Declaration

Name of candidate: Jenna Marie Norrie

This Thesis/Dissertation/Research Project entitled: **"Structural or Cranial Osteopathy: Factors Influencing Practitioner Preference"** is submitted in partial fulfillment for the requirements for the Unitec degree of Master 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: 2010-1112

Candidate Signature:…….…….Date: ……

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Structural or Cranial Osteopathy: Factors Influencing Practitioner Preference

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Abstract

Emerging studies are beginning to explore osteopathic practitioner attitudes and beliefs towards, and experiences with, different treatment styles, namely osteopathy in the cranial field. However, little has been done to investigate the reasons why osteopaths choose to practice within different treatment styles. While many osteopaths integrate a multitude of osteopathic techniques into their clinical practice, this study focused on two specific groups: osteopaths who primarily employed direct structural technique, and osteopathswho primarily employed cranial technique in their clinical practice. The influencing factors that contributed to each osteopath's decision to practice their chosen treatment modality were analysed.

A qualitative approach with thematic analysis and interpretive description has been used as the methodological basis for this study. Data was collected via semi-structured interviews that took place over Skype™ with six osteopaths in Australia who predominantly used either structural or cranial technique. Analysis of the auditory data and interview transcripts revealed multiple themes and influences that contributed to current treatment approach by the participant osteopaths.

The most commonly identified themes, from both the osteopaths who used structural technique and those who used cranial technique, were the influence of a mentor or role model, and the clinical environment of their first professional employment. Other themes emerged, including the influence of existing research, the accumulation of clinical experience, as well as the significance of their physical limitations and personalconsiderations. Discussion surrounding these themes has included the integration of both psychology and medical papers to support the findings of this study.

Key words
Osteopathy in the cranial field; OCF; OMT; structural; technique; influence; mentor

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Finally, I'd like to extend a special thanks to my family, and my parents…
Mum and Dad: this one's for you.

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Abbreviations

OCF	Osteopathy in the cranial field
CSF	Cerebrospinal fluid
PRM	Primary respiratory mechanism
CRI	Cranial rhythmic impulse
CC	Cranial concept
EBM	Evidence based medicine
EBP	Evidence based practice
OMT	Osteopathic manipulative technique
HVLA	High velocity low amplitude thrust
MET	Muscle energy technique
ST	Soft tissue technique
GOT	General osteopathic technique
SCS	Strain counter strain technique
FLR	Facilitated ligamentous release
FPR	Facilitated positional release
LILT	Low intensity laser therapy
MRI	Magnetic resonance imaging
OBA	Osteopathic Board of Australia
AHPRA	Australian Health Practitioner Regulation Agency
AOA	Australian Osteopathic Association
VU	Victoria University

RMIT	Royal Melbourne Institute of Technology
OSNZ	Osteopathic Society of New Zealand
DO	Doctor of osteopathy
MD	Medical doctor

Structural or Cranial Osteopathy:
Factors Influencing Practitioner Preference

No man is an island, entire of itself;
every man is a piece of the continent, a part of the main.
If a clod be washed away by the sea, Europe is the less,
as well as if a promontory were,
as well as if a manor of thy friend's or of thine own were:
any man's death diminishes me, because I am involved in mankind,
and therefore never send to know for whom the bells tolls;
it tolls for thee.

Meditation XVII, John Donne (as cited in Booty, 1990, p. 58)

Chapter 1: Introduction and Background

This study investigates factors that may influence an osteopath's decision to practice primarily within a structural or cranial treatment modality in their professional practice. The first chapter introduces the research topic and provides information on the researcher's background and personal interest in this area of enquiry. An outline of the rationale for this investigation and definitions to distinguish between structural and treatment modalities are then followed by a brief overview of the remaining chapters.

Background and personal interest

A connection with osteopathy was inevitable for me, as I had family members and many friends in professional practice. This resulted in a wealth of stories that I heard over the years, about many aspects of the profession from a wide range of different practitioners. Tales of their trials and tribulations, successes and frustrations, while always retaining patient confidentiality, have provided an abundance of anecdotal information and gave me an impression of their pride, respect and gratitude for their ongoing involvement in the profession. However, through many conversations and interactions with various osteopaths, I have observed an element of tension that exists between the cranial and the structural schools of thought. This seems to be apparent not only in professional practice, but in osteopathic colleges in New Zealand and offshore. As graduation approaches, this division between educational and clinical styles ofosteopathic practice became an area of increasing interest.

Preliminary thought regarding the treatment style which I may choose to adapt for future patients began early as a student of osteopathy. With so many technique options and approaches to choose from, it seemed daunting to simultaneously process all the information, while adapting some aspects to fit with personal attributes and limitations. Ongoing self reflection about different approaches to treatment raised questions regarding the treatment options I may choose to utilise in future private practice.

While it was still too soon to make any definite decisions, I did ask a family member what inspired them to practice their style of osteopathy. Over the following months other osteopaths were asked the same question. What I observed was a reoccurrence of some common factors within each story that contributed to their decisions to practice in their chosen style. These influences were commonly coupled with strong opinions about the different treatment modalities, often creating a sense of tension or discomfort towards other approaches. However, irrespective of the way in which they treated patients, there appeared to be common threads between the practitioners that relate to the osteopathic principles as established by Dr. Andrew Taylor Still. This observation became the foundation on which I decided to base this dissertation: to investigate the observed phenomenon of osteopaths choosing to practice in different ways.

Study Rationale

Within the science of osteopathy and the community of practitioners who embody the profession there have been decades of tension between osteopathic schools of thought and practice, namely between the tradtional structural approach, also known as Osteopathic Manipulative Technique (OMT), versus the more abstract practice of cranial osteopathy (Cardy, 2004). Historically it is difficult to separate the two as the development of the cranial concept quickly followed the origins of osteopathy. One of Dr. Still's original students, Dr. Sutherland, explored and developed an avenue of Still's teachings, and Osteopathy in the Cranial Field (OCF) was born (Ward, 1997). Despite the ongoing development of both streams of osteopathy, modern day OCF is struggling to stand up to conventional scrutiny (Cardy, 2004), and it appears the profession is dividing.

Before any questions concerning the professional implications of the in-house tension may be answered, it may help to first examine the foundations of osteopathy in order to understand why some osteopaths choose to practice at opposite ends of the methodological spectrum. There is no doubt that many osteopaths do not practice within the framework of a single treatment modality, but employ a variety of techniques and styles. For the purpose of this study, the focus will narrow to consider osteopaths who

practice within a structural framework and those who practice within the boundaries of OCF.

While there have been studies looking at osteopaths' attitudes and beliefs regarding OCF, the experience of certain cranial phenomena and the process behind technique selection (Harrison, 2009; Braybrook, 2011) to the best of my knowledge, there appears to be an absence of investigations into why some osteopaths choose to practice with OMT and why others choose to practice with OCF. This study intends to provide a preliminary enquiry into the factors influencing osteopaths to practice either primarily within a structural treatment modality or within a cranial treatment modality, and hopes to provide the basis on which future research can be developed to help bridge that gap in osteopathic knowledge.

Clarification of treatment modalities

Exploration of the background literature regarding the techniques available to osteopaths has informed the formulation of structural and cranial definitions. For the purpose of this study, Parson and Marcer's (2006) defintion of direct technique was used to define the structural techniques/OMT that osteopaths employ. Direct techniques involve engaging the restrictive tissue barrier pertaining to the identified somatic dysfunction and applying an activating force to correct the lesion (Johnson & Kurtz, 2003; *Glossary of Osteopathic Terminology Usage Guide*, 2006). In Johnson & Kurtz (2003), structural (OMT) techniques include:

- Joint Articulation
- High Velocity Low Amplitude thrusts (HVLA)
- Muscle Energy Technique (MET)
- Soft Tissue Technique (ST)

This thesis refers to practitioners who primarily use structural techniques as structural or OMT osteopaths. Osteopaths who practice cranial osteopathy/OCF are generally defined as practitioners who use cranial techniques in the large majority of their patient treatment. This involves a system of diagnosis and treatment using the Primary Respiratory Mechanisim and balanced membranous tension (*Glossary of Osteopathic Terminology*,

2006). For the purpose of this study, practitioners who primarily use OCF in their professional practice will be refered to as cranial or OCF osteopaths.

Thesis overview

Having introduced the researcher's background, the study rationale, and definitions of both structural and cranial treatment modalities, Chapter 1 concludes with a brief outline of the remaining sections. Chapter 2 reviews the relevant osteopathic literature, focusing on the history, scope of practice and recognized treatment models within the profession. Osteopathy in the Cranial Field (OCF) will be expanded upon with respect to its development and current position within the profession. Finally, the origins and development of professional specialisation will be explored, particularly within the medical field as a means to contextualize it for the osteopathic profession, with reference to the classification of treatment modalities as specialties.

Chapters 3 and 4 outline the research methodology and methods used in this study, including criteria for participant selection and the process of data analysis using interpretive description and thematic analysis. Ethical considerations, questions of rigor and credibility are also addressed. In Chapter 5, the emerging themes fromthe data analysis will be identified and presented with excerpts from the interviews. The presentation of the results includes discussion of emerging themes and their relationship to the available literature is considered. Chapter 6 concludes the dissertation with an evaluation of the research process, the implications of this study and suggested areas for future research that may strengthen the growing body of knowledge surrounding osteopathic principles and practice.

Chapter 2: Literature Review

Osteopathy is a growing profession that has evolved to encompass a range of technical approaches that work with the inherent self-healing mechanism of the body. Accredited osteopathic courses teach these techniques as part of the core curriculum (Osteopathic Council of New Zealand, n.d.) They include structural, visceral, articulatory, cranial and functional approaches, all of which have the common goal of facilitating health in the individual. The structural and cranial branches of osteopathy are of particular interest to this study. Of the osteopaths currently practicing, there are some who choose to utilize a more structural approach to treatment, while others a more cranial approach. OCF is often a topic of debate and it has been noticed that there is an "observable tension" between structural and cranial osteopaths (Cardy, 2004, p. 5). This review seeks to explore the literature relevant to this enquiry, the concept of specialisation and its applicability to the profession, and the controversy that exists within the field of cranial osteopathy to provide a foundation for this investigation. Due to the absence of literature exploring the reasons of treatment modality choice/specialisation of osteopaths, exploration of the medical literature and the reasonsfor medical students' decisions to pursue different specialities has been included as an illustration of potential predictors or parallels surrounding similar practitioner decisions in another health care profession.

The history of osteopathy

Andrew Taylor Still, MD (1828-1917) was originally a medical doctor in the 19th century in the U.S.A. After losing four family members to meningitis, his faith in the medical system was challenged. In his rejection of empirical medicine, he founded a parallel stream of medical practice that he named osteopathy (Ward, 1997). The development of osteopathy was conceived with his perception that man was a self-sustaining mechanism aided by the laws of nature (Ward, 1997). He maintained that the manifestation of disease and ailments was due to a disruption in the free flow of material and energetic elements that exist within. This interruption in the internal current of the body inhibits the inherent self-healing process and a state of dis-ease presents (Becker, 2001).

Based on his previous clinical experience and his newly found understanding of natural laws in the role of health and disease, Still developed four fundamental principles onwhich the philosophy of osteopathy was based. In 1892, Still opened the first osteopathic school in Kirksville, Missouri. Still's four key principles as outlined by Ward (1997) are:

i) The body is a unit; the person is a unit of body, mind and spirit.

ii) The body is capable of self-regulation, self-healing and health maintenance.

iii) Structure and function are reciprocally related.

iv) Rational treatment is based upon an understanding of the basic principles of body unity, self regulation and the interrelationship of structure and function.

Scope of osteopathic practice

Osteopathy has evolved over the years into an internationally recognized source of primary healthcare. In particular, it has flourished in the UK, Australia and New Zealand (Baer, 2008). The Osteopathic Council of New Zealand (n.d.) defines professional practice as thefollowing:

> Registered osteopaths are primary healthcare practitioners who facilitate healing through osteopathic assessment, clinical differential diagnosis, and treatment of dysfunctions of the whole person. Osteopaths use various recognized techniques to work with the body's ability to heal itself, thereby promoting health and wellbeing. These osteopathic manipulative techniques are taught in the core curriculum of accredited courses in osteopathy. (para. 7)

Recognised treatment models

There are a number of treatment models that are widely recognized in the osteopathic profession. According to some authors this diversity of treatment options means that theoretically the osteopath may be able to aid everyone and every complaint. The range of treatment options available is expressed on a horizontal continuum from structural to functional, and a vertical continuum from maximal to minimal, indicating the intention of the treatment (Parsons & Marcer, 2006). As illustrated in the diagram below, this schema published in Parsons & Marcer (2006) offers one view that appears to have developed and expanded upon earlier theories (Latey, 1983; Ward, 1997), offering a more modern rendition on the theory of osteopathic technique.

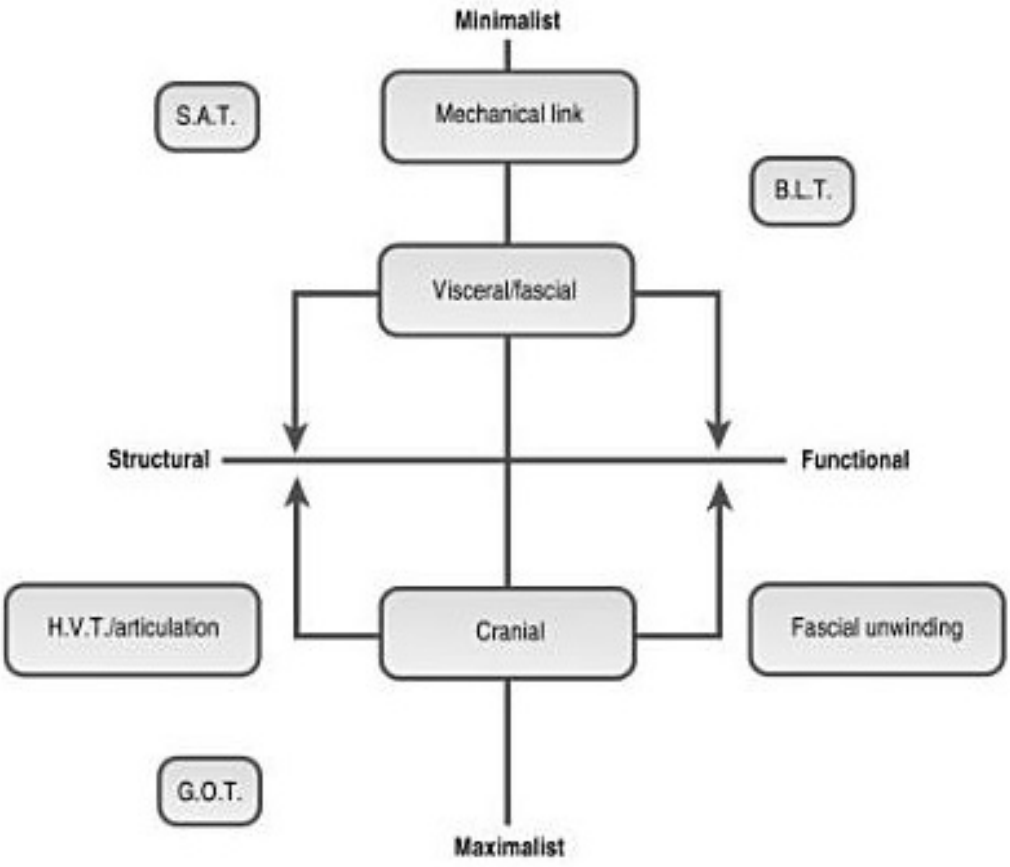

Figure 1: The structure/function and maximal/minimal treatment axis. (Parsons & Marcer, 2006, p. 179)

Structural:

Involves taking the area of dysfunction into the restricted motion barrier; tension is obtained and a force is delivered to overcome the restriction (Parsons &Marcer, 2006, p. 179).

Functional:

Taking the dysfuntional area away from the barrier; disengaging the motion restriction (Parsons & Marcer, 2006, p.179).

Minimalist:

"Treating the whole through its parts" involves finding the primary lesion and correcting it with minimal invasion (Parsons & Marcer, 2006, p. 179).

Maximalist:

"Treating the parts through its whole" where multiple areas of the body are treated causing an integration of physiological components (Parsons & Marcer, 2006, p. 179).

There are two major classifications of osteopathic technique. These are:

Direct method:

Involves engaging the restrictive barrier pertaining to the identified somatic dysfunction and applying an activating force to correct the lesion (Johnson & Kurtz, 2003; *Glossary of Osteopathic Terminology Usage Guide*, 2006). These techniques include:

- Joint Articulation
- High Velocity Low Amplitude thrusts (HVLA)
- Muscle Energy Technique (MET)
- Soft Tissue Technique (ST) (Johnson & Kurtz, 2003)

Indirect method:

Defined as a technique that is applied away from the restrictive barrier causing it to disengage. The dysfunctional body part is moved away from that restriction until there is

equal tissue tension in one or all planes of movement (Johnson & Kurtz, 2003; *Glossary of Osteopathic Terminology Usage Guide*, 2006). These techniques include:

- Strain-Counter-Strain technique (SCS)
- Cranial (OCF)
- Facilitated Positional Release (FPR)
- Functional Method (FM)
- Fascial Ligamentous Release (FLR) (Johnson & Kurtz, 2003)

The foundation of osteopathy in the cranial field

William G. Sutherland, D.O. D.Sci. (Hon) (1873-1954), an early student of Still, considered the fundamental osteopathic philosophies whilst observing a human skull. The sphenoid and the squamous portion of the temporal bone captured his attention and that he likened to the gills of a fish "indicating articular mobility for a respiratory mechanism" (Ward, 1997, p. 902). He postulated that within the bones of a living cranium there existed movement that likened to a form of respiration. He spent forty years of dedicated study investigating this involuntary movement of the cranium and considered this movement to precede that of thoracic respiration, and thus called it the Primary Respiratory Mechanism (PRM) (Becker, 2001). Dr. Sutherland described five components of the PRM that operate in unity.

Ward (1999) and Becker (2001) outline Sutherland's five components as:

i) The fluctuation on the cerebral spinal fluid with the potency of the tide.

ii) The inherent motility of the central nervous system.

iii) The mobility of the cranial and spinal dural membranes (reciprocal tension membrane).

iv) The articular mobility of the cranial bones.

v) The involuntary mobility of the sacrum between the ilia.

Dr. Sutherland continued to emphasise that his discovery was an extension of Dr. Still's teachings of osteopathy (Becker, 2001). His application of Still's philosophy is still recognized as"one of the most innovative ideas to be advanced by a member of the osteopathic profession" (Ward, 1997, p. 902).

Sutherland's philosophies have remained a part of the osteopathic profession from the day he first began teaching them in the mid 1900's (Ward, 1997) right through to this current day, where the practice of osteopathy following the Sutherland model is widely known as Osteopathy in the Cranial Field (OCF). Despite the early recognition that OCF was included as an aspect of osteopathic practice, OCF is continually being challenged by traditional evidence-based practice. As the empirical world of medical research places increasing pressure on osteopathy to justify treatment models and approaches, OCF is struggling to uphold its position next to the more quantifiable OMT techniques.

The controversy that exists with cranial osteopathy

> *"The Tao that can be completely explained is not the Tao itself."*
>
> *Tao Te Ching,*Lao Tzu (as cited in McPartland& Skinner, 2005, p. 21)

The current evidence-based practice paradigm finds the cranial concept (CC) to be problematic. It has been argued that, from the beginning, Still's concepts were "already beyond the capabilites of double-blind trials" (McPartland & Skinner, 2005, p. 21). Still regarded osteopathy as a science, but when the osteopathic concepts expanded beyond empirical evaluation, his lessons were conveyed in metaphor (McPartland & Skinner, 2005). While evidence based practice (EBP) does recognise experiental and anecdotal evidence, in the medical world, it is has a very low value in comparison to the accepted standard of the randomized clinical trial (Collins, 2007). Despite external criticism, OCF may well be growing in popularity for both patients and practitioners; a number of

anecdotal success stories continue to be collected to substantiate increasing efficacy and popularity (Sommerfeld, Kaider, & Klein, 2003).

According to Sommerfeld et al (2003), the physiological aspect of the CC is based upon two main hypotheses:

1) The idea that movement exists within the osseous membranous structures of the skull: the hypothesis of cranial mobility.
2) The presence of the Primary Respiratory Mechanism (PRM), an autonomous rhythmic phenomenon inherent to every living organism, independent of any other physiological rhythm or pulse. The cyclical changes of the PRM are represented by an expanding phase called flexion and a contracting phase called extension. (p. 1)

Several studies using magnetic resonance imaging (MRI) several studies have contributed towards the confirmation of cerbrospinal fluid fluctuation as movement of the brain and spinal cord is being identified in vivo. The demonstrated movements produced a vector that created a piston-like action thought to be the primary force behind ventricular compression, thus contributing to the interventricular flow of the cerebral spinal fluid (CSF). It is thought that this movement is a possible contributing factor to the phenomena of the PRM, but there remains scepticism from many authors (Jones, 2000).

There is little research surrounding cranial osteopathy. That which does exist is primarily concerned with inter- and intra-examiner reliability of palpation of the cranial rhythmic impulse (CRI) of the PRM. Intra-examiner reliability studies conducted by Hanten et al., (1998) and Jones (2000) have generated polarized results with extreme figures representing poor reliability. Other studies have produced similar results. These include authors such as Halma, Degenhardt, Snider, Johnson, Schaun Flain, & Bradshaw (2008) and Moran & Gibbons (2001) who have all produced varying results, so that no clear conclusion can be affirmed.

Inter-examiner reliability for the palpation of the CRI remains poor. A study conducted by Moran and Gibbons (2001) concluded the reliability of CRI palpation to be very low.

These low levels of inter-examiner reliability have generated doubts surrounding the construct validity of the PRM,however, the clinical significance must not be ignored (Moran & Gibbons, 2001). Whilst there is no plausible biological model and a lack of scientific evidence regarding the identification of the CRI and the effect of OCF, there is positive clinical experience and patient feedback (Moran, 2008). Bearing this in mind, it would seem that empirical scientific research falls short when trying to explain the subtlties of osteopathic treatment affecting the human healing mechanism. Blaser (2009) also suggests this idea and argues that osteopathic research is either statistically insubstantial with small sample sizes, or has employed weak and uncontrolled designs limiting the research validity. Consequently, the osteopathic profession has been criticised due to the apparent lack of evidence and effectiveness of the techniques (Blaser, 2009).

There is another option available for osteopathic research; qualitative investigation. Qualitative research has the ability to capture the essence of what is being investigated by providing a rich description of the participant's viewpoint. Qualitative research aids the applicability of quantitative results to human context (Trochim, 2006). For this reason, there is a valid place for qualitative research in osteopathy as it assisits in revealing the subtlties that cannot otherwise be measured by scientfic experiments. A commentary written by Tyreman (2008) concludes that although science may provide knowledge that contributes to the comprehension of human anatomy, physiology and biomechanics, science and quantitative analysis alone will not establish osteopathic identity. Tyreman (2008) argues that emerging knowledge may either support or undermine the preconceptions that define osteopathy and facilitate a re-evaluation of what osteopathy is. However in the final analysis, the osteopathic identity is based upon agreed and accepted values between practitioners, and how the profession can be enhanced. While this commentary has muliptle journal articles, listed as references, it must be considered that this published paper is essentially opinion based.

Structural osteopathy

Structural osteopathic techniques are thoroughly taught throughout the osteopathic training programmes and are used in professional practice by many osteopaths. As defined earlier, structural osteopathic techniques involve taking the identified area of dysfunction into the restricted motion barrier.Tension is then established and a force is delivered to overcome the restriction. Such techniques include high velocity low amplitude thrusts (HVLA), articulatory techniques including joint articulation and general osteopathic treatment (GOT), muscle energy technique (MET), and soft tissue (ST) techniques (Latey, 1983; Parsons & Marcer, 2009; Blaser, 2009). These techniques form the foundation and majority of technique curriculain most osteopathic colleges, and unlike OCF, structural techniques are supported by quantitative research.

HVLA is among the most commonly used techniques by osteopaths (Gibbons & Tehan, 2006) and has been subject to extensive research with consideration to both the change in spinal segment range of motion and perceived tenderness. HVLA typically involves delivery of a short and fast thrust to a joint, either spinal or peripheral, once sufficient tension has been gathered. It is often accompanied by an audible pop or crack (Hamilton, Boswell, & Fryer, 2007; Ward, 1997; Parsons & Marcer, 2009).

There are a number of theories that attempt to explain the mechanism by which HVLA generates a hypoalgesic response. These theories are largely conjectural and are yet to be consolidated (Hamilton et al., 2007). One theory proposed by Melzack & Wall (1965) known as the gate control theory, attributes the effect of joint manipulation to the change in joint proprioception and its effect on the mechanoreceptors. The large diameter myelinated neurons of the mechanoreceptors regulate the small diameter nociceptive neuron input into the spinal cord. Joint manipulation is thought to inhibit nociceptive input through activation of these large diameter fibres as a result of the propreoreceptive changes from the stretching or movement within the joint capsule (Hamilton et al., 2007). It has also been suggested that the theraputic benefitof HVLA comes from the change in joint effusion and oedema by altering capsule restrictions and therefore local fluid flow

and drainage. It has also been hypothesised that joint manipulation has an effect in pain reduction through the influence of higher brain centres such as the dorsal periaqueductal grey matter to the spinal cord (Hamilton et al., 2007; Vincenzino, Collins, Benson, & Wright, 1998). Essentially, both these explanations are theories based upon known biological systems and cannot be deemed one-hundred percent accurate. This becomes particulary applicable to the latter theory, as prelimanry research is currntly limited to animals and has yet to be investigated in humans (Vincenzino et al., 1998).

Joint range of motion is another field of research that parallels HVLA investigation. One osteopathic theory advocating HVLA refers to precise postioning of the joint towards the restrictive barrier before delivering the thrust. This direct approach toward the motion restriction followed by the delivery of a specific thrust is thought to overcome the joint restriction and improve the joint range of motion (Ward, 1997). This theory has been supported bymuchresearch showing that HVLA to a cervical spine restriction improves the joint range of motion immediately (Fernadez-de-las-Penas, Downey, & Miangolarra-Page, 2005; Martinez-Segura, Fernandez-de-las-Penas, Ruiz-Saez, Lopez-Jimenez, & Rodriquez-Blanco, 2006).

A 2005 study used radiographic imaging to quantify simple joint hypomobility associated with mechanical neck pain, and evaluated the effects of HVLA to the restricted segment. The results showed marked improvement in range of motion (as measured by the distance in millimeters between the transverse process of the dysfunctional vertebra and the transverse process of the subjacent vertebra) following an HVLA to an identified restriction, at cervical vertebral joints 3-4 and 4-5 (Fernadez-de-las-Penas et al., 2005). While this clinical trial was small with only 15 participants, limiting its ability to be generalised to the wider public, it does appear to be relatively reliable. Identification of the joint restriction was obtained by a validated lateral-glide test that reproduced the participants familiar joint pain. Palpation of the joint for hypomobility, as well as radiographic imaging was used to complete a triad of diagnostic assessments and clearly identify the restricted joint. This reduces any bias or inter-rater reliability that may apply to practitioner analysis of the palpation, as the potentially subjective method of diagnosis through palpation was supported with two forms ofexternal analysis. However there was

no control group involved, limiting the validity of the study (Fernadez-de-las-Penas et al., 2005).

Another recent randomised controlled trial involving seventy participants compared the effects of joint range of motion at C3/4 and C4/5 levels using an HVLA as the technique and a manual joint mobilisation as the control. A total of sevety-one participants were used and were randomly assigned to receive the HVLA (n=34) or to the control group (n=37) where manual mobilisation techniques other than HVLA were used. Joint restriction was identifed through active cervical range of motion as measured by a cervical goniometric device in conjunction with the validated lateral-glide test. The techniques were performed by an osteopath with more than five years clinical experience and who was not involved in the goniometric measurements. An external examiner, who was blinded to the participants'treatment protocol, measured the cervical active range of motion post-intervention, minimising the introduction of bias. Both groups showed improvement in range of motion of the joint in question, with those that received the HVLA showing a greater improvement than the control group (Martinez-Segura et al., 2006).

Muscle Energy Technique (MET) is an osteopathic technique that is linked back to A.T. Still. Still insisted that if the practitioner knew the anatomy and osteopathic philosophy, then they would know the techinique. In 1948 Fred Mitchell, Sr. took Still's concept and explored the possibility of using the patient's active muscle contraction and effort as part of a treatment. From this the idea of muscle energy was conceived and developed into the commonly used Muscle Energy Technique (Ward, 1997; The Educational Council on Osteopathic Principles of the American Association of Colleges of Osteopathic Medicine, 2006). MET is defined by the *Glossary of Osteopathic Terminology* that was written by the American Association of Colleges of Osteopathic Medicine as "a form of osteopathic manipulative diagnosis and treatment in which the patient's muscles are actively used on request, from a precisely controlled position, in a specific direction, and against a distinctly executed practitioner counterforce"(2009, p. 31). MET has been promoted for the treatment of shortened or weakened muscles, restricted joints, and for the promotion of lymphatic drainage. Recent research has successfully demonstrated the apparent

effectiveness of MET, and the clinical application of the technique is now increasing (Fryer, 2011). While there is current evidence that suggests MET has a greater effect on increasing muscle extensibility than passive stretching alone, the literature overview published by Fryer (2011) reported that there is either conflicting or lack of evidence available on MET. This suggests there is an absence of reliable guidelines for the technique, with respect to the optimal number of isometric muscle contractions, the force and duration of the contraction, and the force of the stretch to maximse the positive effect on the muscle length. However the lack of agreed guidelines does not seem to deter osteopathic practitioners from using the technique in a clinical setting (Fryer, 2011).

A 2009 study conducted at Unitec, Auckland, explored the viscoelastic response (stress-relaxation) during sub-maximal isometric contractions of the plantar flexor muscle tendon. A dynamometer was used to standardise and maintain 20% of contractile force for individual dorsiflexion. The participants were asymptomatic and acted as their own control over three repitions of muscle contraction and stretch. The results showed a positive viscoelastic stress relaxation response in the targeted muscle tissue, as well as a gradual relaxation component following the intervention. However there was only a small number of participants which limits the generalisability of the results to a wider population (Jacobs, 2007).

Structural osteopathy, cranial osteopathy and the fourth principle

The fourth osteopathic principle is the summation of the first three. It includes the concept of unity, the reciprocal relationship between anatomical structure and function, and the body's inherent ability to heal itself. "Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation and the inter-relationship of structure and function"(Ward, 1997, p. 4). The idea of rational treatment naturally occurs if the principles and the understanding of the human being as a whole are applied. With this knowledge and understanding, the differential diagnosis of the osteopath becomes more accurate (Ward, 1997). From there, a treatment plan may be developed. Still, as cited in Van Buskirk (2001), was adamant that the scope of osteopathy was not limited to the techniques that he performed:

> I want to make it plain that there are many ways of adjusting bones. And when one operator does not use the same method as another, it does not show criminal ignorance on the part of either, but simply the getting of results in a different manner… Each operator should use his own judgment and choose his own method of adjusting all bones in the body. It is not a matter of imitation and doing just as some successful operator does, but bringing the bone from the abnormal to the normal. (p. 7)

The heart of this research project is based on the principles of the above assertion by Still: that an osteopath's "own judgment" may lead to a personal choice of preferred treatment "method", and though individual practitioner methodology may be dissimilar, Still considers this to be acceptable osteopathic practice, as long as the treatment endeavors to return structural alignment: "bringing the bone from the abnormal to the normal" (Van Buskirk, 2001, p. 7). Whether or not the technique is delivered in the form of an HVLA, a MET (or any other direct technique), a functional or a cranial technique, as long as the practitioner has the knowledge (of the osteopathic principles) and rationale behind his (treatment plan) actions, then they are practicing soundosteopathy. This idea contrasts with Plant,Handoll, Stone, Tanswell, Woodhead, Betser, & Pusey'sassertions where the risk of becoming a "Jack of all trades and master of none" arose, as well as challenging the idea of specialization in the osteopathic realms (2001, p. 12). More importantly, if both the structural and cranial concepts of osteopathy have stemmed from A.T. Still's original thought, then why is it that some osteopaths choose one model of treatment over the other? If Still declared that osteopaths' use of different methods "does not show criminal ignorance on the part of either [practitioner], but simply the getting of results in a different manner" (Van Buskirk, 2001, p. 7), then why do some osteopaths regard colleagues with differing styles as less respectable or less effective practitioners? With this in mind, is the noticeable tension between structural and cranial osteopaths as described in Cardy (2004) really necessary? It is hoped that by the end of this research, the answer to these questions may become clearer.

Introducing the concept of specialisation in professions

According to the *Online Compact Oxford English Dictionary*, the word "specialise" means to concentrate on and become an expert in a particular area or skill, and a "specialist" is a person who is highly skilled or knowledgeable in a particular field ("Specialise", 2008).Specialism is a concept that has been circulating the professional world for years, and appears to be a result of both an economic drive and as a way of managing the proliferation knowledge (Smith, 1776; Moghaddam, 2009). According to Moghaddam (2009) this stems back to Adam Smith in the late 1700s and was then later built upon by Charles Darwin in the 1900s. In the 1776 published work of Smith's *The Wealth of Nations*, he describes the beginnings of professional specialty as "the greatest improvements in the productive powers of labour, and the greater part of the skill, dexterity and judgment, with which it is anywhere directed, or applied, seem to have been the effects of the division of labour"(Smith, 1776, p. 10). He illustrates this division through the profession of pin-making, where one man is assigned the manufacturing of a particular part of the pin, be it drawing out and cutting the wire, grinding the top to make the head, or making the eye to feed the thread. This creates a division of labour within the trade that produces a greater number of pins made daily, and consequentially the trade "is divided into a number of branches, of which the greater part are likewise peculiar trades"(Smith, 1776, p. 11). In 1953, Charles Darwin published the *The next million years*,where he describes the nature of both man and animal, given favorable conditions, to "rapidly multiply to fill the vacant spaces of the world"(p. 36). This denotes the concept of specialization in terms of maximising available resources and increasing the chances of survival (Moghaddam, 2009).

This historic division of labour has not only survived, but has proliferated since the days of Smith and Darwin into modern day professions such as law, engineering, architecture and medicine. In the scientific world, the development of specialization and specialist enquiry has facilitated the progression of western medicine for nearly two centuries (Cassel & Reuben, 2011). This is largely attributed to the growing need for specialty medicine, as well as the famous Flexner Report, published in the USA and in Canada 1910, outlining the reform of medical education. Osteopathic colleges were included in

the inspections, as Abraham Flexner travelled North America visiting and inspecting over 155 medical and osteopathic schools, assessing the academic standards of them individually before publishing the famous report. Medical schools that did not live up to the famous "holy trinity of medical education" (Markel, 2010, p. 888) were threatened with poor public reviews and national discredit. This added pressure to raise the standard of medical education and further develop the concept of medical specialties as Flexner stressed the need for doctor's "commitment to helping others and the prevention of disease in the population rather than merely the cure of the individual"(Markel, 2010, p. 888).

Over the years, the intellectual enquiry of medical scientists became more focused on the exploration and understanding of narrower topics which simultaneously directed differentiation of general medical physicians into physicians with specific fields of expertise. Not long after the release of the Flexner report, Ophthalmology became the first recognized specialty in 1917 and developed a separate board of assessment segregating the general physicians from the ophthalmologists. Over the decades, further specialties have emerged from the original general practice into the common specialists we encounter today, including rheumatologists, cardiologists, pediatricians, dermatologists and more (Cassel & Reuben, 2011).

With the growing segregation of medicine, there are also emerging voices of concern about the proliferation of specialism detracting value from the role of the general physician, making it a less attractive choice for residents (Cassel & Reuben, 2010). These concerns have rapidly become a reality as the desire for medical doctors to specialise has increased (Petchey, Williams, & Baker, 1997). This issue propogated the development of yet another speciality, and in 1969 family medicine became a recognised medical specialization in the United States (Cassel & Reuben, 2011).

A study within the medical field, conducted by Petchey, Williams, & Baker (1997),sought to investigate perceptions of general practice as a career. The results of their qualitative study identified three distinctively consistent analytical themes. The first

of these themes, clinical content, concluded that the majority of subjects considered general practice to be “clinically less challenging and intrinsically less satisfying” (Petchey et al., 1997, p. 195). One subject expanded on this perception to say that “if you take it [general practice] at its purely physical level, then yes, it is incredibly boring and incredibly frustrating” (Petchey et al., p. 195). The other emerging themes that contributed to avoidance of general practice were lifestyle and organizational context. It is suggested that there is ego attached to the choice of being a hospital specialist. One subject commented that he “liked the idea of being your own boss and having your own little area, your own little kingdom” (Petchey et al., p. 196). It was well documented throughout their study that many subjects noted that general practice was something you did if you could not make it in a specialty, and that you only worked in general practice if you could not make it anywhere else. Success was equated by study participants with hospital specialities, and the subjects referred to this as “making it” (Petchey et al., p. 197).

Lewin (2005) argues that the increase in the number of specialists compared to that of general practitioners has taken its toll on the health of patients. The World Health Organization has ranked the United States 37th out of 119 countries in the overall performance of medical health care, compared to the United Kingdom, who ranked 18th and had half the health care spending capital of the US (Lewin, 2005). Obesity is fast becoming an epidemic in the U.S. with the national statistics climbing each deade. Adult obesity trends in the US, as recorded by the Behavioral Risk Factor Surveillance System, showed that in 1990, that of the states that participated in the Surveillance System, there were no states that had a prevalence of obesity greater than 15%. By the year 2000, 23 states had a prevalence between 20-24% and the remaining states all had more than 10% prevalence. In 2010, record levels of obesity were recorded. No state had less than 20% obestiy, and thirty-six of those states reported record levels of obesity with numbers reaching 25-30% or more (Centers for Disease Control and Prevention, 2011). This epidemic has led some to suggest that, among other factors, this may also be a reflection of the increase in number of specialists compared to that of the primary care doctors in general practice. Lewin (2005) argues that specialists take a reductionist approach to medicine and are primarily focused on the patient, with specific symptoms that need to be eliminated, rather than the person as a whole being, who has contributed to the

manifestation of disease. A famous historical physician in the early 20th century, Sir William Osler, was perhaps one of the first medical doctors to illustrate this, with his famous quote "it is much more important to know what kind of person has a disease than what sort of disease a patient has"(Lewin, 2005, p. 190; Brainy Quote, 2011).Cassel and Reuben (2011) also argue this point and say that while specialisation in the medical field can benefit both the physicians and the patients, unnecessary and unjustified cultivation of specialties may make it difficult for the general public to choose an appropriate health care option without additional professional guidance. In addition Cassel & Reuben (2011) suggest that any sub-specializations that appear should be well considered and regulated by the boards and organizations to maximise the potential health care benefits to the public that further specialisation may offer.

Specialisation and osteopathy

The concept of specialisation in osteopathy is one that provokes debate. There is a noticeable increase in the number of osteopaths who depict themselves as specializing in certain areas or treatment modalities. An example of the debate surrounding osteopathic specialisation is found in the official journal of the General Osteopathic Council of the United Kingdom, *The Osteopath*, where they discuss possible specialisations that include, but are not limited to "visceral, cranial, sports or paediatric osteopathy" (as cited in Plant et al., 2001, p. 11). It has been observed that at some point a practitioner is generally recognized as having a specialty or as being a specialist in a given area (Plant et al., 2001). The 2001 October issue of the *The Osteopath* published a survey conducted by the General Osteopathic Council in the UK and showed that the specialist osteopaths increased their knowledge in a particular practice through various means, including further education from recognized institutes, other osteopaths, or they were self-taught (as cited in Parsons & Marcer, 2006).

Ward (1997) notes that Sutherland refers to OCF as being an extension of Still's original model of osteopathy rather than a new concept:

> OCF is osteopathy of the entire person because the inherent force that manifests from within the head region functions throughout the body; therefore, this form of diagnosis and treatment affects the whole person rather than being limited to the cranium. (p. 902)

Given that OCF is an extension from the original creation of osteopathy, if a practitioner predominantly employs cranial techniques in professional practice, does that make him a specialist of OCF? Dr. Sutherland would argue not: “The science of osteopathy is a speciality and those who practice that are specialists. The cranial concept itself is not a speciality. It is osteopathy, and the credit belongs to Dr. Still” (Sutherland, 1967, p. 145).

Osteopathy in the Cranial Field remains consitent with the osteopathic holistic approach to treatment. Sutherland’s work has been described by James Jealous as “perceptual… learning to sense the Whole. When one meets a patient [in person], one sees the Whole – a very rare event in our modern world” (McPartland & Skinner, 2005, p. 26). One possible meaning behind Jealous’s view of the whole patient (McPartland & Skinner, 2005) could be interpreted by using Still’s description of the triune nature of man, suggesting that when you meet someone, it is not just their physical body that you encounter, but also their non-physical components of self (as cited in Stone, 1999).

Considering Sutherland’s insistence that cranial osteopathy is not a separate entity, along with the consistent holistic considerations and approach to patient treatment, it would seem that OCF or any other treatment modality, including structural and visceral approaches, are not specialisations, but rather they are instruments in the range of osteopathic techniques. Plant et al. (2001) suggest that the philosophy of osteopathy does not limit treatment options to particular modalities:

> Every osteopath should strive to explore to the farthest extent the particular aspects and expressions of the total osteopathic concept which interests them, excites them and fascinates them, and try to do the best in the world that they can do. (p. 12)

It has been suggested that there may be another word aside from specialismthat may be more appropriate to osteopathy, however one has not yet been identified. It would seem that there is an absence of an appropriate definition for a specialist in the osteopathic profession. However this is not the case in other health care professions. To present a relevant, though somewhat simplistic example, specialist disciplines are recognised and taught in medicine and surgery, psychiatry, psycholgy, and even physiotherapy is beginning to recognise areas of specialisation (Van Der Horst, Siegrist, Orlow, &Giger,' 2010; Margerison, 1988; Massey University, 2008; Bennett & Grant, 2004). While at this stage the osteopathic profession does not recognise any formal specialities, perhaps, along with Sutherland's comments in mind, describing a cranial osteopath as an 'osteopath with an interest in the cranial field' would be more appropriate terminology.

Causes for the phenomenon of specialisation

There is limited available data exploring the reasons behind a practitioner's choice to specialise in one field or another. Most of the research in this area is focused around medical students and what influences them to specialise in various fields. One focus for research is family medicine (FM), as it is becoming a dwindling choice for residents in the U.S. and Europe (Rosser, 2002; Jordan, Brown, & Russell, 2003). Common themes within the literature suggest why doctors have chosen FM as a medical speciality, and include the presence of a role model, previous exposure to FM and meaningful experiences they have had with FM (Jordan et al., 2003; Wright, Wong, & Newill, 1997).

Studies in Switzerland have also demonstrated the influence of gender on medical residents' choice of specialties. In 2006, a Swiss study investigated the influences of specialty choices in 436 medical residents. The results revealed gender to be the most influential factor in resident specialty, with women more inclined to choose gynaecology, obstetrics and pediatrics, with men more likely to choose surgical specialties. The study also uncovered the influence of personality, career motivation and life goals. The

residents chosing the medical specialties were characterised with traits such as substantial career motivation with ‘power’ and ‘achievement’ as major life goals (Buddeberg-Fischer, Klaghofer, Abel, & Buddeberg, 2006). Anesthesiology and intensive care attracted residents who were more instrumentally orientated, while the paediatricians shared common characteristics with the obstetrics and gynaecology specialists. The primary care specialists had a tendency to be more people-orientated or interested in helping people (Buddeberg-Fischer et al., 2006; Osborn, 1993). A 2010 study, also in Switzerland, has revealed similar results with gender being a major predictor of residents’ specialty choices. It was found that women took into consideration work and time aspects as well as patient contact and orientation, and were more likely to choose specialties that had a greater element of patient interaction. The men tended to prefer specialties that were more instrument-orientated and prefered high-technology medicine (Van der Horst et al., 2010). Other references to the influence of gender and residents’ specialty choices comes from a study in the U.S., where it was noted that men were more likely to pursue careers in non-primary care specialties, and women were more inclined to pursue primary care and family medicine. However the influence of gender ranked second to the influence of faculty advisors and role models (Osborn, 1993).

Summary

Like most modern medical professions, osteopathy has been subject to evolutionary change that is seeing the development of specialties and sub-specialties. While these divisions are not yet recognised in a professional sense, they are evident amongst the practitioners. There is limited research surrounding this phenomenon in osteopathy that is not opinion based, therefore to enhance the possible understanding of this, literature in the medical field that suggests the predictors of resident specialisations was explored. While the findings of these publications cannot be directly transferred to the osteopathic field, they provide a basis for discussion surrounding the specialty or disciplinary decisions of osteopaths, enabling a useful foundation of information on which the research methodology of this investigation will now turn its focus to.

Chapter 3: Research methodology

To investigate factors that contribute to an osteopath's decision to practice primarily within a structural or a cranial framework, it was important to consider methodology best suited to this type of inquiry. Discussion of methodology, along with thematic analysis, interpretive description, and both philosophical reasoning and practical applications to support selection of methodology are included in this chapter. The use of comparative method is also considered to illustrate the element of comparison involved between the narratives of the osteopaths who work structurally and those who work cranially. Finally, key points that will be relevant for further discussion in the following chapter will be highlighted.

Choice of methodology

There are a number of features common in qualitative methodologies that indicate that several research approaches that could have been suitable for this study. Phenomenology and its branches of Husserlian and Hermeneutic phenomenology were explored for their potential suitability. Phenomenology in itself is a method that allows the participants to describe their own experience of a given phenomenon, with root questions relating to epistemology, such as how we know, and ontological concepts of the nature of existence (Greene, 2009; Cohen & Omery, 1994). Husserlian phenomenology is essentially involved in the experience itself and the nature of knowing and understanding that experience. The researcher seeks the underlying essence of the experience by actively removing all potential areas of bias, such as pre-conceived traditions, beliefs and ideas (Greene, 2009; Cohen & Omery, 1994; Gearing, 2004). To contrast Husserlian phenomenology, Hermeneutic phenomenology does not seek to withhold bias, but rather recognizes the researcher's own experiences as an essential component of the analytical process (Greene, 2009; van Manen, 1997).

While the above mentioned methodologies could have been applied to this study, it was decided, that due to the possible causes, factors or experiences that might contribute to an osteopath's choice of practice style, thematic analysis and interpretive description would be the most appropriate, because it allows for the possibility of recurrent themes or motifs to emerge. The following section will discuss in detail the applicability of thematic analysis and interpretive description to this study.

Thematic analysis and interpretive description

This study was conducted usinginterpretive description and thematic analysis methodology, useful when accessing data that is not suited to numerical analysis, and can best record a "unique example of real people in real situations" (Cohen, Manion, & Morrison, 2007, p. 253). An osteopath's decision to employ one treatment modality over another is likely to be unique to each practitioner; a human experience that in essence cannot be acquired through quantitative methods. In-depth investigation has the ability to capture the wholeness and integrity of the human disposition is a distinguishing characteristic pertaining to a case study (Sturman, 1999), and is essential when considering the nature of this research topic.

Thematic analysis was used in this study to support the process of organisation and understanding of the data. Thematic analysis is a process of organizing qualitative information into recurring themes or patterns that relate to the research question. These patterns may either be simple, complex, or indicators of causal relationships. Initially, themes may be a result of the inductive analysis of the raw data, or as a result of deductive processing from prior research or investigation. Regardless of specific process, thematic analysis is often used in conjunction with many other qualitative methods to maximize the insight of the researcher (Boyatzis, 1998).

Interpretive description is a methodological process of investigation, which aims to provide a conceptual and in-depth understanding of a given phenomenon (Neergaard,

Olsen, Anderson, &Sondergaard, 2009). It has evolved from traditional qualitative methodologies to incorporate an articulation of the qualitative approach with an interpretive or explanatory flavor (Thorne, Kirkham, & O'Flynn-Magee, 2004; Thorne, 2008). The nature of anaylsis relies soley on the researcher's interpretation, therefore it cannot render facts, but it can extract "constructed truths" (Thorne et al., 2004, p. 13). While there have been previous studies investigating the reasons behind osteopath's choice of techniques, or the osteopath's experiences while using OCF on a patient (Braybrook, 2011; Harrison, 2009), to the best of the researcher's knowledge the issue of treatment preference of osteopathic practitioners are not well documented. Due to the absence of previous investigation in this area, interpretive description was used as the framework for this study, based on the understanding that this methodolgy is generally suitable for smaller scale qualitative investigations that aim to capture the human experience, themes and motifs within subjective perceptions that are not already well documented (Thorne, Kirkham, & O'Flynn-Magee, 2004; Thorne, 2008). Interpretive description was suited to the exploration of why some osteopaths have chosen to utilise either OCF or a structural approach as their primary treatment modality. It allowed the researcher to explore common themes in human experiences and provide the necessary tools and guidelines (as outlined below) to satisfy the objectives of this study. The process of intellectual inquiry that is involved with thematic analysis extends the applicability of the data to potentially include a practical setting.

There is reasoning that supports why this methodology was appropriate for this research project, as outlined by Lincoln and Guba (1985) with three philosophical underpinnings supporting interpretive description:

1) There are multiple constructed realities that can be studied only holistically. Thus, reality is complex, contextual, constructed and ultimately subjective.
2) The inquirer and the 'object' of inquiry interact to influence one another; indeed the knower and the known are inseparable.
3) No *a priori* theory could possibly encompass the multiple realities that are likely to be encountered; rather, theory must emerge or be grounded in the data. (p. 5)

Adding to the points of Lincoln and Guba (1985), Thorne (2004) regards the abililty of interpretive description to acknowledge both the contextual nature of the human experience as well as allowing shared realities.

This research was an *a priori* investigation; there have been no previous studies investigating why some osteopaths practice primarily OCF and others chose a more structural approach. Osteopathy professes to be a holistic profession, so it was appropriate that a holisitc manner of research be utilised to analyse their experiences and identify any common themes.

While still employing interpretive description, the nature of this research required a comparative element. The concept of comparison is a rudimentary principle of science and in its simplest form is the relationship between values and attributes of two or more objects (Caramani, 2008). In this case the objects of comparison were the narratives of the six osteopaths being interviewed who practiced primarily within a structural or a cranial framework in their professional practice. Because comparison is universal, a distinction between causal comparison and the scientific method of comparison needs to be indentified. Caramani articulates this well: "It [comparative method] is a method to analyze relationships between phenomena and their causal connections" (2008, p. 2). Comparative method lends itself well to the interpretive description and thematic analysis style of this research. The nature of a small sample size does not determine a definite relationship between the osteopaths and their decisions to practice structurally or cranially, but rather identifies commonalities and recurrences that may be suggestive of a strong relationship between the two.

Summary

The rationale for selecting thematic analysis and interpretive description with respect to answering the research question is based upon the potential for the researcher to organize, present and interpret the data in the most coherent manner possible. Thematic analysis simultaneously permits both interpretive description and comparative method, allowing

the accurate extraction of “constructed truths” that may sufficiently address the research question (Thorne et al., 2004, p. 13). The next chapter will discuss the method that applies to this methodology.

Chapter 4: Method

This chapter describes the method used in this study including the process of participant selection, sampling, ethical considerations and the means by which the data was collected. Finally, issues concerning the validity and reliability of the study will be addressed.

Ideal participants: Inclusion and exclusion criteria

To maximise the ability of the data to answer the research question, appropriate inclusion and exclusion criteria were established for the potential participants. The inclusion criteria for the potential participants was kept relatively broad, to reduce the anticipated difficulty of locating sufficient participants, but without detracting from the necessary requirements to answer the research question. A sample size of between six to eight was approved by supervisiors to be a suitable number of participants for this research, with the understanding that it is an exploratory investigation of an otherwise uncharted field of knowledge.

The criteria for the participants was as follows. The participants would:

i) Be registered with the Osteopathic Board of Australia or the General Osteopathic Council.
ii) Have a current Annual Practicing Certificate.
iii) Have been actively practising for a minimum of three years.
iv) Be willing to participate in the study.
v) Identify with and implement in daily epractice primarily structural OR cranial technique.

Ideals for participant distribution were drafted in case there was an influx of respondents willing to participate. The ideal participant distribution was to be:

- Four osteopaths who practice primarily structurally.
- Two male practitioners who graduated from the same educational institute, one with more than five years professional experience and the other with fewer than five years professional experience.
- Two female practitioners who graduated from the same educational institute, one with more than five years professional experience and the other with fewer than five years professional experience.

The same three criteria were used for osteopaths who practice primarily with OCF.

The significance of equal gender in the sample was to observe whether gender might influence practitioner treatment choice. There has been preliminary evidence to suggest that such a trend exists. Johnson and Kurtz (2003) noticed that women were more likely to use counterstrain, cranial, lymphatic, muscle energy, soft tissue and myofascial techniques, and men were more likely to use high velocity low amplitude thrusts.

Osteopaths were excluded if they did not practice primarily one treatment modality over the other. Osteopaths were also excluded if they had direct association with the researcher's father or had worked in the family osteopathic practice in Auckland, New Zealand. Exclusion based on familiarity with the researcher's father was to reduce the influence of participant and/or researcher bias on the data, and is discussed further in context with research validity.

Potential participants were initially sought from three different countries: New Zealand, Australia and the United Kingdom and were to be currently engaged in professional practice and listed with either the Osteopathic Council of New Zealand, the Osteopathic Board of Australia (OBA), or the General Osteopathic Council in the UK. The rationale for this decision was based upon the notion of gathering a broad collection of osteopaths from various different osteopathic colleges around the world. Unfortunately cooperation from the United Kingdom and New Zealand was limited, so the decision was made to base the study in Australia.

In order to access Australian osteopaths it was decided that the Australian Osteopathic Association (AOA) would be contacted to enquire about the process of distributing the research information sheet to the osteopaths. The decision to contact the AOA was based upon their large representation of Australian osteopaths. The AOA is the largest osteopathic association in Australia with a recorded 1190 members in August, 2010. This number represents over 80% of the total number of registered and practicing osteopaths in Australia (Rota, S., Personal communication, 2011). The AOA is a national association of voluntary registration that exists to support and promote the osteopath as well as providing postgraduate education and professional support (AOA, 2007). The association is not government regulated and is a complementary membership to the mandatory registration with the government regulated Osteopathic Board of Australia (OBA). Through the Australian Health Practitioner Regulation Agency (AHPRA) the OBA monitors national osteopathic registration and accreditation as well as enforcing various legeslations that protect members of the public. It is a compulsory registration that legally permits qualified osteopaths to practice in Australia (AHPRA, 2011).

Participant recruitment and sampling

Participants in Australia were recruited through contact with the Australian Osteopathic Association (AOA). Permission was granted from head office to distribute the research Information Sheet to all AOA members, and in in early November 2010, an email was despatched on behalf of the researcher (Appendix A). Osteopaths willing to participate were then asked to provide information regarding their gender, the osteopathic institute from which they graduated, the number of years in they had been in practice and whether they identified themselves as, and practiced as primarily a structural or cranial osteopath.

For the purpose of this study two sampling methods were used: volunteer sampling and snowball sampling. Snowball sampling is useful when participant recruitment is difficult (Cohen, Manion, & Morrison, 2007), as in this study, where the potential participants were based off-shore. The AOA distributed the research information sheet to all members and if any member wished to enquire about, or participate in the study, they were able to contact the researcher with the supplied email address. Of the total six participants, five were recruited with volunteer sampling. There were more responses, but due to unforseen circumstances they were unable to participate.

Snowball sampling played a minor role in participant recruitment. Snowball sampling requires a small number of interested individuals or suitable participants to act as informants to other potentially interested individuals. Two participants offered to contact some of their osteopathic peers to participate in the study. The researcher's details were passed on, and those who were interested in participating contact the researcher. This method of sampling is useful when reaching a specific population that may be difficult to access (Cohen at al, 2007). By using snowball sampling, it helped to find participants that fit the criteria with the specific expertise for the investigation, because the contacts were recommended by the participants based on their suitability for this study. Through snowball sampling, another two potential participants became available. One participant was excluded from the study, so snowball sampling was responsible for the successful recruitment of only one participant.

Ethical considerations

To gain ethical approval from the Unitec Research Ethics Committee a full ethics application (Appendix B) regarding this study was submitted and was approved on the 24th of September, 2010. While there was no forseeable harm associated with this study, issues of informend consent, privacy, anonymity and withdrawal from the study were all addressed. The participants were all adults and willingly offered to participate in the study, and signed a consent form to demonstrate this (Appendix C). The consent form

outlined the measures that were taken to maintain confidentiality. The contact details of the researcher and the assigned supervisor were included in the information sheet.

The participant was free to contact either the researcher or the supervisor with any queries or hesitations they may have had surrounding the study. The participant was able to withdraw at any time from the interview, and up to ten days after they had seen the transcribed version of the interview. The participant remained anonymous to everyone but the researcher and was provided with a list of possible pseudonyms they could choose from. Before beginning the interview, the participant was reminded once again of the option to withdraw from the study if they so wished, ensuring that both written and verbal consent was obtained. As the participant was engaging in a conversational interview, there was little risk of physical harm. In the unlikely case of emotional distress, the participant had the option of immediate interview termination and withdrawing their data from the study. All data were, and still is secured in a locked computer that only the researcher has access to. The printed documents are also kept in a secure area.

Data collection

Semi-structured, in-depth interviews with the participants were used as the method to collect the qualitative data. The duration of the interviews ranged between 40 and 80 minutes, with the average discussion lasting approximately one hour long. The interviews required the use of a computer and took place over Skype™. Skype™ is a free program that permits free calls from computer to computer, or computer to telephone at reduced rates. For the international participants, it was the most practical option. Those participants that did not have Sype™ already installed on their computer were supplied with the webpage www.skype.com where they could download the program free.

To record the Skype™ interviews, a program called Call Recorder was used. A professional Mac-compatible version of this program was purchased by the School of Health Science at Unitec. The sound quality proved to be excellent, and was

simultaneously able to record video with those participants who had the camera option on their computer. Both programs, Skype™ and Call Recorder ran simultaneously, recording the conversation as soon as the record button was hit. Before beginning to record, each participant was reminded of their rights to withdraw from the study up to ten days after receiving the transcript, and their permission was asked to click the record button.

The interview initially followed a semi-structured format with distinct questions that were previously prepared by the interviewer (Neergaard et al., 2009). The nature of a semi-structured interview creates the possibility for the research question to be addressed while maintaining a degree of conversational flexibility. This limits the researcher's ability to structure the interview while still allowing room for conversational clarification if necessary (Flick, 1998). The researcher drafted a simple Interview Plan to refer if required for guidance or structure during the interviewing process (Appendix D).

As the interviews progressed, some participants adopted more of a narrative or story telling form, and questions were only inserted to either prompt the interviewee into further discussion or to keep them on topic. Most of the participants did not digress too far from the topic and there was a good balance of questioning and story telling. The participants being interviewed were encouraged to provide insight surrounding either structural or cranial osteopathy including:

i) Their decision to utilise either approach as their primary modality for patient treatment. General ideas that were discussed included the predominance of certain patient types eg. mothers and babies compared to athletes, as well as the osteopath's experiences with each treatment modality and whether they find one approach to be more successful than the other.

ii) What it was about that model of practice that drew them into treating patients in this manner. General ideas that were covered included the influence of a mentor or role model, their experiences at osteopathic college, and ease/difficulty of delivery techniques from one model over the other.

The interviews were scheduled at a convenient time for each participant, irrespective of the time difference between New Zealand and the various regions of Australia. Most interviews took place late evening New Zealand time. The length of interviewing time went between 35 and 80 minutes long, with the average length being approximately 45 minutes long.

Preparation for data analysis

The interviews were transcribed verbatim by the researcher and then printed. Field notes were taken both during the interview and immediately after as a means to document any observations that may support, counter or enrich the spoken word. Staying true to traditional qualitative research the researcher became immersed in and familiar with the data. Interpretive description requires the researcher to know the individual cases intimately so that common themes and concpets can be extracted (Thorne et al., 1997). Familiarity and data immersion was achieved on multiple levels, beginning with the process of transcribing the interviews. Then each interview was read three times before both listening to and reading the transcript simultaneously. The benefits of having the data in both recorded and written form is that it provides the researcher with interpretation of the data in both the auditory and visual dimensions (Niven, E., Personal communication, 2010). Listening to the audio documentation of the conversation conjured different insights compared with that of the transcription alone (Thorne et al., 2004).

Thematic analysis was used to identify any recurrent or related concepts and ideas detected throughout the interview and provide insight into why they have chosen to practice within an OMT or an OCF treatment modality. As outlined in Cohen, Manion, & Morrison (2007) there are a number of ways to analyze and present qualitative data including organizing it by people, issue or instrument. To satisfy the research aim and objectives, thematic analysis was used.Subsequently the data were then grouped into issues/themes and the frequency at which they occurred was noted. Because this is a comparative study, it was structured in such a way that the themes that commonly existed between both the structural and the cranial practitioners were still identifiable within the

total frequency of a theme/issue. The origin of the theme is not lost in the amalgamation of data.

The final organization of the data is illustrated in a table showing the total frequency of the theme occurring as well as the ratio of structural and cranial participants contributing to the total. It is suggested that data display is an important aspect of data reduction and selection leading to 'progressive focusing' where the "researcher takes a wide angle lens and to gather data and then, by sifting, sorting, reviewing and reflecting on them, the salient features of the situation emerge" (Cohen et al., 2007, p. 462).

There was one case where similar themes within data has been merged into a common term for simplicity, and then are elaborated on in later discussion. For example the theme 'physical factors' has been the appointed theme to incorporate two separate physical issues. One issue is body fatigue (practitioners physically tiring in their hands and legs following ongoing structural treatment), and the other is a medical condition (cerebellar ataxia) that has necessitated a change in treatment style. Because of data integration beneath this common term, verbatim data has been included to illustrate the considerable difference between the two situations. "Verbatim data is thought to keep flavor of the original work as it is often more illuminative and direct than the researcher's own words but also because it is faithful to the exact words used" (Cohen et al., 2007, p. 462). Due to the thematic nature of analysis, metaphor and imagery were availabe to be used as a means to articulate and describe the interpretive insights that have emerged in the process of analysis. To maximise the credibility of the results, intellectual inquiry, as outlined below, was employed to avoid meaningless metaphor and empty data (Thorne et al., 2004).

Validity, reliability and quality measures

Issues concerning validity and reliability apply to both qualitative and quantitative research. Unlike the objective nature of quantitative research with the corresponding

measures of standard error, the subjective nature of qualitative research requires validity to be more suitably viewed in matters of degrees rather than as an absolute state (Cohen et al., 2007). While threats to validity and reliability cannot be entirely erased, they can be diluted by rigorously applying quality measures as presented below (Cohen et al., 2007).

Validity

In essence, the validity of a study is the sum of both the internal and external validity components. Internal validity refers to the study's ability to accurately describe or explain an event that ultimately generates results that addresses the research question. The external validity is concerned with the ability for the results to be generalized or applied to a wider population (Cohen et al., 2007). Validity is a vital component in effective research and can improve the worth of the research and its outcomes. Invalid research is considered worthless (Cohen et al., 2007). Issues of research validity in this study are addressed in a number of ways. As outlined in Cohen et al (2007) these include:

i) **Fidelity*:*** refers to the integrity of the researcher when self-reporting and analyzing, and presenting the data. Fidelity also relates to the integrity of the information gathered from participants. In this research fidelity was obtained through the maintenance of participant confidentiality, therefore avoiding outside or external influence on data interpretation and analysis. Keeping an audit trail also made the position of the researcher with relation to the data and the data interpretation transparent, allowing any possible threats to fidelity easily identified.

ii) **Careful sampling:** improves the research validity and reduces the bias by not only avoiding participants with close familial connections to the researcher and by reducing the halo effect: a cognitive bias where the personal knowledge of the participant may influence the researcher's judgment (Cohen et al., 2007). While an attempt to eliminate all bias is naive (Thorne, Kirkham, & MacDonald-Emes, 1997) a potentially large opportunity for bias can be addressed. Due to familial connection and the personal interaction of the researcher with a number of cranial osteopaths in the Auckland and Waikato regions in New Zealand, this study is based on international participant recruitment to reduce any bias that may have been present if

local osteopaths had participated. Osteopaths who have a close association with the the researcher's family have been excluded.

Reliability

Reliability in qualitative research is regarded as a "fit between what researchers record as data and what actually happens in the natural setting that is being researched" (Cohen et al., 2007, p. 149). This study has employed a number of techniques outlined in Cohen et al (2007) to maximize reliability. These include:

i) **Respondent validation:** Before commencing data analysis, the transcribed data were returned to the participants for proofing and editing. They were free to make any alterations to the data if they felt it was incorrectly recorded or their message was misconveyed. This process reduced potential bias by eliminating the researcher's influence on the data that may have occurred from transfering the data from an auditory dimension to a written dimension. This also reinforces the research validity through fidelity as discussed above, as the participant can influence their honesty and integrity within the data by checking that their written dialogue is presented in a manner that reflects the message they were verbalising. No major alterations to the transcripts were made by the participants. Punctuation was commonly corrected, but not data content which maximised the potential accuracy for the data analysis through triangulation, as discussed below, as the field notes and auditory data reflected the participant's edited transcript.

ii) **Reflective journals and independent audits:** To maximise the credibility of a qualitative study, the complexities of the analytical process, and the interpretation of the data plus the positioning of the researcher must be made transparent (Thorne et al., 2004). To achieve this, an audit trail was kept, consisting of a journal recording of everything being done in the course of this research. It will includes thoughts and feelings pertaining to the topic and any considerations that contribute to decision making. An audit trail allows for re-evaluation of thoughts and ideas, as well as identifying any preconceptions the researcher may have. A coherent trail is necessary in the analytical framework of the research and will limit the possibility of "sloppy science," as well as giving transparency to the development to the direction

of analysis (Thorne et al., 1997, p. 172). Tracking methodological developments and decisions in a recorded journal becomes data that is entwined in the research text and shows how the interpretation was made (Koch, 2004). Documented field notes taken during the interviewing process are a useful link between the contextual data and the transcribed data allowing for transparent development of phenomena (Thorne, et al., 1997). It has been noted by many authors in the last twenty five years, that keeping an audit trail is an essential component of qualitative research when addressing questions of rigour. After analysing many of the issues raised around the credibility and validity of qualitative research, Rolfe (2006) argues that the quality of research cannot be guaranteed even with diligent application of agreed methods, but rather quality is "revealed in the write up of the research, but also somehow resides in the research report, and therefore is subject to the wise judgement and keen insight of the reader" (p. 309).

iii) Triangulation:"bridges the issues between validity and reliability" (Cohen et al., 2007, p. 141) and involves two or more methods of data collection. This study employed methodological triangulation, involving multiple methods of data collection and analysis for the same interview (Cohen et al., 2007). The two methods of data collection used include both auditory and transcribed recording of the interviews, along with field notes taken by the researcher. The process of data collection, analysis and the interactions between the three dimensions of data are best demonstrated by the diagram below:

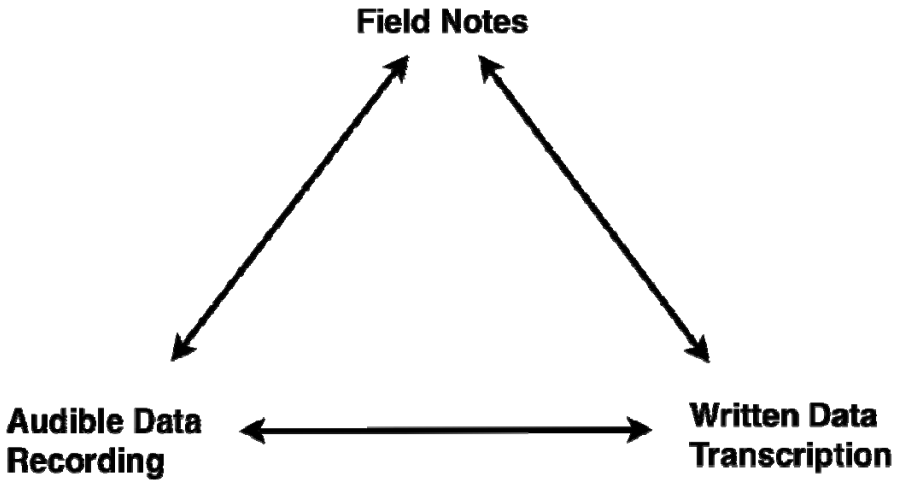

Figure 2: Demonstration of triangulation through the interaction of three data dimensions during the process of data collection and analysis.

Field notes as a method of data collection lends itself from ethnographic research and can be taken either in situ or after the interview. The field notes are a collection of the researcher's observations of the subject throughout the research process (Cohen et al., 2007). For the purpose of this study, field notes were taken during and immediately after the interview allowing for the researcher's thoughts to be documented both during and at the conclusion of the interview.

Summary

This study involves the exploration of what possible factors may influence the osteopath to practice within an OMT or an OCF treatment modality. The study involved six osteopaths who satisified the inclusion criteria. The osteopaths were from Australia, and three of them used OMT, and the other three used OCF in their clinical practice. Ethical obligations were upheld and participant autonomy and privacy was maintained at all times. The participants were also able to withdraw from the study ten days after receiving their interview transcript and were at liberty to edit the raw data as they saw fit. There was no coercion involved and the osteopaths participated in this study of their own free will.

As a particular topic of research that has otherwise been unexplored, semi-structured interviews were used as the method of data collection. This style of interview allows a balance to exist between researcher questioning and participant story telling so that rich, in-depth data may be obtained (Cohen et al., 2007). The interviews took place over Skype™and were recorded using a purchased programme Call Recorder. The interviews were then transcribed into written form and returned to the participant for validation before the commencement of data analysis.

Issues concerning research credibility were addressed with the application of multiple quality measures to maximise the validity and reliability of the study. These quality measures relevant to research validity included the minimisation of potential bias through researcher fidelity and careful sampling. Issues concerning reliability were addressed

through participant validation of the transcripts, the use of an audit trail, and finally employing the process of triangulation to connect the issues of both validity and reliability. As a result, the data was subject to multiple planes of analysis in order to extract common themes and phenomena to answer the research question. The results and interpretation of the data are presented in the following chapter.

Chapter 5: Data Interpretation and Discussion

Introduction

The data and central themes that emerged from the six osteopathic practitioners interviewed are presented. Three of the osteopaths, pseudonyms Edward, William and James, identified themselves as structural practitioners for the majority of their patient care. This means they use structural techniques such as HVLA, MET, soft tissue, inhibition and articulation for most of their patients. The remaining three osteopaths, pseudonyms Martin, Mary and Harry, identified themselves as cranial osteopaths, which means they use OCF techniques, intentionally engaging the primary respiratory mechanism. A table summarizing the demographic data of the participants can be viewed in Appendix E.

The purpose of this analysis was to identify recurring themes evident in both groups of osteopaths that may reveal why they practice within different treatment models. To achieve this, thematic analysis through interpretive description has been used to extract meaning and group recurring trends that express this phenomenon. The data is presented in a table outlining the recurring themes that were common to both structural and cranial osteopaths. These themes represent influencing factors that were important in both practitioner groups. The interpretation and discussion of each theme is discussed with reference to the literature and philosophical foundations of osteopathy, and follows the quantified data.

The identified themes common to both structural and cranial osteopaths included the influence of role models and mentors, their position in their first job, cumulative learning experiences, the influence of physical factors and then finally the influence of research and evidence based medicine. Themes that presented only with the structural osteopaths were the influence of their osteopathic training at university and patient's expectations of treatment. The theme that presented only in the cranial osteopaths was more related to personality and personal qualities.

The data and themes are discussed in three sections; the first section evaluates and discusses the five themes that were common to both the OMT and the OCF practitioners. The influence of significant people or mentors was the most frequently identified factor that was given by five out of the six osteopaths. These five osteopaths made reference to a figure that provided them with guidance or mentoring. The significance of their first job as an osteopath also had a strong influence with respect to their clinical practice with five out of six osteopaths recognizing that their first job did influence their career in some respect. Current research published about osteopathy was an aspect of consideration for four osteopaths. Of those four, some heavily weighted the significance of research, while others acknowledged the evidence but did not allow it to dictate their practice. The influence of physical factors was relevant to three participants who expressed issues concerning management of their own bodies, and as their careers progressed, the way in which they practiced was modified to cater for their own physical needs. Finally the influence of clinical experiences obtained from practice is discussed, with three participants acknowledging specific events that contributed to the way in which they practice osteopathy. Raw data, as verbatim quotes from the interviews,are included to demonstrate the significance of these influences for individual practitioners.

The second section of this chapter evaluates and discusses themes that presented only in the OMT practitioner group. These include more extrinsic factors such as their osteopathic education and the expectation of patients. The participant's discussion also included whether or not the university they had attended had influenced the way they practiced osteopathy. There are reputations of the various osteopathic colleges with respect to their teaching curricula and whether they tend to produce practitioners who are more structural or cranial. These reputations are only anecdotal, but are known and discussed among osteopaths. Participant discussion surrounding these observations is included. Another theme that presented was the influence of the patient and how their expectation of treatment influences the way in which the practitioner does treat them.

The third section discusses the themes that presented only in the OCF practitioner group. This includes more intrinsic factors such as personality, the ability to palpate the CRI and the personal satisfaction gained from their job. Finally, a summary of the data interpretation and discussion is given.

Important themes common to both structural and cranial practitioners

A total of five themes were identified in the transcripts common to both practitioner groups that contributed to the choice of practising one modality over the other. Of the five themes, three feature for more than half of the participants with similar numbers representing each group. These themes are: (a) influential people or mentors present at any stage of their education or career, (b) the influence of their first osteopathic job, and (c) how research in the osteopathic field has contributed to their decision to practice within their chosen modality. Themes identified in half of the participants are (d)physical factors, which include body fatigue and the presence of pathology affecting their ability to practice, and (e)experiences they had within a clinical setting that influenced their decision to practice in their chosen modality. The data are presented on a table below, listing the theme, the total number of participants involved, and whether they were structural or cranial practitioners.

Common themes	Total out of 6	Structural	Cranial
(a) Role models/mentors	5	3	2
(b) First job	5	3	2
(c) Cumulative learning	4	2	2
(d) Physical factors	3	1	2
(e) Research	3	2	1

Figure 3. Table presenting quantified view of common themes.

Theme (a): Role models and mentors

Mentor (noun):

1. *A wise and trusted counsellor or teacher*
2. *An influential senior sponsor or supporter* (“Mentor,” 2011)

For five of the six participants there was evidence of the influence of a mentor with respect to the shaping and development of their careers; this influence was stronger for some participants than it was for others, but nonetheless evident. While there are varying degrees of identified influence of a role model or mentor, there is not one participant who identifies the influence of a mentor as the sole reason for that osteopath practising their chosen modality. This section presents evidence to suggest the influence of a mentor or role model as identified in the participant transcripts, followed by a discussion on these findings with reference to relevant literature. Selections from each participant's transcripts are presented below with italics and quotation marks, and have mostly been placed in indented text, to easily distinguish participant dialogue from other academic quotations in this report.

The participant identified as having the strongest influence from a particular person was Edward, a structural osteopath. Edward revealed that the most influential person in his career was a physiotherapist that he had worked with in his first job:

> *"I worked with a physiotherapist, a manipulative physiotherapist and I guess he was quite influential, you know, that's where I picked up the use of ultrasound and tapping… Yea so he would've been good. And I learnt a lot of exercise rehabilitation with him as well, so I guess I learnt a lot of physiotherapy type stuff. Yeah so he would've been quite influential."* (Edward, p. 7, para. 4)

Edward had begun his osteopathic career in a multidisciplinary clinic alongside a physiotherapist and consequently learnt a number of new techniques from him. Now more than twenty years later, he still uses these physiotherapy techniques alongside the osteopathic techniques on a daily basis. He also makes reference to a chiropractor that has done a lot of work researching the clinical significance of HVLA technique. The outcomes of the chiropractor's clinical studies contribute to the already established data suggesting that HVLA is clinically relevant and a quantifiable technique. Edward describes the chiropractor in a manner that also suggests there's a personal affiliation with the man by commending his character. This sense of personal recognition might possibly be enhancing the chiropractor's influence on the way in which he practices:

> *"He*[the chiropractor]*is a very nice, a scientific chiropractor who has researched a lot you know…he's a very good guy."* (Edward, p. 6, para. 9 & 13)

Unlike Edward, who admitted that he did not have a specific mentor at college, William identifies two clinical tutors who had a significant influence on the way he treated patients in the student clinic:

> *"At university there were two clinic tutors whoinfluenced me strongly… they would come in and show me new techniques… I think the student clinic dictates how you work because of the practitioners, because the main practitioners I had were structural."* (William,p. 3, para. 8; p. 7, para. 5)

For Martin and James, cranial and structural osteopaths respectively, the influence of a role model or mentor is less noteworthy, more a *"tweak of interest"* from various people (James, p. 3, para. 8). He also emphasises that any mentoring or role models were encountered along the journey, not as fixed points of inspiration or motivation. James in particular names four standout figures that *"have always inspired me with what they can do and with their willingness to be a part of my learning as well"* but does not identify them as mentors (p. 4, para. 8).

The method of role modelling and teaching by example is known to be a significant learning tool for medical students and to contribute to the decision making process when pursing a speciality. Mentors tend to be selected by students based on their clinical skills, personality and competence (Wright, Wong, &Nevill, 1997; Osborn, 1993). Studies have identified that while there may be clinicians who act as outstanding role models, the influence of a mentor primarily stems from three basic patterns. These patterns include active identification, active rejection and inactive orientation. This model, developed by Shuval& Adler (1980), studied medical student-teacher interactions and is used as a point of reference for study in the U.S. to investigate the impact of role models on medical students. The model has been used more recently in studies investigating similar relationships in the health and medical situations (Wright et al., 1997; Ray, 2010). Inactive orientation involves the amalgamation of personal values and interest from multiple figures, not just one person, and may or may not have a significant impact on the student

(Wright et al., 1997; Ray, 2010). Active identification is associated with classic modelling of the figure, and describes the relationship where the student mirrors or copies aspects of the role model or mentor. Active identification recognises that at the end of the student-teacher relationship, the student often has clinical traits similar to that of the role model. This is the most common interaction observed in medical student-mentor relationships (Wright et al., 1997; Ray, 2010). Active rejection refers to the situation where the student does not identify with, or want to replicate the traits of the role model (Wright et al., 1997; Ray, 2010).

Active identification and inactive orientation would be the most appropriate models for the participants in this research. With the acknowledgement of a strong influence from the physiotherapist, and the influence from two college clinicians, the role models both Edward and William describe resonate closely with active identification. Edward identifies two major figures, the physiotherapist and the chiropractor. The relationship between Edward and the physiotherapist is more closely associated with active identification as there are distinct techniques that Edward uses that were demonstrated to him by the physiotherapist. Active identification is less appropriate for Edward's interaction with the chiropractor, as the research the chiropractor was doing was validating and confirming a technique that he was taught at osteopathic college and was already using.

William's interactions with the two clinical tutors in the student clinic can also be linked to the model of active identification. William admits to the strong influence they had on his development and still practices in the structural manner that he was taught at university. Similarly Mary, a cranial osteopath, identifies with this model and displays open commitment to emulate a university lecturer who taught the cranial model at college. *"She was a big influence… she was gorgeous and glamorous. I thought I want to be like her!"* (Mary, p. 3, paras. 2 & 4). According to Jordan, Brown, and Russell (2003) such admiration of a senior figure may lead to the student mirroring that person and pursuing a similar career path. In this case Mary has indeed done that, though her decision to pursue OCF is not entirely attributed to the presence and influence of that one teacher.

The experiences Martin and James had with role models resonate more closely with inactive orientation, as there are less defined relationships between the identified figures

of influence and the participants' replication of their clinical traits. While this model is applicable on a basic level, it lacks the ability to illustrate the significance of the support and inspiration that the participants received throughout their careers, from both college lecturers and professional peers. This in particular is important for James, as he acknowledges four figures that *"have always inspired me with their willingness to be a part of my learning"* (James, p. 4, para. 8).

While there are parallels existing between the medical student-mentor interactions and the influence of the participant and their interactions with role models or mentors, an absolute transfer of the model from the medical students to the participants is inappropriate because it does not directly relate to osteopaths, and as already identified, some practitioners did not exactly fit into this model. This is more relevant to Martin and James, as there were identified figures that did have an influence, but not in the dramatic way as defined by active identification. However, the model did provide a useful tool for identifying characteristics of the relationships between students and mentors, and common patterns were evident in the participant data suggesting a commonality in the influence of mentors with respect to career decisions, in medical students and osteopaths alike.

Theme (b): First job

For five of the six participants, the first clinic that they had worked in once they graduated had had a significant influence on their clinical practice. For three participants their first job had had a positive influence, which helped to mould them into osteopaths who practiced in a manner similar to their other associates. For the remaining two osteopaths their first job had had a different influence, but had still contributed to their decisions to practice in their respective treatment modalities. This section will elaborate on the participants' experiences within their first job and how that relates to the ways in which they practice today.

For William, his first job seemed to have a strong influence. He began his career in a structural clinic working as an associate. He admits that his deliberate openness in his first years out of college was a ploy to learn and master more. *"It was a deliberate intention* [to be open] *I wanted to be able to do everything"* (p. 3, para. 8). This openness made him

readily accessible to external influence, as the owner of the clinic also acted as a role model for William:

> *"Working alongside Jim* [clinic owner] *who is quite structural, and equally that was my first job for two years so no doubt that had a fairly strong influence… I was thinking about the way I treat and it boils down to the coincidence of influence from where I worked with Jim."* (p. 3, para. 8; p. 7, para. 3)

Edward also had a similar experience to William in which, as outlined in theme (a), the influence of a named mentor is difficult to separate from the influence of his first job. Both the mentor and the first job seem equally important and are difficult to separate, as the mentor was another practitioner in the clinic. The techniques Edward adapted from his time working alongside the physiotherapist are ones he still implements in his current practice, again illustrating the stature of the mentor within the first job.

James had a similar experience to that of William. From the moment he graduated he was working in clinics that only treated patients with structural OMT techniques. OCF was not mentioned or encouraged. *"Well I look at it like this, I started out working in predominantly structural clinics and then worked in a sports and spinal clinic so it was all structural, there wasn't even any mention of cranial"* (p. 3, para 2). This situation echoes William's experience, in which the structural environment of his first job had encouraged and helped to maintain a career treating patients with OMT. James does not mention a specific person or role model in his first job, which unlike the experiences of the participants discussed above, does provide distinction between the two influences.

For Mary, a cranial osteopath, the story about her first job is different, although just as significant. Unlike the other data that has shown the first job to have a positive influence on what they wanted to do, Mary's first job had the opposite effect and can be related to the model of active rejection as discussed in theme (a). From the experiences at her first job, she soon learned how she did not want to practice; she became bored and from that boredom she began exploring other options:

> *"When I first practiced when I came out, I worked in a chiropractic clinic. And my supervisor for my final six months of the course, which was the practical component of it, was a chiropractor. Much to everybody's disgust. So I learnt basically, to crack* [HVLA] *everybody up. And so that's what I did. He did the soft tissue, and then I started cracking, I'd just come in and do everybody's cervicals left and right, thoracics left and right, lumbars left and right. And so I just got really bored of that and was starting to look at what else I could do, and then the soft tissue came because it was actually an area that I didn't feel was addressed by a lot of other practitioners in the area, like in Adelaide, it was mainly chiropractor, so I was doing a lot of that work because people really felt like they needed it and it was really something that seemed to make a difference. But then I was really, I think that whole process of searching for what fitted for me, and how I wanted to kind of work, and then yeah…that's when the OCF came in and I was just really working to kind of find what sat well for me."* (Mary, p. 4, para. 8)

While she worked alongside another practitioner, initially in a similar manner to them, it did not resonate with her and her beliefs/expectations of osteopathy and so prompted her to investigate other osteopathic avenues. Experience with different lecturers at university had exposed her to other styles of work, and in particular OCF had not captured her attention at undergraduate level. At a postgraduate level, the cranial concept was something she pursued further and adapted to her daily patient treatment repertoire. So her first job was equally as important as it was for the other participants, but in a different way.

Harry's first job experience after graduating was also different. It was not until all the associate practitioners left for a period of time that he felt he had the room to experiment away from the initial structural practice style he had adapted:

> *"With regard to cranial work, I think I only did this in a concentrated burst in the first year of practice and it happened because all the other practitioners in the practice were away and I had lots of patients so I thought 'Oh well I'll treat them all cranially and see how it goes'. This, to me, was like jumping in the deep end seeing where I ended up."* (Harry, p. 4, para. 3)

For Harry, ‘seeing where he ended up’ was the beginning of the cranial path as he developed his cranial skills using a structural basis: an integration of the two until he was comfortable enough to use cranial on its own:

> *“I guess when I first graduated I did treat mainly structurally; a more postural structural type approach. Then I studied cranial and just jumped in the deep end, trying it on everybody to see how it worked. Initially I assessed posture to find the primary problem in the whole person and then I’d use cranial work to treat. So, I sort of mixed traditional and cranial assessment and then treated cranially until I got familiar with assessing cranially, which seemed to work quite well.”* (Harry, p. 1, para. 7)

With room to experiment with his practice, Harry developed his own approach of assessment, and utilised cranial technique as treatment. This phenomenon of experimentation may have happened regardless of where he was practicing, or it may indeed have been a result of the associates departing and leaving him with some space. It also suggests that clinical outcomes were also a contributing factor:

> *“I tended to get good* [clinical] *changes but I often tended to get quite a big reaction as well because I was tackling the primary problem first, whether or not the body was actually ready for this yet or not in that moment. Then, later on, I started looking for the health in the body and when I started doing this and treating from the ‘health within’, people started getting much more blended changes; it was more integrated without the dramatic reactions and the patient improved over time more quickly.”* (Harry, p. 1, para. 7)

The combination of the opportunity to experiment with different treatment approaches and the clinical positive reinforcement of good patient results has influenced Harry to develop his practical skills in the cranial field. The positive clinical results that Harry was seeing from treating patients with OCF were reinforcing his decision to continue working within that treatment modality.

The psychology of extrinsic reward on intrinsic motivation has been extensively researched over the years, and by 1971, there were already a large number of studies suggesting that external reward could influence human behaviour (Deci, Ryan, &Koestner, 1999). A review of the literature revealed, that not only did external reward reinforce desired behaviour, it also suggested that some activities provided an inherent reward that did not rely on external motivation (Deci et al., 1999). The influence of external reward is evident in these participants with the exception of Mary. As illustrated above, Harry is the most classically associated with external reward with the clinical changes evident in his practice. The patient's rapid improvement positively reinforced the way in which he was treating them, essentially acting as a reward system. To a lesser degree this model applies to Edward, William and James, as the OCF treatment approach was not encouraged or entertained. A structural OMT approach was encouraged in their respective jobs, and they responded to that input.

Mary's experience in her first job applies less to the external reward model, but rather to intrinsic reward. For Mary intrinsic reward relates to her sense of self-satisfaction when she discovered another avenue of professional practice that suited her and her beliefs around osteopathy. As mentioned above, the time spent working with the chiropractor clarified her lack of interest in practicing in that manner which relates back to the theory of active rejection. For Mary, it appears to be the combination of these two models, intrinsic reward and active rejection, which were involved in her decision to pursue OCF.

The psychology models of extrinsic and intrinsic rewards are well researched and recognised as strong influences over behaviour. The reward system cannot be suggested as the sole reason for the osteopaths' choice to practice within the defined treatment modalities, but it may help to explain one component of that decision: their experience in their first job.

Theme (c): Cumulative learning

The influence of the accumulated learning experiences presented as a major factor for three participants. While experience itself is something that happens to us on a daily basis,

three osteopaths have had significant experiences, both personal and clinical, that relate directly to their chosen treatment modality.

For Edward, the personal experiences at college and in twenty-five years of practice seem to have shaped his practice from the beginning. Prior to osteopathic college he knew little of osteopathy so there was no pre-conceived expectation, and admits he was a *"completely clean slate"* when he began his training(Edward, p. 6, para. 19). Over the four year course, despite being taught OCF by *"Upledger… a very influential cranial teacher at the time"* he had **"***dumpedall cranial techniques simply because it didn't make any sense to me"* (p. 1, para. 12).

The lack of expectation prior to commencing osteopathic study meant that he processed the information without apparent bias, and could make his decisions free from previous influence. It is known in the psychology fields that initial exposure to an idea or interaction generates bias that can be difficult to over-ride (Lim, Benbasat, & Ward, 2000). However, as mentioned earlier, his experiences within his osteopathic training did influence and shape his professional practise.

In Edward's statement: *"by the time I'd graduated I'd pretty much dumped all cranial simply because it didn't make any sense to me"* (Edward, p. 1, para. 12), the suggested flexibility of *"pretty much"* disregarding OCF by the end of college has definitely diminished. Now, twenty-five years later, in professional practice he confidently claims that he is not alone in thinking that the teaching of cranial technique should be removed from the undergraduate [university] courses (p. 9, para. 7), and that all cranial osteopaths are "*loonies and should be de-registered"* (p. 7, para. 9).

Since graduating college, there has been nothing that he has come across, be it research or other experiences, to change his mind on that original dismissal of OCF, and so he continues to practice with OMT techniques. While many of the techniques he employs were taught during his osteopathic training, or learnt from the physiotherapist he worked alongside in his first job, he developed other aspects of his patient care through experience. These include the use of home exercises and rehabilitation, which is something that he has not been taught at an undergraduate or postgraduate level, but rather learnt through experience by *"figuring it out… trial and error"* (p. 4, para. 7). In

psychology, trial-and-error is a well-known method of learning, and is a process by which problem solving is achieved through the ruling, in or out of things that do or do not work (Mayer, 1992). This method of learning has been consistent throughout Edward's career:

> *"I don't treat patients that have had a back, a work-related back injury 15 years ago, and their back is still hurting whether they've slipped a disc or whether they've had 15 years of neck pain following a car accident. That kind of chronic spine pain, I believe doesn't respond very well at all to physical therapy… I have spent years treating those kinds of conditions with no success at all and there is very good evidence showing that physical therapy isn't appropriate for chronic pain which is a very different condition to acute pain."* (Edward, p. 3, para. 4-6)

Through Edward's clinical experience from years of trial and error treating many different musculoskeletal complaints, he has come to utilize a structural osteopathic approach for a certain niche of patients in acute pain. Contrary to Edward, William did have prior exposure to osteopathy before beginning college. Before he entered college, he spent some time in different osteopathic clinics, and that left him with an enduring first impression of what he thought osteopathy was. *"It probably flavored from my work experience… my understanding before the course was, well my grounding in what I thought osteopathy was; far more structural from work experience days"* (p. 1, para. 6; p. 3, para. 8).

William later confirms that the first impression from work experience got him into the *"mind set that of what I thought osteopathy was… I think you choose your profession on how you think it's going to look"* (p. 7, para. 5). This is consistent with medical studies demonstrating the significance of early exposure to a particular field of expertise, combined with meaningful experience, and the weight of first impressions as another potential influence of a doctor's choice of a speciality (Jordan, Brown, & Russell, 2003; Lim, Benbasat, & Ward, 2000). For William, what he observed and was exposed to during work experience left him with an impression of what osteopathy was that not only encouraged him to attend college, but also to form an understanding that osteopathy entails structural treatment.

The accumulation of learning experiences that influence the way in which Martin practises osteopathy are different to those of Edward or William. The physical challenges that came with Martin's diagnosis of a cerebellar ataxia were not the primary reason he started to make the switch from the more structural approach to a more cranial approach:

> *"It was something I was sort of interested in prior to that [the neurological condition]. When I was a student I was always interested in Arbuckle's, Sutherland's and Spencer's work."* (Martin, p. 1, para 8)

At university Martin was introduced to OCF but not as a primary treatment modality. Throughout his earlier clinical years he was just experiencing the cranial mechanism without using it to treat anyone or knowing what to do with it:

> *"I didn't know anything about it until I was practising for 5 years plus… what I was doing was putting my hands on heads and bodies and feeling the mechanism, so I was building up a data base feeling of the mechanism without being able to use it. Really I don't think I was able to use it for quite a significant amount of time."* (Martin, p. 2, para. 11)

So it seems that it was a prior area of interest that was lightly explored, but it was not until the diagnosis of the neurological disorder that his work started to evolve in the OCF direction. It does not come across as a conscious decision to make that transition but rather a natural progression of professional practice that happened to coincide, or was hastened a little by, the neurological disorder. He began as a purely structural practitioner *"100% HVLA"* (Martin, p. 1, para. 1) because it took him a long time to be able to feel the mechanism, which he says:

> "[It] *just takes time… what really got me interested is treating babies and kids. I mean, that's got to lead you along the way…* [to OCF]… *I think that's where we do our best work, in kids, because you really allow them to grow out of the strain and not grow into the strain."* (Martin, p. 1, para. 1; p. 7, para. 14; p. 1, para. 8)

The accumulation of learning and experiences was probably the most significant influencing factor for Harry in his decision to practice cranial osteopathy. When asked about whether there was a mentor really inspired him, in or outside his career, he related that it was more a combination of experiences:

> *"Um… not really* [a specific mentor/person]. *I sort of learnt little things from everybody throughout my studies. I spent a lot of time observing a lot of different practitioners in practice and it didn't really matter whether they worked cranially or structurally/mechanically… I observed a lot of different people and I noticed that it wasn't so much a technique that made them efficient; it was their actual ability to find the real problem."* (Harry, p. 4, para. 7)

This behaviour replicates, in a broader sense of the term, active identification as discussed earlier in theme (a). In its purest form, active identification is the direct imitation of a figure or role model (Wright et al., 1993). However, Harry does not identify one specific mentor, but has rather collected information from observing different osteopaths, and has made the personal discovery that more important than the treatment approach, accurate diagnosis is paramount. He attributes this to the available research regarding osteopathic technique, and is discussed later in section (e) Research.

The overall accumulation of experiences for these four osteopaths has played a significant role in their decisions to practice in their chosen treatment modality. Harry, William and Edward all had experiences that confirmed and facilitated their decisions to pursue the chosen treatment modalities. These decisions had already occurred very early on in their careers. In contrast, Martin made the transition from using more OMT structural techniques to using OCF a few years later, as a result of both external influence from the diagnosis, as well as the internal influence of already being interested in OCF. This suggests that perhaps the influence experience and extrinsic factors is not limited to the early development of their careers, but may continue to be influential at later stages of clinical practise.

Theme (d): Physical factors

The theme of physical factors, as described earlier in the introduction, is the general term for two separate physical case presentations: body fatigue and a cerebellar ataxia. Martin's diagnosis of a cerebellar ataxia early in his career accelerated his decision to move from the more direct treatment approach of OMT to a more cranial approach. The other osteopaths who comment on the influence of body fatigue are Mary and James. What is interesting to note is that while James currently uses OMT, he comments on body fatigue as a possible stimulus to consider employing cranial technique.

James has been noticing that he is beginning to experience sore hands after working for eight years as a structural osteopath, using OMT techniques that can be hard on the body. This fatigue raised an interest in cranial techniques as a way to rest his hands:

> *"I haven't done a lot of cranial training. I've done a couple of courses… I mainly did those two courses for rest because my hands were sore…it wasn't until I started fatiguing that I thought I could learn cranial technique."* (James, p.1, para. 7; p. 3, para. 2)

While this has not stopped James from treating structurally, it has sparked a professional transition to more cranial treatment being integrated into his practice, particularly with paediatric patients, which is producing some favourable clinical outcomes:

> *"We have more pediatrics coming through, and having kids ourselves we're getting more confident with children, and I think the results are more tangible for parents and children with cranial* [treatment]… *with the local health nurses referring* [children] *to us, the clinic is starting to change a bit now."* (James, p. 3, para. 6)

Osteopathy in the cranial field and its application to the treatment of children is something that is becoming increasingly popular. The principles and theory behind the treatment of ailments such as colic, reflux and otitis media in infants and toddlers are well published and date back to Sutherland's original, and Magoun's additional work (Chila, 2011; Frymann, 2008; Sullivan, 1997; Magoun, 1951). Clinical trials are beginning to show

promising results, indicating that OCF may be beneficial for children, but these studies are few and somewhat inconsistent, with some reports not identifying any benefit for the child (Duncan et al., 2009)

Similar to James, soreness and fatigue in the hands was one of the influencing factors for Mary when considering cranial practice. However, she admits that it *"was not a big influence, but it was certainly there in the background"* (Mary, p. 1, para. 4). She began practicing in a structural clinic and *"was doing quite a lot of soft tissue work and then my thumbs and wrists started to get really sore, and so I thought, well you know, it's probably a good reason to start doing cranial stuff"* (p. 1, para. 4). While fatigue is not the sole reason for the change, it was the final factor when considering the transition from a structural to a cranial treatment approach.

Unlike the previous participants, Martin had a more pressing physical issue that warranted the change from structural to cranial practice. After beginning his osteopathic career he was diagnosed with a cerebellar ataxia. Though he began practicing structurally using HVLA and MET techniques, he started taking a more indirect and cranial approach. In retrospect he says that he started to make that shift because of his diagnosis. However, OCF was an existing area of interest that he had lightly explored, but that it was not until the diagnosis of the neurological disorder that his work started to move in this direction. It does not come across as a conscious decision to make that transition but rather a natural progression of professional practice that happened to coincide, or was hastened a little by the neurological disorder. When asked if it was the physical condition specifically he replied: *"Not really, that comment* [about the neurological disorder] *I've just made in retrospect 20 years down the track"* (Martin, p. 1, para. 8). He says that his decision to pursue cranial treatment began early in his career:

> *"It* [interest in OCF] *started a long, long time ago… the* [clinical] *results are the same…it probably started because of the neurological problem… I was just finding that I wasn't comfortable doing this like I was when I first graduated."* (Martin, p. 2, para. 2; p. 1, para. 2)

The cerebellar ataxia only affects him in the lower limbs, sparing his arms, but it is still enough to make him less comfortable in performing structural techniques: *"the arms are fine… but if it comes to do something quicker like an HVT then I will struggle in the upper body"* (Martin, p. 2, para. 6).So while the cerebellar ataxia alone was not the main cause for the transition from structural to cranial practice, it was certainly a strong consideration, especially with patient safety, as he says that struggles with the quicker movements.

Physical factors, such as body fatigue, are suggested to contribute towards the burnout of manual therapists, and consequently, may facilitate a career change (Kleinbaum, 2009). The decisions of the participants in this study are not as drastic as a career change, but rather a change in treatment style. Perhaps that could be related to the experience of physical fatigue in isolation, rather than the combination of both physical and emotional fatigue that is responsible for burnout (Kleinbaum, 2009).

Theme (e): Research

The significance of published research has different levels of influence on the participants and their decisions to practice one treatment modality or the other. For one participant in particular, research is of no consideration to him as he feels the clinical results he experiences are of greater value. Others, like Edward, and to a lesser extent William, are strongly influenced by the results of the evidence-based investigations in osteopathy.

The influence that research has on Edward's decision to practice within a structural OMT model is clear:

> *"There has been no research or development in cranial technique which has made me change my mind since then* [university] *in twenty-five years. And so I've pretty much stayed out of cranial technique… it* [evidence-based medicine] *has been quite counter-productive* [to the practice of OCF]… *there's been plenty of research trying to demonstrate the cranio-sacral rhythm, either objectively or between different operators, and it's all failed so badly."* (Edward, p. 2, para. 2 & 7)

He then admits that the evidence-based aspect of osteopathic technique is a very important factor in justifying the way he works, but simultaneously confesses to using some techniques that are not as well researched. This contradiction detracts somewhat from the strength of influence of EBM with regard to the way he chooses to practice.

The techniques that he uses are:HVLA *"a good crunch,"* soft tissue/massage, articulation/mobilization, ultra sound, strapping/taping, MET, dry needling, as well as prescribing home exercises, stabilization and stretching (Edward, p. 3, para. 11). There is research to support some of these treatment techniques as having a positive influence on the target tissue, improving joint range of motion and muscle length (Fernadez-de-las-Penas et al., 2005; Martinez-Segura et al., 2006; Fyer, 2011; Jacobs, 2007). Edward expands on the significance of research in his technique selection and is discussed further in this section.

While research within the profession is working towards validating OMT techniques such as HVLA and MET, little if any research is available on other OMT techniques such as soft tissue and joint articulation. Soft tissue technique has been subjected to an increasing amount of investigation, but results remain inconclusive. Undergraduate investigations in England have had varying results when producing data that demonstrates soft tissue technique has a positive influence on the function and contractile forces of a muscle, as well as on joint proprioception (Murphy, 1999; Sadler, 2000). Irrespective of the inconclusive nature of the data available on soft tissue techniques, the most recent edition of the text *The Foundations of Osteopathic Medicine* continues to recognise soft tissue and articulatory techniques as the "basic tenet of manipulative intervention that has been consistent in the history of osteopathic medicine"(Chila, 2011, p. 763).

Despite the lack of conclusive data and validation for some of the techniques he employs, Edward continues to work with a structural treatment approach. He explains his decision to practice in this manner because, unlike OCF, the OMT techniques have not been disproved:

> *"Definitely* [research is a big factor]. *I try to keep my work as evidence-based as possible, which is difficult, but yeah, I do keep it as evidenced-based as possible… if you're only going to be using techniques that have been well demonstrated with*

> *evidence then you're down to a very limited range of techniques. I'll take the other view and if there's something to be proven to completely not work then I'll force myself to dump it. I've done that with low-intensity laser and I've done that with cranial."* (Edward, p. 2, paras. 8 & 10)

Indeed Edward did stop using low-intensity laser therapy (LILT) and substituted LILT with ultra sound therapy because he found there was *"very good evidence presented with low-intensity laser that was no better than placebo, so I chucked that one away. And I haven't used that for a long time"* (p. 4, para. 9). It is interesting to note the frequent use of the word *"dump."* On audio analysis he emphasises the word strongly within the sentence and it magnifies and illustrates the strength of his opinion against using techniques that are not validated by research, and his repeated use of the word *"dump"* emphasises the strength of his disapproval.

When asked why he responded to the email and volunteered to participate in this research, his response was very strong and certain in being anti-cranial osteopathy:

> *"I actually feel quite strongly that cranial osteopathy ought to be dumped and I've been waiting for ages for somebody to ask me what I've thought. It's based on a premise or theory that really has proven to be incorrect and non-existent. It's based on a belief that something happens, you know the cranial-sacral rhythm, which has been well demonstrated that it can't be manipulated, and there's really not that much evidence that it does anything. I firmly believe that it ought to be dumped… it has an incredible placebo effect and doesn't stand up to close examination."* (Edward, p. 8, paras. 5-7; p. 9, paras. 11; p. 6, para. 3)

The strong influence of research on Edward's practice also applies to William, however his opinions of OCF are not as developed as Edward's. This may be a reflection of the number of years William has had in professional practice: ten years compared to Edward's twenty-six. Edward has had the exposure and has been a part of the profession long enough to witness the profession develop over an extended period of time. From that experience, his own opinions have developed and strengthened to the point were he believes that OCF should no longer be recognised as osteopathic treatment. While

William does have similar thoughts to Edward about OCF and its position in the osteopathic profession, a possible explanation for the difference in strength of opinion may be William's comparatively limited years in the profession:

> *"I lean towards the evidence-based preference and I will lean stronger and stronger towards structural techniques and will become more polarized in my viewpoint later on if there isn't more evidence presented for cranial technique… Yeah it* [research] *would be an influence. I know he* [faculty member] *was doing a bit of research whilst we were at university and we understood that even with his carefully calibrated machines they were struggling to put an objective measure on a cranial rhythm and measure the movements, as I recall. And I remember that sort of being a strong point for me. And also I remember reading articles with considerable variability between inter-practitioner findings. I thought 'oh that's tough'. And I can see there's probably been a whole lot more research plugging for the structural so I suspect, given enough years and decades, cranial will probably provide more legitimacy through research. So I suspect, and I don't know this for sure, but I suspect there is more weight for structural just because there has been more study done in that area, even though there has been a bit in there for cranial, that hasn't looked so promising."* (William, p. 2, paras. 2 & 6)

William's exposure to the limitations of OCF research while at university established an early bias against OCF before he even began his professional career. Despite the recognition that the lack of research supporting OCF has been influential in his decision to practice with structural techniques, he is open to the possibility that the research surrounding OCF may one day change.

William and Edward are not alone in their opinions of OCF. Steve Hartman, a lecturer for over twenty-years at the College of Osteopathic Medicine at the University of New England has published a number of opinion-based articles and debates expressing his thoughts and research of OCF. A discussion with some referencing published in 2006 illustrates his negativity towards OCF and the failure of this treatment modality in modern time. He attributes this to the poor expression of inter-examiner reliability when palpating the cranial rhythm and that diagnoses using this method are not reliable. He also claims

that after a century of investigation there have been no adequately controlled studies to produce any evidence that OCF has a positive effect on patient health (Hartman, 2006; Hartman & Norton, 2002). Both the inter and intra-examiner reliability with palpation of the CRI are indeed poor, and the CRI is yet to be proven as a consistently palpable phenomenon (Hanten et al., 1998; Jones, 2000; Halma et al., 2008; Moran & Gibbons, 2001). While there are few studies demostrating the positive clinical effects of OCF, there is even less evidence suggesting OCF is has a negative effect on patient's health with only mild iatrogenesis reported with the treatment of brain injury, and iatrogenesis with the use of the Upledger cranio-sacral technique (Greenman & McPartland, 1995; McPartland, 1996).

While still taking into consideration the published research that does little to validate OCF, unlike William and Edward, Mary sees this as an opportunity to draw on the research from other areas to explain phenomena that research is unable to capture:

> *"It* [research] *has actually* [been influential]. *Because, for me, having evidence and being really grounded in anatomy and physiology is what's really important. I do struggle with the fact that there's no sort of traditional medical research to support it. From what I can see, there is a lot of scientific evidence, which can be transposed to support OCF. And so there is a lot of stuff out there which we have yet to pull together because we haven't got access to a lot of that, and people aren't willing to draw comparisons and aren't willing to draw things in where it's not a specific assessment of some particular component of osteopathy."* (Mary, p. 5, para. 6)

Her struggle with the lack of traditional medical research supporting OCF is suggesting that perhaps EBM has not yet developed an effective means to accurately assess the palpation of the cranial rhythmic impulse. Mary offers the possible explanation for this, and then clarifies the meaning behind the influence of medical evidence and scientific evidence, suggesting that OCF is scientifically sound, but remains undemonstrated in a medical context:

> *"I think a lot of what evidence comes, like a lot of the demand for evidence, comes from the medical profession, in terms of trying to define what we do, and to say, this*

is how we have an effect. And so, there's not that same sense from a scientific point of view that you have to necessarily have an answer and something based on research about the techniques and procedures that you're doing, or the way that you're having an effect. So that you can have scientific research that says 'yes there is motion within the central nervous system and the fluid does fluctuate and there is evidence that there are elastic fibres in the sutures' and all of those sorts of things, and then we can infer from that lots of things. But, because we haven't actually got a way of necessarily saying 'ok I'm putting my hands on and this is what I'm assessing and this is what I'm feeling and this is exactly what it is' it's kind of thrown out the whole evidence-based approach. And I've kind of put that in a medical stuff, rather than the scientific stuff, because it seems to be a medical influence rather than a scientific influence… if anyone picked up an [OCF] paper and actually read it, they'd think it was bollocks. Because it's osteopathy and because it's cranial it's therefore bollocks." (Mary, p. 6, para. 8; p. 9, paras. 4-7)

Research has begun to show quantifiable results for the CRI, but the reliability of intra and inter-examiner palpation of this rhythm remains in doubt (Nelson et al., 2001; Moran, 2008; Moran & Gibbons, 2001). It would seem that research within the profession is struggling to quantify phenomena that science has already explained. The THM oscillations that have been associated with cardiac contractility, heart rate, arterial and venous flow and most recently in the cerebrospinal fluid, are described in physiology texts as playing an important role in homeostasis. The oscillations respond to a complex balance that exists between the divisions of the autonomic system and the renin-angiotensin-aldosterone system (King, 2002). While science provides the explanation for the THM oscillations, Mary's observation is that EBM has not yet been able to successfully apply the physiology to a clinical setting, and as a result OCF's credibility remains controversial.

The current research surrounding osteopathy generated varying levels of influence amongst the osteopaths. What can be ascertained is that irrespective of the treatment modality, the practitioners' identification with osteopathic research was a consideration in their decision to practice within the defined treatment modalities.

Themes common to the structural osteopaths

Through the analysis it became evident that there were common themes that were identified only in either the OMT or the OCF group. There is one theme present in all three structural participants, while the remainder are only identified in one participant. Of the themes identified pertaining only to the structural participants, they all seem to be extrinsic factors and include the osteopathic college they attended, positive clinical outcomes and treating to satisfy patient expectations.

Theme (f): The influence of university

All of the structural osteopaths agreed that their experience at university had an influence on the way the practiced. This may be largely attributed to the college curricula of Victoria University (VU) and Royal Melbourne Institute of Technology (RMIT), which according to the memory of the participants, dedicated only one or two teaching semesters to OCF, as opposed to the other eight or nine semesters devoted to the introduction of structural technique and palpation, right through to the more advanced techniques such as HVLA and MET. Despite the parallel between the two colleges and the amount of time dedicated to teaching different modules, the two colleges have very different reputations amongst the profession in both Australia and New Zealand.

Victoria University has the anecdotal reputation of being the more structural and medically based school in comparison to RMIT, which is perceived to have more focus on OCF and the original osteopathic principles:

> *"I felt that* [reputation differences] *existed when I was graduating. I felt that RMIT was producing more cranial practitioners than VU. It was quite clear that VU had, well the style of practitioners and colleagues that come out of that college, and their thinking is more structural. Although a colleague who works with me now is a VU graduate using cranial technique, so it's not cut and dry. But I did have the impression that RMIT was more strongly influenced in my era, so running from 1997-2001 with a more, well it was probably a fair 50/50 split, so I think that doesn't reflect the profession… I don't know what the split is amongst graduates*

> *now but it seemed like half our class was using a lot of cranial and half weren't…. Yeah. And again anecdotal on this looking back… I think we had, well I don't know if we scored double cranial classes or not, but we had a lot of cranial training. And I would have done a good solid three if not four semesters of cranial classes."* (William, p. 3, paras. 2 & 4)

James also agrees that these Melbourne schools do have that split reputation (James, p. 6, para. 6; p. 9, para. 7). His certainty about the college difference cannot be taken as an absolute because there is a lack of evidence beyond hearsay to confirm this. However, he has had recent interactions and observations with both colleges and may have a reasonable appraisal of the situation. A close family member of James works at RMIT and assists with the management of the student clinic (p. 4, para. 8) so it is probable that he has access to the student clinic and the college. Also, he is only eight years graduated from VU, so he knows first hand the standard of education there and could probably make a reasonable comparison. He has also noted that at post-graduate cranial courses it is not uncommon to see more RMIT students or first year graduates and no VU new graduates, just those who've been in practice for a number of years already (p. 7, para. 4). Based on his observations regarding the differences between the universities, it would seem that James is a product of his osteopathic education and he admits that:

> *"I came from VU, that's what I was taught and that's where my strength lies… that's where my strength is and that's what I learnt for 5 years and that's what I've done for another 8 years, so it's definitely where my proficiency is."* (James, p. 11, para. 1)

While they both agree that the universities do have different reputations, unlike James, William did not choose to pursue OCF despite graduating from RMIT. However this is inconsistent with the observation that RMIT tends to produce more OCF practitioners.

In 2007 the Australian Osteopathic Association (AOA), in a published census, recorded basic information about professional practice. More than half of the members responded, with sixty percent of the respondents agreeing that they were satisfied with their osteopathic training, and that the course they had completed required no improvement.

Two percent would have liked to receive more OCF training. While these results include a large portion of AOA members from a broad range of osteopathic colleges, the number of respondents from each university is not specified. Therefore any relationship between different osteopathic colleges and the respondent's educational satisfaction or desire to receive more OCF training cannot be established (Orrock, 2007).

The use of various osteopathic techniques in Australia has also been charted from the census results, with fifty percent of respondents using OCF 0-20% of the time. Soft tissue technique is used by more than thirty percent of the respondents between 81-100% of the time, and similarly with thirty percent of the respondents using HVLA between 61-80% of the time (Orrock, 2007). These are interesting statistics and provide a more extensive background of treatment styles used by AOA registered osteopaths than the six AOA registered participants of this research. Unfortunately as the results of the census do not include the percentages of the colleges featured in this study's participant responses, it does little to support the segregation of osteopathic colleges in Australia, and the idea remains speculation.

While opinions about the nature of the Australian osteopathic college curriculums and subsequent reputations are recognised amongst Australian osteopaths, there is a lack of quantified data available to support that observation. Consequentially, the observations remain anecdotal, with the possibility for further research to be done on this topic.

Theme (e): Patient expectation

The clinical outcomes of treatments also appear to be a key factor in the structural approach. Clients return for further treatment when they experience positive results, which may help to build the practice and generate income for the osteopath. One of the reasons that James chose structural rather than cranial is that rationale:

> *"Cranial treatment can be a little bit of a slow, creeping treatment, you know, that takes a bit of time to happen, and also can need accumulative treatments so that the patient allows their own state of mind to relax enough to have the treatment imparted upon them. So it might be three treatments before you really get the patient*

> *getting on board with your treatment. So yea, but I've had some pretty fantastic outcomes form cranial treatment, but I think that more frequently the outcomes are attributed to the treatment structurally. Like you go 'crack' and the patients goes 'oh yea better' and walks away with a tangible, instant outcome that is ultimately going to build your clinic's success a lot more quickly then say a cranial treatment... it pays the bills."* (James, p. 2, para. 7; p. 10, para. 5)

A discussion based upon a 2010 published study investigates the difference between patient who attend structural clinics and those who attend functional/cranial clinics, and found that often patients going to their first osteopathic treatment, be it structural or cranial, do not know what to expect (Thornton-Smith &Rajendran, 2010). The initial experience would formulate a first impression, which as mentioned above, is a powerful predictor of future preference/opinion about that particular experience. The study suggested that people who attend functional/cranial clinics are more likely to be more emotionally passive or vulnerable than those attending structural clinics (Thorton-Smith &Rajendran, 2010). No further research has been published concerning this matter, so these findings remain speculative.

Despite not being completely confident in justifying cranial treatment to the patient, and reserving some judgement about his own opinions of OCF, James has experienced good clinical results with it. However for the sake of the business he is not prepared to practice OCF too frequently:

> *"Yea* [it] *totally* [prevents him from going completely cranial]. *Well I could open my doors tomorrow and say we just treat cranially, sorry. Lay on the table, here we go and there you are, that's $75 please. And that's the biggest hurdle to me."* (James, p. 1 para. 8; p. 2, para. 7; p. 10, para. 7)

This is a convincing indication that the monetary side of his professional practice is a significant maintaining factor in his continuing to practice structurally. He is not alone in this opinion. It has been documented that in American Doctors, both Medical Osteopaths (DO's) and Medical Doctors (MD's), one factor influencing the decision to specialise is the financial prospects of certain specialties. This information was obtained through a U.S.

national physician survey in 1993. A total 256 DO's and 717 MD's responded to the survey. While the financial implications of professional practice was a strong influence for the physicians, particularly the DO's who were on the whole in greater debt than the MD's, money was not the biggest influence. However, it is possible that the magnitude of financial influence is poorly represented due to the minimal number of DO participants compared to the number of MD's (Xu, Cummings, Veloski, & Brose, 1996; Singer, 1996).

Overall, the influence of what the patient expects from an osteopathic treatment, which impacts on their decision to return to the clinic for treatment and therefore affecting business, is a big consideration for James. He runs his own clinic as a small business rather than being an associate in someone else's clinic, so the added pressure of maintaining client numbers means that to a degree, he will treat the patient the way they expect to be treated.

Themes common to the cranial osteopaths

Themes that emerged from the data with the cranial osteopaths seem to be more intrinsic and related to the self. These include personality, the skill to palpate the CRI and apply OCF, and the personal satisfaction gained from their job. Personality is a well-documented predictor of medical specialisation in the U.S. Numerous studies have recorded the influence of someone's personality and the likelihood that they may pursue a particular speciality (Singer, 1996; Xu et al., 1996; Buddeberg-Fischer et al., 2006). While this investigation has not been directed towards osteopaths, Mary agrees that her personality was certainly in the equation when she decided to practice OCF:

> *"I related to it* [OCF] *more, right from the word go. Like when I was still at university, it was something that intrigued me and it was something that I felt challenged me and was much more along my kind of, I suppose, my general approach to everything. It kind of fit really well for me."* (Mary, p. 1, para. 6)

This also overlaps with the theme of influential people, where the combination of a supportive study partner and a competitive streak influenced her pursuit of OCF. It seems

that she has a competitive nature and strong aspects of her personality were attracted to, and flourished in, the challenge presented by OCF.

Summary

As the common osteopathic answer to most questions may be ‘it depends,’ it would also seem that that there is no one clear predictor that can be attributed to the decision of an osteopath to treat primarily within a structural or cranial model. Analysis of the interview transcripts revealed recurring themes, suggesting the influencing factors behind the participant’s decisions to practice in their chosen treatment modalities. The most commonly identified influences came from the presence of a mentor or role model, their collected learning experiences both within their first osteopathic job and throughout their career, and the influence of the research that is currently being published about osteopathy and various techniques. These were perhaps the strongest themes discovered in the data, giving no definitive answer to an absolute influence that may predict whether a new graduate chooses to pursue a career using OMT or OCF techniques.

Other influences that featured in the data and may warrant further investigation are the concepts of body fatigue and ‘burnout’: how many osteopaths actually do physically tire or ‘burnout’, and what may the range of causative factors be. This is an area that has some preliminary research to show the effects of ‘burnout’, but with little application to the osteopathic profession and the effects it has on the treatment approach of practitioners. Thoughts regarding areas for possible research will be discussed in more detail in the following chapter.

Chapter 6: Concluding Thoughts

Introduction

The evaluation of the overall research process will be discussed in this chapter. This includes the strengths and limitations of the study, implications of this study on the profession as well as areas for future research. The chapter concludes with some final remarks.

Evaluation of the research process: Strengths and limitations

Interpretive description with thematic analysis was the method of choice for this research. As with any research method, the strengths of one methodological approach are accompanied by some limitations. Thematic analysis is designed for the in-depth extraction of meaning from the spoken word (Thorne, 1997). However the all-encompassing nature of the analysis process permits only a small sample size compared to other methods that adopt a more superficial analytical approach but address a larger population. Consequentially thematic analysis compromises on generalisation for an advanced understanding of the data. Because only six osteopaths of the total 1454 registered osteopaths in Australia were interviewed for this study, the data cannot be generalised to the overall osteopathic population. However there is the potential for transferability of these results and osteopaths may identify with the influences demonstrated. The quality of qualitative data does not depend on its ability to be generalised to a wider population, but rather on the appropriate application of quality measures concerning issues of validity and reliability.

While attempts to minimise bias have been implemented through the diligent application of the quality measures as outlined in Chapter 4, it has not been completely eliminated. On the issue of anonymity of the researcher to the participants it was decided that the researcher's true name would be used, despite the possibility of influence from participants being familiar with the researcher's familial connections with osteopathy. While there was only one participant who was known to be familiar with the researcher's

family, it was decided amongst the researcher and the supervisors that because this participant had little interaction with him (the family member) that participation would be permitted. However at the conclusion of the interview amongst the small talk of saying thank you and goodbye, two participants slipped into the conversation *"… by the way are you related to* [name of family member]*?"* The question was answered honestly and the participants passed on various messages of regard to the family member, which the researcher was not permitted to relay based on the signed confidentiality agreement. Both of the participants had not been in recent contact with the family member, and because the connection was made at the conclusion of the interview, the potential influence of the halo effect is thought to be minimal. The influence of the halo effect could have been eliminated completely if the researcher had taken on a pseudonym to conceal her identity, however it was discussed with the supervisors that this in itself is dishonest and given the in-depth nature of the enquiry, honesty should be maintained at all times.

Despite the possibility of bias appearing in the study, any potential for bias was kept minimal due to the rigid management and extensive process of analysis, reflection and strict adherence to the quality measures established with the commencement of this study. Personal researcher bias was reduced through fidelity and the process of keeping an audit trail. The audit trail kept the researcher's position visible at all times so that any imposing bias could be identified by both the researcher and external readers alike. During each transcript analysis the researcher constantly reminded herself of the aims and objectives of the study, and made continual reference back to these with any theme that arose, maximising the objectivity of the process. However, while there was rigorous management of the influence of potential bias, the nature of qualitative research means that bias cannot be eliminated completely (Cohen et al., 2007).

Implications of this study

This research has drawn attention to some areas of importance that may have implications on the profession. Firstly, it has shed some light on the possible reasons why some osteopaths do choose to practice the way they do. This has the potential to address the issues of the "observable tension" (Cardy, 2004, p. 5) by attempting to unveil possible influences that cause osteopaths to practice within a structural OMT modality or an OCF

modality. It may be possible that the cause for osteopaths to practice either OMT or OCF may be related to this professional tension.

This research also emphasises the significance of mentoring and role models in the osteopath's career; a concept was reinforced at the recent Osteopathic Society of New Zealand (OSNZ) Conference in August 2011. Due to the popular request of the OSNZ members, the faculty are in the process of introducing a 'mentoring system' where new graduates are teamed with osteopaths with more clinical experience to encourage clinical discussion and study groups between all members of the society (Munoz, P., Personal communication, 2011). While it appears such a system is yet to be established through the AOA, one participant comments that the osteopathic and chiropractic clinics in his small town meet semi-regularly to discuss difficult cases. This suggests the importance of a mentoring or support system for some of the osteopaths.

Finally this research raises some interesting viewpoints on the different universities in Australia and their apparent reputations. While these are essentially hearsay, it is an intriguing area of potential investigation.

Areas for future research

The results of this study highlight the significance of a mentor for both the student and the newly graduated professional, the influence of the new graduate's first job as an osteopath, as well as the importance of research and the influence of evidence-based medicine has on some osteopaths. This appears to be a current issue in the osteopathic profession in New Zealand through the OSNZ, but to the best of the researcher's knowledge, a mentoring system is yet to be developed in Australia through the AOA. Perhaps this would be an area for future investigation, to warrant the pursuit of a mentoring system.

In order for the findings of this research to be considered applicable to the osteopathic profession, a larger sample size and population spread would be required. This study serves well as a foundation for further studies as common themes have been identified between the osteopaths and provide the basis for new information to be built upon. Perhaps the next step into finding out about what influences osteopaths to practice one

modality over the other could be implemented via a survey that uses the findings of this study as a foundation for questioning. A survey would target a larger population that could potentially include osteopaths in both Australia and New Zealand, which would maximise the potential for the data to be generalised. This could conveniently be done through the use of online software like Survey Monkey, which provides an easy way to create and distribute surveys (Survey Monkey, 2011). Potential survey questions could be developed based on the specific themes that emerged from this research. Specific questioning over a larger population basis will enhance the preliminary findings of this study.

Another area of potential research could be directed at the osteopaths who are not using just OMT or OCF in isolation, but rather a collaboration of multiple treatment approaches including OMT and OCF, but also other approaches such as visceral techniques and indirect techniques. It would be of interest to reveal the reasons why osteopaths chose not to limit their treatment approach to just one modality.

Further research into this area may provide added insight into the initial decisions as to why some osteopaths practice structurally or cranially, which consequentially may provide insight into the tension that exists between both parties. Understanding this phenomenon and the reasons behind it may bring some unity into the profession, rather than creating the potential for division.

Concluding thoughts

The intention of this research project was to look at the reasons why some osteopaths choose to practice one treatment modality over the other. Despite the common influence of similar factors for both structural and cranial osteopaths alike, there were some who harboured strong opinions against the treatment approach of others. As one participant stated; *"I think potentially it could shoot the heart out of the profession because we're too small to be in-house bickering"* (William, p.2, para. 6),and to some extent, that statement may hold some truth and an important message:

If osteopathy is a holistic approach to manual medicine, then perhaps the same holistic approach should be applied internally within the profession. To quote the words of John

Donne: *"no man is an island entire of itself"*, the same could be said about osteopaths (as cited in Booty, 1990, p. 58). No osteopath is totally separate from the other, and as a profession built upon the foundations of Still's teachings, a division between schools of thought may jeopardise the future of the profession.

An increased understanding between osteopaths whose practice styles are different may help facilitate greater internal respect within the profession and lead to an increase of collaborative efforts in the ongoing development of educational and professional requirements. A more unified osteopathic profession, with greater appreciation for the unique skills and insights that each practitioner represents, will honour the founding principles of the osteopathic tradition, help the osteopathic medical model to grow in respect within the general medical community, and continue to offer an effective health care option for twenty-first century patients and their increasingly complex health issues.

As I approach the transition from student to professional clinician, the insights I have gained by the process of conducting this case study have informed my awareness of the importance of my first professional placing and the influence that the osteopaths, as mentors, will have on my professional development. It has helped me understand that my role as an osteopath is not only to be an effective practitioner, but also to consider that it is my responsibility to develop my skills as a teacher and mentor, so one day I might help other young osteopaths, and by doing so, in my own small and unique way, contribute back to the osteopathic heritage I respect, and forward to the longevity of its future.

…any man's death diminishes me,
because I am involved in mankind,
and therefore never send to know for whom the bells tolls;
it tolls for thee.

Meditation XVII, John Donne (as cited in Booty, 1990, p. 58)

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Participant Information

Keeping Still: A qualitative study of comparative thought between structural and cranial osteopaths.

You are invited to participate in a research project conducted within the Master of Osteopathy program at Unitec Auckland, New Zealand. The aim of this research is to identify any common themes, ideas and influencing factors that may have lead osteopaths to employ structural or cranial techniques as their primary treatment modality.

Inclusion criteria for this study

- Osteopaths to be currently registered with the Osteopathic Council of New Zealand, the Australian Osteopathic Association or the General Osteopathic Council in the UK and have their current annual practicing certificate.
- Osteopaths who have been actively practicing for a minimum of three years.
- Osteopaths who employ structural or cranial techniques for the majority of their treatment.

The researcher acknowledges that Osteopathic practice encompasses many treatment approaches and that some practitioners may incorporate many different techniques in any given treatment. However for the purpose of this research project, osteopaths who employ structural or cranial techniques for a large majority of their patient treatment will be invited to participate.
For the purpose of this study a definition of structural and cranial osteopaths has been generated:
Osteopaths who practice structurally will be identified as osteopaths who utilize direct techniques that involve engaging the restrictive barrier pertaining to the identified somatic dysfunction and applying an activating force to correct the lesion.
Osteopaths who practice cranially will be defined as osteopaths who utilize cranial techniques including the use of the Primary Respiratory Mechanism and Blanaced Ligamentous Tension for diagnosis and treatment purposes.

What it will mean for you
Engaging in an interview process where the following ideas will be talked about:

- Your osteopathic eduation and your experiences with both structural and cranial techniques.
- Any influencing factors that have lead you to employ structural or cranial techniques in professional practice. This may include the presence of a role model or mentor, personal preferance or any other possible influence.

The interview process will be conducted over Skype™. The interview is expected to take approximately 60 minutes and will be conducted at your earliest convenience with consideration to international time zones.

The interview material will be audio taped and then transcribed into a written form of which you are sent a copy to edit and proof. There will be a hired transcriber who will sign a confidentiality form prior to transcribing the data. You may withdraw from the research project at anytime up to ten days after receiving the transcript.

These transcripts will be used in preparing a research dissertation. This dissertation may also be used for future purposes as part of a journal article and/or presenting findings at a conference or an osteopathic educational institute. Your name and any information that may identify you will be kept confidential and not used in the dissertation or any articles or presentations. The only persons who will know what you have said will be the researcher, and the researcher's supervisors. All information will be stored securely on a computer and in hard copy at Unitec for a minimum period of 5 years.
If you need more information or you have any concerns about this research project you can contact the researcher Jenna Norrie phone +64 21 1207 310 or email j.norrie.research@gmail.com or alternatively you may contact the research supervisor Dr Elizabeth Niven email eniven@unitec.ac.nz
This study has been approved by the Unitec Research Ethics Committee from (24-09-2010) to (31-12-2011). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (Ph: 09 815 4321 ext.7254). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Appendix B

Unitec
NEW ZEALAND
Te Whare Wānanga o Wairaka

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address Private Bag 92025, Auckland Mail Centre, Auckland 1142, New Zealand
Mt Albert campus Carrington Rd, Mt Albert, Auckland, New Zealand
Waitakere campus Ratanui St, Henderson, Auckland, New Zealand

Jenna Norrie
88 Portland Road
Remuera
Auckland 1050

27 October 2010

Dear Jenna
Your file number for this application: 2010-1112
Title: A qualitative study of comparative through between structural and cranial osteopaths

Your application for ethics approval has been reviewed by the Unitec Research Ethics Committee (UREC) and has been **approved** for the following period:

Start date: 24 September 2010
Finish date: 31 December 2011

Please note that:

1. the above dates must be referred to on the information AND consent forms given to all participants
2. you must inform UREC, in advance, of any ethically-relevant deviation in the project. This may require additional approval.

You may now commence your research according to the protocols approved by UREC. We wish you every success with your project.

Yours sincerely

Lyndon Walker
Deputy Chair, UREC

cc: Elizabeth Niven
Cynthia Almeida

Thank you for agreeing to participate in this research project being undertaken for the Master of Osteopathy programme at Unitec New Zealand.

Consent Form

Keeping Still: A qualitative study of comparative thought between structural and cranial osteopaths.

Name of Participant:

I have had the research project explained to me and I have read and I understand the information sheet given to me.

I understand that I don't have to be part of this if I don't want to and I may withdraw from the interview at any time. I may withdraw or edit any or all of my contribution to the interview within ten days of receiving the transcript.

I understand that everything I say is confidential with the researcher and none of the information I give will be used in a way that identifies me. I understand that the only persons who will know what I have said will be the researcher, and the researcher's supervisors. I also understand that all the information that I give will be stored securely on a computer and in hard copy for a minimum period of five years.

I understand that my discussion within the interview will be recorded and transcribed by the researcher.

I understand that I will receive a copy of the transcript and I can see the finished research document.

I have had time to consider everything and I give my consent to be a participant in this study.

Participant Signature: …….. Date:……

Project Researcher: ……. Date: ……

This study has been approved by the Unitec Research Ethics Committee from (date) to (date). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (Ph: 09 815 4321 ext.7254). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Interview Plan

Goal: To understand the osteopath's decision as to why they have chosen to practice and identify themselves as either structural or cranial osteopaths.

- Reinforce consent to participate in the research project.
- Confirm demographic data – this includes age, the college they graduated from, and years in clinical practice.
- Remind the participant of the research aims.

Opening question

How have you as a practitioner arrived at primarily employing structural/cranial techniques in your clinical practice?

Expected key points that will arise during the interview

- Their experience at osteopathic college.
- Whether or not they were they drawn to one modality more than the other during college or once they had graduated and were out practicing.
- Whether or not their knowledge/understanding of the published research surrounding their chosen modality influenced their decision to employ that treatment modality
  e.g. " are you aware of the scientific basis and reliability of the techniques corresponding to this treatment style? How has that influenced your decision to employ these techniques in your professional practice?"
- Whether or not they have an interest in one area more than the other before commencing osteopathic training.
- Whether they developed an interest in one modality more than the other during their osteopathic training, or out in clinical practice.
- Whether there was a mentor/role model that influenced their decision to practice structurally or cranially.
- When in their career was the mentor/ role model present e.g. college or soon after graduation in early clinical practice.
- Whether or not they identify themselves as cranial or structural osteopaths. If not, what do they identify themselves as.

Appendix E

Demographic data of the six participants

Practitioner – structural/OMT	Osteopathic training	No. of years in practice
Edward	European School of Osteopathy	26
William	Royal Melbourne Institute of Technology	10
James	Victoria University	9

Practitioner – cranial/OCF	Osteopathic training	No. of years in practice
Martin	Pacific College of Osteopathic Medicine	26
Mary	Melbourne Royal Institute of Technology	19
Harry	Melbourne Royal Institute of Technology	18

Data table of themes common to both the structural/OMT practitioners and the cranial/OCF practitioners.

Common themes	Total out of 6	Structural	Cranial
[a] Role models/mentors	5	3	2
[b] First job	5	3	2
[c] Cumulative learning	4	2	2
[d] Physical factors	3	1	2
[e] Research	3	2	1