

4.3.5 Practitioner beliefs in the efficacy of osteopathic treatment in dealing with clients with mood disorders

Twenty five percent of the respondents ‘strongly agreed’ that osteopathy helps clients with mood disorder. Thirty seven percent of the respondents ‘agreed’ that osteopathy
helps, 28% of the respondents ‘neither agreed nor disagreed’ and 3% ‘disagreed’. Combining the ‘strongly agreed’ and ‘agreed’ responses, 62% of respondents believe in the efficacy of osteopathic treatment in dealing with clients with mood disorders. See Figure 4.4.

Figure 4.4 Practitioner’s belief that osteopathy helps in the management of mood disorders.

4.3.6 Referring clients to other programmes/practitioners

Most practitioners (81%, n = 50) responded that they refer clients with mood disorders to some other practitioners/programmes. A few (10%, n = 6) responded in the negative. Of the practitioners who referred on their clients, 84% referred clients to their general practitioner (GP), 78% referred clients to a psychologist/counsellor, 44% referred clients to a psychiatrist/psychotherapist and 40% referred for other services including allergy and chemical analysis, acupuncture, ayurvedic medicine, life
coaching, energy worker, herbal treatment, homeopathy, hypnotherapy, journey work, meditation, yoga, naturopathy, Rongoa Maori and exercises. Refer Figure 4.5.

Figure 4.5: Referral of clients by respondents to other practitioners.

4.3.7 Difficulties in managing clients with mood disorders

Almost half of the respondents (48%) felt that it was ‘difficult’ to manage clients with mood disorders, 3% of respondents felt it was ‘very difficult’ and 36% felt that it was ‘not difficult’ to manage clients with mood disorders. This equates to 51% finding it ‘difficult’ and 36% finding it ‘not difficult’. See Figure 4.6.
Figure 4.6: Perceived level of difficulty in managing clients with mood disorders as reported by respondents.

4.4 Education with regard to mood disorders

This section presents the analysis of the following variables:

- Previous education with regard to mood disorders
- Sufficiency of previous education
- Qualifications in the field of mental health
- Work experience in the field of mental health
- Further education with regard to mood disorders.

4.4.1 Previous education

Half of the respondents reported having had no specific education content regarding mood disorders in their osteopathic training. For those who did have education about mood disorders, the education was at undergraduate level with either a module in psychology or pharmacology. A few reported that they had guest/student presentations on mood disorders. To quote a participant:
“This included a few modules in psychology and pharmacology at undergraduate level or an occasional guest presentation...”

While 19% of respondents who had specific education felt that this education was sufficient for their practice, 36% of respondents felt that this education was insufficient. Most of the male respondents (80%) felt that the education they had was “insufficient” while 54% of female respondents felt that it was “sufficient”.

4.4.2 Qualifications and work experience in the field of mental health

Twenty-four percent of the respondents had qualifications, other education or work experience in the field of mental health. The qualifications included a diploma in complementary health, postgraduate diploma in counselling, and BSc in social sciences (psychology). Other education included journey process work, somato-emotional release work, courses in re-evaluation counselling, body talk system, personal experience of counselling, psychology and spiritual aspects of health care. Work/life experience included work in acute admission/A&E/trauma (including self harm) of a large teaching hospital, a community mental health unit, a hospital psychiatric ward, working with people with intellectual disability, working with chronic pain patients often suffering from depression and life experiences with individuals with mood disorders.

4.4.3 Further education

Almost three quarters of the respondents (73%) felt that further education in regard to mood disorders would be of value to their practice. The respondents had valuable suggestions of which two main patterns were observed: post-graduate education and under-graduate education. Most of the respondents felt that post-graduate education like a course with a psychologist or Continuous Professional Development (CPD) courses with regard to early identification and management of mood disorders would
be invaluable. A few respondents felt that mood disorders and their management should be a part of the undergraduate curriculum. The findings are discussed in depth in the discussion section, however a selection of comments by respondents are given below:

“Introductions to tools that can be used to deal with varying disorders… offer educated processes to either refer or discuss the situation…”
“Inputs from other professionals…red flag indications which I may be missing”
“This would be a useful topic for the compulsory core competency courses for 2008 - maybe suggest this to the OCNZ?“

The respondents who felt that further education is not important to their practice felt they already had sufficient education on mood disorders or thought it was not within their scope of practice.

4.5 Inferential analyses

Chi-square test for relatedness or independence was the preferred technique for inferential analyses of quantitative data. Independent variables included gender, years of osteopathic practitioner experience, qualifications and experience in mental health. The major dependent variables were assessment, management, and response to further education.

4.5.1 Patterns of response by gender

Questioning regarding mood disorders: All female osteopathic practitioners preferred to question their clients regarding mood disorders. Seventy-eight percent of male osteopathic practitioners questioned their clients. It can be concluded that female practitioners prefer to use questioning as a tool to assess mood disorders as compared to male practitioners, $X^2 (1, N = 59) = 6.258, p < 0.05$. 

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Use of osteopathic diagnostic tools: Female osteopathic practitioners preferred to use specific osteopathic diagnostic tools in clients with mood disorders, cranial rhythm in particular. While 52% of female practitioners preferred cranial rhythm as an assessment tool only 26% of male practitioners used cranial rhythm as an assessment tool. The probability value is below 0.05, and it can be concluded that female practitioners preferred the use of cranial rhythm as an assessment tool more than male practitioners, \( X^2 (1, N = 62) = 4.122, p < 0.05 \).

Further, cross tabulations show that female practitioners were more likely to think that their education in regard to mood disorders was sufficient (53%) as compared to male practitioners (21%), \( X^2 (1, N = 34) = 3.825, p < 0.05 \). Table 4.2., provides a comprehensive listing of the variables, with a graphic display in Figure 4.7.

Table 4.2
Cross Tabulation of Practitioner’s Gender (vs.) Preference of Assessment Tools and Perceived Sufficiency of Education

<table>
<thead>
<tr>
<th>Attributes/ activities</th>
<th>Percentage of ‘yes’ responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (n = 48)</td>
</tr>
<tr>
<td></td>
<td>Male (n = 52)</td>
</tr>
<tr>
<td>Questioning the clients with regard to mood disorders</td>
<td>100%</td>
</tr>
<tr>
<td>Preferance for use of Cranial rhythm as an assessment tool</td>
<td>52%</td>
</tr>
<tr>
<td>Perceived sufficiency of education as reported by respondents</td>
<td>53%</td>
</tr>
</tbody>
</table>
4.5.2 Patterns of response by qualifications in the field of mental health

*Identification:* Results from cross tabulation show a significant Chi-square correlation, Pearson value of 5.845, with the significance level below the alpha of .05. All respondents (100%) with qualifications in the field of mental health perceived the need to identify mood disorders in their clients. Sixty seven percent of respondents without qualifications in the field of mental health perceived the need to identify mood disorders in their client. One can conclude that practitioners with qualifications in the field of mental health perceived the need to identify mood disorders more than practitioners without qualifications in the field of mental health, $X^2 (1, N = 58) = 5.845$, $p < 0.05$.

*Assessment:* Practitioners with qualifications in the field of mental health preferred using mood disorder questionnaires (34%) as compared to practitioners without qualifications in mental health (10%), $X^2 (1, N = 52) = 3.861$, $p < 0.05$. Further, the
analysis shows that the use of specific osteopathic/manual tools are preferred by practitioners with qualifications in the field of mental health (69%) as compared to practitioners without qualifications in mental health (36%), $X^2 (1, N = 59) = 4.664, p < 0.05$.

*Management:* Practitioners with qualifications in the field of mental health perceived the need to manage/help clients with mood disorders (100%) more than practitioners without qualifications in mental health (71%), $X^2 (1, N = 58) = 4.840, p < 0.05$.

Practitioners with qualifications in the field of mental health preferred combination of treatment techniques (46%) as their treatment of choice as compared to practitioners without qualifications in mental health (15%), $X^2 (1, N = 51) = 4.730, p < 0.05$. See Table 4.3 and Figure 4.8 for a snapshot of the emerging relationship between practitioners with and without mental health qualifications and perceptions on identification, assessment and management of clients with mood disorders.

Table 4.3

*Cross Tabulation of Responses of Practitioners With and Without Qualifications in Mental Health (vs.) Preferred Assessment Tools and Management of Clients With Mood Disorders.*

<table>
<thead>
<tr>
<th>Activity/attribute</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived need to identify mood disorders</td>
<td>practitioners with qualifications in the field of mental health (n=50)</td>
</tr>
<tr>
<td>Use of mood disorder questionnaire</td>
<td>100%</td>
</tr>
<tr>
<td>Use of specific osteopathic tool for assessment</td>
<td>34%</td>
</tr>
<tr>
<td>Perceived need to manage clients with mood disorders</td>
<td>69%</td>
</tr>
<tr>
<td>Use of combinational</td>
<td>100%</td>
</tr>
<tr>
<td>Use of specific osteopathic tool for assessment</td>
<td>46%</td>
</tr>
</tbody>
</table>

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4.6 Analysis of Qualitative Data

This section presents the findings of the analysis of the qualitative data provided by the respondents. This includes the descriptive analysis of participant responses to the open-ended questions and the thematic interpretive analysis of the data.

4.6.1 Descriptive analysis of qualitative data

The section which follows is a summary of practitioner responses to the open-ended questions, which explored: (a) Reasons for not investigating about mood disorders further, (b) Influence of documented history of mood disorders on assessment, (c) Assisting clients to manage their mood disorders, (d) Adaptation of treatment approaches, (e) Reasons for not referring clients to other practitioners/programmes,
and (f) Difficulties experienced by practitioners in managing clients with mood disorders.

**Reasons for not investigating the issue of mood disorders further:** Respondents were questioned how much consideration they give for the identification of mood disorders? (See Appendix A, Q.9 and Q.10). If the answer was ‘none’ they were asked the reasons for not investigating the issue of mood disorders further. Some of the reasons given by respondents for not investigating the issue included practitioner outlook, practitioner’s assumption, client characteristics and lack of training.

**Influence of documented history of mood disorders on assessment:** The survey question to this item was: Given that a client has a documented history of mood disorders (e.g. depression) does that influence the way you ‘assess’ him/her? If no, why not? (See Appendix A, Q.11 and Q.12). Responses of practitioners included practitioner skills, maintaining an unbiased view, practitioner outlook, lack of expertise and client barriers.

**Assisting clients to manage their mood disorders:** The question that corresponds to this item was: Why don’t you attempt to help or manage your clients regarding this issue? (See Appendix A, Q.19). Reasons given by respondents ranged from lack of training, limited scope of practice, difficulty in coping with empathy transference to history of previous failure.

**Adaptation of treatment approaches:** The respondents were questioned whether they adapt their treatment approach in clients with mood disorders (refer Appendix A, Q.24). Adaptations made by practitioners include increasing time spent in verbal interaction (discussions), or where applicable, modifying techniques such as temporal aspects of prognosis and prescribing exercise programmes. Selected comments by respondents are presented below: -

“The treatment approach is going to be different for each individual patient… however there are some osteopathic techniques that can work better with certain people and conditions…”

“Increase time spent on verbal interaction/listening part of consult… Follow up discussion about progress”
“I modify my treatment approach…this may be gentle…may be more talkative during the treatment or very quiet to allow them to relax…”

Reasons for not referring clients to other practitioners/programmes: The survey question to this item was: Do you refer your client to another health practitioner or program? If no, why not? (Refer Appendix A, Q. 29). Reasons for not referring clients to other practitioners/programmes included practitioner outlook, lack of referral network and the perception that the clients were treated elsewhere. A comment by one of the respondents is given below: -

“There is no network of alternative professionals that I have reason to trust in this town. The network of medical professionals is already identified to the client”

Difficulties experienced by practitioners in managing clients with mood disorders: The survey question to this item was: From your experience, what are the difficulties in managing these clients? (Refer Appendix A, Q. 33). The respondents reported a number of difficulties ranging from client characteristics, lack of acknowledgement that they have mood disorders, compliance issues, lack of education/training and practitioner outlook. Some of the comments by respondents are as follows: -

“Some of these clients do not accept they have a problem… Often very distressed…follow time can become a problem when other patients are waiting”

“Depends on the client and my own skills or otherwise. Can be compliance issues with the client in terms of them taking medications, following advice and suggestion…”

4.6.2 Thematic analysis:

Thematic analysis revealed two major themes which act as barriers to the osteopath’s identification, assessment and management of mood disorders in their clients. They are (1) practitioner barriers and (2) client barriers. Table 4.3 presents the major themes and the sub-themes as identified in the present study.
Table 4.4: Emerging Patterns of Major Themes and Sub Themes

<table>
<thead>
<tr>
<th>Major theme</th>
<th>(1) Practitioner barrier</th>
<th>(2) Client barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub themes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practitioner skills</td>
<td></td>
<td>Lack of client acknowledgement</td>
</tr>
<tr>
<td>Practitioner outlook</td>
<td></td>
<td>Compliance issues</td>
</tr>
<tr>
<td>Lack of expertise</td>
<td></td>
<td>Client characteristics</td>
</tr>
<tr>
<td>Unbiased view</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practitioners’ assumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of education/training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of professional network</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An in-depth discussion of the major themes and sub themes is done in the discussion chapter in context with the relevance of the findings of this study.

### 4.7 Summary of findings

From the findings of this research study, it is found that a majority of osteopathic practitioners perceive the need to identify mood disorders and use a number of assessment tools as part of assessment procedures. However, a clinical dilemma exists in terms of managing clients with mood disorders. Nearly half of the respondents had no specific education with regard to mood disorders. Inferential analysis revealed that gender and qualifications of osteopathic practitioners in the field of mental health, may be significant variables in terms of identification, assessment and management of clients with mood disorders. The two major themes as identified by thematic analysis are practitioner barriers and client barriers.
Chapter Summary

This chapter presented the findings of the study “Identification, assessment and management of mood disorders in clients by osteopaths in New Zealand”. Further this chapter has identified and presented a number of strategies used by a sample of New Zealand osteopaths in identifying, assessing and managing clients with mood disorders. It also touched upon their education regarding mood disorders and their attitude towards further education regarding mood disorders. In the next chapter the findings are discussed in the light of published literature.
Chapter Five: Thematic Analysis and Discussion

Introduction

In this chapter, the thematic analysis of qualitative data is presented. Further, the results of the present research are discussed in the context of published literature. As explained in Chapter Two the literature available on mood disorders with regard to osteopathy is minimal, hence studies from other disciplines such as general medical practice, nursing and massage are used.

5.1 The barriers to a holistic care

From the findings of this study, the majority of the practitioners believed/perceived that managing clients with mood disorders was ‘difficult’. Two major issues (themes) have been identified as barriers for osteopaths in New Zealand in terms of identification, assessment and management of clients with mood disorders. These include: (1) Practitioner barriers and (2) Client barriers. This is in congruence with the findings of a study done in general practice by Williams, Rost, Dietrich, Ciotti, Zyzanski and Cornell (1999). A number of sub-themes have also been identified and include practitioner skills, practitioner outlook, lack of expertise, unbiased view, practitioners’ assumptions, and lack of education, lack of professional network, lack of client acknowledgement, compliance issues and client characteristics.

5.1.1 Practitioner barriers

Practitioner barriers encompass various barriers that include practitioner skills, years of experience, level of education, education/training in mental health, practitioner outlook (structural, cranial or visceral), scope of practice, expertise and referral skills. These barriers are discussed in detail in the section which follows.
5.1.1.1 Practitioner skills

Practitioners identified various factors in their skill set which they thought restricted (to an extent) their abilities as an osteopath to deal with clients with mood disorders. For example, one of the practitioners stated: "I’m an osteopath, not a psychologist and don’t feel confident enough to treat these persons any differently from others…" It can be seen that the practitioner believed that they were not confident enough to treat clients with mood disorders differently to any other client. This could mean that the way the practitioner questioned or assessed clients with mood disorders would not be different from clients without mood disorders. This lack of confidence may be due to lack of education with regard to mood disorders or lack of experience in managing clients with mood disorders. A study in general practice shows that obstetrician and gynaecologists are less confident than GPs in managing patients with depressive disorders (Williams et al., 1999). A gynaecologist does not normally expect to diagnose or treat client with depressive disorders (unless as co-morbidity to, for example, fertility issues) which could well be the case for osteopaths.

5.1.1.2 Practitioner outlook

For some of the practitioners it is their outlook or treatment approach that they use often that was found to be the barrier. As one practitioner reported: "I’m strongly structural in outlook and use this as a first approach in forming a relationship with the patient…” Here the practitioner feels that they are more of a structural osteopath and hence psychological issues such as mood disorders may not fit into his/her way of treatment approach. This view is reinforced by another practitioner who commented: "I’m busy enough dealing with the musculoskeletal problems. These mental states may affect their pain but I’m not qualified to treat this…” Both these practitioners report that they don’t give much importance to mental health states. One hypothesis is that these practitioners have restricted themselves to a particular skill set and are more comfortable treating their clients with this particular (structural) approach. This is
paradoxical given the supposedly “whole body” approach that underpins the philosophy of osteopathy.

5.1.1.3 Lack of expertise

Most of the practitioners identified lack of expertise in the area of mental health as the major limiting factor in the way they assess and manage clients with mood disorders. This is highlighted by the views of one practitioner who reported:

“I don't consider it my area of expertise to handle such disorders, and most of the time touching on them ends up bringing out stuff I'm not qualified to deal with. If I consider a mood disorder of vital importance to the presenting complaint, I usually suggest an appropriate professional for the patient to see…”

It can be seen that the practitioner not only feels that they have insufficient expertise in this area but also is apprehensive about possible psychological issues that he might have to manage if he decides to treat these clients. It is almost as if they fear “opening the box” in case ‘something’ that they are ill-equipped to manage is released.

5.1.1.4 Unbiased view

When it comes to assessment of clients with mood disorders, some practitioners felt that a documented history of mood disorder would not influence the way they assess their clients. This is because these practitioners preferred to have an unbiased view and not to categorise clients by labelling them. One of the practitioner comments that:

“It doesn't change how I assess a person as during my assessment they are a unique individual and I try to minimise any labelling or categorising, it is just another factor that is taken into consideration when I prepare my treatment and management plan for that individual”

Here the practitioner explains that mood disorder is just another factor along with various other factors that the practitioner takes into consideration while they prepare a treatment plan.
The practitioner, while being aware of a client’s depressive disorder, does not allow themselves to treat the client as someone with a psychiatric illness, but rather as they would treat any person presenting with a specific physical problem.

5.1.1.5 Practitioners’ assumptions

A few practitioners reported that given a documented history of mood disorders, they would assume that their clients are in contact with relevant professionals for their mood issues. This is illustrated by a comment from a practitioner who opines that “A documented history suggests the clients will have contact with relevant professionals”. In their study Taylor and Wilkinson (1996) found that GP’s who referred their patients to a psychiatrist continued to manage only a quarter of these patients with an expectation that the psychiatrist would take care of the patients. In a way the assumption reported by osteopathic practitioners in this present study is similar to the expectations of GP’s reported in the study by Thomas and Wilkinson (1996). However assumptions can be a major pitfall in clinical practice and it is wise to question the clients rather than assuming things.

5.1.1.6 Lack of education/training

Most practitioners felt that they do not have sufficient education/training with regard to mood disorders which they felt as a major barrier in treating clients with mood disorders. The findings of the present study are similar to the findings of a study done in nursing by Thomas and Corney (1993). Thomas and Corney (1993) suggested that practice nurses along with primary care workers should get more training in the field of mental health if effective care is to be provided for primary care clients. This lack of training is highlighted by one of the practitioner who comments that:

“As an osteopath, I have had no training in counselling and would not therefore attempt to try. I am not qualified enough in craniosacral technique to attempt to "alter" someone’s mood swings. I do take into consideration that state of mind has an impact on the body's
This practitioner feels that they have no training in counselling, however they remark that they are not qualified enough in ‘Cranio-sacral technique’ to attempt to treat these clients. This could mean that this practitioner feels that if they had enough training in Cranio-sacral techniques, they could treat clients or attempt to treat clients with mood disorders. This remark is significant considering that cranial techniques were preferred by most practitioners. It was reported in the earlier section that osteopaths with qualifications in the field of mental health prefer to assess and manage clients than osteopaths without mental health qualifications. Hence it can be concluded that training/education in the field of mental health would be beneficial for osteopathic practitioners.

**5.1.1.7 Lack of professional network**

A few practitioners chose not to refer their clients to other practitioners/services. The major barriers to referral to a mental health provider by primary care practitioners include long wait for an appointment, lack of available services/referral network, patient’s unwillingness to use those services, reimbursement issues, practitioner dissatisfaction and inadequate content of communication between practitioners (Gandhi et al., 2000; Hartley, Korsen, Bird, & Agger, 1998). Lack of referral network has been identified as a major barrier in the present research study. One practitioner reported:

“I have no trusted and tested routes of referral to these particular services. I prefer to suggest people access services, and find someone they are comfortable to go to, rather than suggest to them who to go to if I am unsure myself”

Here the practitioner not only mentions that they have no trusted way of referral but also feels that they are unsure of whom to refer their clients. This insecurity is consistent with practitioners reporting that they are not confident in treating clients with mood disorders.
5.1.2 Client barriers

Client or patient barrier is the other main difficulty that was reported (perceived) by practitioners. Client barriers include lack of acknowledgement by clients that they have an issue, poor patient compliance with the treatment plan/advice and patient characteristics.

5.1.2.1 Lack of client acknowledgement

The reluctance to accept the diagnosis by the patient or patient’s family has been found to be a major barrier in providing care for patients with depressive disorders (Williams et al., 1999). This is reinforced by the findings of the present research study and is reflected by the views of one practitioner who reported: - “Some of these clients do not accept they have a problem and need additional help. They are often very distressed and are reluctant to acknowledge that they may need help...” Another practitioner felt that once these clients become aware of their mood disorders, they cope well except they express physical manifestations. They commented that: - “Once the patient is aware of the condition, most manage it themselves very well except for the physical manifestations which is delegated to the practitioner.” This practitioner further opines that these physical manifestations expressed by the clients will be taken care of during osteopathic treatment.

5.1.2.2 Compliance issues

Non compliance with the treatment or management plan has been identified as one of the barriers while treating patients with depressive disorders (Breen & Thornhill, 1998). This is consistent with the findings of this study. A comment by one of the practitioners highlights the issue of non compliance to the treatment plan by clients with mood disorders. “Non compliance issues with the client in terms of them taking medications, following advice and suggestions...”
5.1.2.3 Client characteristics

A few practitioners felt that these clients are attention seekers and sometimes helping them might not be the right thing to do. As one of the practitioner described:

“Sometimes the disorder is a crutch and the patient thrives on the attention they are getting. They come to you for more attention and sometimes some patients don’t want to get better or change their thinking patterns or deal with the issues that are generating the disorder as this would mean they no longer have the attention they think they so need”

This practitioner felt that some of these clients do not want to get better as that would reduce the attention they are getting. This is reinforced by other practitioners who felt that these clients sometimes have a negative attitude and difficulties with decision making which would then affect the way they progress.

“As a generalisation - usually negativity to their progress (they dwell on the discomfort, not on the amount they are feeling better) or (lack of) adherence to exercises/stretching”

“But being in that depressive state means it’s difficult for them to make decisions regarding their well being and health…”

While practitioners identified the impact on treatment of negative attitudes and impaired decision making in clients, they also acknowledged that these could also be symptoms of depression. This is consistent with research by Murphy et al. (2001) that found people with mood disorders have been shown to have difficulties in cognitive decision making abilities. This may reinforce the fact that rehabilitation/treatment success depends as much on a client’s attitude and decision making as it does on practitioner skills. In general it can be said that the more positive a client’s attitude is, the better the treatment outcome would be.
5.2: Identification of mood disorders and the New Zealand context

The results showed that majority of the respondents were in general agreement that they ‘often’ encounter clients with mood disorders. This is not surprising considering that depression is common in primary care practice and the question arises “Why are we routinely seeing so much mental illness?” (Morris, 2003). In line with the findings of Kuchera (2005) the results of this research study show that osteopaths feel the need to identify mood disorder in their clients and employ a system of history taking designed to screen for the signs of depression or any other significant non-physical links contributing to pain. Further, the findings of this study are congruent with those of Lucas (2005) who suggests, that osteopaths are well placed to recognize and understand current concepts in regard to the role that psychosocial factors play in patients with pain. This perceived need to identify mood disorders may also be due to the fact that these practitioners are aware that early detection of mood disorders can improve quality of life and minimize the negative impact of depression on the client (Morris, 2003).

5.3 Assessment of mood disorders

The tools commonly used by osteopaths for assessment of mood disorders identified in this research were communication (questioning the clients), palpatory diagnosis (tissue palpation/cranial rhythm) and screening tools (questionnaires, psychometric tests).

Communication: It is seen from the results that most of the practitioners questioned their clients regarding mood disorders. Most practitioners engaged themselves in discussions with clients that included discussion of posture, stress coping mechanisms and support networks. The importance of discussion/questioning clients is highlighted by one practitioner who commented that:
“I usually try to explain mind-body links to clients so they understand the importance of their emotional wellbeing in their physical health. I tend to focus more on identifying underlying issues and guiding patients towards recognising them and either working on them with some support from me, or referring to other agencies if appropriate...”

The practitioner (who has previously worked in mental health) not only explains the importance of emotional well being to the patient but also tries to identify the underlying issue and tries to either provide support or refer them as appropriate. This may suggest that osteopaths in New Zealand possess excellent communication abilities, which was also identified in research by Nasrallah (2003).

_Tissue palpation:_ Osteopathic medicine places great emphasis on the importance of the musculoskeletal (MSK) system in maintaining normal structure and function (Lesho, 1999). Psychological issues such as mood disorders/depression trigger a number of autonomic and musculoskeletal reactions often producing myofascial pain syndromes with characteristic trigger point formation in muscles (Miller, 2000; Smith, Lumley, & Longo, 2002). These trigger points are clinically palpable and palpatory exams are used by many health care professionals including osteopaths to diagnose abnormalities of structure and function (Najm et al., 2003; Vickers & Zollman, 1999). This is reinforced by the findings of the present research where the majority of the respondents reported using tissue palpation as their key assessment tool. Plotkin et al. (2001) also report the use of tissue palpation as an assessment tool in patients with depression. Though tissue palpation cannot be used objectively to measure mood disorders, changes in tissue texture can provide practitioners with useful clues and leads to further questions, examinations and tests. This is in congruence with the suggestions of Kuchera (2005).

However, some studies have shown that the use of tissue palpation as an assessment tool is unreliable and recommendations have been done to create well designed and implemented studies in this area (Najm et al., 2004; Najm et al., 2003). Lesho (1999) counter-argues that research on palpatory diagnosis is difficult because of the apparent lack of inter-examiner agreement. Despite minimal scientific evidence tissue palpation remains the most sophisticated diagnostic tool in the hands of a well trained practitioner (Lewit, 1994). This statement is significant considering that most of the
participants in this study had more than six years of experience as an osteopathic practitioner and it could be argued, are all well trained practitioners. Hence it could be said that tissue palpation is an important diagnostic tool for an osteopathic practitioner. What is needed are studies on palpatory diagnosis incorporating good reliability and validity measures and using random sampling techniques of osteopathic practitioners.

_Cranial rhythm:_ The results of the current study show that cranial rhythm was considered as an important assessment tool by majority of the practitioners. This is not surprising considering that CRI is clinically palpable (McPartland, 1996) and plays a central role in diagnosis and treatment for practitioners of cranial osteopathy (Hartman & Norton, 2002).

The rate of CRI may be decreased with stress, mental depression and other psychiatric conditions (Lay & King, 2003). Considering that CRI is palpable and that its rate is decreased in clients with MD, it is possible that CRI palpation would serve as an important assessment tool for osteopathic practitioners. However there is lack of evidence/published work that supports the reliability of CRI as a diagnostic tool (Hartman & Norton, 2002; Moran & Gibbons, 2002). More importantly the measurement of CRI is subjective rather than being objective (Moran & Gibbons, 2002). Hence the role of CRI palpation as a clinical decision making tool must be rethought (Sommerfeld, Kaider, & Klein, 2004). Although scientific evidence is lacking, cranial rhythm is found to be an important assessment tool used by osteopaths in New Zealand as reported by participants in the study.

_Psychometric tests:_ From the results of this study it is clear that there is a low reliance on psychometric tests/mood questionnaires by osteopaths in New Zealand. One explanation is that these practitioners might not have had the training or experience to administer these questionnaires. It could also be that these practitioners believe that administering a questionnaire may be too intrusive, especially on the first visit as was noted by Lucas (2005). This is echoed in the observation of one practitioner who stated “I feel concerned that the patient may be offended if there is no actual mood disorder”.

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5.4 Management of mood disorders

The majority of the respondents agreed that they would help their clients manage their mood disorders in course of providing osteopathic treatment. This is consistent with the core philosophy of osteopathy advocated by Still that human beings consist of an integrated body, mind, and spirit, and good clinical care treats the patient as a whole (Baron et al., 2003). The different strategies used by the practitioners can be briefly classified into physical (influencing the muscle tone, adapting/adopting treatment approaches, and influencing the autonomic nervous system), behavioural/cognitive strategy (providing counselling, encouraging coping mechanism, identifying the stressor, reducing anxiety, etc) and referral to other practitioners/services.

*Physical strategies:* The respondents of this study reported using a number of treatment techniques (structural, visceral, cranial and combination of all the three) to suit their client’s needs. Most of them felt that each patient is different and hence the treatment will be different. The following comment by one practitioner explains this:

> “The treatment approach is going to be different for each individual patient, whether or not they have a mood disorder, as this related to the underlying principles of osteopathy. You cannot classify and treat people with specific conditions with specific techniques, however there are some osteopathic techniques that can work better with certain people and conditions, but this is not the rule of thumb. The patient has to be assessed on an individual basis...”

This practitioner feels that each client is unique and they adapt their treatment approach to suit the client’s need. They opine that adapting different treatment techniques is related to the principles of osteopathy. A combination of treatment approaches was preferred by most of the practitioners. This goes to show that osteopaths in New Zealand have been exposed to different schools of thought and have learnt a wide variety of osteopathic treatment techniques. It has been shown that these techniques may be helpful in managing clients with mood disorders (Field et al., 2004; Field et al., 1996; Plotkin et al., 2001).
Cranial techniques were the preferred treatment technique of choice by most of the respondents. This is not surprising considering that most practitioners preferred cranial rhythm as an assessment tool and using cranial techniques as a treatment tool would just be a logical progression. Further, evidence suggest that cranial osteopathic techniques may be helpful in clients with mood disorders such as depression (Lay & King, 2003; Plotkin et al., 2001).

From the findings of this study it can be concluded that osteopaths in New Zealand are exposed to different schools of thought and employ a variety of osteopathic treatment techniques in managing clients with mood disorders. However, the application of these techniques depends on the nature of dysfunction and the selection of a particular treatment technique/s is the clinical call of an individual practitioner (Plotkin et al., 2001).

**Behavioural/cognitive strategy:** The respondents seem to employ a number of behavioural strategies in helping their clients handle mood disorders. These include reducing anxiety, focusing on the stressor, encouraging client reflection and increasing coping mechanisms. This is consistent with the suggestions of Jerome (2003) that the osteopathic treatment should be directed at modifying the biopsychosocial causes and maladaptive response to stress. Further, clients with mood disorder may undergo behavioural changes in them which they may or may not be aware of. Five stages of behavioural change has been identified that include pre-contemplation, contemplation, preparation, action and maintenance (Porchaska, DiClemente, & Norcross, 1992).

Though stress does not cause depression, stress has been identified as a significant factor in clients with depression (Revicki, Whitley & Gallery, 1993). Hence identifying the underlying stress may help both the practitioners and the clients. Osborn (2003) feels that it is the duty of the osteopathic practitioner to assist their clients to identify the stage they are in and guide them to move on to the next.

A few respondents in this present research reported that they are not psychologists or counsellors and felt that they have no expertise in counselling to alter one’s mood or behaviour. This reluctance to take on the role of counselling exists partly because of
the lack of effective training in these aspects during osteopathic education and in postgraduate courses (Osborn, 2003). Hence it can be concluded that education with regard to mood disorders may be helpful to osteopathic practitioners.

Advice given: It was found that most of the osteopathic practitioners were offered some form of advice to their clients to manage their mood disorders. Most of the practitioners advised relaxation therapy to their clients. This is in not surprising since relaxation therapy has been shown to reduce depression and anxiety (Rees, 1995; Field et al. 1996). The results show that many practitioners advised about life style factors (diet, physical activities, smoking, drinking alcohol and exercise) to their clients. A study done in Australia shows that depression is directly associated with heavy smoking and inversely associated to physical activities (Cassidy et al. 2004). A few practitioners adopted spiritual strategy and advised their clients about meditation, yoga and Rongoa Maori. It shows that these practitioners considered client’s spiritual needs in accordance with the core philosophy of osteopathy, where spiritual health is of prime importance (Seffinger et al. as cited in Ward, 2003, p.3). Further, spiritual concepts such as prayers have been shown to have positive effects on people with depression (O’Laoire & 1997; Tloczynski & Fritzsch, 2002). It can be concluded that most of the osteopaths in New Zealand have an excellent understanding about the influence of life style factors on their client’s presentation including their spiritual needs and advice them accordingly.

Referral: The results show that most of the practitioners referred their clients to other practitioner/services. The two important questions that a practitioner may have to answer before referring clients are (1) whether to refer? (2) To whom to refer? (Starfield, Forrest, Nutting, & Schrader, 2002). The answer to the first question depends on the clinical decision making abilities and experience of the practitioner. The second question of to whom to refer may be influenced by the particular areas of interest of a practitioner (Reynolds, Chitnis, & Roland, 1991).

Most of the practitioners in the present research study referred their clients to GP’s. In their survey of GP’s referral to outpatient psychiatric clinic, Taylor and Wilkinson (1996) have found that the process of referral for psychiatric health is usually initiated by the GP. Hence, on-referring to the client’s GP is the osteopath’s way of ensuring
an appropriate referral to psychiatric care if necessary. Further, a few practitioners reported that mood disorders are outside their scope of practice which could be also be a reason for high referral rates to a GP.

5.5 Education with regard to mood disorders

Previous education: The results show that half of the respondents had no previous education with regard to mood disorders. Most of the practitioners felt that they had minimal education specific to mood disorders, often this was a psychology paper or a module in pharmacology. Most of them felt that it was not specific to osteopathy. One of the practitioners commented that,

“A fairly meaningless look at mood disorders during Pharmacology. This was more on the perspective of pharmaceuticals that we may encounter rather than on identifying, treating and managing mood disorders. It would have been more useful to have had some in-depth advice on working with people with mood disorders…”

This clearly explains that much of the education the practitioners had was from a pharmacological point of view. This also explains that the practitioners had minimal education in identification, assessment and management of mood disorders. This minimal education was consistent with what most of the practitioners reported.

This minimal level of education with regard to mood disorders may be one of the reasons that psychometric tests and standard mood disorder questionnaires were least preferred as assessment tools. Sufficient education with regard to mood disorders is extremely important in that clients with these disorders are less likely to ask explicitly for help for their psychological problems (Nuijen, Schellevis, Verhaak, & Volkers, 2006). Sufficiency in education not only increases the confidence of an osteopath to assess and manage clients with mood disorders but also will lead to better referral to other practitioners/services. Further, as explained before early identification of mood disorders will not only ensure effective management but also will prevent further complications (Morris, 2003).
Further education: Most of the practitioners felt that further education regarding mood disorders would be valuable for their practice. Most of them felt that insights on identification and management of mood disorders would be beneficial. While many practitioners suggested either a post-graduate course with a psychologist or Continuing Professional Development (CPD) courses a few of them suggested that education regarding mood disorders should be a part of the undergraduate curriculum.

CPD courses are the choice of education preferred by most of the practitioners. This is similar to the findings of a chiropractic study on continuing profession education. The study reports that chiropractors expressed high levels of satisfaction with continuing education (Stuber, Grod, Smith, & Powers, 2005). One of the practitioners suggests that: “Getting Counsellors or Psychologists to come into the training institutions to give people strategies on identifying mood disorders and mechanisms for working with these people…” This is supported by another practitioner who also feels that a course would help his/her practice. He/she suggests that: “A practically applicable course with how to deal with, triage and perhaps help with the management of such patients…”

In general most practitioners were in agreement that they are limited when it comes to identification and management of mood disorders. They felt that CPD courses that introduce them to tools that can be used to deal with mood disorders would make them better. Also, many practitioners reported that more information regarding management of mood disorders, in particular referring these clients to another practitioner/program would be helpful for their practice. A few comments from practitioners are as follows:

“More so an introduction to tools that can be used to deal with varying disorders… to understand the limitations it places on the patient and so that practitioners have the ability to empathize and offer educated processes to either refer or discuss the situation…”

“Purely from an osteopathic practice perspective, to be able to recognise, diagnose and see the warning signs of mood disorders earlier. To help with other referrals that is whom and when to refer…”
From the findings one can conclude that osteopaths have a minimal level of specific education with regard to mood disorders in the course of undertaking their qualification programme. Given that osteopaths are primary care practitioners, this minimal level of education may impact on their ability to identify, assess and manage clients with mood disorders.

5.6 Practitioner’s gender: Does it matter?

From the findings of this research study it is clear that female practitioners question their clients regarding mood disorders more than their male colleagues. Although there is no osteopathic literature available to support this gender-based difference, there are a few studies in general practice that may support gender differences in practitioners’ provision of mental health care. One possible explanation is that female practitioners may be more empathic towards their clients (Hojat et al., 2002). In their study Hojat et al. (2002) used a 20-item empathy scale and found that female medical students scored higher than male students. Further, female physicians engage in more communication with their patients that include positive talk, psychosocial counselling, psychosocial question asking and emotionally focused talk (Roter, Hall, & Aoki, 2002). Hence it could be argued that female osteopathic practitioners, like female physicians, were engaged in more communication with their clients than male osteopathic practitioners. This is also supported by the findings from a Dutch study of general practitioners which reports that female GPs tend to spend more time with their patients and have a stronger tendency to provide continuity of care (Bensing, Brink-Muinen, & De-Bakker, 1993).

CRI was the assessment tool of choice preferred by most female osteopathic practitioners. The role of gender in selection of CRI as an assessment tool is difficult to explain as there is no literature available to support this claim. One possible explanation is that female practitioners would prefer a soft and gentler approach. However, it was found that a practitioner’s gender is a significant factor in osteopathic practice in identifying, assessing and managing clients with mood disorders as found in this research study.
5.7 Qualifications in the field of mental health: Does it make a difference?

The results of the present study show that osteopathic practitioners with additional qualifications in the field of mental health feel an increased need to identify mood disorders in their clients. This may be because these practitioners have sufficient knowledge /education with regard to mood disorders and the importance of early identification.

The results further show that mood disorder questionnaires (as an assessment tool) are preferred by practitioners with qualifications in the field of mental health. It was discussed earlier in this chapter that the use of questionnaire may be too intrusive for patients, especially on the first visit. However it is recommended to evaluate psychosocial issues by administering questionnaires on patients in the sub-acute stage (Lucas, 2005). Hence one possible explanation is that the practitioners with qualifications in mental health are aware of mood disorder questionnaires and know how to administer them in a clinical setting (sentence changed as suggested). The practitioners with qualifications in mental health also reported that they helped manage clients with mood disorders more than practitioners without mental health qualifications.

Chapter Summary

This chapter discussed the major findings of this study. The findings suggest that New Zealand osteopaths possess excellent communication skills. Most New Zealand osteopaths preferred the use of tissue palpation and CRI to assess dysfunctions which then leads to further examinations and tests. Mood disorder questionnaires and psychometric tests were the least preferred of the assessment tools.

However, osteopaths perceived that they are less confident in managing clients with mood disorders and reported a number of practitioner and clients barriers in delivering a holistic care. It is suggested that sufficient education and training with regard to mood disorders may be beneficial for osteopathic practitioners.
The next chapter presents the strengths and limitations of this research study, potential areas for future research and the implications of this study.
Chapter Six – Conclusion

Introduction

In this chapter the potential implications of the findings for osteopathic profession, the strengths and limitations of this study and possible avenues for further research are discussed.

6.1 Implications for osteopathic practitioners

The present research study shows that osteopaths often come across clients with mood disorders and perceive that they are less confident in managing clients with mood disorders. As discussed previously, this lack of confidence can be directly linked to practitioners’ level of knowledge about mood disorders and lack of experience in managing clients with mood disorders. This lack of training/experience in managing clients with mood disorders is highlighted by one of the practitioner who comments that: “I have had no training in detection, diagnosis or treatment of mood disorders…”

There is a need to increase the level of knowledge regarding mood disorders considering that early identification plays a crucial role in managing clients with mood disorders (Morris, 2003). Further it is known that training primary care workers in the field of mental health is essential for providing effective care for patients with mood disorders (Thomas & Corney, 1993). Most of the practitioners of this study felt that knowledge regarding early identification of mood disorders would be valuable. A comment by one of the practitioner explains this: “Being able to identify early markers for the most prevalent conditions facing people today… I would find it beneficial to be competent in the early detection of mood disorders”

This training/education may be provided in the form of Continuing Professional Development (CPD) courses. A few practitioners suggested that a course on mood disorders should be made a compulsory CPD course for the year 2008 by Osteopathic Council of New Zealand (OCNZ). Hence it is suggested that it would be useful if
training/education with regard to mood disorders is available to osteopathic practitioners.

6.2 Implications for education providers (Unitec New Zealand)

Education providers such as Unitec New Zealand perhaps need to consider providing training/education regarding mood disorders to students of osteopathy before they enter the profession. I and many of the participants believe it would be very useful to have sufficient knowledge regarding identification and management of mood disorders so that the practitioners feel confident in managing clients with mood disorders. In his study, Nasrallah (2003), investigating the identification, assessment and management of psychosocial stress by New Zealand osteopaths, found that 81 percent of respondents felt that education in the management of psychosocial stress would be valuable. These findings are similar to the findings of the present study in which nearly 75% of respondents felt that education regarding mood disorders would be valuable. Hence it is suggested that it may be useful for the osteopathic profession and practitioners if education providers include mood disorders in the curriculum.

6.3 Implications for the osteopathic profession

The philosophy underpinning osteopathy stresses that the human body is a single functional unit with interactions between body and mind. Further, an osteopathic practitioner should treat the patient as a whole instead of simply treating their symptoms. The findings of this present study suggest that there is a clinical dilemma among osteopaths with half of them opting for a holistic care and the other half considering mood disorders as outside their scope of practice. This dilemma can be explained when we consider the following comments by a few of the practitioners.

"The patient has to be assessed on an individual basis and take into account all aspects of their person that influences why they came to see you as this related to the underlying principles of osteopathy"
Another practitioner argues that: “These issues require professional management; I am not trained in this area. Also I believe it is currently outside the scope of practice for osteopaths”

This clinical dilemma and confusion regarding scope of practice can be linked to the practitioner’s perception of their own abilities and level of knowledge about when to refer their clients on to other practitioners/services. Hence it is suggested that more information regarding management of mood disorders and information regarding when and whom to refer will be beneficial to the whole profession of osteopathy.

6.4 Strengths and limitations of this study

This study reports explored how osteopaths in New Zealand identify, assess and manage clients with mood disorders. The use of mixed methods is one of the strengths of this research as the combinations of methods enhances the validity of the findings (Polit & Beck, 2004). The use of a web based questionnaire was not only cost effective but also provided access to individuals who were otherwise difficult to reach. Further, it resulted in a rich amount of qualitative data from open ended questions. Absence of an interviewer meant that there is no issue of interviewer bias associated with this study (Polit & Beck, 2004). The other major strength is that the study was targeted towards the entire population of osteopaths in New Zealand facilitating external validity of the study. However the results have to be discussed within the context of a participation rate of less than 30%, and lack of normality of emerging data. A response rate higher than 29% was hoped for and effort was made to increase the response rate by repeat requests, mailing questionnaires in addition to the web-based version.

Further, data analysis revealed that the majority of respondents had more than six years of experience as an osteopath. This could mean that experienced osteopaths were more confident and had more knowledge/experience in managing clients with mood disorders that they volunteered to complete the questionnaire. Hence one could argue that there is a possibility of response bias associated with this study. However
this could just be a coincidence as the study was intended towards the entire population of osteopaths whose email addresses were publicly available.

This study is the first of its kind in New Zealand and hence can be used as a reference point for future studies. Despite the limitations outlined above, I believe that this study can be considered as a starting point to an area of osteopathic care that has been under-researched.

6.5 Suggestions for further research

The findings of this research study suggest that palpation and CRI are used by a majority of practitioners as an assessment tool in clients with mood disorders. However, the reliability of both palpation and CRI as assessment tools has been questioned (Moran & Gibbons, 2002; Najm et al., 2004; Najm et al., 2003). It would be interesting to investigate the reliability of palpatory diagnosis as an assessment tool for dysfunctions that may be evident in mood disorders considering that palpation has been widely used by various professionals. Given the significant relationship between female practitioners and the preference for cranial techniques, a qualitative study to explore this relationship in detail would be worthwhile doing. Further a qualitative inquiry into the paradox that exists between osteopathic practitioners in managing clients with mood disorders can also be done.

It is my strong belief that osteopathy calls for a holistic approach to care and an osteopath could play a larger role in managing clients with mood disorders. Hence an extension of this study, and one which reflects my own particular interest, would be to explore the role of osteopathy in treating clients with mood disorders. A further extension of this study would be to investigate and compare the curriculum of education providers internationally (e.g. New Zealand, Australia and the UK) and explore the coverage of mood disorders as part of osteopathic education.
Chapter Summary

The study described and critically explored how osteopaths in New Zealand identify, assess and manage clients with mood disorders. An inquiry into the specific education of these practitioners with regard to mood disorders and their attitudes towards further education were also explored. The aims of the study were realized and it can be concluded that osteopaths in New Zealand lack confidence in managing clients with mood disorders. It is suggested that education/training with regard to mood disorders would be beneficial not only for the osteopathic practitioners, but also for the profession as a whole and the clients.


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Appendices

Appendix A - The questionnaire

THE IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF MOOD DISORDERS IN CLIENTS BY OSTEOPATHIC PRACTITIONERS IN NEW ZEALAND

Survey questionnaire

This questionnaire (survey) is divided into three sections:

- **Section 1** is concerned with some general information about you, your previous education and other demographic details.
- **Section 2** is related to your practice in terms of identification, assessment and management of mood disorders in your patient.
- **Section 3** is concerned with your osteopathic (and other professional education) in relation to mood disorders in patients.

Some definitions:

**Mood disorders:**

For the purpose of this study, mood disorders can be defined as mood swings characterised by an abnormally high or low mood. Mood disorders include unipolar disorders (depressed mood state) and bipolar disorders characterised by manic (up) and depressed (low) mood states.

**Identification:**

Identification is the ability of an osteopath to identify mood disorders in patients presenting with somatic symptoms.

**Assessment:**

Assessment refers to the use of particular tools to assess the impact of mood disorders on these clients. Example: using physical examination, palpatory changes, questionnaires or standard psychometric tests for assessments.

**Management:**

Management includes osteopathic treatment and referral to some other practitioner.

**Implied consent:**

Submitting the questionnaire implies your consent to participate in this study.

(UREC registration number: 2007.719). This study has been approved by Unitec Research Ethics Committee (UREC) from July 07 to December 07. If you have any complaints or reservations about the ethical conduct of this research you can contact the committee through the UREC secretary (8154321 extn 7248). All issues that you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.)
Section 1

General information

Please read the questions and answer (or tick) as appropriate.

(1) Your gender is: male [ ] female [ ]

(2) How many years you have been in osteopathic practice?
   a) 0-3 [ ] (b) 3-6 [ ] (c) more than 6 years [ ]

(3) Details of the institute from where you qualified as an osteopath?
   Name:
   Country:

(4) Other than your osteopathic qualification, do you have any other educational/professional qualification(s)?
   Yes [ ]  No [ ].

   If yes, please provide details:
   Qualification:
   Name of the institution and location:

(5) Where in New Zealand do you practice?

(6) For how many years have you been practicing as a registered osteopath in New Zealand?
   a) 0-3 years [ ] (b) 3-6 years [ ] (c) More than 6 years [ ]
Section 2

**Your practice in relation to your clients with mood variations/disorders**

(7) **How often** do you come across clients with ‘mood disorders’ (e.g. depression)?

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<thead>
<tr>
<th></th>
<th>Very often</th>
<th>Often</th>
<th>Rarely</th>
<th>Others (please specify)</th>
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<td>Number</td>
<td>1</td>
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(8) When you are listening to the presenting complaints of your clients, are there instances when you feel there is a need to identify mood disorders in them which was not reported in their medical history?

Yes [___]  No [___]

*If you have answered ‘no’, then proceed to question (11)*

(9) If yes how much consideration does you give to the **identification** of ‘mood disorders’?

<table>
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<th>Minimal</th>
<th>Moderate</th>
<th>Maximum</th>
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<tbody>
<tr>
<td>Number</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(10) If ‘none’, **why** do you not investigate this issue further?

**Assessment procedure:**

(11) Given that a client has a documented history of mood disorders (e.g. depression) does that influence the way you **assess** him/her?

Yes [___]  No [___]

(12) If ‘no’ why not?

(13) Do you **question** these clients on this issue?

Yes [___]  No [___]

(14) Do you use any **screening tool**?

Yes [___]  No [___]
(15) If yes, which one(s)?
   Psychometric test  [ ]
   Standard mood questionnaire  [ ]
   Others  [ ] which others?

(16) Do you use any specific osteopathic or manual diagnostic tool in these clients?
   Yes  [ ]
   No  [ ]

(17) If yes, which one(s)?
   Tissue palpation  [ ]
   Cranial rhythm  [ ]
   Others  [ ]
   Which others?

Management:

(18) When providing osteopathic treatment to clients with 'mood disorders' (e.g. depression) do you attempt to help or manage your clients in this issue?
   Yes  [ ]
   No  [ ]

(19) If ‘no’, why don’t you attempt to help or manage your clients regarding this issue?

If you have answered ‘no’, then proceed to question (29)
If yes,

(20) Do you adopt specific osteopathic treatment approach for patients with mood disorders?
   Yes  [ ]
   No  [ ]
   Not Applicable  [ ]

If you answered question (20) with no or not applicable, please go directly to question (22)
(21) If yes which one(s)?
   Structural treatment [___]
   Cranial treatment [___]
   Visceral treatment [___]
   Combination of the above [___]

(22) Do you give any advice to your client about managing mood disorders?
   Yes [___]                               No [___]

   If you answered question (22) with ‘no’, please go directly to question (24)

(23) If yes, which one(s)?
   Psychological therapy [___]
   Relaxation techniques [___]
   Pharmacological therapy [___]
   Behaviour therapy [___]
   Other(s) [___] Which other(s)?

(24) Do you adapt your treatment approach for these clients?
   Yes [___]                               no [___]

   If you answered question (24) with ‘no’, please go directly to question (26)

(25) If yes, please provide details?

(26) Do you attempt to help or manage your client in any other way (s) than above?
   Yes [___]                               No [___]       Not Applicable [___]

   If you answered question (26) with no or not applicable, please go directly to question (28)

(27) If yes, how?
(28) Osteopathic treatment helps in clients with mood disorders

| Strongly agree | [] |
| Agree          | [] |
| Neither agree nor disagree | [] |
| Disagree       | [] |
| Strongly disagree | [] |

(29) Do you refer your client to another health practitioner or program?

Yes [ ]  No [ ]  Not Applicable [ ]

(30) If no, why not?

If you answered question (29) with ‘no’, ‘not applicable’ please go directly to question (32)

If you answered question (29) with ‘yes’,

(31) Did you refer your client to (please tick as many as applicable):

His/her GP [ ]
A psychologist or counsellor [ ]
A psychotherapist or psychiatrist [ ]
Other(s) [ ]

If yes, which other(s)?

(32) How difficult it is to manage clients with mood disorders?

Not difficult  difficult  very difficult
0  1  2

(33) From your experience, what are the difficulties in managing these clients?
Section 3

*Your previous education in relation to ‘mood disorders’*

(34) During your osteopathic education have you had **specific education** *(course content)* in relation to mood disorders?

Yes [_]  No [__]

*If ‘No’, proceed to question (37)*

(35) If yes, please **provide** some details:

(36) Do you feel this specific education is **sufficient** for your osteopathic practice?

Yes [_]  No [__]

(37) Other than osteopathic education, do you have any other qualification/education in the field of mental health?

Yes [_]  No [__]

(38) If yes, please provide some details:

(39) Apart from osteopathic practice, do you/have you worked in the area of mental health and/or with clients who experience mood disorders?

Yes [_]  No [__]

(40) If yes, please provide some details:

(41) Do you feel **further education** in relation to ‘mood disorders’ would be valuable to your practice?

Yes [_]  No [__]

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(42) If ‘yes’, do you have any **suggestions**?

(43) If ‘no’, what are the reasons?

(44) Any other ‘comments’:

‘**Thank you for your participation**’
Appendix B – Information sheet

THE IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF MOOD DISORDERS IN CLIENTS BY OSTEOPATHIC PRACTITIONERS IN NEW ZEALAND

Information Sheet

You are invited to take part in a research project being undertaken as a part of Unitec Master of Osteopathy degree. This project involves exploration and description of how osteopaths identify, assess and manage mood disorders in patients. Also, the study is designed to identify what sort of specific education osteopaths have received and may wish to receive further in this respect.

Researchers:

The researcher is Kovanur Sampath Kesava. The research project is being supervised by Dr Carol Horgan (School of Health Science, Unitec New Zealand), Dr Dianne Roy (School of Health Science, Unitec New Zealand) and Dr Deepa Marat (Postgraduate Centre, Unitec New Zealand).

What will participation involve?

- Completing an online survey or a hard copy version which explores how osteopaths identify, assess and manage mood disorders in patients.
- Completing the online survey implies your consent to participate in the study.
- If you are filling the hard copy version of the survey, kindly find a consent form enclosed with this mail.
- You will be provided with definition of terms such as mood disorders, assessment and management.
- The questionnaire is divided into 3 sections and comprises both closed and open ended questions.
- The questionnaire may take up to ten or fifteen minutes to complete.
- If you are filling the online version of the questionnaire please make sure that you click the submit button so as to submit the survey questionnaire.
- If you are filling the hard copy version, you are provided with a paid envelope to enable you to return the consent form and the survey questionnaire.
• Your questionnaire has been assigned an ‘access code’ that is unique. If you wish to withdraw from the study at a later stage please quote the access code found on the top right corner of your questionnaire.
• Please return the completed questionnaire and consent form before 30th September 2007.

Potential risks to research participants:
There are no potential risks identified to be associated with this research study.

Confidentiality:
Confidentiality of all the participants will be protected in the following ways.
  o All completed questionnaires will be seen only by the researcher.
  o All hard copies will be stored in a locked file in a secured room. Only the researcher will have access to these files.
  o Only anonymous data will be presented in reports related to this research.
  o Electronic files will be protected with an electronic password.

You have the right not to participate, or to withdraw from this research project. If you decide to withdraw from the study, you can do so within 2 weeks after submitting your questionnaire. This can be done by contacting K.S.Kesava or Dr Carol Horgan by telephone or email.

On completion of this research, the final report will be available at the Unitec main library and a summary of results will be emailed to you.

Information and concerns:
For further information or concerns please contact the researchers by telephone, email or fax.

Kovanur Sampath Kesava
School of Health Science
Unitec New Zealand
Telephone: (09) 8151419
Mobile: 021 072 5999
Email: dearkesava@yahoo.com

Or

Dr Carol Horgan
Senior Lecturer
School of Health Science
Unitec New Zealand
Mobile: 021 0272 6340
Email: chorgan@unitec.ac.nz

Thank you for your valuable time and contribution to this research.
Appendix C – Feedback sheet

YOU’R FEEDBACK ABOUT THE PILOT QUESTIONNAIRE:

“The Identification, Assessment and Management of Mood Disorders in Clients by Osteopathic Practitioners in New Zealand”

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>TERMINOLOGY/ WORDS/ PHRASES WHICH NEED TO BE CHANGED</th>
<th>ASPECTS OF RELEVANCE TO YOU BUT NOT COVERED IN THE QUESTIONNAIRE</th>
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<tr>
<td>MOOD DISORDERS</td>
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<td>IDENTIFICATION</td>
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<td>ASSESSMENT</td>
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<td>MANAGEMENT</td>
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<td>QUESTION ARRANGEMENT</td>
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Any other suggestions for revision of questionnaire (time taken to answer the questionnaire, length of questionnaire, ease in answering)

“THANK YOU FOR YOUR INFORMED FEEDBACK”