

**The New Zealand Osteopathic Profession's Understanding
of Continuing Professional Development**

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Abstract

Continuing professional development (CPD) is commonly accepted as the process for improving the competency, and enhancing the knowledge, skills and attitudes (KSA's) of health professionals. Within the last few decades CPD has become an expected requirement of maintaining the right or licence to continue practice.

The aim of this research was to investigate the beliefs and understanding of the New Zealand osteopathic profession in relation to CPD; how they decided what CPD to undertake, what they saw as the perceived benefit of completing CPD, and whether they had any barriers accessing CPD.

A survey was sent to all 632 registered osteopaths in New Zealand. The survey asked questions about CPD and also gathered general and professional demographic information.

The survey was completed by 48% (n=303) of all registered osteopaths, 67% (n=203) of whom held an annual practicing certificate. Findings demonstrated that over 82% (n=234) of respondents completed CPD because it was a requirement of recertification, but 90% (n=256) also felt motivated to complete CPD because it assisted with clinical practice and improving their knowledge, skills and attitudes. Just over half of respondents 52% (n=139) stated they chose CPD based on their clinical focus and particular interests. Practitioners believed theoretical and practical skills and communication skills improved following CPD completion. Barriers to CPD were time (n=212, 71%), cost (n=170, 59%), availability (n=213, 74%), and maintaining a work life balance (n=210, 73%). For 73% (n=191) of respondents, attendance at conferences was the preferred CPD activity, with a further 32% (n=84) preferring informal peer contact and attendance at peer group meetings being very favoured by 37% (n=97). Blogging was the least favoured CPD activity, with 92% (n=240) indicating they did not prefer this as a CPD activity. Male respondents work longer hours in a clinical

setting, when compared to females, and spent more money on CPD than the female respondents. Findings from this study have shown that osteopaths engaged with CPD for both legislative requirements and also personal reasons. Barriers to CPD include time, cost, availability and work-life balance. This seems to be magnified for the female respondent.

Keywords: Osteopath, New Zealand, continuing professional development, competence.

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List of Abbreviations

ACC	Accident Compensation Corporation
APC	Annual practicing certificate
BCNO	British College of Naturopathy and Osteopathy
BSO	British School of Osteopathy
CBME	Competency based medical education
CE	Continuing education
CME	Continuing medical education
CPD	Continuing professional development
ESO	European School of Osteopathy
ESoP	Extended Scope of Practice
HCPC	Health and Care Professionals Council
HPCAA	Health Practitioners Competency Assurance Act
ISOP	International Society for Osteopathic Practitioner's
KSA's	Knowledge skills and attitudes
KT	Knowledge translation
LNA	Learning needs analysis
NHS	National Health Service
NZRO	New Zealand Register of Osteopaths
OCNZ	Osteopathic Council of New Zealand
PD	Professional development
RMIT	Royal Melbourne Institute of Technology
TA	Thematic analysis
VSoP	Vocational Scope of Practice

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Chapter one: Introduction and overview

In this chapter the legislative framework for regulated health professionals will be presented, and an overview of the osteopathic profession in New Zealand. This will be followed by an overview of CPD and the chapter will conclude with a presentation of the overall structure of the thesis. For the purposes of this thesis CPD is defined as the process by which professionals maintain and develop their competency.

In the last few decades interest and research in the field of CPD has expanded quickly, particularly in the health sector. One of the areas that has been researched relates to the decision's health professionals make regarding the CPD they choose to pursue during their career. These decisions were influenced by legislative demand, public pressure for accountability, and career development within the healthcare sector. Since September 2004 the Health Practitioners Competency Assurance Act 2003 (HPCAA) has provided legislated statute across 16 healthcare professions within New Zealand, including nursing, medicine, osteopathy, physiotherapy and chiropractic. The HPCAA ensures the healthcare professions regulated by the act are mandated to complete CPD. This research examines the causes, nature, extent, and outcomes of CPD in the healthcare professions started in the 1970s. Indeed, within New Zealand over this time CPD for all regulated health professionals is now mandated. Other healthcare professions such as medicine and medical radiation technologists also regulated under the HPCAA have been consulted about the role of CPD in the maintenance and development of a professional's competency (MCNZ, 2017).

The lack of research on CPD engagement by New Zealand osteopaths is perhaps not surprising, given CPD was only made compulsory for the whole profession in 2004, as a direct result of the passing of the HPCAA into law in September of that year. Until that time there were two self-regulating organisation's and membership was not

compulsory. This situation was a product of the great diversity in the training of osteopaths. Between the 1970's and the passing of the HPCAA the education of osteopaths in Australasia was varied both in length of time to obtain a qualification and, differing academic oversight across those qualifications (Cameron, 1994). This variation in pre-registration training produced a wide range of knowledge, skills and attitudes (KSA's) within the New Zealand osteopathic profession. Australasian osteopathic training could be completed in a one-year part-time distance taught course provided by an individual through to a five-year double degree provided by a tertiary training institute, with the KSA's obtained during both these learning pathways being different. Furthermore, prior to statutory regulation one of the self-regulating organisations required annual CPD completion and the other did not. Thus prior to the introduction of the HPCAA the differences in pre-registration education, and differing CPD requirements ensured the profession might not have a homogenous relationship to training and ongoing learning.

Research demonstrates that some CPD activities are more likely to result in improving practice and patient outcomes than others (Mazmanian, Davis, & Galbraith, 2009; Petty & Morley, 2009). Information that could inform the profession and stakeholders about CPD engagement would potentially be of use in determining whether there was a difference between what the profession was undertaking for CPD, and those CPD activities that research shows are more closely aligned to improved practice and patient outcomes. Such research could be used to inform the profession and stakeholders about CPD engagement and would potentially be of use in determining whether the CPD undertaken by the profession was the type of CPD that research shows is aligned to improved practice and patient outcomes. The research sought to explore the beliefs and understanding of the profession in relation to CPD so that the results could be compared with what the research shows about best practice in CPD. Three key research questions formulated;

1. How do osteopaths decide what type of CPD to do?
2. What are the perceived benefits from completing CPD?
3. What difficulties do osteopaths face in accessing CPD?

This chapter introduces the legislative framework regulating the osteopathic profession within New Zealand, followed by an overview of the history of the profession to provide the context of the profession, both before and after regulation. This will be followed by briefly describing CPD and its role in the professional development of the wider health workforce, after which the engagement of the profession with CPD within New Zealand will be discussed, this will ensure a much-needed context to understand the changing relationship the New Zealand osteopathic profession has with CPD. The chapter concludes with a description of the overall structure of the thesis.

1.1. Health Practitioners Competency Assurance Act (2003)

The radical change in the last 100 years of osteopathy in New Zealand was the Health Practitioners' Competence Assurance Act 2003 (HPCAA). This Act created a statutory frame for the regulation of many healthcare professions including the osteopathic profession and the necessary regulating authority, the Osteopathic Council of New Zealand (OCNZ). The principal purpose of this act was to “protect the health and safety of the members of the public by providing for mechanisms to ensure that health practitioners are competent and fit to practice their professions”(HPCAA, 2003, p.12). The functions of the Act that are pertinent to this research relate to the competence of health practitioners (in this case osteopaths), the setting of educational and practice standards and the promotion of ongoing training (CPD).

1.2. Osteopathy in New Zealand

Osteopaths are primary healthcare practitioners working with manual medicine techniques and have been practicing in New Zealand for over a hundred years with varied training and diverse regulations. Initially, osteopaths in New Zealand were trained in the United States of America (USA), but over the last fifty years, the majority have been trained in the United Kingdom (UK), and Australia, (OCNZ, 2014). Since 1998, New Zealand has had its own tertiary education institute training programme for osteopaths. Until 1978 the profession was without any group that attempted to regulate the practice and competence of its members. The profession is small (currently 553 osteopaths hold an annual practicing certificate (APC)) and the small size of the profession creates some challenges. In some parts of New Zealand there are a very small number of osteopaths, this may create difficulties when trying to establish a local peer group and can increase the possibility of practitioner isolation. The professional association aims to promote and advocate for the profession but the revenue for this is provided by the membership fees. Given the small number of osteopaths in New Zealand this limits the income for the association, thereby potentially reducing what the organisation might achieve. Provision of conferences is one role of the professional association and the financial viability of this activity can become difficult when there may be only a relatively small number of registrants attending the event.

The first self-regulating register was formed in 1978 as the New Zealand Register of Osteopaths (NZRO). With the formation of the NZRO, parliament moved to recognise the register with the 1978 New Zealand Register of Osteopaths Incorporated Act. This Act recognised the register as a professional body capable of regulating its members. The NZRO put in place conditions for entry onto its register, the most important of which was that an osteopath must have trained at an institute which the NZRO council deemed of a certain standard (Cameron, 1994). So, the register recognised graduates from training establishments in the United Kingdom, the British

School of Osteopathy (BSO), British College of Naturopathy and Osteopathy (BCNO), and the European School of Osteopathy (ESO). The Royal Melbourne Institute of Technology (RMIT) in Australia and New Zealand osteopaths who had trained in a variety of Australian schools in the 1970s and early 1980s also joined the NZRO. The Act enabled the NZRO to develop as both a self-regulatory and representative organization for osteopaths (Cameron, 1994). For instance, the NZRO formulated qualification requirements for members and set and policed the standards of osteopathic practice, and, on this basis, advocated for and received accreditation with the Accident Compensation Corporation (ACC) ensuring its members could become accepted as treatment providers.

A second register, the International Society for Osteopathic Practitioner's (ISOP) was formed in 1983. The membership of ISOP was predominantly comprised of osteopaths trained in New Zealand and Australia prior to the university courses being established and its members were initially not able to claim for treatment payments under ACC regulations. Following the ISOP council lobbying ACC for equal rights as far as treatment providers they were able to provide treatment under ACC from 2001 onwards. The role ISOP had with regard to its members was slightly different to that of the NZRO, ISOP solely functioned as a professional association which supported its members and provided CPD activities, it did not function in relation to disciplinary processes. Following on from the implementation of the HPCAA ISOP continued to function as a professional association.

1.2.1. Osteopathic education in New Zealand

Osteopaths in New Zealand do not all hold the same qualification. The qualification held is dependent on where and when they trained. Initially, New Zealand training in the early 1970's was at the South Pacific College of Natural Therapies; this was a part-time two-year naturopathic course followed by a part-time two-year

osteopathic course. This programme continued until 1979. In 1980 a distance course (part-time) was started by Melva Martin, but this ceased in the early 1990's. In Australia, osteopathic training was available at RMIT (with a combined osteopathic and chiropractic curriculum) and Sydney's New South Wales College of Natural Therapies. Both provided four-year full-time courses in osteopathy. Currently, osteopathic training in Australia is available at several tertiary institutes and graduates exit the five-year programmes with a double degree. The development of an Osteopathic programme in New Zealand began in 1996 at Unitec and in 2003 the first Unitec students graduated, this qualification was a five-year full-time double degree. The training pathway in the United Kingdom has been a four-year full-time degree for the last 30 years. The difference between the four and five-year degrees emerged because tertiary institutions in Australia and New Zealand found it easier to access government accreditation and subsidies for an osteopathic programme if they offered a bachelor and an masters degree. The amount of osteopathic specific training, within degrees across the United Kingdom, Australia and New Zealand, is similar, since these countries tend to use each other's expertise and osteopaths to monitor each other's various programmes. Therefore, within the current New Zealand profession there is a reasonable variation in the undergraduate training that afforded osteopaths their original osteopathic qualification, and potentially the academic rigor of some historical qualifications.

1.3. Overview of CPD

CPD is the process used by a wide range of professionals to maintain and develop their competency (Lawton & Wimpenny, 2013; Tivey et al., 2012). It has been described as the longest part of the education of a healthcare professional as it spans the length of their career (Knowles, 1984). There are a number of factors that are known to be of importance in assisting to create best practice processes regarding CPD engagement (French & Dowds, 2008). First, health professionals should be given

guidance about the type of CPD they choose to complete. Some CPD activities are more aligned than others to improving competency, changing practitioner behaviour and improving patient outcomes. For example, if healthcare professionals are informed about which particular activities (attending conferences, peer group meetings etc) have a stronger relationship to improving practice this may influence practitioner choice in relation to the type of CPD they complete. Secondly, advice about how to record their learning experience to help it 'bed in', through the use of a portfolio/self-reflective process, and thirdly a discussion about how this is an essential part of CPD in professional practice would assist in supporting professional development (Mansouri & Lockyer, 2007; Peck, McCall, McLaren & Rotem, 2000). Also, a self-reflective process is crucial to developing an understanding of a practitioner's KSA's, identifying what they might wish to improve, and a constructive plan of how to complete that journey (Knowles, Swanson & Holton, 2014).

For most health professions, including New Zealand osteopaths, the relationship between an individual practitioner's competence and their CPD record only becomes a matter of importance to the regulator when there is a question of competency as a result of a complaint. It is only at this point that the practitioner may in some way be required to prove their competency to ensure ongoing practice rights, and their CPD record may be one of the tools used by the regulator during an investigation.

Given the rate of change in the healthcare industry, ensuring professionals have up to date KSA's is of great importance (James & Francis, 2011). Osteopaths, as part of the regulated allied health workforce, need to ensure they have currency of KSA's to provide appropriate care to the New Zealand public. It is expected by regulators that professionals stay up to date via CPD (Chipchase, Johnston & Long, 2012). As practitioners progress through their career, the KSA's in which they are required to be competent will vary, hence the need for ongoing CPD (Eustace, 2001). The actual act of 'doing' CPD improves other skills that are of importance to practice life such as

communication skills, team building and problem-solving skills (Cervero, 2001). There are a wide range of CPD activities that a healthcare professional might complete, from tertiary level post-registration study through to personal self-reflection.

There is literature from a variety of non-osteopathic health care professions discussing the link between particular CPD activities and the potential effect on competence (Gosling, 1999; Madden, 1993). Some activities, such as small group work and ongoing collegial peer relationships have a more positive effect on practice habits and patient outcomes than more didactic types of learning such as conference attendance (Davis et al., 1999; Webster-Wright, 2009). In the literature it is common that types of CPD are classified into formal and informal learning activities (French & Dowds, 2008), in order to recognise the great diversity of learning situations that may improve practice outcomes. The Health and Care Professionals Council (HCPC) in the United Kingdom, in a summary report on CPD, breaks this classification down further into the following categories (HCPC, 2017), which helpfully display the range of activities that may be considered worthwhile CPD;

- **Work-based learning** - for example, reflecting on experiences at work, considering feedback from service users or being a member of a committee
- **Professional activity** - for example, being involved in a professional body or giving a presentation at a conference
- **Formal education** - for example, going on formal courses or carrying out research
- **Self-directed learning** - for example, reading articles or books

It is common for responsible authorities to mandate that their registrants must complete specified amounts of CPD focused within certain subject areas. Within New Zealand and Australia, the osteopathic professional bodies specify the numbers of hours of CPD that must be undertaken, in various capabilities of practice and over particular time-frames. This is also the case for the Physiotherapy and Chiropractic professions.

The specifics of those requirements for Australasian osteopathic, chiropractic and physiotherapy professions are presented below (Table 1).

Table 1. Osteopathic, physiotherapy and chiropractic mandated CPD requirements in Australasia in 2018

Regulatory authority	Continuing professional development requirements
Osteopathic Council of New Zealand	25 hours of CPD must be completed annually relating directly to the six domains of practice in the Capabilities for Osteopathic Practice
Osteopathic Board of Australia	25 hours of CPD must be undertaken annually, four hours must include board approved mandatory topics Must hold a current senior first aid certificate
Physiotherapy Board of New Zealand	Minimum 100 formally recorded CPD hours per three-year cycle Minimum of 20 formally recorded CPD hours in any one year At least one CPD activity in each learning category over the three-year cycle One professional peer review per three-year cycle Reflective practice demonstrated by reflective statements Use the Board's log-book for documenting CPD
Physiotherapy Board of Australia	25 hours of CPD must be completed annually
Chiropractic Board of New Zealand	50 hours of CPD to be completed every two years, of which half must involve formal learning activities
Chiropractic Board of Australia	25 hours of CPD annually, half of this must be from formal learning activities

The OCNZ, prior to 2013, had an annual requirement for 25 equivalent hours of formal and informal learning requirements (category one and two, respectively) to be undertaken. Examples of category one activities were attendance at conferences and formal tertiary study, with category two activities being self-reflection and peer group attendance (OCNZ, 2012). Since 2013, the OCNZ removed specified categories of CPD activities though the annual requirement continues to be 25 hours (OCNZ, 2017), and the activity must be directly related to the six domains of practice set out in the Capabilities for Osteopathic Practice (OCNZ, 2009b).

For all the regulated healthcare professionals within New Zealand completion of CPD is a requirement of practice that is set by the HPCAA and the process by which the regulatory authorities maintain surety of ongoing competence in the health workforce.

1.4. Changes to the CPD scheme for New Zealand osteopaths since regulation

CPD requirements were introduced by section 118 (E) of the HPCAA, which requires ‘responsible authorities’ – the councils - to “recognise, accredit and set programmes to ensure the ongoing competence of health practitioners.” Between 2004 through to 2014 the OCNZ has implemented three different CPD schemes. From 2004 – 2007 a recertification scheme was mandated, from 2008 through to 2013 a low trust CPD scheme was in place and from 2014 to the present time a high trust scheme has been in place.

For the first three years of statutory regulation from 2005-2007, the OCNZ set a recertification CPD scheme (OCNZ, 2006). Due to the diversity of pre-regulation training, that CPD scheme was a three-year recertification programme that had been developed to ensure all practitioners were clear about their professional responsibilities. The recertification programme covered the six domains of practice detailed in the Capabilities for Osteopathic Practice (OCNZ, 2009b).

Following completion of this recertification process, in 2008 the OCNZ moved to a more traditional CPD scheme. The 2008 CPD regime required the profession to complete 25 hours of CPD annually. Registrants were required to have their CPD activities approved (or rejected) and these activities were awarded CPD points by a sub-committee of the council. These points equated to the number of hours of attendance (OCNZ 2009a). As indicated at the start of this section, the award of points was split into two categories. More formal types of learning (e.g. tertiary study, conference attendance) were awarded category one status, where one hour of activity equated to one CPD hour, and less formal learning activities (e.g. peer group attendance, journal reading) were awarded category two status, where two hours of CPD activity equated to one hour of CPD. For courses to be approved, they needed to be of relevance to one or more of the six domains of practice, as stated in the Capabilities for Osteopathic Practice (OCNZ, 2009b). At the end of the calendar year, it was mandatory for all

osteopaths to submit their documentation of CPD activities to the OCNZ for auditing. There were various options for how the OCNZ would manage registrants that had not met their CPD obligations: from an agreement and plan to make up the shortfall through to a full competence review.

In 2013 the council changed the CPD model. The council moved from the previous low-trust model to a high trust model. As described above, the low trust pre-2013 model requires prior approval for CPD activities, without which no CPD points can be claimed by the registrant. An OCNZ sub-committee decided to which category the CPD activity was to be allocated. A full audit of each osteopath's CPD activities took place annually. The high trust model requires no approval of activities, nor is there any categorisation of types of CPD. There is also currently no audit of the CPD documentation kept by the profession. Individual osteopaths must collate and maintain a log of their activities and ensure they relate appropriately to the six domains of practice. Since 2004 to the present time registrants must fulfil 25 hours of CPD per year. At re-certification, registrants are required to make a statutory declaration that they have met the conditions of the CPD scheme. Inherent within the structure of the high trust model is that the practitioner is best placed to determine their CPD needs and ensure that these are met by those activities they chose to complete. This model is more consistent with other professions regulated under HPCAA (OCNZ, 2017). These changes to the CPD scheme for New Zealand osteopaths since 2004 have occurred without any research determining how the profession is deciding what CPD to complete, what benefits this might have to their practice, and any barriers the profession might experience. This study aims to answer those questions.

1.5. Thesis structure

Chapter one has presented an introduction to, and context for, the use of CPD in the New Zealand osteopathic profession. Chapter two (the literature review) examines

definitions of CPD and the role CPD plays in healthcare (using expert opinion and research studies). The literature review is used to frame a discussion about research on the relationship between CPD activities and competency in healthcare. Chapter three (the methodology), outlines the methodological approach used to answer the research questions. This includes a discussion of why a survey was chosen to answer the research questions, the question formation, data collection, and data analysis information. The analysis of the data is presented in Chapter four (results). This is followed by chapter five (discussion) which brings the findings of the survey and the current research on CPD and competency together. Chapter six (conclusions) provides an outline of the most pertinent findings of the research so that this might assist stakeholders to better support and guide CPD for the osteopathic profession.

Chapter two: Literature review

This chapter will review the relevant literature for the three research questions:

1. How do osteopaths decide what type of CPD to do?
2. What are the perceived benefits from completing CDP?
3. What difficulties do osteopaths face in accessing CPD?

The osteopathic profession is relatively small and as such does not have a wealth of literature in this area. Additionally, CPD engagement is not unique to osteopaths, and given healthcare professions are all required to complete CDP, it is of value to this study to draw on the larger professions research base. Therefore, literature from primary healthcare professions such as medicine, physiotherapy and nursing is of value to this study.

The paucity of research relating to osteopathic competency, patient outcomes and CPD for the New Zealand profession is mirrored in similar jurisdictions such as Australia and the United Kingdom. The literature, from other health professions, makes general assumptions about the purpose of CPD. That is, the literature usually takes for granted that the completion of a mandated number of hours should ensure the practitioner is competent, and this should improve their patient care and therefore patient outcomes (Furze, 1999). However, research suggests that improved patient outcomes as a result of CPD completion is less clear (Davis & Oxman, 1995; Walshe & Chambers, 2017). Regulatory authorities in the above-mentioned countries have assumed that a certain number of hours or points of CPD completion ensures competency (at least in some manner) and it is possible that this might encourage the members of the profession to think in a similar manner. This perspective may mean a professional's relationship to their competency is less focused toward CPD being a self-

reflective part of practice life and more towards an outwardly approved tick box to ensure conditions set by a registering authority are met.

Research from other healthcare professions clearly shows that didactic types of CPD are ineffective in developing or improving competency (Jordan, 2000). Instead, it is now known that particular types of CPD activities, and how participants are expected to interact during the CPD activity, has a substantial influence on whether improved practice and patient outcomes are achieved (Mansouri & Lockyer, 2007). There is also relevant literature discussing the barriers a professional might face when accessing the CPD they wish to do (French & Dowds, 2008).

The type of literature relevant to healthcare falls into four categories, theoretical, research, practice and policy (Wallace & Wray, 2006). For this study the literature that was most helpful was research literature, since it provides peer-reviewed studies to support its claims about the best use of CPD (Aveyard, 2014). Given the regulatory environment, there were also some policy documents that provide context, and theoretical literature was included to provide possible frameworks for understanding CPD and its role in the professional life of a healthcare worker.

2.1. Search strategies and literature review parameters

To inform the literature review various data sources were used. Historical data was located through the Alexander Turnbull Library, the AT Still Memorial Library and the web service, Past Papers New Zealand. Databases of electronic articles were used to access current peer-reviewed literature, and relevant policy literature was sourced through statutory regulatory bodies' websites nationally and internationally.

Limits to the database searches regarding peer-reviewed articles were as follows;

- Peer-reviewed papers more than 10 years old were excluded to ensure currency of the research. However, to provide a historical perspective, some older documents were used

- Must be written in English
- Preference to articles from New Zealand, Australia, and the United Kingdom was given since the regulation of healthcare professionals in these countries is similar. All are regulated under statute and have mandatory CPD. To add further breadth to the literature search journal papers from Canada and America were used, however in Canada osteopathy is not regulated by statute and so studies relating to Canadian osteopaths were treated with caution. Peer-reviewed papers relating to American osteopathic practice were treated with caution, since American osteopaths hold full medical practice rights, and they work across all medical specialties found within orthodox medicine (McGrath, 2015; OIA, 2012). While practice in America is substantively different, research relating to CPD was found to be relevant and so included in the review of the literature.
- Research was sourced from a range of professions including osteopathy, chiropractic, physiotherapy, nursing, medicine, and education. Osteopathy is a relatively small profession, and to broaden the literature other healthcare professions were incorporated into the database searches. Since there is similarity in the place these occupations hold within healthcare systems and all had mandated CPD requirements, research on those occupations was pertinent.

Keywords used in the searches were: continuing professional development, continuing professional education, continuing medical education, competency, education, post-registration education, capability, life-long learning, professional development, knowledge, skills, attitudes, patient outcomes, professional practice, practitioner behaviour, knowledge translation, learning styles, adult learning, andragogy, regulation, co-operative learning, peer-groups, small group learning.

The databases accessed were CINAHL, Cochrane Library, Google Scholar, and Ovid databases (including Medline, AMED, and Embase). Articles referenced in the primary literature, but were outside the research parameters (e.g., older than ten years) were included when relevant.

2.2. CPD

This section discusses the history of CPD, defines CPD for the purposes of this thesis, and reviews the role that it plays within the healthcare environment. The relationship between CPD and competency is then considered, along with the legislated requirements for osteopaths to complete CPD and the positive and negative effects of mandating CPD. The intersection between the functions of the regulatory authorities and the relevant profession, and the differing roles that CPD has is also discussed and clarified.

2.2.1. History of CPD

During the late 1960's and early 1970's it was began to be understood that further learning, (after the initial registering qualification was obtained), would be required to ensure the competency of healthcare workers (Fleet et al., 2008; Hearle, Morris & Lawson, 2016). Until then, pre-registration training was thought to prepare practitioners for professional life. As this view changed and professions realised their ongoing learning was crucial to competent practice, CPD started to become an optional part of practice life for some healthcare professions (French & Dowds, 2008). At this time, it was proposed that there was a 'half-life' during which time it possible to become out of date with the developments of professional knowledge and the associated technology. Within medicine, this half-life was thought to be five years (Dublin, 1972).

At the same time, accountability around maintaining professional standards within healthcare was starting to become more important. In New Zealand, a committee

of inquiry (Cartwright Inquiry) into the allegations concerning the treatment of cervical cancer patients at National Women's Hospital and other related matters led to an overhaul of patient rights, ethics in research, peer review, and professional accountability (Purdie, 1990). The faults within the New Zealand health system were highlighted by the 'Unfortunate Experiment' (Bunkle, & Coney, 1987), and became the basis for patient-centred care, and the respect of patient rights being enshrined in New Zealand's health policy, regulation and legislation. This was further expanded upon with the findings of the cervical cancer screening issues uncovered in Gisborne in 2000 (Duffy, Barrett & Guggan, 2001), where one of the key findings was the poor competency of the health practitioner involved (a pathologist reading cervical smears). Similar demands from the public for appropriate and accountable healthcare occurred in the United Kingdom in the late 1990's (Aylin et al., 2001). As a result of the public and professional expectation of quality healthcare in the United Kingdom, the National Health Service (NHS) introduced a clinical governance system in 1998 to guide improvements in practice (Crimson, 1999). The over-arching aim of this new approach was to ensure a systematic approach to maintaining and improving the quality of patient care within the (NHS) (Degeling, Maxwell, Iedema & Hunter, 2004; Walshe & Chambers, 2017). One of the areas of professional life that the clinical governance system high-lighted was that ongoing professional development of healthcare workers, that is, CPD, was critical for patient safety. These events have created an environment within healthcare that mandates the requirement for CPD completion, and where the professionals within this sector acknowledge the need for ongoing improvements to their skill-set to ensure competent and safe practice.

2.2.2. Defining CPD

There are varying definitions; some arise from regulatory authorities, others from the scholars of education, and others from professional associations (Hearle et al.,

2016). A common thread to all definitions is that CPD is the tool by which health practitioners maintain and expand their competency, within their particular area of practice, over the course of their career. There is an expectation by the public that health professionals maintain their knowledge and skills in line with current developments in their field as they continue through their professional life. Also, healthcare professionals understand that their pre-registration study is the beginning of further learning (Fleet et al., 2008; Jarvis, 2004; Webster-Wright, 2009). The definition of CPD is interchangeable with the definitions for continuing medical education (CME), continuing education (CE), professional development (PD), continuing professional education (CPE) (Tivey et al., 2012). This thesis uses the common New Zealand term, CPD. Within the regulated health professions in New Zealand, Australia and the United Kingdom all registered practitioners have mandated CPD, and in those jurisdictions failure to comply with the requirements of CPD may result in the removal of practice rights.

2.2.3. The role of CPD in healthcare

There is a varied list of complex outcomes that CPD is supposed to bring to the individual throughout their professional life (Chipchase et al., 2012; Friedman & Phillips, 2004), these include;

- life-long learning (on the basis that the CPD period is the longest period of learning for professionals)
- development and acquisition of up to date skills
- professional security about work-related skills
- public surety around standards of professional competence and practice
- employer assurance about a competent work-force

Sadler-Smith, Allison and Hayes, (2000) proposes that the literature can be summarised as suggesting three key roles for CPD. The three roles proposed relate to different facets of the relationship healthcare workers have with CPD and external stakeholders. The maintenance role is about the relationship of the professional with their ongoing learning through the development of life-long learning skills. There is no third party involved in this role. The survival role involves the practitioner interacting with others, since it requires practitioners to demonstrate their ongoing competence to the regulating authority. Practitioners provide the regulator with supporting documentation regarding the appropriate completion of CPD requirements, in order to avoid compromising their registration. The mobility role also has third party involvement, as this can be between the practitioner and an employer. This third role is focused on CPD providing an ability for the practitioner to change/improve their employment situation. There is some overlap of the different roles, for example both the maintenance and the mobility roles are related to the KSA's that change/expand when CDP is completed. These roles are key in the development of practitioner's ongoing competencies within the workplace. The survival role and the mobility role also overlap, since the survival role requires the demonstration of competence, and this might be in relation to the regulating body or their employer. The demonstration of maintaining or improving competence, is commonly a requirement placed on practitioners by employers when a practitioner is seeking new roles and responsibilities in the workplace.

Engagement with CPD may involve all or some of these three roles. However, when professions have mandatory CPD there will always be a part of CPD completion that falls into the survival role, as failure to maintain registration can ultimately result in a loss of income. Within professions that are predominantly self-employed, the mobility role may be less dominant. Whereas, for healthcare professions that work in large

organisations, the mobility role might be an over-riding motivating force for CPD completion.

The goal of CPD completion is typically to improve and expand a practitioner's competency, thereby improving the care of the patient and by inference the clinical outcomes for that patient (Gosling, 1999). Competence, unlike CPD, is focused more on the ability to perform and complete specific tasks to a specified standard of care (Eraut, 1998). The specific standard of care (competence) is determined by the regulatory authorities and can vary dependent on the particular scope of practice held by a practitioner. While the link between CPD and competence is clear, some of the characteristics of CPD are not related to competence. For instance, CPD is commonly associated with the process of learning - the assessment of one's learning needs then guides the process of accessing educational events that expand and improve KSAs and ensure the possible organisational needs of practitioner's employer are met (Madden & Mitchell, 1993). Competency, on the other hand, is more task orientated. It is the ability to complete a task or a set of tasks to a particular standard, and when competency is lacking that completion of tasks does not meet the expected and stated standard. These standards of competency allow for a regulatory authority to be confident of a competent work-force, providing assurance of safety in practice. The required level of competency is set to ensure a minimum level of skill is maintained by practitioners to practice safely, provide proper patient care, and demonstrate fitness to practice (Gosling, 1999). Competence will change with different situations and is individual to each practitioner. Competency in of itself is not about the development of increasingly complex skills but rather the ability to meet the level of skill required to perform a task, to a competent level, but not specifically above that level (Fraser & Dunstan, 2010). Competency is more aligned to the initial point at which someone or a body of people can pronounce a practitioner is safe and competent to practice.

If healthcare professionals use CPD as the tool to ensure competency, it seems imperative that the choice of CPD ought to be related to needs of the individual practitioner, such needs can be determined by completing a learning needs analysis. Such an analysis provides a tailor-made educational framework that allows practitioners to consider their various strengths and weaknesses within their particular KSAs (Knowles et al., 2014; Evans, Ali, Singleton, Nolan & Bahrami, 2002). After all, given the complexity of practice life, a 'one size fits all' approach may well impede competency development. Ownership by the individual of their requirements in professional development is deemed essential, a finding that has been borrowed from scholars of adult learning (Driessen, Jan Vermunt & Vleuten, 2003).

Research from the field of adult learning is useful when thinking about CPD because it is a much older and deeper field of literature than more recent study about CPD in healthcare. The literature on adult learning makes clear that the best way to encourage life-long learning is by encouraging the individual to have autonomy and self-direction (Knowles et al., 2014). Indeed, the motivation of an individual to learn is reduced if they do not have the ability to choose what they want to learn (Hidi, 1990). The length of a professional's career is the longest part of their development and learning. That is, time spent doing CPD as osteopath is going to total, over the course of a career, many more hours than the initial tertiary training programmes that enable osteopaths to first register. Yet where such tertiary pre-professional training programmes outcomes are clearly presented and assessments of achievement frequent, and those programmes are audited constantly by government agencies, that same rigour of the measurement of outcomes is not traditionally applied to CPD, other than when the CPD undertaken is formal tertiary study.

2.3.2. Health professional's thoughts and beliefs about CPD

It is commonly accepted by health professionals that they need to engage in regular CPD to maintain currency of registration (Ahuja, 2011), and when CPD is a mandatory requirement of registration the amount of time spent completing CPD increases (Landers, McWhorter, Krum, & Glovinsky, 2005). James and Francis (2011) in their research show that the majority of healthcare professionals are in favour of CPD being mandated. The principles of adult learning that stress the need for autonomy, agency and choice do not sit so well with these findings on mandated CPD (Quinn, 2000). From the perspective of the 'sanctions and benefits' model (Table 2) proposed by Madden and Mitchell (1993) mandating ensures that CPD is based on a 'sanctions' model (Saks, 2013).

Table 2. Sanctions/benefits model of CPD

Sanctions Model	Benefits Model
Compulsory	Voluntary
Demonstrable competency	Understanding of changing levels of competency dependant on the situation
Measured by inputs, i.e., how many hours of learning have been completed	Focused on outputs, i.e., how has practice changed given their learning experience
Activities are designed to update and upskill	Individually based

CPD requirements that follow the sanctions model tend to focus on the technical expertise of the practitioner and their ability to demonstrate specific skills with little focus on personal attributes. However, the benefits model depends on personal qualities, such as reflection and constructive self-evaluation, guiding the learning experience. Another difference between the models relates to the emphasis on the completion or end point of the learning experience. For the sanctions model the focus is being able to measure/prove how much time has been spent, whereas for the benefits model the focus is more aligned to reflecting on whether practice/practitioner change has occurred as a result of the learning experience (Friedman & Phillips, 2004).

Interestingly, while healthcare professions are accepting of mandated CPD, and the majority state that they meet their CPD requirements to ensure registration is maintained, when CPD is not mandated the majority of healthcare workers state that they complete CPD to improve their KSA's (Tassone & Heck, 1997). This reflects the findings from research about adult learning and suggests practitioners may not well served by the sanctions model of CPD (Knowles et al., 2014). The motivation of professionals to complete CPD and the reason for that completion seems to be affected through the compulsory nature of mandated CPD. However, a more complex picture of cause and effect on motivation to complete CPD and improve patient care was demonstrated by a study of Texan nurses which found that three-quarters of respondents held a positive attitude to mandated CPD and that there was a significant relationship between this positive attitude to CPD and improvements in the nurses KSA's and the quality of the healthcare delivered to the public (Prater & Neatherlin, 2001). In this study, most of the respondents completed more hours of CPD than was required for registration purposes and reported that they felt their practice improved, along with their understanding of professional issues and general knowledge (Prater & Neatherlin, 2001). Lazarus, Permaloff and Dickson, (2002) also found that some healthcare practitioners hold the belief that CPD directly influences improving KSA's and that mandating CPD is critical in maintaining practice standards (Lazarus, 2002). Improving and expanding professional knowledge is a key influencing factor in the completion of CPD, as is updating qualifications, promotion of the profession and supporting the demonstration of competence (Ryan, 2003). In summary, the majority of studies show that healthcare professionals are accepting of mandated CPD and view that engagement with CPD improves their KSA's and has a beneficial effect on patient outcomes.

2.3.3. Choice of CPD

Notwithstanding the benefits of mandated CPD, research from the field of adult learning makes it clear that an assessment of learning needs should guide the choice of CPD. The learning needs analysis (LNA) then informs the practitioner about the areas of practice that they wish to improve or develop, and this LNA then informs the development of a constructive plan detailing how to achieve this (Knowles et al., 2014). Given all practitioners are individuals, and at different points in their practice life, the process of formulating a LNA is idiosyncratic and changeable over time. A commonly used framework for assessing learning needs is the process proposed by Wittich et al (2012), known as the LASO process. This is a useful tool for practitioners when they are deciding which areas of their practice they might need to improve (Dijkhuizen, 2018). This will then assist the practitioner when deciding what CPD they will complete. The four steps to this process are detailed below;

- Step One - The learner's stage of professional development and their practice context is defined
- Step Two - Formation of a learning needs assessment
- Step Three - Determine if there is a difference between the required standard of practice and current practice
- Step Four - State the educational outcome, understand how and what CPD will fill the educational gap, and lastly decide what will be the outcome of this will be and how will this be measured

The LASO process requires the practitioner to be familiar with the concept of self-reflection and committed to the process of enhancing their KSA's. For an individual to decide appropriately what CPD they need to do requires them to be self-reflective, flexible and aware of both their skills and their weakness (Driessen, 2008). Undertaking CPD is no longer thought to be just related to the imparting of content

from one person to another. It is considered to be important that CPD ensures the addition of specific skills (such as self-reflection) to the portfolio of the practitioner; hence both personal and professional lives may be affected by CPD completion (Gosling, 1999). The skills acquired during the CPD process may not just be those skills used to complete tasks as part of the healthcare professionals' job but, may also be skills that are used in the persons everyday life.

2.3.4. Types of CPD

The research driving a move away from CPD delivery by traditional didactic learning methods and the passive distribution of content to professionals, suggests the focus should instead be on reflective practice and self-awareness of competency and the changing demands of practice life (Lockyer, Bursey, Richardson, Frank, Snell & Campbell 2017). This move is backed by studies demonstrating the definite connection between engagement with CPD, enhanced practitioner knowledge and practice behaviour (Gunn & Goding, 2009; Mansouri & Lockyer, 2007; Tivey et al., 2012). Engagement with CPD has been shown to improve practitioner confidence, KSA's and competence (Gunn & Goding, 2009). Also, skills such as communication, effective problem solving and working as part of a team have been shown to be influenced positively by CPD completion (Cervero, 2001). However, there is less literature that has investigated the effect CPD may have on patient outcomes (Bloom, 2005; Jordan, 2000; Mazmanian et al., 2009).

The transfer of new KSA's gained from a CPD activity into future clinical situations remains a relatively unresearched, (Jordan, 2000). Most research does not follow up the provision of CPD with attempts to assess possible changes in patient outcomes; it is simply not recognised as an integral part of determining the effectiveness of the educational event (Greco, & Eisenberg, 1993). The research that does exist is not conclusive. When Davis, Oxman and Haynes, (1992) reviewed 50 CME studies, 32

analysed physician performance, seven analysed patient outcome and 11 assessed both factors. Of the 18 that assessed patient outcomes, eight demonstrated positive patient health outcomes. Eaton, Brooks, Patel, Batchelor, Merali & Narain, (2011) found similar results in a literature review completed for the General Dental Council in the United Kingdom, with it being evident no high-quality studies exist to demonstrate the effectiveness of CPD outcomes such as quality of care delivered, competence or professional standards.

A systematic review of CPD was also conducted by Mazmanian, (2009) and the findings were similar to those found by Eaton et al. (2011). Of the 37 studies reviewed by Mazmanian, (2009), one study measured the short-term impact of CPD on clinical outcomes and suggested an inconclusive effect and three studies did not report any data relating to a change in clinical outcomes. Of the remaining 33 studies that did measure long-term outcome, only 13 showed a beneficial effect from CPD engagement. This review also found research data supporting the understanding that the type of CPD undertaken is of importance, when looking at the effect on long-term clinical outcomes multiple media use over a period of time, as opposed to the use of a single medium, was shown to be more effective in six of seven studies that compared these two types of exposure (Mazmanian et al., 2009).

Research in other health professions, such as physiotherapy (French & Dowds, 2008), nursing (Lawton & Wimpenny, 2003), dentistry (Eaton, 2011) and medicine (Mansouri & Lockyer, 2007), shows that some types of CPD have greater efficacy than others in improving practitioner knowledge, changing practice behaviours and improving patient outcomes (Bloom, 2005; Mazmanian et al., 2009). For example, didactic teaching methods, (e.g., conference attendance) have little or no efficacy in enhancing practitioner behaviour or improving patient outcomes (Forsetlund et al., 2009). Small group discussion and skills acquisition, on the other hand, together with ongoing review of the new skillset, improves practitioner behaviour and patient

outcomes (Forsetlund et al., 2012; French & Dowds, 2008). Studies in the physiotherapy profession in the United Kingdom have demonstrated improved patient outcomes were more likely to occur following ongoing education and the incorporation of new skills into practice life than with one-off educational experiences (French & Dowds, 2008; Cleland, Fritz, Brennan & Magel, 2009). The results of this research are consistent with the findings by Forsetlund et al. (2012), which suggests that the practitioner must incorporate lessons learnt during CPD into their daily professional practice, and this is best achieved by revisiting CPD activities within a small group structure (Jones, 2007).

2.3.5. Knowledge translation

Changing practice behaviour as a direct result of CPD is often called knowledge translation (KT), (Straus, Tetroe, & Graham, 2009). Other terms such as knowledge to action and knowledge to action cycle are also used (Larocca, Yost, Dobbins, Ciliska, & Butt, 2012; Straus et al., 2009). The Canadian Institutes of Health Research have defined KT as “a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, and provide more effective health services and products, and strengthen the healthcare system” (Straus et al., 2009, p.2). If enhanced practice and improved patient outcomes are the desired effect of CPD, this process of knowledge translation is critical to the success of the CPD activity. However, across the healthcare landscape it is well documented that the implementation of research into practice is poor (Grimshaw, Eccles, & Walker, 2005; Majumdar, McAlister, & Furberg, 2004; McGlynn et al., 2003). Neither is it demonstrated that evidence-based CPD programmes result in research being used to inform treatment, patient management and healthcare policy (Jordan, 2000). Other than university based post-graduate training the majority of CPD is provided to practitioners in weekend courses/workshops run over one to two days

(Petty & Morley 2009). These courses are usually at relatively high cost to the participant (Brown, Belfield & Field., 2002) and the potential effect of these CPD experiences on improved clinical practice or improved patient outcomes is contested by the literature. Given the assumed effect of CPD is an improvement in KSA's and potentially patient outcomes the type and process of any CPD being completed is critical to ensure efficacy of the activity.

2.3.6. CPD and the New Zealand osteopathic profession

As discussed previously, the OCNZ is legally required to ensure practitioners are involved in CPD by its establishing statute, the HPCAA. Indeed, the very aim of this act was to provide public assurance of competency (Saks, 2013). Currently, within New Zealand, the CPD requirement for the osteopathic profession is that they complete 25 hours of CPD annually, and it must be relevant to the six domains of practice set out in the Capabilities for Osteopathic Practice (OCNZ, 2009b). Documentation of these activities must be kept for the process of audit. While there is literature discussing various healthcare professional's relationship to and interaction with CPD such research regarding the New Zealand osteopathic profession is lacking. The three research questions forming the basis of this study; how osteopaths decide what CPD to do, what the perceived benefits are, and potential barriers to completing CPD will explore how the profession interacts with this part of practice life.

Chapter three: Methodology

This chapter will discuss the methodological approach and research methods used in this study. The development of the survey tool and recruitment processes are presented. The aim of the project was to collect information about the beliefs and understanding of the New Zealand osteopathic profession in relation to CPD. The nature of the research questions led to a quantitative survey being selected for this study. Given the lack of any information in this area, a survey was considered to provide a wide representation of the profession. Alternative approaches such as interviews or focus groups would have been less useful in providing a broad overview.

3.1. Research paradigm

During the development of the research proposal, four essential elements informing the process were considered: the epistemology, the theoretical perspective, the methodology and the research methods most appropriate to the research questions (Crotty, 1998). These four elements assisted in deciding on what methods and methodology were most suitable to answer the research questions posed.

Epistemologically, the quantitative method used, and data obtained, by this research sits within the positivist paradigm. This approach understands that human behaviour can be tested and measured like any other aspect within our environment and assumes, more or less, the cause and effect model used in pure science (Crossan, 2013). “Positivists posit that the social world can be studied and explained in a scientific manner, and it is still possible even if ideational factors (meanings, beliefs, ideologies, culture, ideas) play a central role in the social world” (Hussain, Elyas & Nasseef, 2013, p.2377). The ontological position in the quantitative paradigm is that there is only one truth, and this as an objective reality is independent of human perception. The epistemology of this type of research is that the researcher and those being researched are independent and the researcher has no influence on the research subjects, or on the

data collected from those research subjects. However, given the paucity of information on the topic of the osteopathic professions beliefs and understanding about CPD, it was felt important not to constrain participants within the researcher's questions, but instead allow the respondents to move beyond the researcher's preconceived notions and set out their own subjective ideas about CPD. Therefore, spaces were created within the survey that allowed respondents to express their individual perspectives using free text boxes.

The epistemology of the free text section of the study fits into social constructivism (Creswell, 2013). Theories of social constructivism suggest there is no objective truth to be discovered but rather that truth and meaning are influenced by and constructed through our engagement with the world, (Crotty, 1998). Thus, the quantitative part of the survey reflects the understanding of meanings and truth about CPD of the researcher (as derived from their experiences and research work), and the qualitative questions allow the research subjects to provide information from the participant's individual and subjective viewpoints (Crossan, 2013). "Social constructivists believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas" (Creswell, 2013, p.8). While the majority of this study was conducted under a positivist framework, aspects of the free text provided opportunities to understand the multiple perspectives of participants, and this fits more under a constructivist paradigm.

3.2. Research methods

Given the lack of any research in this area, it was important that as many practitioners as possible were able to participate, therefore a nationwide survey of registered osteopaths in New Zealand was considered the most inclusive approach.

Other tools that may have been used for data collection that were considered were observational data collection, focus groups and interview. Observational data collection would not have been helpful since much of the data needed was historical, and intermittent activities such as conference attendance would not have been possible to capture in the time allowed for this research. Focus groups, in-depth interviews and panel structures are best used to deepen the scholarly understanding of a population (Bryman, 2012). While these would have allowed for greater depth of information to be collected, they are expensive and have poor population coverage (Blair, Czaja and Blair, 2014). Given there was no scholarly information on this topic, it was felt that a survey would provide a basic understanding of the osteopathic professions beliefs and understanding of CPD and be of possible use in guiding further research. Surveys have been criticised for not always providing data that is representative of the whole population, and there are a range of distinct factors that can cause misrepresentation including:

- Sampling variance can occur when the samples do not reflect the whole population. Ensuring a large sample size can minimise the sampling variation.
- Sample bias occurs when the sample is inherently different in a systemic manner in relation to the whole population.
- Selection bias occurs when one group of a population have a disproportionately high or low chance of selection.
- Non-response bias occurs when there are substantive differences between the sample group that respond and those that do not. Increasing sample size does not negate this situation. (Blair et al., 2014)

The osteopathic profession in New Zealand at the time of the survey was relatively small (632 registrants), and sampling variance was controlled by inviting all

registered osteopaths to participate. Given all registered osteopaths were approached and there were no exclusion criteria within the profession, selection bias was not of concern. The preferred strategy to manage non-response bias is to define the population being studied; and maximise the response rate from that population. For this study, the definition of the population were osteopaths registered with the OCNZ.

3.3. Inclusion and exclusion criteria

The inclusion criteria for the survey was that current registration with the OCNZ must be held by the participant. Participants did not need to hold a current APC. Registration status was the single inclusion criteria.

3.4. Development of the survey questions

Reviewing the literature about both CPD and how professions engage with post-registration education ensured the development of the research questions was consistent with other primary healthcare professions and their perspectives of CPD, (Chipchase et al., 2012; French & Dowds, 2008; Gunn & Goding, 2009; Tivey et al., 2012). The development of the survey questions arose from a review of the literature that describes the current thinking in healthcare about post registration education and the ongoing development of competency. There were several iterations of the initial draft survey with both supervisors and a focus group of six osteopaths having input into the final version. The focus group provided feedback and input via email communications during the drafting process. The survey question formation began in April 2016 and was finalised by June 2016 (Appendix B). There were two sections within the survey. In the first section, the respondents were asked to comment on their thoughts and beliefs about CPD; the second section contained a range of questions covering general and professional demographic information. Since, at the time of the survey there were three Maori osteopaths registered in New Zealand, recording the ethnicity of respondents

would potentially make those osteopaths identifiable, ethnicity information was not collected. The geographical regions were taken from those developed by Statistics New Zealand for use in the 2013 census. Once the survey was finalised a link was sent to the focus group to complete and provide feedback. The focus group were asked to provide specific information about ease of use and clarity of the questions. This feedback was positive with one change to instructions regarding ranking of CPD activities which was found to be difficult to understand.

3.5. Ethical approval and Maori consultation

Approval for the survey was obtained from the University of Otago Ethics Committee (no. 16/120, see Appendix C), in August 2016. The project was referred to the Kāi Tahu Research Consultation Committee, *Te Komiti Rakahau ki Kāi Tahu* to ensure that mana whenua were consulted appropriately. (Appendix D)

3.6. Data collection

Data were collected via an online survey tool, Qualtrics. There was no paper process for the completion of the study. Data collection occurred between September 3rd, 2016 – September 24th, 2016. This data were exported to a statistical management package, Statistical Package for the Social Sciences, (SPSS) version 22 for analysis.

3.7. Recruitment of participants

The only organisation that holds a full and current email contact list for New Zealand osteopaths is the OCNZ. The OCNZ council approved forwarding the survey link to the profession in May 2016. An email that distributed a survey link was sent to all 632 registered osteopaths, 451 of whom held a current APC. There were three repeat requests via email asking that they complete the survey. The survey was made available to all registered osteopaths from 24th August 2016 to September 18th, 2016.

3.8. Data analysis

3.8.1. Qualitative analysis

There were two types of analysis of qualitative data possible. The first type was analytic that are tied to particular theoretical or epistemological positions (Braun & Clarke, 2006). Examples of this are interpretive phenomenological analysis (IPA) or narrative analysis. The second possible range of analytic tools were those independent of theory or epistemology, an example of which is thematic analysis (TA). Given the time available, the scope of the research, and that this was the first research on this topic within the population, thematic analysis (TA) was ideal to organise the comments made in the free test boxes of the survey. Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data (Braun & Clarke, 2006; Attride-Stirling, 2001). There are various types of TA, each being focused slightly differently in relation to the type of information they best represent. Essentialist or realist TA method reports the experiences, meaning and reality of participants, whereas the constructionist TA approach looks at the way in which social discourses affect people's realities and experiences. There is also a contextualist TA approach which attempts to meet the critical realism demand (Willig, 1999), to understand that people create meanings for their life experiences but that these meanings may be affected by the broader social context in relation to those experiences. For this study, essentialist TA was the most appropriate to use to shed light on the research questions because the data that was being sought was about the respondents' thoughts and feelings; analysing their subjective perspective on their experiences was the aim.

There are two primary types of essentialist TA analysis that could be used to identify the themes, inductive and theoretical. Inductive analysis allows for the data to guide the creation of the themes (Patton, 1990), as opposed to theoretical analysis where the research questions guide the development of the themes not the data. Inductive

analysis does not try to fit the data into an independent set of themes, nor is it needing to fit within the researchers own perspectives. With the free text questions, the aim was to begin to develop a broader understanding of the thoughts and feelings of respondents, and the researcher wanted to analyse those respondents without preconceived notions or categories. Therefore, inductive analysis was best suited to this goal. It must be noted that the themes, even when driven by the data will be potentially influenced by the epistemology of the researcher (Braun & Clarke, 2006). The levels at which data is placed into themes can be either semantic/explicit or latent/inductive (Boyatzis, 1998). A semantic approach looks only at the explicit meaning from the data presented, it does not aim to delve deeper into what the data might mean but is solely focused on what has been said/written. Conversely, a latent approach aims to find underlying ideas, concepts and assumptions that may be influencing the semantic content of the data. Given the aim of the research was to develop a broad overview of the professions relationship to CPD, and it is the first research to do so there is little to guide the development of a latent approach, and so the semantic approach was adopted Creswell (2013). However, before coding can take place, four steps are suggested by Bryman (2012), to ensure the research becomes suitably attuned to the comments made by the participants.

1. Becoming familiar with the data - The text is read and re-read, with notes taken relating to content
2. Ideas forming within the text are developed, the generation of initial codes is undertaken, and these codes are collated into themes
3. Main themes are noted, the themes are then checked to ensure that they were representative of the data set, and clear definitions and names for each theme are generated
4. Unusual comments are noted

Coding in qualitative research “is an integral part of the analysis, involving sifting through the data, making sense of it and categorising it in various ways” (Darlington, 2002). Saldana (2014) suggests using as a code “a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data”. In discussions with supervisors and osteopathic colleagues, I added another level of review to my qualitative data review: members of a group of practitioners that provided constructive feedback about the survey structure and questions were asked to review the codes and the relevant script to determine consistency of coding.

3.8.2. Quantitative analysis

Descriptive statistics were chosen to represent the study population and then to explore the relationships between variables. The type of statistical tests used to analyse the data is largely dependent on the type of variable collected. There are two broad types, categorical and numerical. The analysis of the data uses simple descriptive statistics (frequencies and cross-tabulation). Categorical variables were summarised using counts and percentages (n, %), and continuous variables using means and standard deviations. Chi-square tests used for nominal data with Phi coefficients test to add further information about the strength of relationships arising from the Chi-Square. To analyse ordinal and nominal data the Mann-Whitney test was used.

Statistical significance was set at $p = <0.05$. When the null hypothesis states that there is no relationship between two variables and the traditional value of $p = <0.05$ is met, the null hypothesis can be rejected. An alternate hypothesis (that the variables have a statistically significant relationship) is adopted. When $p = <0.05$, there is less than 5% chance of rejecting the null hypothesis by chance.

Chapter four: Results

This chapter will present the general and professional demographic information, followed by the results of the survey relevant to each of the three research questions. There were 306 responses, a return rate of 48% (n=303) of all registered osteopaths. For those osteopaths that held a current APC the return rate was 67% (n=203). Of the surveys received 88% (n=266) were fully completed, and 12% (n=36) were partially completed. The response rate varies for each question (Appendix A) as it was not compulsory to complete any of the questions. Where the number of responses to a question has a bearing on the significance of the answer, n-numbers are noted in the text. Otherwise this information can be found in appendix A.

4.1. Demographic information

General and professional demographic information was collected to determine if any of the questions about respondents' relationship to CPD could be correlated with demographic information.

4.1.1. Registration and scopes of practice

The majority of respondents (n=251, 95%) held a current APC. Of the 13 non-APC holders, five had not held an APC for less than one year, five had not held an APC for over three years, and three had not held an APC for between one and three years. A small number of respondents (n=27, 9%) held additional scopes of practice. There are three scopes of practice, one Extended Scope of Practice in Western Medical Acupuncture (ESoP), and two Vocational Scopes of Practice (VSoP), Pain Management or Gerontology.

4.1.2. Age, gender and year of graduation

The age range of respondents was between 23-72 years of age, with the mean age of respondents being 52 years. The gender balance within the respondents (n=268, 87%) is very even, with males (n=133, 49%), and females (n=135, 50%). One respondent did not specify gender (n=1, 0.3%). The majority of respondents (n=190, 72%) graduated between 1997 – 2016, just over a quarter of respondents (n=73, 27%) graduated between the years 1976 – 1996 (Table 3).

Table 3. Number and gender of respondents per decade, 1976–2016

Year of graduation	Number of graduates	Gender	
		Male n (%)	Female n (%)
Pre-1977	2	1 (50%)	1 (50%)
1977-1986	22	16 (72%)	6 (27%)
1987-1996	49	27 (55%)	22 (44%)
1997–2006	87	45 (51%)	42 (48%)
2007-2016	103	42 (40%)	61 (59%)
Total	263	131	132

4.1.3. Country where trained

Most of the respondents were trained in the United Kingdom (n=143, 53%), followed by New Zealand (n=99, 36%), then Australia (n=22, 8%). The remaining respondents had trained in France (n=1, 0.3%), United States of America (n=2, 0.7%), and Hong Kong (n=1, 0.3) (Fig. 1).

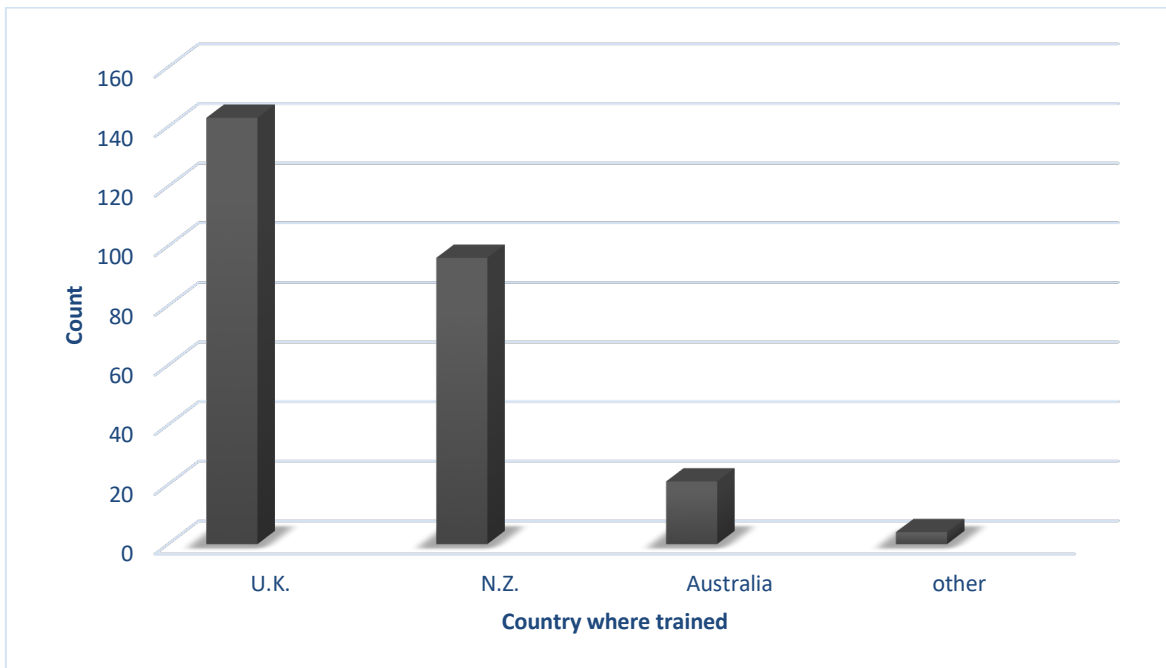


Figure 1. Country of training

4.1.4. Geographical location.

Just under a third of respondents, (n=82, 32%), worked in the Auckland region, with Canterbury, (n=29, 11%) being the second largest group, followed by the Wellington region (n=27, 10%). The other regions had smaller and similar numbers of respondents working there, except for the West Coast, from which there were no responses (Fig.2).

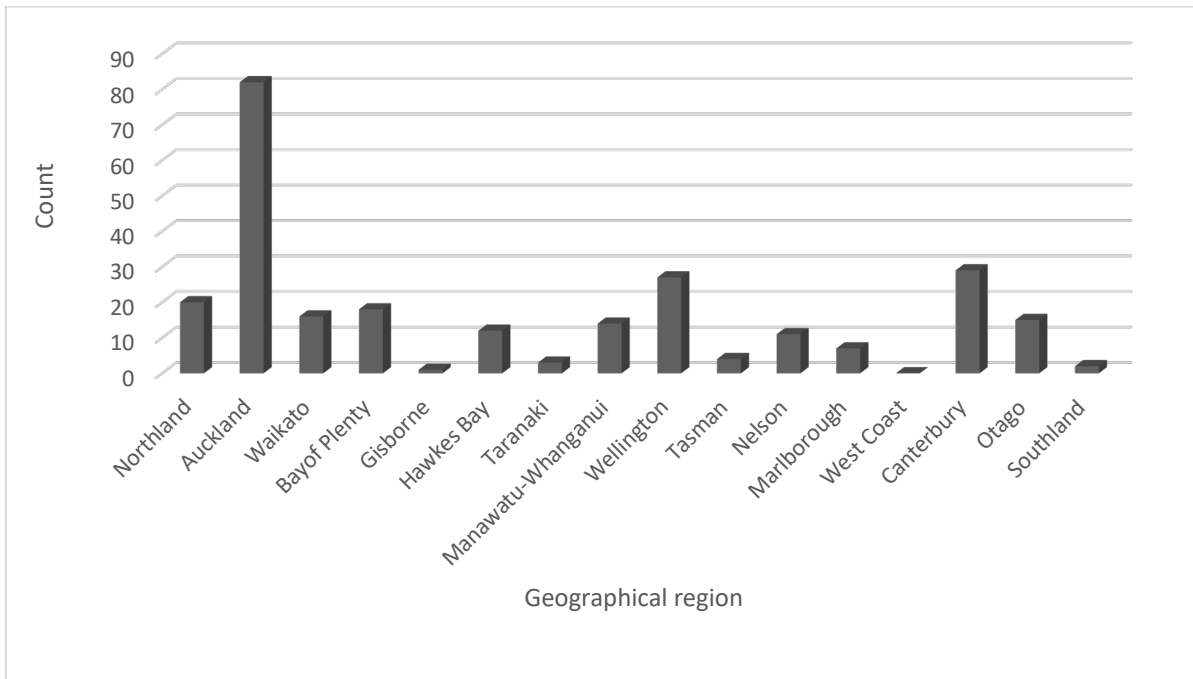


Figure 2. Geographical location

The total number of osteopaths by region is also shown to provide information about the percentage response rate in relation to the local osteopathic profession. There is a discrepancy within the four responses from the Tasman region, and the number of osteopaths working there being two, this may be explained by the difference of one year between the data sets (Table 4).

Table 4. Respondents per 100,00 with geographical location, total number of osteopaths (2017) and number of respondents (2016)

Geographical region	Number of registered osteopaths in region (2017)	Number of respondents per 100,000 (2013 census data)	Responses by region (2016), n (%)
Northland	30	6:100,000	20 (7%)
Auckland	188	5:100,000	82(31%)
Waikato	32	3:100,000	16 (6%)
Bay of Plenty	51	6:100,000	18 (6%)
Gisborne	9	2:100,000	1 (.3%)
Hawkes Bay	19	7:100,000	12 (4%)
Taranaki	7	2:100,000	3 (1%)
Manawatu-Whanganui	16	6:100,000	14 (5%)
Wellington	52	5:100,000	27 (10%)
Tasman	2	8:100,000	4 (1%)
Nelson	16	23:100,000	11 (4%)
Marlborough	5	16:100,000	7 (2%)
West Coast	0	0:100,000	0 (0%)
Canterbury	38	5:100,000	29 (11%)
Otago	25	7:100,000	15 (5%)
Southland	3	2:100,000	2 (.7%)

4.1.5. Pre-registration career

Half of the respondents had not had a previous career prior to becoming an osteopath, (n=129, 48%). For those that did have a career before becoming an osteopath just over half, (n=72, 52%) stated that their previous career required formal tertiary study (Fig.3). Of these, just under a quarter (n=16, 22%) had held a previous registration in healthcare (Table 5).

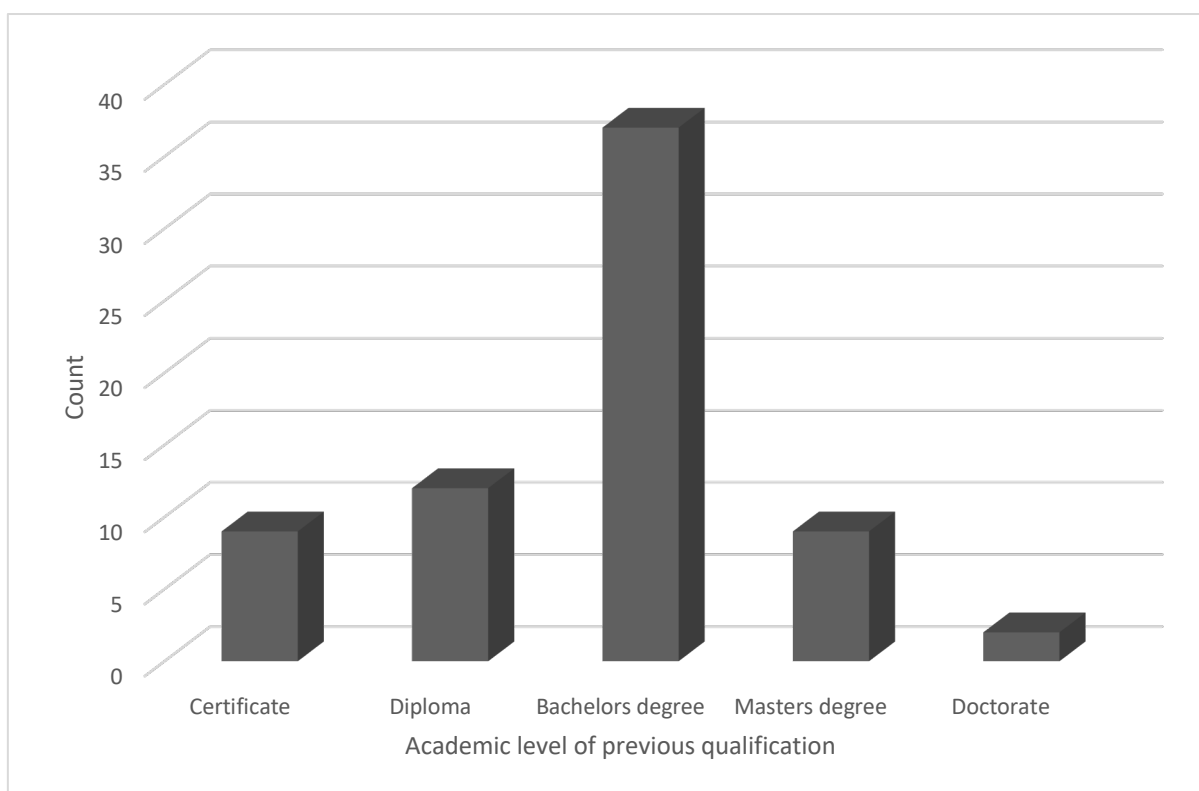


Figure 3. Academic level of previous qualification

Table 5. Prior healthcare registration

Healthcare registration before osteopathic registration	Number of respondents
Physiotherapist	4
Acupuncturist	3
Nurse	2
Massage therapist	2
Physician assistant	1
Medical social work	1
Homeopath	1
Occupational hygiene	1
Sports massage	1

4.1.6. Clinical contact time, amount of money spent on CPD and gender

Just under a half of respondents worked 30 plus hours per week (n=129, 49%), with another quarter working between 20 – 30 hours per week. Males were more likely to work 30 hours or more per week (n=75, 58%) compared to females (n=54, 41%).

Half the number of males worked between 10 -20 hours per week (n=14, 5%) compared to females (n=27, 10%) (Table 6). The results of the Chi-Square test for gender and hours worked shows that there is a statistically significant difference (p= .003) between the average weekly hours worked by males and females (Table 7).

Table 6. Weekly clinical contact and gender

Amount of clinical contact each week	Gender		Total n (%)
	Male n (%)	Female n (%)	
1 - 9 hours	3 (1%)	14 (5%)	17 (6%)
10 - 19 hours	14 (5%)	27 (10%)	41 (15%)
20 - 29 hours	37 (49%)	38 (50%)	75 (28%)
30 plus hours	75 (58%)	54 (41%)	129 (49%)
Total	129 (49%)	133 (50%)	262 (100%)

Table 7. Chi-square test, weekly clinical contact, and gender

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.862 ^a	6	.003
Likelihood Ratio	18.992	6	.004
Number of Valid Cases	262		

a. 4 cells (33.3%) have an expected count of less than 5. The minimum expected count is 0.06.

Analysing the amount of clinical time respondents reported weekly and how much money they spent on CPD activities over the previous two years shows a direct relationship between these two variables (Table 8). The results of the Chi-Square test (Table 9), demonstrate there is a statistically significant relationship between the two groups ($p = .003$).

Table 8. Weekly clinical time and amount of money spent on CPD in the previous two years.

Weekly hours of clinical contact time	Approximate spend on CPD in the previous two years				Total
	\$100.00 - \$999.00	\$1000.00 - \$1999.00	\$2000.00 - \$2999.00	\$3000.00 plus	
1 - 9 hours	6	7	2	2	17
10 - 19 hours	4	18	11	9	42
20 - 29 hours	12	23	16	24	75
30 plus hours	18	21	35	52	126
Total count	40	69	64	87	260

Table 9. Chi-Square test, weekly clinical contact, and amount spent on CPD in the previous two years

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.706 ^a	9	.003
Likelihood Ratio	24.676	9	.003
N of Valid Cases	260		

a. 3 cells (18.8%) have expected counts of less than 5. The minimum expected count is 2.6.

4.1.7. Association membership

Just over two-thirds of respondents ($n = 184$, 69%) indicated they held membership to one or more professional associations. Over three-quarters of respondents, ($n = 169$, 82%) were members of Osteopaths New Zealand, the next largest group ($n = 21$, 10%) belonged to ‘other’ associations (Table 10). Of the 21 respondents belonging to ‘other’ associations five indicated membership to regulatory bodies. As these are not association memberships these answers were removed from the data.

Osteopaths Australia and the New Zealand Pain Society had the same number of memberships (n= 6, 2%).

Table 10. Association memberships not specified in the survey

Professional association	n
Functional Medicine	1
Sports Medicine	1
British Medical Acupuncture Society	2
British Osteopathic Society	1
Cranial Academy	3
Physiotherapy New Zealand	1
Nutrition Society of New Zealand	1
New Zealand Institute of Chemistry	1
International Body-talk Association	1
Access Consciousness'	1
New Zealand Ergonomic and Human Factors Society	1
New Zealand Sports Medicine Federation	1
Acupuncture New Zealand	1
Total association memberships not specified in the survey	16

4.2. Reasons for engaging with CPD

The majority of respondents indicated that they completed CPD to improve their KSA's (n=256, 90%), improve weak areas of their practice (n=242, 86%), and to assist them in feeling better prepared for clinical practice (n=253, 90%). However, over two thirds of respondents also indicated that maintaining registration was also a motivating factor for the completion of CPD (n=234, 82%). Just under half of respondents did not feel that peer pressure was a motivating force driving CPD completion (n= 117, 45%), with a quarter stating peer pressure was a strong motivating factor behind their CPD completion. For just under a half of respondents the completion of CPD was not a requirement of the practice they worked at (n= 117, 42%), and just over a quarter stated that practice requirement of CPD completion was a motivating factor (n= 74, 27%). Development of respondent's business was a motivating force for just under three quarters (n=195, 69%) (Table 11).

Table 11. Reasons for engaging in CPD

Reasons for engaging in CPD n (%)	Strongly / somewhat agree n (%)	Neither agree or disagree n (%)	Somewhat / strongly disagree n (%)
Maintaining registration n=284 (92%)	234 (82%)	25 (8%)	25 (8%)
My peers expect me to n=274, (89%)	66 (24%)	91 (33%)	117 (42%)
The practice I work in requires me to n=273 (89%)	74 (27%)	82 (30%)	117 (42%)
I want to improve my KSA's in a specific area of practice n=282 (92%)	256 (90%)	20 (7%)	6 (2%)
CPD is crucial to developing my business n=279 (91%)	195 (69%)	52 (18%)	32 (11%)
CPD makes me feel better prepared for clinical practice n=281 (91%)	253 (90%)	15 (5%)	13 (4%)
I want to improve my weak areas of practice n=280 (91%)	242 (86%)	31 (10%)	7 (2%)

4.2.1. Preferences for CPD containing practical sessions

It is common practice for osteopathic conferences and seminars to contain practical sessions, where the delegates will be introduced to new osteopathic techniques and practice them on each other under supervision. Results from this study showed that just over half of respondents preferred CPD that contained practical components (n=142, 53%). For the remainder just under a quarter sometimes/never preferred a practical component (n=60, 22%), and another quarter that liked a practical component to their CPD about half of the time (n=65, 24%) (Table 12). Just over two-thirds of respondents stated a preference for CPD provided by osteopaths n=182 (68%) (Table 13).

Table 12. Preference for practical component within CPD

Preference to CPD that has a practical component n=265, (86%)	n (%)
I always/mostly prefer CPD that has a practical component	n=142 (53%)
About half of the time I prefer CPD that has a practical component	n=65 (24%)
I sometimes/never prefer CPD that has a practical component	n=60 (22%)

Table 13. Preference for provision of CPD

Choosing CPD not provided by osteopaths n=266 (86%)	n (%)
I sometimes/never choose CPD not provided by osteopaths	n=182 (68%)
About half the time I choose CPD not provided by osteopaths	n=46 (17%)
I always/mostly choose CPD not provided by osteopaths	n=38 (14%)

4.2.2. Preferences for different types of CPD

Conferences were most preferred CPD choice by respondents (n=191,73%), followed by peer group activity (n= 97, 37%), informal peer contact (n=84, 32%), reading (n=57, 21%) and then formal tertiary study (n=52, 20%).

The activities in the 'least preferred' ranking were blogging (n=240, 92%) and other activities (n=213, 81%), these were followed by formal tertiary study, (n=140, 52%). (Fig 4).

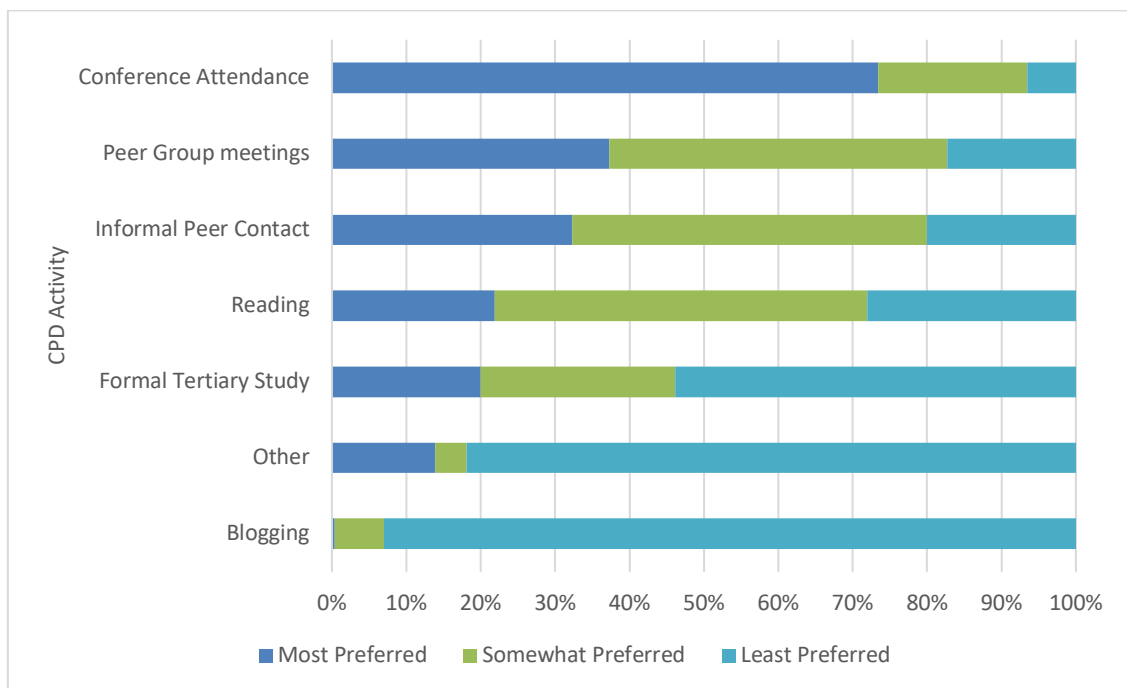


Figure 4. Preferences for different types of CPD activity

4.2.3. Conference attendance in the previous two years

The majority of respondents, (n=239, 90%) had attended an osteopathic conference in the previous two years. Half (n=131, 49%) stated they had attended other health-related conferences. Just under a third, (n=79, 29%) had been to a musculoskeletal conference and a small number (n=37, 13%) had attended a pain-related conference (Fig. 5).

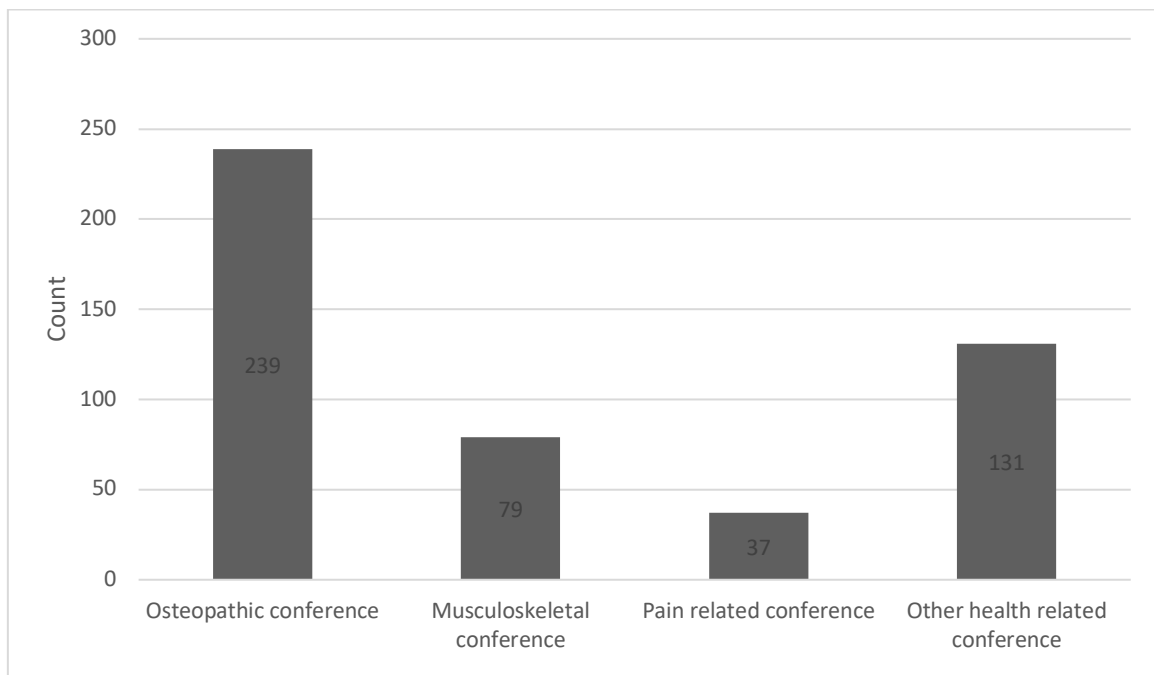


Figure 5. Type of conference attendance in the previous two years

4.2.4. Peer group activities

Nearly two-thirds of respondents indicated their attendance at peer group meetings was of benefit to their clinical practice (n=191, 68%), a slightly larger group reported that they thought peer group attendance provided collegial support (n=219, 78%). Over half of respondents reported their KSA's improved with peer group attendance, (n=181, 64%) (Table 14).

Table 14. Perceived benefits of attending peer group meetings.

Perceived benefits of attending peer group meetings n (%)	Definitely/probably of benefit n (%)	Might/might not be of benefit n (%)	Probably/definitely not of benefit n (%)
Is peer group meeting attendance beneficial to your clinical practice n=279 (91%)	n=191 (68%)	n=63 (22%)	n=21 (7%)
Attendance at peer group meetings provides collegial support n=279 (91%)	n=219 (78%)	n=43 (15%)	n=17 (6%)
Attendance at peer group meetings adds new skills and knowledge n=280 (91%)	n=181 (64%)	n=77 (27%)	n=22 (7%)

Just over half of the respondents (n=169, 60%) indicated that they had attended a peer group meeting in the previous two years. Of those who had attended, males attended peer group meetings more than females (94 to 70 respectively) (Table 15). This was statistically significant (p=.015) (Table 16), (Table 17).

Table 15. Male and female attendance at peer group meetings in the previous two years

Peer group meetings attended in the previous 24 months	Count		Total
	Male	Female	
None	38	65	103
1-3	56	39	96
4-6	23	12	35
7 plus	15	19	34
Total	132	135	268

Table 16. Chi-square tests, attendance at peer group meetings for males and females, in the previous 24 months

	value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	15.831	6	.015
Likelihood ratio	16.234	6	.013
Linear by Linear Association	3.179	1	.075
Number of valid cases	268		

Table 17. Symmetric measures, attendance at peer group meetings for males and females, in the previous 24 months

	Value	Approximate significance
Nominal by Nominal Phi	.243	.015
Number of valid cases	286	

Over half of the respondents, (n=170, 59%) stated they had an active peer group in their region. However, just over one-third, (n =111, 38%) had not attended any meetings in the previous two years, another third (n=101, 35%) had attended between 1-3 meetings, and a smaller number had attended between 4-6 meetings, (n=40, 13%) and 7 or more meetings, (n=34, 11%) (Fig.6). Most respondents, (n=225, 79%) had not been involved in organising a peer group meeting in the previous two years.

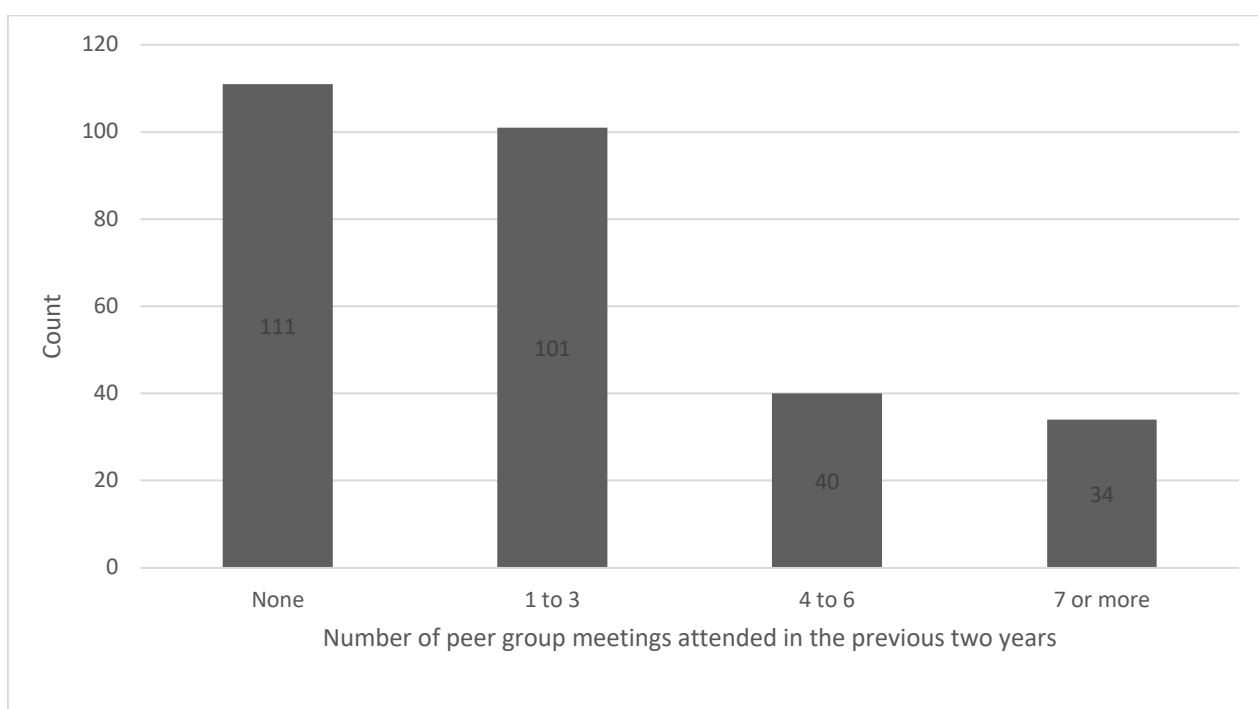


Figure 6. Frequency of attendance at peer group meetings in the previous two years

The survey asked respondents, using free text, to comment on what changes to peer groups might make the meetings more useful to them. There were 189 comments, when these were analysed four themes emerged:

- Theme one – ease of access and meeting organisation
- Theme two – absence of meetings
- Theme three – no change
- Theme four– personal/political issues

4.2.4.1. Theme one – ease of access and meeting organisation

The general comments on this theme were that the respondents wanted to be able to access the peer group meetings more easily, both in relation to the location, frequency and communication about the event. Examples of representative quotes from this theme are, “more frequent meetings”, “easier access to the physical location of the meeting”, “clearer and more obvious statements around the timing of the meetings”, “more regular meetings”, “meeting locations closer to my home and my clinic.”

Comments were made relating to the structure and content of the peer group meetings and also the timing of the meetings, specifically that they should be on set days and times. The comments indicated that information was not always accessible about the practical content of the meetings and when they would be held. Examples of representative quotes are “they need to be clinically oriented”, and, “more structure to the meeting”, and including “good relevant external speakers”. Comments indicated a desire to work with others “we should have collaboration/CPD with other professions”, and that the meeting times are “scheduled 2-3 per year with set meetings times that don’t change”, and that they should be “regular meetings.”

4.2.4.2. Theme two – absence of meetings

For many respondents there were no peer group meetings in their area. The comments made seemed to suggest that when there is not an active peer group structure, respondents were aware that it might be beneficial to organise one. Comments about why they thought they should start a peer group meeting were not present in the free text box. Examples of representative quotes are as follows, “none have been organised”, “we do not have local meetings”, “no peer group leader in our area”, “we need a peer group”, and “we need to start one.”

4.2.4.3. Theme three – no change to the peer group

The main comments in this theme were about respondents being happy with how their peer group was functioning. Respondents stated that they were happy with the timing, content and collegiality of the meetings they were attending. Examples of representative quotes are as follows, “meetings were useful and collegial”, “meetings did not need improvement”, “were excellent and had nothing to improve”, “just started and are great”, and finally “I am happy with meetings as they are.”

4.2.4.4. Theme four – personal and political issues with attending peer group meetings

Barriers to partaking in a peer group meeting, specifically around personal feelings of want to attend or otherwise. There were comments about difficult professional relationships and how this negatively impacts their attendance at peer group meetings. Examples of representative quotes are “there were personality clashes within the local group so I didn’t want to attend”, “I feel that some osteopaths had a sense of superiority over others”, “I felt that being open and honest in a meeting might damage my business”, “Unfortunately most osteopaths in our area have fallen out with someone in the group which makes things difficult”, “older British trained are opposed to new grads from Unitec”, “the local osteopaths have an apathetic attitude”, “the meetings feel very competitive and tense.”

4.2.5. Other CPD activities

Over two-thirds of the respondents, (n=194, 72%) indicated they had read peer reviewed journals in the last 24 months. A free text box was included to capture information about other CPD activities not specified in the survey. Weekend courses, practical courses, online learning, teaching, and self-reflection were reported as other CPD activities, with the majority indicating weekend courses (n=19, 35%) were a common CPD activity not previously mentioned (Fig. 7).

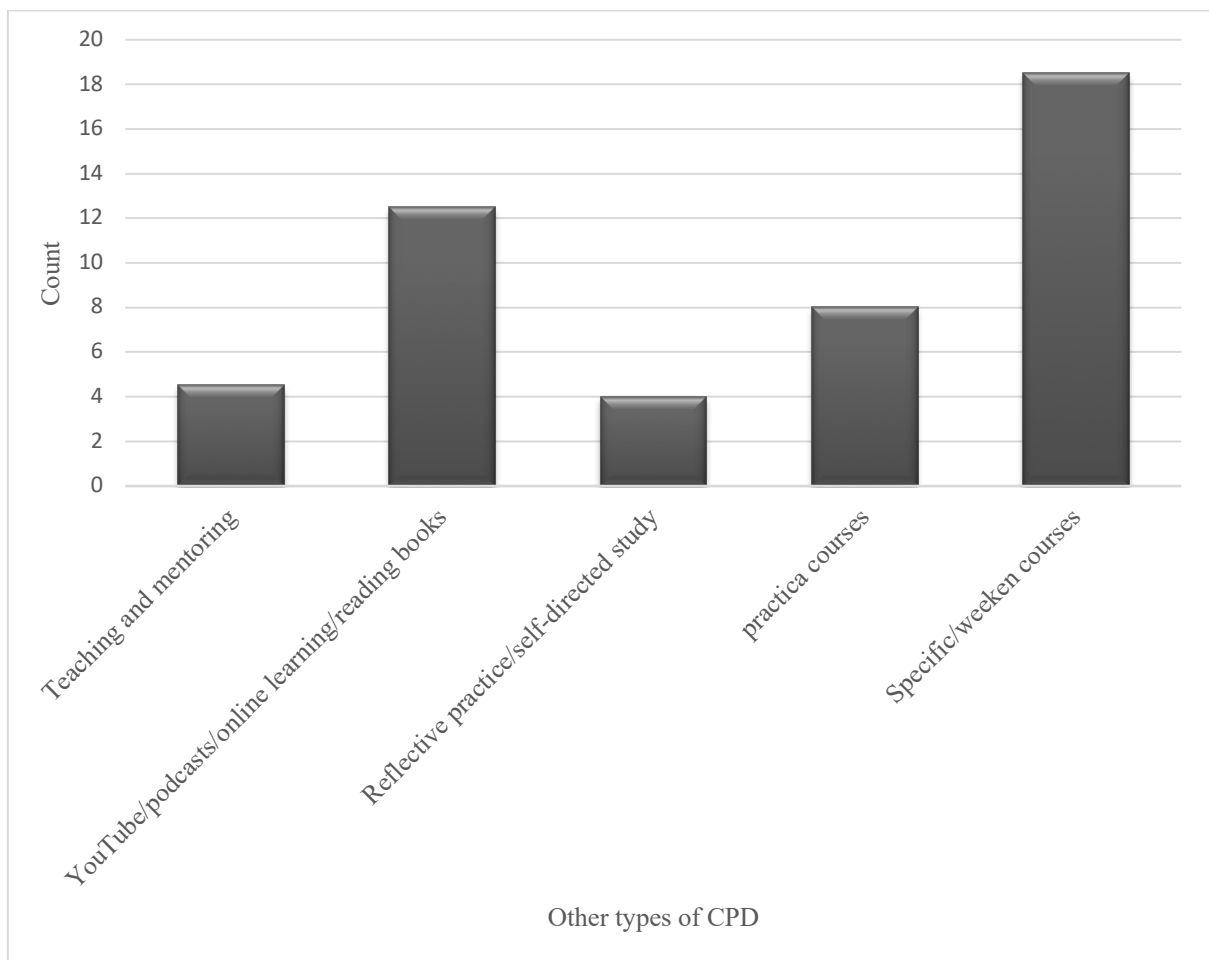


Figure 7. Other types of CPD

4.2.6. Clinical focus in relation to CPD choice

Just over with over half of respondents (n=139, 52%) stated that the clinical focus of their practice always/mostly guided their CPD choice. With a quarter of respondents stating that their clinical focus in practice sometimes/never guides their CPD choice (Table 18).

Table 18. The influence of practice focus on CPD choice

Practice focus n=267 (87%)	n (%)
Practice focus always/mostly guides CPD choice	n=139 (52%)
Practice focus guides CPD choice about half the time	n=61 (22%)
Practice focus sometimes/never guides CPD choice	n=67 (25%)

Just over half of respondents indicated they did not find it difficult to access CPD relevant to their clinical focus (n=148, 55%). Of the remaining responses around a half did find it difficult to access relevant CPD some of the time (n=61, 22%), and just over a fifth found it very difficult to access germane CPD in relation to their practice focus (n=58, 21%) (Table 19).

Table 19. Access to CPD relevant to practice focus

Difficult to access CPD relevant to practice focus n=267, (87%)	n (%)
Its sometimes/never difficult to access relevant CPD	n=148, (55%)
About half the time it's difficult to access relevant CPD	n=61, (22%)
It's always/mostly difficult to access relevant CPD	n=58, (21%)

4.2.7. Impact of CPD

The CPD activity that was reported to have the most impact on respondents' practice was attending conferences, (n=175, 67%), followed by informal peer contact, (n=103, 39%). Just over a quarter of respondents indicated attendance at peer group meetings impacted their practice (n=75, 28%). The CPD activities that respondents

stated had the least impact on their practice was blogging, (n=183, 70%) and then formal tertiary study, (n=134, 51%) (Fig. 8).

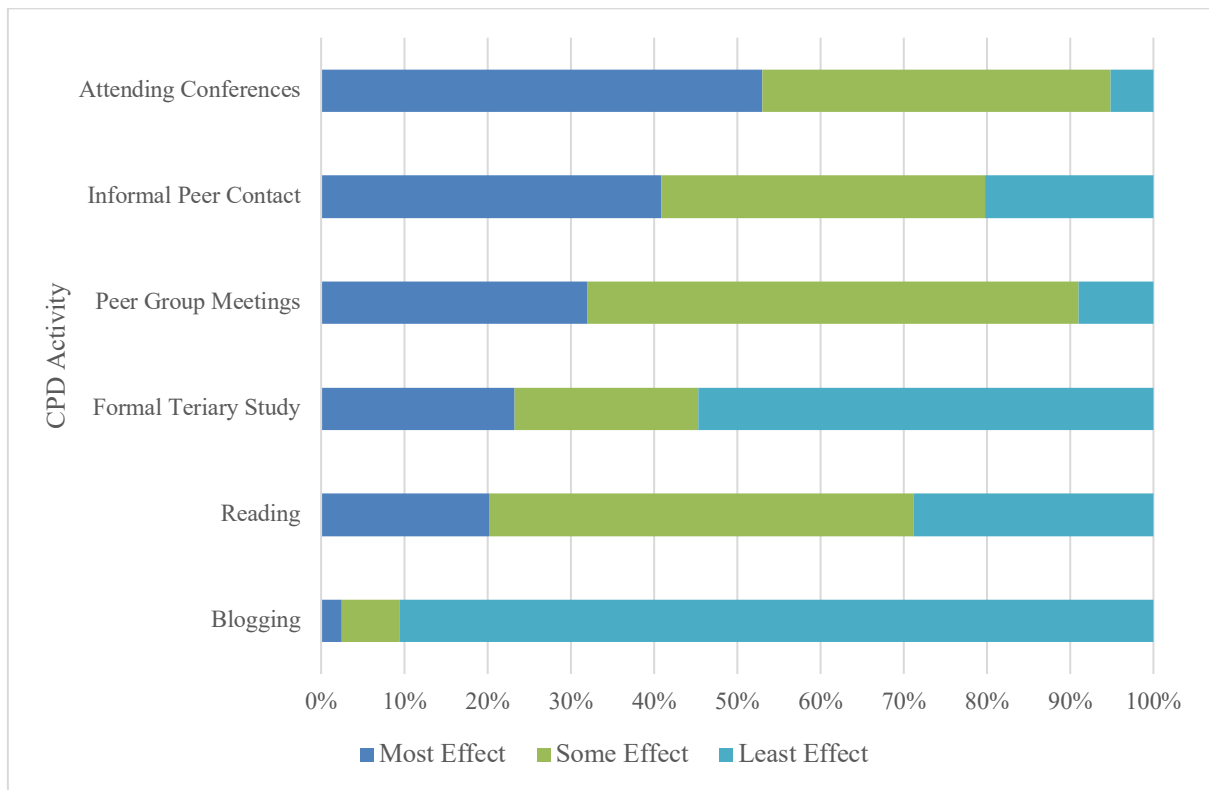


Figure 8. Impact on practice for different types of CPD activity

A free text box allowed respondents to provide further information about CPD activities that were not specified but that they felt impacted their practice. There were 59 free text comments. The CPD activities that respondents reported had the most impact on their clinical practice were specific courses/weekend courses (n=22, 37%) and practical courses (n=8, 13%), which when combined accounted for just over half, (n=30, 50%) of all comments. About one-fifth of respondents, (n=12, 20%) stated their practice was impacted by participating in You-Tube/podcasts/online learning/reading books, and the combined activities of teaching/mentoring/research and reflective practice/self-directed learning accounted for a small proportion (n=10, 16%) of comments.

4.2.7. Perceived benefits of CPD

Nearly all respondents agreed that completing CPD improved their theoretical understanding, (n=257, 96%) alongside their clinical skills (n=242, 90%). Just over two-thirds of respondents reported their communication skills improved (n=187, 70%), over half indicated CPD helped to develop their business (n=171, 64%) (Fig.9).

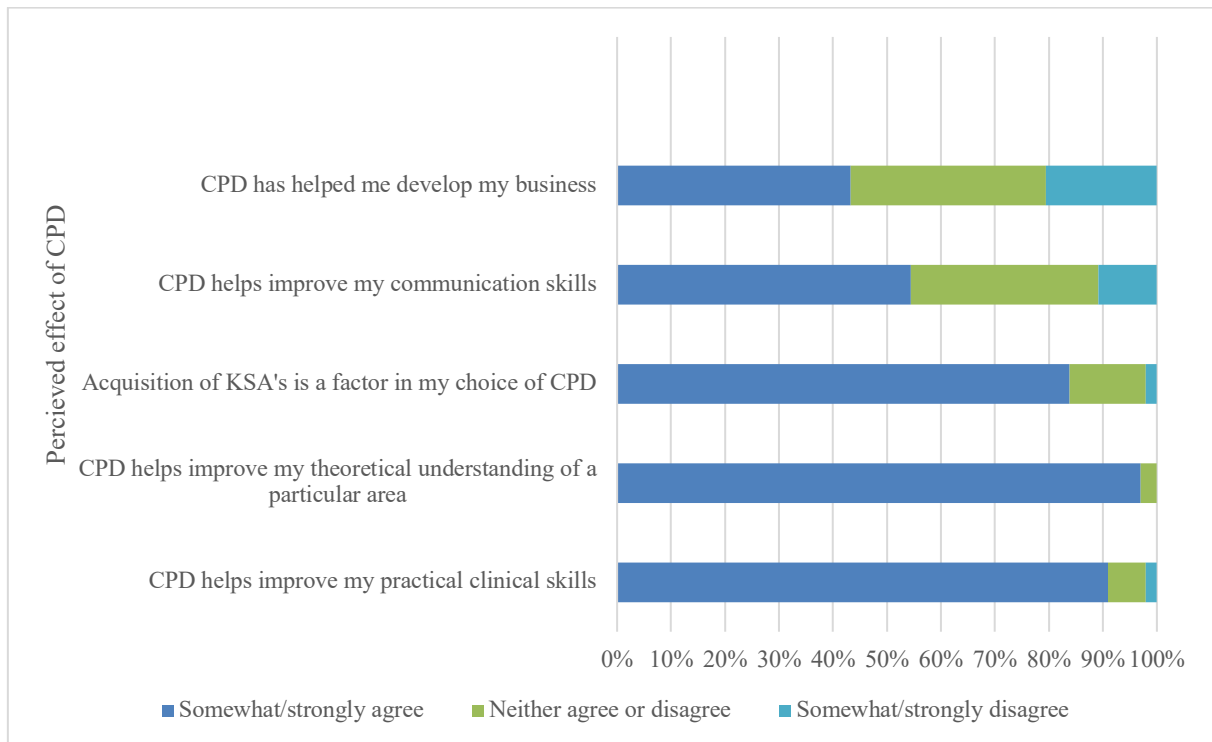


Figure 9. Perceived benefits of CPD completion

4.2.8. CPD choices and improved competency in practice

Over three-quarters of respondents, (n=240, 89%) reported that their competency had improved because of their CPD choices with just six (2%) stating their competency had not improved as a result of CPD completion.

4.2.9. Importance of CPD to respondent's practice

The importance placed on CPD by respondents differed between males and females, with males stating CPD is less important to their practice when compared to females (Table 20). This difference is statistically significance ($p=.01$) (Table 21).

Table 20. Mann Whitney test, importance of CPD to your practice and gender variations

	Gender	n	Mean Rank	Sum of ranks
How important is CPD to your practice?	Male	132	145.57	19215.00
	Female	135	122.69	16536.00
	Total	267		

Table 21. Test statistics, importance of CPD to your practice and gender variations

	How important is CPD to your practice?
Mann-Whitney U	7383.000
Wilcoxon W	16562.000
Asymptotic Significance (2-tailed)	.010

a. Grouping Variable: What is your gender?

4.3. Barriers to accessing CPD

There were a number of barriers identified by respondents when accessing CPD, these included, time, cost, access to events and difficulty juggling work-life balance. For over half of respondents ($n=150$, 52%) time was a barrier to CPD completion and, for just under three-quarters of respondents, the cost of CPD was a factor when choosing what CPD to complete, ($n=295$, 71%). Over half of respondents stated they found it difficult financially to complete CPD ($n=170$, 59%). There was a statistically significant relationship between the amount of clinical time and how much money respondents had spent on CPD in the previous two years ($p=.003$), there was also a statistically significant relationship between gender and average hours worked ($p=.003$). With males on average working more hours than females this data suggests that, for these osteopaths, males and spending more money on CPD than females. Three-quarters of respondents indicated they preferred to participate in locally available CPD ($n=213$, 74%), and just under three-quarters of respondents preferred to complete CPD outside

of clinical time (n=212, 71%). A further two-thirds of respondents stated they find it difficult to balance CPD, clinical time and family demands (n=210, 73%) (Table 23).

Table 23. Practical and financial considerations when choosing CPD

Considerations when choosing CPD n (%)	Strongly/somewhat agree n (%)	Neither agree or disagree n (%)	Somewhat/strongly disagree n (%)
Preference for CPD to be close to home n=286 (93%)	n=213 (74%)	n=55 (19%)	n=18 (6%)
Preference to travel away from home for CPD n=283 (92%)	n=83 (29%)	n=100 (35%)	n=100 (35%)
Completing CPD is financially difficult n=286 (93%)	n=170 (59%)	n=61 (21%)	n=55 (19%)
Cost of CPD is a factor when I choose which CPD to complete n=295 (96%)	n=212 (71%)	n=33 (11%)	n=50 (16%)
CPD must occur outside of clinical time n=285 (93%)	n=150 (52%)	n=73 (25%)	n=62 (21%)
Juggling CPD, clinical and family demands is difficult n=287 (93%)	n=210 (73%)	n=40 (13%)	n=37 (12%)

4.4. Competency in practice (free text)

Registrants were asked to use a free text box to describe what they thought might improve their competency in practice. The responses were organised into four themes;

- Theme one – knowledge, skills, and attitudes
- Theme two – peer group factors
- Theme three – self-reflection and communication skills
- Theme four – barriers to CPD

4.4.1. Theme one – knowledge, skills, and attitudes (KSA's)

The comments within this group were categorised into the following three areas, the development of KSA's, practice management skills, and practice standards.

Respondents have stated in their comments that they understand that improving their KSA's is likely to positively affect their competence in practice. The comments state the desire for respondents to both review current skills and also expand their theoretical and practical skills. Representative quotes relating to this are “I want to have more technique courses”, “I would like to review of differential diagnosis and clinical examination skills”, “I would like to explore new concepts and regularly review my basic knowledge.” When commenting on practice standards and practice management skills it was apparent that respondents were interested in having guidance about practice standards and guidelines and, develop better information technology skills. Respondents also commented about developing more effective skills in relation to case history taking. Examples of representative quotes made about practice management skills and standards of practice are as follows “I would like to improve my practice management systems and be being more digitally savvy”, “taking better notes in a more efficient way to keep them above the required level”, “I would like to have discussions and review guidelines.”

4.4.2. Theme two – peer group factors

Comments within this theme related to respondents' peer group engagement, specifically the skills respondents want to expand or develop through peer group attendance. Respondents stated a desire to further develop inter-professional collegiality, learn and share both techniques and work with their peers to discuss and analyse case studies. Examples of representative comments made are “I want to see other osteopaths working with different techniques” I want to have improved inter-professional relationships”, “I would benefit from working through case-based

discussions in small groups”, “I am keen to have regular workshops with peer review discussion of cases.”

4.4.3. Theme three – self-reflection and communication skills

This theme contained those comments focusing on self-reflection and communication skills. Respondents stated that they felt the need to improve their communication skills with other practitioners, with comments such as “I need to improve my ability to communicate with other practitioners”, and also dedicate more time for themselves to reflect on their practice, examples of comments made about time for reflection are “I need more time for self-reflection”.

4.4.4. Theme four – barriers to continuing professional development

This theme comprised of comments that were focused on any issues related to accessing CPD. Respondents stated that they found balancing time pressure, financial demand, and access to the CPD of their choice all acted as barriers to the completion of CPD. Some examples of representative comments are as follows “I have too many time pressures to complete CPD”, “It’s hard finding the courses that I want to attend”, “It’s very difficult paying for CPD”, “I don’t have access to peer-reviewed journals”, “if I were free from financial and time pressures I could do more CPD.”

To summarise, the majority of respondents completed CPD to ensure ongoing registration and further develop their KSA’s. Both theoretical understanding and practical skills were identified by registrants as those areas of practice they wished to further develop through their engagement with CPD. Attendance at conferences and peer group meetings were the preferred CPD activities, however it was noted that small group work, and courses with a practical element were also favoured. While it did not seem that respondents are undergoing a formal self-reflective process when choosing

CPD, respondents stated that they were choosing CPD to revise or expand their KSA's, this would seem to indicate there is a reflective process occurring. Perceived benefits to respondents as a result of CPD completion included improved KSA's, improved communication skills and feeling better prepared for clinical practice. For the respondents the main difficulties they faced in accessing CPD related to cost, time commitments, availability of what they wished to complete, and location of the CPD events.

Chapter five: Discussion

The aim of this thesis was to gain an understanding of how the New Zealand osteopathic profession engages with CPD. Key results of this study indicate that CPD was completed to improve KSA's and maintain registration, and that many respondents felt their competency improved as a result of CPD completion. The preferred type of CPD activity completed was attending conferences and peer contact, with the least favoured being blogging. Male respondents indicated that CPD was not as important to their practice when compared to females, and males worked longer hours in the clinical setting when compared to females. Barriers to CPD completion were time, cost, access and balancing work/life demands.

5.1. Choice of CPD

The findings from this study showed that there were two types of influences on practitioners that impacted their decision about what CPD to undertake, these were classified as internal and external influencing factors. Internal influences are those aspects that the individual deemed to be of importance (e.g. the development of new KSA's, feeling better prepared for clinical practice). External influencing factors relate to external requirements in relation to CPD completion (e.g. maintenance of registration, professional advancement). Guidelines from responsible authorities promote motivation for the engagement with CPD and act as external motivating forces.

5.1.1. Internal motivating factors

Internal motivating factors are those that are individual to the practitioner. There have been many studies of the characteristics of adults that attend educational programmes, and factors that motivated them to attend the programmes (Knox, 1990). That research has resulted in some consensus that there are six broad motivational factors for adult learners (Boshier, 1977) (Table 24).

Table 24. Motivational orientation of adult learners

Social Relationships	Establishment and improvement of interpersonal relationships, engage with group activities and improve interpersonal skills
External Expectations	Participation as a result of directives, expectations or suggestions of an authority figure
Social Welfare	Participation to improve one's ability to serve others, the community or society
Professional Advancement	Participation to improve KSA's, increase competence, increase job advancement/status or obtain certification
Escape/Stimulation	Participation to avoid boredom routine or frustrating situations
Cognitive Interest	Participation to seek knowledge for its own sake

Results from this study show that for the vast majority of respondents, (90%), CPD was completed to improve their KSA's in a specific area of their practice, a further 91% of respondents stated they completed CPD as it made them feel better prepared for clinical practice and that they used CPD to improve their weak areas of practice. These would fit into the social welfare and professional advancement areas of motivation for CPD. Ryan (2003), reported that improving professional knowledge was a prime motivating factor for influencing the participation in CPD within a cohort of nurses, occupational therapists and physiotherapists in the United Kingdom. The results of this study are consistent with these findings. Additionally, Prater and Neatherlin (2001), found in a study of Texan nurses that completion in, and a positive attitude to mandatory CPD, resulted in the perception of improved cognitive, psychomotor and affective skills.

Urbano, Jahns and Urbano (1988), reported there were a number of factors that predict those more likely to participate in CPD: prior educational attainment; occupation

and income and, when viewed collectively with tertiary study are strong predictors for further adult study. Broadly, Urbano et al., (1988), identified that tertiary educated adults who participate in further study do so as a result of a desire for knowledge, for less educated adults they tend to participate in further learning to acquire specific skills. The results of the survey are consistent with the findings of Urbano et al., (1988) showing that an increased likelihood of ongoing learning occurs when a number of factors combine together, namely previous educational exposure, income, and occupation. Given 69% of respondents stated they used CPD to develop their business the relationship between income and CPD completion can be inferred. The majority of the New Zealand osteopathic profession are self-employed (OCNZ, 2014a) and it could be surmised that the CPD is used to aid the development of a busy clinic, in order to ensure not only an income stream for osteopaths but also a sense of professional accomplishment. Using CPD to develop business would fit into the professional advancement and social welfare area of motivation for completing CPD.

In summary, the findings from the survey found that there are a number of factors that influence the motivation of practitioners when they are engaging in CPD which may intersect with each other and are consistent with research. Respondents indicated they engaged with CPD to improve and expand their KSA's, and ensure they felt better prepared for clinical practice.

5.1.2. External motivating factors

Over 80% of respondents indicated that maintaining registration was a substantial motivation for the completion of CPD. This finding is consistent with research that shows mandatory CPD requirements for registration increases the amount of CPD undertaken (Landers et al., 2005; Tassone & Heck, 1997), and is a motivating factor in CPD completion (Ahuja, 2011). In studies researching how healthcare professionals view mandated CPD there is majority support for this regulatory approach

(James & Francis, 2011). Hence, the survey results are consistent with international research in that mandated CPD provides a motivation for practitioners to complete their CPD requirements to ensure ongoing recertification.

There is a substantively different relationship to CPD when it is a compulsory part of the recertification/licensing process. One study, looking at the physiotherapy profession compared American states with and without mandatory CPD (Tassone & Heck, 1997). In the states that did not mandate CPD, a higher percentage of healthcare workers indicated they complete CPD to improve KSA's, as compared to the mandated states in which the healthcare workers indicated they completed CPD to maintain registration (Tassone & Heck, 1997). However, higher numbers of hours of CPD completion were achieved in states/jurisdictions where it is a mandatory part of practice (Ahuja, 2011; Landers et al., 2005). The reason for this difference is not clear but it may simply be that for mandated jurisdictions practitioners are initially relating CPD completion to regulatory requirements, rather than the development of KSA's. Respondents were also motivated by factors relating to professional advancement. Ninety percent of respondents stated that they engaged with CPD to improve their KSA's, information detailing how this improvement was being measured/assessed was not collected.

5.2. Types of CPD chosen

This study found that conferences were the preferred choice of CPD for nearly three-quarters of respondents, followed by peer group meetings and informal peer contact. In the free text comments the strong preference for CPD activities to be encompassing some aspects of practical sessions, and this approach to CPD is found to be highly effective by the research (Phillips, 2010). These preferences are discussed in more detail below.

5.2.1. Conference attendance

Respondents indicated a strong preference for attending conferences to fulfil their CPD, this finding is consistent with physiotherapy engagement with different types of CPD, (French & Dowds, 2008; Gunn & Goding, 2009). In the broader healthcare arena, it would be reasonable to assume that conference attendance would involve a didactic learning style with speakers and attendees. French and Dowds, (2008), indicated that this type of CPD has little or no effect on a change in the practitioner's behaviour or on the outcomes for the patient. However, within the osteopathic profession, both in New Zealand and further afield, it is more common for osteopathic conferences to contain a mix of didactic learning and also practical 'technique' sessions, with treatment plinths provided to enable delegates to practice their new skills on each other under the supervision of osteopaths familiar with the techniques being taught. It may well be that when osteopaths are attending osteopathic conferences the potential for improved practitioner KSA's and also enhanced patient outcomes is greater than when attending more traditional/didactic style conferences that do not include any practical sessions. The findings from this study show that just under half of respondents had attended non-osteopathic health related conferences in the previous two years, and 90% had attended an osteopathic conference. Whether attendance at osteopathic conferences is related to respondents stated preference for practical components in the CPD is unclear and would require further investigation. Forsetlund et al. (2012), stated that if, following a CPD event which involved didactic and interactive learning, there is an ongoing use of the practical skills obtained in the CPD event, then the effect on practitioner behaviour and improved patient outcomes is maximised. It could be supposed that if an osteopath were to learn a new practical skill at an interactive conference, and they then took this into their clinical practice then the potential for beneficial effects on their practice and patient outcomes might well be forthcoming. This would require further investigation.

Another possible factor in the stated preference for conference attendance might be related to meeting the mandated CPD activity to ensure registration is maintained. It is likely that attending one conference a year immediately meets the CPD requirements of an osteopath for that year, while they would need to attend 10-12 peer groups to gain the equivalent CPD points. Peer-group meetings may also be considered less important because between 2004 through to 2015 the OCNZ had a two-tiered system for the classification of CPD activities, in which conferences and didactic teaching methods were awarded double the number of CPD points than peer-group attendance (OCNZ 2006). Thus, conferences were seen as better value for time and money to achieve recertification requirements. Given that 82% of respondents complete CPD to ensure they can maintain registration, it is hardly surprising that so many respondents devoted their resources to attending a one or two-day conference, rather than 10 peer group meetings throughout the year. It is also possible that the profession has taken heed of the historically low value placed on peer group meetings and this has affected attendance rates. There may also be other factors influencing the desire to attend conferences that were not investigated in this study, such as the social elements to conference attendance and interest in exhibitors.

5.2.2. Peer group attendance

Respondents next preferred CPD activity was that of peer group attendance and informal peer contact. Over half of respondents reported that they felt peer group attendance benefited their clinical practice, provided collegial support and that their KSA's improved as a result of attendance. The reports of positive effects on KSA's and patient outcomes by the respondents are supported by the findings from de Villers et al., (2003) which suggests small group work/peer group attendance is much more effective than traditional/didactic learning. Also, small group work has been shown to improve how current research is incorporated into practice (MacVicar et al., 2006). Kelly,

Cunningham, McCalister, Cassidy and MacVicar, (2007) found there were certain factors that made small group work more effective. Firstly, participants in the small groups enjoyed comparing their practice to that of their peers, and secondly, they felt that the collegial and safe setting ensured they felt confident to share case discussion and be reassured of their practice. Respondents comments in this current study regarding their experience of collegial support as a result of attending peer group meetings is consistent with research. Kelly et al. (2007) also found that small group work usually involves active participation on a specific task and reflection, the general structure of a peer group meeting involves all of these features. The mechanics of a conference that involve practical technique may faithfully reproduce all these positive aspects of small group work, this would require further investigation to clarify. Active participation would occur as delegates would be practicing a new technique, the specific task would be learning the new technique, and this would also involve a collegial discussion and reflection of the new skill and how that might become a part of practice. This is also supported by Merriman (2003) who found that confidence to share in a supportive environment improves the chance of a positive change in practice.

Only half of all respondents stated they had an active peer group in their region, just over a third of respondents had not attended a peer group meeting and a further third had attended only one to three meetings in the preceding two years. Given the researched benefits to fulfilling CPD requirements through attendance at peer group meetings and the stated benefits from the respondents, the reasonable number of either low or no attendance seems at odds with the survey findings. However, only half of respondents had a local peer group meaning that for this group attendance was not possible. The study also showed that there was statistically significant difference in peer group attendance between the genders; males attended more frequently than females. Of particular note is that when looking at the frequency of meeting attendance in the previous two years, females were twice as likely to have attended no meetings

compared to males. The reason for this difference in attendance between males and females is unclear but may be a result of females finding it more challenging to allocate time in the evening to attending meetings. This point would need further clarification. Of further note is that the vast majority of respondents, had not been involved in arranging a peer group meeting and as such the arrangements fall on a small group of enthusiastic osteopaths across the country. With just over half of respondents stating they had an active peer group in their region and three quarters of respondents indicating they had not organised a peer group meeting in the previous two years these factors together would potentially make attendance at a meeting challenging.

A range of comments were made in a free text box relating to the personal and political issues for some respondents when attending peer group meetings. Respondents noted that personal differences within a group, diverse professional allegiances and differing perspectives/viewpoints were all barriers to attendance. As some of the smaller towns within New Zealand might have only a handful of osteopaths it would not be difficult to see that personal issues could arise, making collegial meetings difficult. It is also possible that some osteopaths might feel they are in competition with each other and this might be cause for difficult professional relationships, this would require further investigation to clarify.

The essential elements for a small group to function in a collegial or co-operative way to encourage learning are questioning, listening, responding and explaining (Edmunds & Brown, 2010). That is, the contribution of social interaction to the process of learning is seen to be essential to the effectiveness of the overall process (Johnson & Johnson, 2009). If there is a degree of tension within the members of a group, this may in turn affect how productive the educational outcomes are and how comfortable attendees feel to share their thoughts and feelings about areas of their practice life. It is not likely that individuals will share vulnerabilities within a group where there are social difficulties. It might be that in these situations those respondents

that reported tension within the peer-groups either do not share, or do not attend.

Further research is needed before making any conclusions.

The integral social aspect of co-operative learning requires sharing to occur to ensure a useful outcome, so if there is attendance but isolation of some group members this would not be helpful to learning. It would be interesting to also understand more about how many of the profession find peer-groups challenging to attend due to difficulties with professional and social interactions. Another theme of the respondents' comments about peer group meetings related to practicalities, specifically: knowing when they occur, having more of them/getting a peer group up and running, timing of the meetings, and the content of the meetings being more structured with quality speakers presenting. At the present time, there is minimal support for the organisational aspect of peer groups, nor is there any firm guidance to the profession about how a group might best work. Within general practice in Scotland in 2004 a practice based small group learning (PBSGL) scheme was constructed, the scheme is supported with modules available to guide and support study. A review of this scheme was completed in 2016 and this showed high rates of involvement, with participants reporting attendance met their learning needs and encouraged peer to peer learning (Cunningham & Zlotos, 2016). It may be of benefit to investigate how osteopathic peer groups might be better supported.

5.2.3. Formal study

This study identified that for over half of respondents, formal tertiary study was their least preferred CPD activity. Reasons for this are not clear, however currently within New Zealand there are no specific post-graduate osteopathic qualifications available and so any tertiary study would be more general in content. It may be that the stated desire by respondents to ensure there is a practical element to their CPD activity is one factor disincentivising the engagement with tertiary study as this study would not

contain any practical activities, being theoretical in nature. In addition, tertiary study is usually a one-off event aimed at attaining a qualification, therefore once a practitioner had attained this post-graduate qualification there is no further need to continue with such study. Information regarding why respondents indicated formal tertiary study was not something many wished to complete was not gathered, however it might be that access, cost and time may be influencing factors.

5.2.4. Reading journal articles

This study also showed that only a small percentage of respondents ranked journal reading as their preferred CPD activity, with the majority ranking it as a least preferred activity. However, the survey also showed that around three quarters of respondents indicated they had read peer-reviewed journal articles in the previous two years. Typically, healthcare professionals are asked to base their clinical practice in evidence and one way to achieve this is to stay abreast of current research by reading peer reviewed scholarly journals. To access quality peer reviewed journals requires either a paid library subscription or university enrolment. Since the survey showed that formal tertiary study was not the most favoured CPD option those respondents that stated they are reading journals may be incurring a financial burden to have journal access. Jette et al., (2003) has shown that where there is home-based access to peer-reviewed journals practitioners use this as a tool to maintain and develop currency of relevant research. However, research shows the passive act of reading a peer reviewed paper may not lead to any change in practitioner behaviour or improved patient outcomes (Palfreyman, Tod & Doyle, 2003).

5.2.5 Improved business development

Around two-thirds of respondents stated that they chose CPD activities that assisted the development of their business. Therefore, it can be surmised that for a third

of respondents they did not see that there is much of a relationship between their business development and CPD completion. It may well be that for this group of osteopaths they are not particularly interested in a more business-focused practice but prefer to concentrate solely on their theoretical understanding or clinical skill development. For those respondents not engaging in CPD to benefit their business development it may be that they are not the owner of the business and so have no responsibility for its development. It is also possible that those respondents for whom business development is not part of why they complete CPD that they are choosing to focus on other aspects of their professional development. This study did not collect information that might be able to answer these questions. However, Stone, Boud and Hager (2011), suggests that the development of a business often encourages professionals to engage with CPD, this incentive may be affected for those working within another practitioners practice.

5.2.6. CPD activities not mentioned in the survey

Respondents were also asked to discuss CPD activities not mentioned in the survey that had impacted their practice in a free text box. The largest group of these stated that small courses and courses with a practical component had the largest impact on their practice. A small group commented that teaching/mentoring and reflective practice had an impact on practice. Within another free text question respondent stated they thought their competency in practice had improved as a result of completing CPD. This finding is supported by Eustace (2001) who determined that within nursing CPD completion was stated as improving and developing their competence.

5.3. Efficacy of different types of CPD

When discussing particular types of CPD it is helpful to classify the varying activities that can be undertaken so that the potential effect different CPD activities

might have on practitioner performance and patient outcomes can be examined (Forsetlund et al., 2012) since research shows not all CPD activities are equally useful when its outcomes are assessed in relation to a change in practice and patient outcome (Mazmanian et al., 2009). Commonly CPD activities are categorised into three types as detailed below;

- Didactic, conference/lecture attendance with minimal audience involvement
- Interactive, sessions that enhance audience involvement, role-play, case/problem solving, hands-on training or discussion groups
- Mixed, involving both didactic and interactive session

Historically, the type of CPD undertaken by osteopaths was predominantly instructive and focused on similar teaching methods used in undergraduate training (Mansouri & Lockyer, 2007). The content was presented to a mostly passive audience, with the expectation that this new information would then be inserted by the audience into their professional behaviour and clinical practice. In this study the majority of respondents stated that their preferred type of CPD activity was conference attendance this may not have the highest likelihood of resulting in a change in practitioner behaviour or patient outcome. The potentially limited effect of didactic CPD activities might, within the osteopathic profession, be improved due to conferences commonly having a practical component. However, as discussed Chapter Two, section 2.3.4. (p 26), the ability of passive learning to change professional behaviour is not supported by the research in this area (Davis et al., 1999; French & Dowds, 2008). Adult learning for professional development is most effective when a process of self-reflection occurs, the didactic approach to learning does not typically involve this. Furthermore, participation by the learner – not the passive receipt of information – is known to be essential to a productive learning experience. This suggests the didactic style of information transfer is least effective for changing practice, it does however have a place in the imparting of knowledge between professionals. Following after conference attendance respondents

indicated they preferred peer group meetings and informal peer contact, research supports the potential for improved efficacy of this type of CPD activity when assessed in relation to improved practice and patient outcomes (Mazmanian et al., 2009). Therefore, it may be that increased access and support for these type of activities within the osteopathic profession would be of benefit to practitioners.

5.4. Perceived benefits from CPD

This study identified a range of benefits respondents felt as a result of completing CPD. The majority indicated their theoretical understanding improved following CPD, alongside their clinical skills. Just over two-thirds of respondents, reported their communication skills had improved, and over half indicated their CPD had helped to develop their business. Only a small number of respondents reported their clinical skills had not benefitted following completing CPD.

5.4.1. Improved theoretical understanding and clinical skills

The majority of respondents stated that they thought their theoretical understanding and their clinical skills had improved as a result of CPD completion. When this is viewed alongside the improvement in their KSA's being a substantial motivating factor in engaging with CPD it could be inferred that the majority of respondents found CPD to be productive and fulfilling their need of career/clinical development. Gould, Drey and Berridge (2007) reported similar findings of improved KSA's in their study of nurses in the United Kingdom, with the improvement and addition of skills being an outcome of CPD engagement. Effective CPD is seen as being activities that produce improvements in the quality of practice, specifically the impact on KSA's and the resultant changes in practice (Schostak et al., 2010). Respondents stated in free text comments that short courses, and informal peer contact which contained a practical element had the largest influence on their practice. It could be

surmised that the practical components in the activity would be then transferred into the clinical setting, given the nature of osteopathy. Brennan et al. (2006) showed that one-off CPD events do not change patient outcomes when they do not involve a re-visiting of the skills/knowledge learnt by the practitioner. What is not clear from the research is whether the revision of the topic needs to occur in a formal manner that involves other practitioners or whether individual revision is just as effective. From this study it is also unclear whether the respondents, on completion of the short courses/informal peer contact, then use the newly learnt techniques in their clinical practice, this would require further study to clarify what might or might not be occurring after the initial CPD event.

5.4.2. Improved communication skills

Just over two-thirds of respondents in this survey reported their communication skills had improved following CPD. Clear communication has been established as essential to a practitioner/patient relationship and that what practitioners think they are saying and what patients are hearing can be quite different (Betz Brown, 1999; Berkhofab, 2011). The practice setting for the majority of osteopaths in New Zealand involves the osteopath and the patient alone in a room together during the consultation, so opportunities are rife for miscommunication. The evidence is well documented (HDC, 2016), that issues with communication skills occur across all health professions in New Zealand. Respondents perception that their communication skills had improved as a result of CPD completion is a positive finding of this study.

5.4.3. Improved competency in practice

The majority of respondents in this study stated that they thought their competency had improved as a result of CPD activity. Competence, however may mean a variety of different things dependant on who is being asked. For instance, the general public may believe that when the term is used about a health professional then it implies

that health professional is competent to perform the duties of their profession, within their specific scope of practice. A general practitioner would not be expected to have the competency of a heart surgeon, and the public would understand that competency is related to the training the person has completed. The relationship between competency and CPD has, over recent years developed, with the discussion focusing around the development of competency based medical education (CBME) (Sargeant, Wong & Campbell, 2018; Lockyer et al., 2017). The development of CBME has arisen in part as a result of the poor relationship between CPD undertaken and improvements in quality of care (Choudhry, Fletcher & Soumerai, 2005; Mazmanian, 2006) and the increasing need for a better quality of care. CBME has a number of characteristics not always found within traditional CPD activities (Campbell, Silver, Sherbino, Cate & Holmboe) these are detailed below;

- A dynamic process, ensuring practitioners progress in competence to attain expertise within a defined practice context
- Founded on clear and measurable competencies, with assessment and educational strategies that inform the practitioners life-long learning
- Enabled by learning competencies to ensure practitioners engage in a self-reflective process
- Addresses CPD limitations due to the focus CBME has on competencies that improve practitioner performance, patient care and patient safety

The intent of CBME to better expand and manage the CPD process can be used to explain the comments made by respondents about competency. Analysis of respondents' responses to the question 'what is competency?' identified three main themes;

- Safety, skills and effectiveness
- Best practice

- Personal attributes

Respondents indicated that improvement in KSA's would improve their competency in practice. While this relationship between improved KSA's and improved competency might be assumed the structure of CPD traditionally completed does not meet the requirements of CBME (Campbell et al., 2010). It is therefore unclear how any improved competency might be occurring, how this might be measured, or the potential effect on patient care. Further research is needed so that the profession might gain a better understanding of patient outcomes and develop a clear and user-friendly process for assessing this on a regular basis.

Respondents identified that best practice was about the incorporation of “evidence-based research into practice” and, adhering to “research evidenced guidelines” and “treating patients with best practice treatment solutions”. That is, for best practice to occur in the clinical setting the current research would need to be embedded into practice. It has been demonstrated by Choudhry et al (2005) that the process of implementing best practice into a clinical setting is poor. The goal of CBME is to improve this part of practice, improving accountability and patient care.

Respondents also commented on the need for best practice guidelines as currently these do not exist for the osteopathic profession. Further study of how the profession is meeting best practice/standards of care would shed light on the relationship between current research, osteopathic practice and efficacy of patient outcomes.

Respondents indicated that their personal attributes were an important part of competency, specifically that their practice was in accordance with “an ethical approach to patient care”, and that CPD had developed respondents understanding of “professional boundaries”, “ethics and conduct” and the requirements of the OCNZ. Comments were made regarding practicing “within the HDC code of rights” and ensuring “their patients right to informed consent was met”. Respondents awareness of their ethical and legal obligations in practice was demonstrated with these comments.

5.5. Barriers faced when completing CPD

Barriers to CPD identified in this study included time, cost, access to events and difficulty juggling work/life balance. The obstacles to CPD have been well researched internationally (Friedman & Phillips 2004; Ikenwilo, 2014) and the findings of this study are consistent with this.

5.5.1. Time

Just over half of respondents stated they preferred to complete CPD outside of clinical time, the reason for this was not clarified in the survey. However, the New Zealand profession is largely self-employed and so it may be that CPD completion within clinical time negatively affects their income. Unsurprisingly, research shows that for health professionals employed within a large institution the desire to complete the CPD within work time is high (Murphy, Cross & McGuire, 2006) whereas those health professionals in a self-employed situation favour CPD to be completed outside of clinical time (Courtney & Farnworth, 2003). Two-thirds found it difficult to balance the demands of clinical time, family demands, and CPD fulfilment and three-quarters of respondents indicated they preferred CPD that was locally available CPD. It could be surmised that accessing local CPD requires a smaller time commitment than having to travel away from home. It could also be the case that locally sourced CPD is less likely to impact on time in clinic. These findings are consistent with results for other professions. The obstacles to CPD have been well researched internationally: typically, these are time, cost, work-life balance, compulsory curricula and the availability of programmes (Friedman & Phillips, 2004; Ikenwilo, 2014).

5.5.2. Financial

Three-quarters of respondents indicated the cost of CPD was a factor when deciding what CPD to complete, and just over half of respondents found it financially challenging to afford CPD. This study showed that males spent more money on CPD than females in the previous two years. The reason for this is not known but, given males are also spending more time in clinical contact than females and therefore are likely to be earning more, this may be a factor in their higher spend on CPD. It is possible that there is a relationship between income and the money respondents are choosing to spend on CPD. It is evident from the survey findings that respondents are considering the financial demands of CPD in relation to what activities they are choosing to complete. It is also of importance that when CPD activities occur outside of the respondents' clinical hours the potential for loss of income is reduced. Such results might suggest that attendance at peer groups outside clinic time would be a preferred CPD, since such meetings are free, usually within the local area and do not impact on clinic time. However, results from this study indicated that this was not the case, and that only a small number of respondents used peer group meetings for CPD. Within the free text comments respondents commented on the personal and professional differences that can reduce attendance at peer group meetings. Also, of note is that a substantial number of respondents stated they did not have an active peer group in their area. When these issues are combined with the small number of respondents that have been involved in arranging a peer group meeting it may be the case that lack of attendance is related to these issues, as opposed to simply not finding peer group meetings interesting and useful. Given the known benefit of this type of CPD understanding these areas more deeply might be of use.

5.5.2.1. Gender differences in relation to the amount of money spent on CPD

In this study, gender and time spent in practice during the week were important variables in determining the level of engagement with CPD. There was a statistically significant difference between male and female osteopaths in the amount of clinical time spent per week, with females reporting fewer hours in clinic than males.

Interestingly, there was no gender difference noticeable among osteopaths working between 20-30 hours per week, but females are much more heavily represented in the group of osteopaths working under 20 hours per week.

When the amount of clinical time is analysed in relation to the amount of money spent on CPD over the preceding two years, there was a statistically significant relationship between the two; increasing clinical time meant more money spent on CPD. This would make sense as most osteopaths are self-employed (OCNZ, 2014a), so the income available for CPD would directly relate to the amount of clinical time they completed. An important finding of the survey is the correlation between hours worked and CPD undertaken meaning that it was mostly females – since they dominated the category of those working under 20 hours per week – who have financial impediments to undertaking CPD. This difficulty may become even more significant as women become the majority of the profession; before 2006, 56% of the respondents were male, and 43% were female, by 2016 this ratio had changed with males comprising of 42%, and females 61% of the respondents. If this trend were to continue there may be a shift within the profession towards a more significant proportion of osteopaths working part-time. The competency required by a practitioner working five hours per week is no different to the practitioner working 50 hours per week. That is, with more females than males entering the profession, and if the current trend holds of females spending less time in clinic and less money on CPD, then it would be timely to start a discussion about how to ensure those with fewer hours and potentially less money to devote to CPD and clinical practice are still able to access CPD.

5.5.3. Balance of clinical time and family demands

Two-thirds of respondents stated they found it difficult to balance the demands of clinical time, family demands, and CPD fulfilment. Given the majority of respondents indicated that they prefer to attend conferences as the way of completing CPD it is understandable that this may involve travel away from home, and therefore potentially time away from family and possibly also less clinical contact time. In this study the next favoured CPD activity was attending a peer group meeting, this would be expected to be local, outside of clinical time but possibly occurring when the respondent might normally be involved with family, (most are evening meetings). Just over half of the respondents had attended a peer group meeting in the previous two years. So, from this study it seems that while the majority of respondents' state difficulty juggling CPD, clinical time and family demands this is not resulting in huge numbers of respondents attending peer group meetings. Attendance at peer group meetings would ease the financial burden of CPD, not interfere with clinical contact time but would take place in the evenings and therefore might disrupt other activities. It may be that the issues raised relating to personal and professional differences and availability of CPD meetings are also influencing attendance.

5.5.4. Location

Findings of this study demonstrated that half of all respondents' CPD choices were influenced by their practice focus. A potential reason for the low number could be explained by the related finding that half of the respondents indicated it was difficult to access their desired choice CPD. Mansouri and Lockler, (2007) clearly demonstrated that motivation is enhanced when the practitioner is able to have autonomy over what CPD they wish to complete. Since half of respondents found it difficult to access appropriate CPD this could be seen as a barrier to effective CPD for the profession. Over two-thirds of respondents indicated that they chose CPD provided by osteopaths,

with only a small number accessing non-osteopathic CPD. What is unclear from the survey is whether looking outside of the profession for CPD is because of the difficulty respondents reported in finding the CPD they would like to complete.

Another barrier to CPD identified by respondents was the problem of proximity to CPD and a local peer group. Nearly three-quarters of respondents indicated they preferred CPD to be close to home. New Zealand is a geographically disparate country, with a relatively small population and large distances between the main cities. Geographical access to CPD events was mentioned as being problematic. When the logistical elements of traveling away from home, including the financing of accommodation, time away from family, etc are considered the overall cost starts to mount. These are not issues just facing the New Zealand osteopathic profession, Stagnitti et al. (2005) identified that allied health in rural Australia also faced challenges with CPD access.

One possible way to ameliorate such costs is to use distance learning techniques. Indeed, around a quarter of respondents stated they did use online methods for learning such as YouTube for CPD. Some uses of these distance learning techniques were mentioned in a separate free text question in which around 20% of respondents indicated they had modified their practice based on online learning. With the development of online tools, podcasts, distance taught courses, and video conferencing it seems there is an opportunity for these to help osteopaths to meet CPD needs, as the number of respondents using them at present is low. It would be interesting to further examine why the uptake is low and whether osteopaths place less importance on this type of learning activity. Given the average age of respondents was 52 years old, age might be influencing poor social media and information technology uptake. A number of the issues stated as barriers in this study, whether personal, professional, financial or time constraints, would potentially be managed very well with this type of learning. Given practitioner isolation is well documented as a possible issue for competence in

practice (Leape & Fromson, 2018) an online approach to CPD might improve collegiality and professional relationships.

5.6. Strengths and Limitations of the Research

This study was the first piece of research looking at CPD for the New Zealand osteopathic profession. The response rate for the survey was high, (67% of osteopaths holding a current APC), and this has ensured the results of the survey can to a reasonable degree be extrapolated to the wider profession. The three research questions have all been answered by the survey and during this process areas that need further investigation and or discussion with the profession have come to light. The survey has allowed for clear information to be shared with the profession and the regulatory authority that should assist in improving the way the New Zealand profession can enrich its development through CPD activities.

Some issues that arose from the survey affected conclusions that could be drawn, namely the lack of a definition of competence, and lack of questions around how respondents were assessing their own competence. Defining the term competency at the start of the survey would have been of use to ensure that respondents understood what exactly they were being asked to comment on, and it would have been useful if the survey had asked about how respondents were assessing their own competency.

Findings from this study show that respondents do not explicitly use the process of self-reflective practice when asked but this finding is at odds with how they are describing what influences their choices around CPD. Respondents indicated they are choosing CPD that improves their weak areas of practice, and to improve their KSA's, it could be inferred that this is part of self-reflective practice but the respondents are not seeing this as an explicit process. Inclusion of more specific questions about what registrants thought reflective practice was, and how they used it may have produced a clearer picture of the types of self-reflective practice occurring within the profession.

There was a question within the survey that asked about whether respondents had completed tertiary study in the previous three years. Unfortunately, this data could not be used; respondents that had, in the last three years, been studying for their pre-registration qualification quite rightly stated they had completed tertiary study. The question should have explicitly stated that post-registration tertiary study information was required.

The attendance at weekend course/practical workshops was not specifically questioned but this was strongly identified by respondents as being beneficial. Further questions regarding the specific activities at these events that were felt to be of most use would have provided more understanding about types of CPD respondents were engaging with.

Brief questions investigating the employment/self-employment of respondents would have been useful to the discussion around the amount of money spent on CPD. Also, further questions clarifying why those respondents working part-time were doing so would have been useful to understand how the profession was working and why. This information would have been particularly useful in light of shift in gender ratios in the profession that came to light as a result of the research.

5.7. Implications of the survey findings

For the New Zealand osteopathic profession CPD is mandated through the HPCAA, the results of this study show that the majority of respondents are completing CPD to maintain registration. However, there are a number of barriers to the completion of CPD, time, money, access and work/life balance. The relationship of CPD to competency is unclear and therefore assumed. Competency based medical education shows that the missing links between CPD, competency and patient outcomes are not well served by the traditional CPD process's completed by healthcare practitioners (Campbell et al., 2010). CBME is focused on the development of a set of learning

priorities, that use practice information to identify learning goals and this is key in the development of a CPD plan. This is then followed through with the use of tools and processes to measure competence and performance and continually further develop KSA's. A key feature of the process is that of professional self-reflection, it is this that is guiding the choices made about CPD events, and that changes in practice need to be monitored and assessed for efficacy. The motivating factors associated with adult learning including choice and ownership of the learning experience are critical to the success of the activity. While this study shows that respondents have an understanding of what competency is and the relationship of CPD to increasing KSA's respondents preferred type of CPD, conference attendance, does not meet the requirements of a CBME process. The CPD activities undertaken by the profession would be likely to better serve both the practitioners and their patients if the concepts of CBME were developed within the CPD provided to the profession.

Given the barriers to the completion of CPD indicated by respondents it would be worthwhile to explore options for delivering/receiving CPD, such as utilisation of video conferencing. This would also ensure peer groups could be formed between osteopaths that chose to combine their CPD activities without the influence of geographical location.

There is not an explicit statement made by the OCNZ about how the osteopath might ensure their particular CPD activity is appropriate to meeting the requirements contained within the capabilities' documentation. However, the council does state that practitioners "should judge what CPD they require to maintain and develop their ongoing competence" (OCNZ, 2013 para 1). Davis et al. (1992) indicated that practitioners can be poor when assessing in which areas of practice life that they might need some up-skilling, some guidance for practitioners would be helpful. For instance, this study suggests that it would be very helpful for osteopaths if there was a more formal or recognised process for self-reflection so that osteopaths may develop the

skills required to more accurately identify educational needs and access solutions to those needs. Certainly, an explicit discussion with the profession about the relationship between the CPD process and desired outcomes of CPD for each practitioner appears important, and this conversation should further develop the professions understanding of CBME and, how this affects the way in which a practitioner might be accessing and assessing the effect of their CPD activities.

Chapter six: Conclusions

The key findings from this study were that the majority of respondents completed CPD to maintain registration status, they also indicated that their KSA's had improved as a result of their CPD choices and that the preferred type of CPD was that of attending conferences. Barriers to CPD completion were time, cost and juggling work/life demands.

Further research that might be of use in this area would be to clarify the beliefs between CPD completion, the improvement of competency and how positive effects on patient care and outcomes might be measured. Investigating how the current CPD provision might be better aligned to the requirements of CBME would also be of use in informing the profession how to best engage, and measure the effect of their CPD.

Given some of the reported barriers, such as time, cost and juggling family and work commitments, the possible role of information technology (video conferencing/audio conferencing) might be of great use to the profession. The identification of these barriers will hopefully provide the profession with some specific areas on which to develop useful strategies for easier CPD engagement. This study has ensured the profession now has a baseline of information from which further research can be completed to clarify queries raised in the survey.

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Appendix A: Survey questions with response rate.

- Q 1. Do you currently hold a APC? (n=264)
- Q 2. How long has it been since you held a current APC? (n=13)
- Q 3. Do you hold an ESoP or a VSoP? (n=27)
- Q 4. In what year were you born? (n=263)
- Q 5. Year of graduation (n=263)
- Q 6. In which country did you train? (n=268)
- Q 7. What is your gender? (n=286)
- Q 8. Geographical location of respondents (n=255)
- Q 9. Is osteopathy your first career? (n=268)
- Q 10. Did your previous career require formal tertiary study? (n=137)
- Q 11. What was the academic level of your initial qualification? (n=72)
- Q 12. Prior to your osteopathic registration have you been registered in another healthcare profession? (n=70)
- Q 13. What is your average number of clinical contact hours per week? (n=263)
- Q 14. How much money did you spend on CPD in the previous 2 years? (n=262)
- Q 15. Do you hold membership to a professional association? (n=266)
- Q 16. To which professional association do you have membership? (n=205)
- Q 17. Do you complete CPD to maintain your registration? (n=284)
- Q 18. If peer pressure a factor in ensuring you complete CPD? (n=274)
- Q 19. Does your practice require you to complete CPD? (n=273)
- Q 20. Do you complete CPD to improve your KSA's? (n=282)
- Q 21. Do you complete CPD to develop your business? (n=279)
- Q 22. Do you do CPD to feel better prepared for clinical practice? (n=281)
- Q 23. Do you complete CPD to improve weak areas of your practice? (n=280)
- Q 24. Have you attended any of the specified conferences in the last twenty-four months? More than one box could be ticked, (n=486)
- Q 25. Please indicate if you have attended a type of conference not detailed above? (n=40)
- Q 26. Have you read any peer reviewed journals in the previous twenty-four months? (n=266)
- Q 27. Please comment in the free text box if you have completed CPD activities that have not been previously mentioned? (n=115)
- Q 28. Does your clinical/practice focus guide your CPD choices? (n=267)
- Q 29. Do you find it difficult to access relevant CPD? (n=267)
- Q 30. Do you prefer CPD that has a practical focus? (n=267)
- Q 31. Do you prefer CPD provided by osteopaths? (n=266)
- Q 32. What are your preferences for different types of CPD? (n=260)
- Q 33. How important is CPD to your practice? (n=286)
- Q 34. What is the impact of CPD on your practice? (n=253)
- Q 35. Has the CPD you have completed been of benefit to a range of your skills (clinical skills, theoretical understanding, acquisition of KSA's, communication skills, business development)? (n=267)
- Q 36. Has the CPD you have completed in the previous three years improved your competency? (n=268)
- Q 37. How important is CPD to you? (n=268)
- Q 38. Is attending peer groups beneficial to your clinical practice? (n=275)
- Q 39. Do you think attending peer groups provides you with collegial support? (n=279)
- Q 40. Does peer group attendance improve your KSA's? (n=280)
- Q 41. What might improve your competency in practice (free text box)? (n=231)
- Q 42. Do you prefer CPD close to home? (n=286)

- Q 43. Do you prefer to travel away from home for CPD? (n=283)
- Q 44. Do you find completing CPD is financially difficult? (n=286)
- Q 45. Is cost of CPD a factor when you chose what to complete? (n=295)
- Q 46. Do you prefer CPD to occur outside of clinical time? (n=285)
- Q 47. Is juggling CPD clinical and family demands difficult? (n=287)
- Q 48. Do you have an active peer group in your region? (n=286)
- Q 49. Have you attended any peer group meetings in the previous twenty-four months?
(n=285)
- Q 50. In the previous twenty-four months have you assisted in organising a peer group meeting? (n=284)

Beliefs and understanding of the New Zealand Osteopathic profession in relation to CPD

Start of Block: Block 1

A survey to investigate the beliefs and understanding of the New Zealand Osteopathic profession in relation to continuing professional development (CPD)

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request. This project is being undertaken as part of the requirement for Emma Fairs' Masters in Health Science. The aim of this research is to gain a better understanding of the New Zealand osteopathic professions beliefs and understanding of continuing professional development (CPD), CPD is one way in which osteopaths maintain and improve their competency but very little is known about the professions' views of CDP. I have been a member of the Osteopathic Council of New Zealand since 2010 to present, and am the immediate past chair of the Council. This study hopes to shed light on why, how and what CPD osteopaths in New Zealand do and what they feel CPD brings to their practice. There will also be questions relating to possible difficulties of completing CPD. The survey contains questions relating to the demographic and educational history of participants. The survey is anonymous. A link to this survey will be sent to all New Zealand registered osteopaths, via the Osteopathic Council of New Zealand. Osteopaths that hold current annual practicing certificates (APC's) and those that don't hold an APC but are registered with the council will be asked to complete the online survey. Participants will receive an email with a link to the summary of results when the project is finished. Should you agree to take part in this project, you will be asked to follow a link to the Qualtrics survey and complete the survey online. The survey will take around 15 minutes to complete. Please be aware that you may decide not to take part in the project without any disadvantage to yourself. The raw data that will be collected will ask questions about your beliefs and understanding of CPD. There will also be some questions relating to your demographic information and educational background. The researcher and the supervisors will have access to the raw data. The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. Data obtained as a result of the research will be retained for **at least 5 years** in secure storage. Once you complete the survey and submit your answers you won't be able to change your answers. As the survey is anonymous you will not be able to obtain a copy of your completed survey. The results of the project may be published and will be available at the University of Otago Library (Dunedin, New Zealand), and every attempt will be made

to preserve your anonymity. You may withdraw from participation in the project at any time before submitting your online survey without any disadvantage to yourself.

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Emma Fairs (student) or Dr. Bronwyn Lennox Thompson (supervisor) Department of Orthopaedic Surgery and Musculoskeletal Medicine University Telephone Number 03 3640530 Email Address Emma Fairs (marem980@student.otago.ac.nz)

Email Address Dr. B Thompson (bronwyn.thompson@otago.ac.nz)

Q3 CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage. I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project up until the survey is submitted without any disadvantage;
3. The raw data on which the results of the project depend will be retained in secure storage for at least five years. The raw data might be used by the researcher for further study.
4. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand).

The survey is anonymous, and every attempt will be made to preserve your anonymity. This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph. +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.

- I agree to take part in this survey (1)
- I don't wish to take part in this survey (2)

End of Block: Block 1

Start of Block: Introduction The requirement of completing continuing professional development

Display This Question:

If CONSENT FORM FOR PARTICIPANTS I have read the Information Sheet concerning this project a... = I agree to take part in this survey

Q4 This survey is in two main sections. Section one focuses questions related to your beliefs and understanding of CPD. Section two focuses questions around your demographic information and educational history.

Q5 Section One

Q6 The following questions are about wanting to understand some of the reasons why you do CPD.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
Because I have to maintain registration (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because my peers expect me to (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The practice I work in requires me to (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have an interest in a particular area and want to improve my knowledge skills and attitudes in that area of practice (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see it as crucial to developing my business (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It makes me feel better prepared for clinical practice (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On reflection of my practice I know I have some weak areas and want to improve these (7)

Q7 These questions are about the peer group in your region

	Yes (1)	No (2)
In your region do you have an active peer group (1)	<input type="radio"/>	<input type="radio"/>
Have you attended peer group meetings in the last 24 months (2)	<input type="radio"/>	<input type="radio"/>
In the last 24 months have you been involved in organising a peer group meeting (3)	<input type="radio"/>	<input type="radio"/>

Q8 How many peer group meetings have you attended in the 24 months

- none (1)
- 1-3 (2)
- 4-6 (3)
- 7 or more (4)

Q9 The following questions relate to what you feel the benefits are of attending peer group meetings

	Definitely yes (1)	Probably yes (2)	Might or might not (3)	Probably not (4)	Definitely not (5)
Do you feel your attendance at peer group meetings is of benefit to your clinical practice ? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel your attendance at peer group meetings provides collegial support ? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel your attendance at peer group meetings adds new skills and knowledge to you as an osteopath (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 These questions relate to the practicalities and financial considerations when choosing CPD

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I prefer CPD that is close to where I live (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to travel away for CPD (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fulfilling CPD requirements is difficult financially (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of CPD is a factor when choosing what I do (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPD must occur outside of clinical time (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Juggling CPD, clinical and family demands is challenging (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 What changes could be made to your peer group to make the meetings more useful to you

Q12 Did you attend any of the types of conferences listed below?

- Hosted by an osteopathic organisation (1)
 - Hosted by a pain organisation (2)
 - Hosted by a musculoskeletal organisation (3)
 - Other health related conference (4)
-

Q13 Have you been enrolled in formal tertiary study in the last three years?

- Yes (1)
- No (2)

Display This Question:

If Have you been enrolled in formal tertiary study in the last three years? = Yes

Q14 1. Please indicate which tertiary institute you have studied with in the last three years

- University of Canterbury (1)
 - University of Otago (2)
 - University of Auckland (3)
 - Auckland University of Technology (4)
 - Victoria University of Wellington (5)
 - Other, please specify (6)
-

Q15 Have you in the last 24 months read peer-reviewed journals relevant to your clinical practice

- Yes (1)
 - No (2)
-

Q16 If you have fulfilled your CPD requirements doing other activities not mentioned above please indicate what these were below, e.g. observed/treated with another practitioner, peer review

Q17 These questions relate to what you feel the benefits of CPD are

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
CPD helps improve my practical clinical skills (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPD helps improve my theoretical understanding of a particular area (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think the CPD you have chosen in the last three years has improved your competency in practice (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquisition of new Knowledge Skills and Attitudes (KSAs) is a factor in my choices (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPD helps improve my communication skills (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPD has helped me develop my business (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 These questions relate to your practice focus and CPD choices

	Always (1)	Most of the time (2)	About half the time (3)	Sometimes (4)	Never (5)
My practice focus (treating a particular group of patients) guides my choice of CPD (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it difficult to find CPD relevant to my particular practice focus (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I undertake CPD that is not provided by osteopaths (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer CPD that includes practical techniques (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Please briefly describe what you think "competency" means

Q20 Please comment on what you think would improve your competency in practice

Q21 Please rank the following in order of which types of CPD you prefer. You can drag and drop each item, with the first being most preferred and the last least preferred

- Conference attendance (1)
- Peer group attendance (2)
- Reading journals (3)
- Informal peer contact (4)
- Formal tertiary study (5)
- Blogging (6)
- Other (7)

Q22 Please rank the following in order of which types of CPD you feel has most impact onto your practice. You can drag and drop, with the first being most preferred and the last least preferred

- Conference attendance (1)
 - Peer group attendance (2)
 - Reading journals (3)
 - Informal peer contact (4)
 - Formal tertiary study (5)
 - Blogging (6)
 - Other (7)
-

Q23 How important is CPD to your practice ?

- Extremely important (1)
 - Very important (2)
 - Moderately important (3)
 - Slightly important (4)
 - Not at all important (5)
-

Q24 The following questions of the survey are about your demographic and educational background



Q25 What year were you born?

▼ 1920 (1) ... 2015 (96)

Q26 What is your gender?

- Male (1)
 - Female (2)
 - other (3)
-

Q27 In which country did you train?

- United Kingdom (1)
- New Zealand (2)
- Australia (3)
- Other, please specify (4)

Q28 At which institution did you train?

- Unitec (1)
 - Royal Melbourne institute of Technology (2)
 - University of Western Sydney (3)
 - Victoria University (4)
 - Southern Cross University (5)
 - Southern Cross University (6)
 - The British College of Osteopathic Medicine (7)
 - The British School of Osteopathy (8)
 - The College of Osteopaths (Stafford) (9)
 - The British College of Osteopathic Medicine (10)
 - The College of Osteopaths (Hertfordshire) (11)
 - The European School of Osteopathy (12)
 - Leeds Beckett University (13)
 - The London College of Osteopathic Medicine (14)
 - The London School of Osteopathy (15)
 - Oxford Brooks University (16)
 - The Surrey Institute of Osteopathic Medicine (17)
 - Swansea University (18)
 - Other, please specify (19)
-



Q29 What year did you graduate with your osteopathic qualification?

▼ 1920 (1) ... 2016 (97)

Q30 Have you undertaken formal tertiary study after your osteopathic qualification was awarded

Yes (1)

No (2)

Q31 What is your highest academic qualification

Q32 Is osteopathy your first career

Yes (1)

No (2)

Skip To: Q36 If Is osteopathy your first career = Yes

Q33 Did your previous career require completing formal tertiary study

Yes, please state the qualification (1)

No (2)

Display This Question:

If Did your previous career require completing formal tertiary study = Yes, please state the qualification

Q34 Prior to your registration as an osteopath were you registered in another healthcare profession?

Yes (1)

No (2)

Display This Question:

If Prior to your registration as an osteopath were you registered in another healthcare profession? = Yes

Q35 Please detail your previous profession

Q36 Please briefly comment below about what elements a high-quality CPD scheme should include

Q37 Please indicate if you hold either an extended or vocational scope

- Extended Scope of Practice in Western Medical Acupuncture (1)
 - Vocational Scope of Practice in Gerontology (2)
 - Vocational Scope of Practice in Pain Management (3)
-

Q38 On average how many hours per week do you normally see patients

- Between 1-10hrs (1)
 - Between 10-20hrs (2)
 - Between 20-30hrs (3)
 - 30 or more hrs (4)
-

Q39 Approximately how much money did you spend on CPD in the 24 months

- \$100.00-\$999.00 (1)
 - \$1,000-\$1999.00 (2)
 - \$2,000.-\$2,999.00 (3)
 - \$3,000-plus (4)
-

Q40 Where do you currently practice

- Northland (1)
 - Auckland (2)
 - Waikato (3)
 - Bay of Plenty (4)
 - Gisborne (5)
 - Hawkes Bay (6)
 - Taranaki (7)
 - Manawatu-Whanganui (8)
 - Wellington (9)
 - Tasman (10)
 - Nelson (11)
 - Marlborough (12)
 - West Coast (13)
 - Canterbury (14)
 - Otago (15)
 - Southland (16)
-

Q41 Do you currently have membership to a professional association?

- Yes (1)
- No (2)

Display This Question:

If Do you currently have membership to a professional association? = Yes

Q42 Please tick the professional bodies that you have current membership with

- Osteopaths New Zealand (1)
- Institute of Osteopathy (2)
- Osteopaths Australia (3)
- New Zealand Pain Society (4)
- New Zealand Association of Musculoskeletal Medicine (5)
- New Zealand Register of Acupuncturists (6)
- Other, please specify (7)
-

Q43 Do you hold a current annual practicing certificate with the OCNZ?

- Yes (1)
- No (2)

Display This Question:

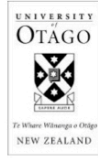
If Do you hold a current annual practicing certificate with the OCNZ? = No

Q44 How long has it been since you held a annual practicing certificate with the OCNZ

- Less than 1 year (1)
- Between 1 and 2 years (2)
- Between 2 and 3 years (3)
- Over three years (4)

End of Block: Introduction The requirement of completing continuing professional development

Appendix C: Ethics Approval



16/120

Academic Services
Manager, Academic Committees, Mr Gary Witte

19 August 2016

Dr B Lennox Thompson
Department of Orthopaedic Surgery & Musculoskeletal Medicine (ChCh)
University of Otago, Christchurch
University of Otago Medical School

Dear Dr Lennox Thompson,

I am writing to let you know that, at its recent meeting, the Ethics Committee considered your proposal entitled "**Beliefs and understanding of the New Zealand Osteopathic profession in relation to continuing professional development (CPD)**".

As a result of that consideration, the current status of your proposal is:- **Approved**

For your future reference, the Ethics Committee's reference code for this project is:- **16/120**.

The comments and views expressed by the Ethics Committee concerning your proposal are as follows:-

While approving the application, the Committee would be grateful if you would respond to the following:

Information Sheet

The Committee recommends that you disclose the role of Emma Fairs with the Osteopathic Council of New Zealand on the Information Sheet.

Consent Form

Please amend point 2 on the Consent Form to indicate that participants are free to withdraw from the study up to the point of submitting the online survey rather than stating that they can withdraw at any time.

Please provide the Committee with copies of the updated documents, if changes have been necessary.

Approval is for up to three years from the date of this letter. If this project has not been completed within three years from the date of this letter, re-approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

The Human Ethics Committee asks for a Final Report to be provided upon completion of the study. The Final Report template can be found on the Human Ethics Web Page

<http://www.otago.ac.nz/council/committees/committees/HumanEthicsCommittees.html>

Yours sincerely,

A handwritten signature in black ink that reads "Gary Witte". The signature is written in a cursive style.

Mr Gary Witte
Manager, Academic Committees

Tel: 479 8256

Email: gary.witte@otago.ac.nz

c.c. Professor G Hooper Department of Orthopaedic Surgery & Musculoskeletal Medicine (ChCh)

Appendix D: Acknowledgment of Māori consultation

NGĀI TAHU RESEARCH CONSULTATION COMMITTEE *TE KOMITI RAKAHAU KI KĀI TAHU*

Tuesday, 05 July 2016.

Ms Bronwyn Thompson,
University of Otago Christchurch - Orthopaedic Surgery and Musculoskeletal Medicine,
WSM&HS.

Tēnā Koe Ms Bronwyn Thompson,

Beliefs and understanding of the New Zealand Osteopathic profession in relation to continuing professional development (CPD)

The Ngāi Tahu Research Consultation Committee (the committee) met on Tuesday, 05 July 2016 to discuss your research proposition.

By way of introduction, this response from The Committee is provided as part of the Memorandum of Understanding between Te Rūnanga o Ngāi Tahu and the University. In the statement of principles of the memorandum it states "Ngāi Tahu acknowledges that the consultation process outline in this policy provides no power of veto by Ngāi Tahu to research undertaken at the University of Otago". As such, this response is not "approval" or "mandate" for the research, rather it is a mandated response from a Ngāi Tahu appointed committee. This process is part of a number of requirements for researchers to undertake and does not cover other issues relating to ethics, including methodology they are separate requirements with other committees, for example the Human Ethics Committee, etc.

Within the context of the Policy for Research Consultation with Māori, the Committee base consultation on that defined by Justice McGechan:

"Consultation does not mean negotiation or agreement. It means: setting out a proposal not fully decided upon; adequately informing a party about relevant information upon which the proposal is based; listening to what the others have to say with an open mind (in that there is room to be persuaded against the proposal); undertaking that task in a genuine and not cosmetic manner. Reaching a decision that may or may not alter the original proposal."

The Committee considers the research to be of importance to Māori health.

As this study involves human participants, the Committee strongly encourage that ethnicity data be collected as part of the research project as a right to express their self-identity. That is the questions on self-identified ethnicity and descent, these questions are contained in the latest census.

The Committee suggests dissemination of the research findings to Māori health organisations regarding this study.

We wish you every success in your research and the committee also requests a copy of the research findings.

The Ngāi Tahu Research Consultation Committee has membership from:

*Te Rūnanga o Ōtākou Incorporated
Kāti Huirapa Rūnaka ki Puketeraki
Te Rūnanga o Moeraki*



NGĀI TAHU RESEARCH CONSULTATION COMMITTEE
TE KOMITI RAKAHAU KI KĀI TAHU

This letter of suggestion, recommendation and advice is current for an 18 month period from Tuesday, 05 July 2016 to 5 January 2018.

Nāhaku noa, nā



BR NT REC

Mark Brunton
Kaiwhakahaere Rangahau Māori
Research Manager Māori
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The Ngāi Tahu Research Consultation Committee has membership from:

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Kāti Huirapa Rūnaka ki Puketeraki
Te Rūnanga o Moeraki*