

Opening the Gates: Factors Influencing General Practitioner
Referral to Osteopathy.

Sarah Teresa Jackson

A research project submitted in partial requirement for the degree of
Master of Osteopathy, Unitec Institute of Technology, 2004

Abstract

Traditionally General Practitioners (GPs) have referred patients to physiotherapy for manual therapy. In 1988 only 15% of Wellington GPs referred patients for osteopathic treatment (Hadley, 1988). Since then there has been an increase in the popularity of complementary and alternative medicines, including osteopathy. The osteopathic profession in New Zealand has recently undergone several changes. These include regulation under the Health Practitioners Competency Assurance Act 2003 and expansion as a profession with the first new practitioners graduating from a Masters approved New Zealand based training programme. On the eve of osteopathic registration, Auckland based GPs were surveyed regarding their referral of patients to osteopathy, physiotherapy and chiropractic, the factors that influence their referral patterns, and their attitudes towards osteopathy. Results were compared to a similar survey completed 10 years earlier. It was found that physiotherapy is still the first choice for GP referral to manual therapy, although referrals to osteopathy have increased. There also appears to have been a shift away from chiropractic and towards osteopathy. Although GPs demonstrated attitudes of medical dominance and superiority over alternative therapies, it appears that positive treatment results experienced by patients influence GP referral patterns. The need for scientific evidence establishing the effectiveness of osteopathic treatment was highlighted. GPs claimed to have knowledge of osteopathy yet demonstrated a limited understanding with the confined scope of practice for which they would refer to osteopathy. Nevertheless, GPs wish to be more informed of osteopathic medicine.

Acknowledgements

I would like to thank Carol Horgan and Maurice Drake whose input, feedback and encouragement have been invaluable. I would like to thank my friends who have helped throughout the research process and have shown great patience with me, especially when explaining the intricacies of the Internet, word and excel. Special thanks to all the GPs who took the time to complete the survey and make this project possible. Lastly, thank you to Mum, Dad and Teresa who have been incredibly supportive of me throughout my studies.

Table of Contents

	Page
Abstract	i
Acknowledgements.....	ii
Table of Contents.....	iii
List of Tables.....	iv
List of Figures.....	iv
List of Abbreviations.....	v
Introduction.....	1
Literature Review.....	8
Significance.....	20
Methods.....	21
Results.....	25
Discussion.....	39
References.....	59
Appendices.....	67

List of Tables

	Page
Table 1 Years in Practice of GP Respondents.....	25
Table 2 Levels of Knowledge of Osteopathy, Chiropractic and Physiotherapy.....	26
Table 3 Acquisition of GPs Knowledge of Manual Therapies.....	27
Table 4 Comparison of GP Referral Rates for Various Conditions.....	29
Table 5 GP Attitudes Towards Manual Therapies.....	31
Table 6 Change in GP Attitudes Towards Manual Therapies in the Last 5 Years.....	31

List of Figures

Figure 1 Frequency of GP Referrals to Osteopathy, Chiropractic and Physiotherapy.....	28
Figure 2 GPs' Perception of Patient Demand for Osteopathy, Chiropractic and Physiotherapy.....	30

List of Abbreviations Used

ACC	Accident Compensation Corporation
AMA	American Medical Association
BMA	British Medical Association
CAM	Complementary and Alternative Medicine
CSAG	Clinical Standards Advisory Group
GP	General Practitioner
HPCA Act	Health Practitioners Competency Assurance Act 2003
LBP	Low Back Pain
NZ	New Zealand
NZMA	New Zealand Medical Association
NZRO	New Zealand Register of Osteopaths
UK	United Kingdom
US	United States

Introduction

Many patients seek manual therapy for the treatment of musculoskeletal disorders. Manual therapy is defined by Lederman (1997) as “the use of the hands in a curative and healing manner” (p.1) and is beneficial for the treatment of various disorders (Lederman, 1997), especially those affecting the musculoskeletal system. For the purpose of this study, manual therapy refers to treatment by osteopaths, physiotherapists and chiropractors. These therapies involve different therapeutic modalities and philosophical approaches.

This study focuses on osteopathy. “Osteopathy is that system of the healing arts which places the chief emphasis upon the structural integrity of the body mechanism as being the most important single factor in maintaining the well-being of the organism in health and disease” (Magoun, 1978, p. xiii). The Osteopathic Council of New Zealand has defined the scope of osteopathic practice as follows

Registered osteopaths are primary healthcare practitioners who facilitate healing through osteopathic assessment, clinical differential diagnosis and treatment of dysfunctions of the whole person. Osteopaths use various, recognised techniques to work with the body’s ability to heal itself, thereby promoting health and wellbeing. These osteopathic manipulative techniques are taught in the core curricula of accredited courses in osteopathy. The ultimate responsibility for recognition of practice lies with the Osteopathic Council (personal communication with Registration Boards Secretariats Ltd., November 26th 2004).

Osteopathy is inimitable within health care systems as it provides unique services based on its core principles and philosophies. Traditionally, physiotherapy has been considered the conventional option (Simpson, 1998) with osteopathy and chiropractic being considered complementary or alternative (Ernst & Pittler, 1999; Fulder & Munro, 1985; Hadley, 1988; Perkin, Percy & Fraser, 1994; Pirotta, Cohen, Kotsirilos & Farish, 2000; Reilly, 1983; Thomas,

Nicholl & Fall, 2001; White, Resch & Ernst, 1997. Differences in education opportunities, variations of professional numbers and inconsistencies in government legislation, also demonstrate discrepancies between the professions.

Education programmes for training physiotherapists are well established in Auckland and Dunedin. Until recently there were two schools of osteopathy in New Zealand, however, neither of these produced graduates who were eligible for acceptance by the New Zealand Register of Osteopaths (NZRO) (Burton, 2001, cited in Adams, 2003). Both of these schools are now closed.

Numbers of practicing osteopathic, chiropractic and physiotherapy professionals have changed within the last 10 years. The Health Workforce Advisory Committee (2002) reported there to be 318 osteopaths in New Zealand in 1996 (from census statistics). There are now 375 registered osteopaths in New Zealand (personal communication with Registration Boards Secretariats Ltd., September 28th 2004). From the purchases of annual practising certificates of chiropractors and physiotherapists, it is reported that the number of professional chiropractors in 1990 was 110 and the number of physiotherapists was 1777. Likewise, in the year 2000, there were 218 chiropractors and 2500 physiotherapists. These statistics demonstrate an increase in the professional presence of manual therapists within New Zealand in the previous 14 years.

Prior to 2004, osteopathy in New Zealand existed as an unregulated profession. There was no requirement for osteopaths to be members of any registration authority. In contrast, physiotherapy and chiropractic practitioners have both been regulated by Acts of Parliament since 1949 and 1982 respectively (Adams, 2003).

The popularity of complementary and alternative medicines (CAM), inclusive of osteopathy and chiropractic, appears to have increased in recent years (Berman, Singh, Lao, Singh, Ferentz, & Hartnoll, 1995; Eisenberg, Davis, Ettner, Appel, Wilkey, Van Rompay, et al., 1998; Marshall, Gee, Israel, Neave,

Edwards, Dumble, et al., 1990; Saks, 1991). This is discussed in the literature review.

CAM is defined as “diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine” (Ernst et al., 1995, cited in Ernst, 2000; Ernst & Cassileth, 1998, cited in Botting & Cook, 2000). What constitutes CAM is ill defined within the medical profession and can describe vastly diverse practices (Pietroni, 1992) with the terms ‘alternative’, ‘complementary’ and ‘integrative’ often used as umbrella labels to describe any number of practices.

Furthermore, the definition of CAM varies in the academic literature illustrating its ambiguous meaning. Some studies of CAM use, and physicians attitudes towards CAM, include chiropractic but exclude osteopathy (Berman et al., 1995; Eisenberg et al., 1998), whilst Marshall et al., (1990) includes osteopathy but not chiropractic. The majority of studies refer to CAM as inclusive of chiropractic and osteopathy (Ernst & Pittler, 1999; Fulder & Munro, 1985; Hadley, 1988; Perkin et al., 1994; Pirotta et al., 2000; Reilly, 1983; Thomas et al., 2001; White et al., 1997). For the purposes of this literature review, the term CAM will encompass all therapies referred to in previous literature as ‘complementary’, ‘alternative’ or ‘integrative’, inclusive of osteopathy and chiropractic.

Patients who seek manual therapy do so either by self-referral or upon recommendation from another health professional. General Practitioners (GPs) are common health care providers in New Zealand (NZ) and their recommendations influence which type of manual therapy is sought. Traditionally, physiotherapy has been the foremost form of manual therapy recommended by GPs in New Zealand and internationally (Simpson, 1998). GPs’ preference for physiotherapy means that patients who may benefit from osteopathic care are often not referred to it.

GPs are more likely to refer patients to therapists of disciplines they feel more knowledgeable about (Berman et al., 1995; Preston-Thomas, van den Bergh &

Maxwell, 1993). GPs' limited knowledge of osteopathy restricts referrals, which ultimately hinders the growth of the osteopathy as a profession. Documenting the knowledge and understanding GPs have of osteopathy provides a basis for the education of GPs to the likely benefits of osteopathic treatment for patients.

A Brief History of Osteopathy

Andrew Taylor Still, an army physician unsatisfied with orthodox medicine, founded osteopathy in the US in 1874. His teachings contradicted those of the medical profession and thus were not supported by orthodox practitioners (BMA, 1986). Osteopathy in the US, however, moved towards orthodox medicine and was incorporated into mainstream medicine in the 1960's (Woodhouse, 2004). By 1973 all osteopathic medicine graduates had been granted unlimited medical licensing, equivalent to the practice rights of orthodox doctors (Cameron, 1998). Because of this, the osteopathic situation in the US differs greatly from that in New Zealand, the UK, Australia and other countries.

Osteopathy in Britain

The first osteopaths arrived in Britain at the beginning of the 20th century (British Osteopathic Association, 2004) and the first osteopathic college in Britain began in 1917. Osteopathy is the most politically developed CAM in Britain and has had legitimate professional standing since passage of the Osteopaths Act in 1993 (Saks, 1999). This means that the General Osteopathic Council regulates the osteopathic profession in Britain. Since legislation, there has been increased medical acceptance of osteopathy and increased communication and collaboration between osteopaths and medical practitioners (Clinical Standards Advisory Group (CSAG), 1994a). The political environment of osteopathy in Britain 11 years ago is similar to that which osteopathy in New Zealand is now entering with the HPCA Act 2003.

Osteopathy in New Zealand

The popularity of osteopathy has increased in New Zealand with the rise and acceptance of CAM. The number of osteopathic providers in New Zealand has risen since 1996 and will continue to rise further with the yearly graduation of

newly qualified osteopaths from the Unitec New Zealand Master of Osteopathy programme, of which the first cohorts graduated in November 2003. This increase in professional numbers produces a larger and stronger osteopathic presence, contributing to public exposure of the profession and subsequently raises its profile. The establishment and maintenance of a Master's level osteopathic programme demonstrates a developed professional presence.

The osteopathic profession is included in the definition of a 'primary health care' workforce by the Health Workforce Advisory Committee (Health Workforce Advisory Committee, 2002, p. 90). Along with chiropractic, osteopathy has been included in the HPCA Act 2003, which came fully into effect on 18th September 2004.

Statutory Regulation of Osteopathy in New Zealand

Osteopathy and chiropractic are two of the most popular professions of CAM (White et al., 1997). They are the only CAMs included in the New Zealand HPCA Act 2003 (Cumming, 2003).

In 1977, osteopathy applied for regulation and was denied due to failure "to meet satisfactory standards of education to provide primary health care" (Minister of Health, 1977, preamble, section 4). In 2003, with the introduction of the HPCA Act 2003, the Osteopathic Council was established. This council is responsible amongst others for the establishment of the scope of practice for osteopaths and the setting of the qualifications and competencies required to practice osteopathy. This regulation will ensure that satisfactory standards of education and training for entry into the osteopathic profession have been met. These standards both protect and assure the public (and GPs) that the registered osteopathic practitioner is both competent and fit to practice. In a letter to the New Zealand Register of Osteopaths (NZRO) from the Australian Osteopathic Society, Robbins said that difficulties experienced with public safety and professional misconduct due to untrained individuals practicing osteopathy were experienced prior to registration in Australia (Robbins, 2002).

Szmelskyj & Morris (1992a) acknowledge the impact of statutory regulation and how this may play an important role in the development and future success of a profession by gaining professional maturity and greater respectability. Associate Professor Clive Standen (2002), in a letter to the NZRO in support of the then HPCA Bill, wrote of the importance of confidence in the osteopathic profession held by other health care practitioners to enable them to refer patients for osteopathic treatment. St. George (2002) states that GPs must only refer patients to health care workers that are accountable to a statutory regulatory body. Legislation provides assurance for other health care practitioners that the osteopath they may refer to is safe and competent to practice.

Aims

This study was designed to gain information from Auckland based GPs regarding their referral patterns to osteopaths, chiropractors and physiotherapists. The information was intended to be used to explore the place of osteopathy within the New Zealand health system under the blanket of the now passed Health Practitioners Competency Assurance (HPCA) Act 2003 and inform the osteopathic profession.

The aims of this research were:

1. To establish the extent to which GPs in Auckland refer patients to manual therapy.
2. To establish the range of conditions for which GPs refer to manual therapy.
3. To investigate whether GPs refer to one manual therapy over another, and if so, why
4. To examine GPs levels of understanding of osteopathy, physiotherapy and chiropractic, particularly of osteopathy.
5. To identify where GPs gained their knowledge of osteopathy and their attitudes towards receiving this information.
6. To identify any gaps in GPs' knowledge of osteopathy and establish effective means of providing this information to GPs.

7. To examine any relationship between GPs' demographics and their referral patterns.
8. To examine any relationship between GPs' knowledge of osteopathy, chiropractic and physiotherapy and their referral patterns.
9. To investigate any recent changes in attitude towards manual therapists and the reasons for any changes.
10. To identify ways the osteopathic profession may encourage increased patient referrals from GPs.

This paper, researched on the eve of legislation, explores the place of osteopathy within the New Zealand health system under the blanket of the now passed Health Practitioners Competency Assurance (HPCA) Act 2003. Auckland based GPs were surveyed regarding their referral patterns and attitudes towards osteopathy, chiropractic and physiotherapy. Results demonstrated a general preference for physiotherapy as first line referral for manual therapy, a tentatively uncertain yet positive attitude towards osteopathy, and negative attitudes towards chiropractic. Issues of medical dominance were highlighted as many GPs alluded to osteopathy and chiropractic as inferior. GPs reported a high level of knowledge of osteopathy yet demonstrated limited understanding of what this treatment modality entails and its scope of practice. Possible methods to inform GPs of osteopathic practice are discussed, as are suggestions to enable productive communication between general practice and osteopathic professions.

A survey of Auckland based GPs' referral patterns to manual therapies was completed by Preston-Thomas et al. in 1993. These earlier results are compared with the present survey responses and illustrate a shift in attitude towards both osteopathy and chiropractic in the last 10 years. Reasons for this shift including an increased popularity of CAM, an epidemic of lower back pain and the recent passing of the HPCA Act 2003 are discussed.

Literature Review

Increased Popularity of Complementary and Alternative Medicine

Saks (1999) wrote that alternative medicine in Britain was created in the mid-nineteenth century. However, due to parliamentary acts passed at the turn of the century reinforcing the medical monopoly of doctors, alternative medicine declined, until resurgence began in the 1960s. In contrast, Schepers & Hermans (1999) wrote of a shift towards alternative medicine in the Netherlands after World War Two as demonstrated by decreased prosecution of alternative practitioners. Public views and those of the medical profession, both in New Zealand and internationally, appear to be changing favourably towards CAM (Berman et al., 1995; Eisenberg et al., 1998; HRH Prince Charles, 2001; Marshall et al., 1990; Perkin et al., 1994).

In New Zealand:

In a Wellington study examining the views of GPs towards CAM, Hadley (1988) acknowledged increased interest in CAM by GPs. She linked this with an increased public demand brought about by growing understanding of the importance of lifestyle and personal responsibility for health. She found that GPs more commonly referred patients to chiropractic treatment than osteopathic treatment.

Marshall et al. (1990) surveyed GPs in the Auckland region and concluded that alternative practices are an integral part of primary health care. The researchers suggested there was a growing interest in the New Zealand public regarding alternative medical therapies, stating that there was one alternative medical consultation for every ten GP consultations. They also found that most GPs (68.7%) referred patients to alternative therapies although only 38.1% stated their attitude towards alternative medicine to be positive. The difference between these results was thought to demonstrate ambivalence as to the effectiveness of alternative medicine.

Internationally:

The increased prevalence of CAM in New Zealand is reflected internationally. Increased public use of CAM parallels increased acceptance of CAM among family doctors in the United Kingdom (UK) and Australia (Pietroni, 1992; Pirotta et al., 2000; Wharton & Lewith, 1986). Osteopathy is one of the CAMs more commonly accepted by GPs in the UK (Perkin et al., 1994; White et al., 1997). Saks (1999) illustrates the resurgence of CAM in Britain with increased sales of unorthodox medicines, increased public use of CAM, increased numbers of CAM practitioners and the use of CAM by medical doctors.

Reilly (1983) published an early UK study of doctors' views of CAM (inclusive of osteopathy) and found that younger GPs were interested in CAM and referred considerable numbers of patients to alternative practitioners to complement orthodox medicine. This led him to presume an imminent expansion in the use of CAM. Interestingly, whilst a large proportion of the GPs surveyed were ambiguous about their attitudes towards osteopathy and chiropractic, many still rated osteopathy more useful than chiropractic.

In the United States (US) in 1992, the Office of Alternative Medicine was established by the National Institute of Health (Berman et al., 1995), acknowledging the likely future acceptance of the then unconventional CAMs. The increased use of CAM in the US has been demonstrated in the literature (Berman et al., 1995; Eisenberg et al., 1998). It is important to note that osteopathy is considered a mainstream parallel of orthodox medicine in America (Adams, 2003) and has not been included as a CAM in the US literature. Thus its role within the US health system is not comparable to that in New Zealand.

Reasons for the Increased Popularity of Complementary and Alternative Medicine

There have been many suggestions made as to why the popularity of CAM has increased in recent years including changes within doctor/patient relationships,

changes in patient demands, the rejection of technology and a growing attraction to natural approaches.

The British Medical Association (BMA) (British Medical Association, 1986) suggested that developments in the physical sciences have affected patient/doctor relationships. They suggest that prior to major developments in orthodox medicine, doctors devoted more time to counselling and patient support, which has now been replaced with modern technological therapeutic interventions that, although effective, have detracted from the caring role of the doctor.

Patients are demanding more than just symptom relief and governments are allowing health care to be more market driven (Easthope, 2003). In response to these changes, patients have become 'clients' and medical services have become 'commodities' driven by market demand. This view is also described by Brury (2004), Charles, Whelan and Gafni (1999) and Coulter (1999).

Ernst (2000) commented on the popularity of CAM, outlined motivations for trying CAM and predicted a rise in its use. Positive motivations included perceived effectiveness and safety, attraction to non-invasive holistic natural approaches, control over treatment, empathetic patient/therapist relationships, and increased treatment time coupled with the pleasantness of the therapeutic experience. Negative motivations included desperation and rejection of the establishment, science and technology. Hadley (1988) suggested further reasons for the increased popularity of CAM including increased costs, awareness of side effects, and limitations of orthodox medicine. Saks (1999) attributes the resurgence of CAM to the failure of orthodox medicine and increased patient desire to be involved in their own health care. Astin (1998) however, found that most users of alternative medicines in the US were doing so not because of dissatisfaction with conventional medicine, but because the beliefs and philosophies of CAM were more fitting with their individual values. Saks (1999) suggests that political support, such as that provided by Prince Charles' role within the BMA's investigation into alternative medicine, has

helped to override any resistance in the use of CAM from the medical profession.

The Diversity of Osteopathic Treatment

There is a common misconception that osteopathic treatment is only for musculoskeletal problems (Stiles, 1976), particularly for spinal complaints (Szmelskyj & Morris, 1992b), specifically low back pain (Standen, 1993). In reality, osteopathic treatment is applicable to all areas of clinical practice. Its approach towards optimising the body's own inherent healing mechanisms is beneficial for a diverse range of conditions and can be sought for a wider variety of disorders other than just joint pain. These disorders include respiratory disorders, cardiovascular disorders, gastrointestinal disorders, genitourinary tract disorders, rheumatologic disorders and obstetrics (Barral, 1993; Barral & Mercier, 1988; Kuchera & Kuchera, 1994).

Osteopathy can provide effective treatment for chronic conditions (Carruthers, 1988; Carruthers & Gaastra, 1991) for which conventional medicine is often inadequate (Lewith, 2000). Affected patients could benefit from osteopathic treatment if their GPs referred them.

In order for patients to receive the benefits of osteopathic treatment, both patients and GPs need to be aware that it is an option. The approach taken by the osteopathic practitioner can complement that taken by the orthodox physician (Stiles, 1976) allowing the potential for a greater healing response to occur within the patient.

Osteopathic Treatment and Cost Effectiveness

Carruthers (1989) studied the frequency and amount of treatments given to patients in his Blenheim Osteopathic Clinic (New Zealand) and concluded that osteopathy was a cost-effective treatment in terms of the number of treatments required to resolve complaints. He acknowledged however, that several factors may have affected his results. These included the distance required to travel to

his practice to receive treatment and dissatisfaction of treatment resulting in non-returns. Also, he did not provide any reference to the cost effectiveness of other therapies. Nevertheless, Carruthers and Barker (1993) also highlighted the cost effectiveness of osteopathy noting that most patient presentations required minimal numbers of treatments.

Furthermore, Maniadakis and Gray (2000) conducted an economic analysis of the costs of back pain in the UK and reported that on average, patients with back pain receiving physiotherapy attend between 6 to 11 sessions for recovery whereas those patients with back pain receiving osteopathic or chiropractic treatments require an average of only 5 sessions.

Lower Back Pain Epidemic

Back pain is a common problem in general practice in Western society and is of significant economic importance (Waddell, 1987; Williams, 1997; Maniadakis & Gray, 2000). Lower back pain (LBP) and its resulting disability represent the single greatest and inefficient area of health care expenditure in Queensland, Australia (Simpson, 1998). The impacts of LBP on society not only include restrictions of lifestyle (Maniadakis & Gray, 2000), but also include absence from work, compensation and long-term disability (CSAG, 1994a, 1994b; Ong, Doll, Bodeker & Stewart-Brown, 2004; Waddell, 1987). Incapacity resulting from LBP rose by 104% in Britain between 1986 and 1992 (Maniadakis & Gray, 2000).

Most people experience back pain at some time in their life (CSAG, 1994a, 1994b). Of all GP consultations back pain is the third most commonly reported symptom after headache and tiredness (Williams, 1997). In New Zealand, the Accident Compensation Corporation (ACC) estimates that 90% of the population will incur acute low back pain at some stage in their lives (ACC, 2001; ACC, 2002). ACC data shows that claims for back injuries account for 25% of all work-related claims and 35% of total work-related costs (ACC, 2003). In Western society, simple back strains now disable many more people than all the serious spinal diseases put together.

Patients, therapists and doctors are becoming increasingly aware of the limitations of traditional medical treatment for back pain. According to Waddell (1987) and the CSAG (1994a), most of the routine treatments for back pain are ineffective and inappropriate. A recent randomised controlled trial compared routine physiotherapy with advice for low back pain and found physiotherapy to be no more effective than advice to remain active (Frost, Lamb, Doll, Carver & Stewart-Brown, 2004).

Osteopathy is Beneficial for Low Back Pain

Because LBP is so significant in Western society, it is important that those suffering should have beneficial treatment options available to them. Osteopathy is one of these options and has been shown in previous studies to have beneficial effects for patients with LBP.

Many patients in the US and Britain are now so dissatisfied with orthodox medical treatment for back pain that they seek alternative treatment (Astin, 1998; Thomas, Carr, Westlake & Williams, 1991). Ong et al. (2004) randomly surveyed UK residents from GP registers and compared two groups; one group of physiotherapy patients and one group of osteopathic and chiropractic patients (inclusive). They found that those with back pain using either osteopathic or chiropractic services appeared to be less disabled than those receiving physiotherapy.

Furthermore, the CSAG in the UK supports physical therapy inclusive of manipulation for back pain (CSAG, 1994, cited in Little, Smith, Cantrell, Chapman, Langridge & Pickering, 1996) and Waddell (1996) suggests that manipulation within the first 6 weeks of LBP is beneficial. Likewise, in their booklet on the management of acute low back pain in the workplace, ACC (2000) provides contact details of treatment providers of not only physiotherapy, but also osteopathy and chiropractic for the management of back pain. Other studies indicate that spinal manipulation may provide beneficial effects for those with back pain (Maigne & Vautravers, 2003; Shekelle, Adams, Chassin, Hurwitz & Brook, 1992).

In addition, although scientific research validating the effectiveness of osteopathic treatment is limited, several studies indicate that osteopathy is beneficial for the treatment of LBP (Andersson, Lucente, Davis, Kappler, Lipton & Leurgans, 1999; Carruthers & Gaastra, 1991; Ernst & Pittler, 1999; Ong et al., 2004; Williams, Wilkinson, Russell, Edwards, Hibbs, Linck et al., 2003). Carruthers and Gaastra (1991) conducted a study focusing on the results of osteopathic treatment for ACC patients with spinal injuries. They found osteopathy to result in symptom improvement in both acute and chronic cases, even where physiotherapy had previously failed. 84% of patients who underwent osteopathic treatment became symptom free or much improved, 7% had some improvement, 5% had no change, and 4% of patients did not follow up their initial treatment. 82% of chronic patients (defined as symptomatic for 1 month – 1 year) and 53% of very chronic patients (symptomatic > 1 year) were also discharged symptom-free/much improved after osteopathic treatment for spinal injury. Carruthers and Gaastra suggested that early referral to osteopathy for acute conditions would avoid the development of chronic conditions.

Williams et al. (2003) studied two groups of patients with subacute spinal pain. The first, the control group, received treatment as usual from their GPs, inclusive of referral to physiotherapists without manipulation. The second group received the same GP treatment with osteopathic treatment inclusive of manipulation. Results showed that those patients who received osteopathic treatment with GP care reported greater improvement in short-term physical and longer-term psychological outcomes than those without osteopathic treatment.

Andersson et al. (1999) compared osteopathic manipulation with standard care for patients with chronic and subchronic low back pain and found the osteopathic treatment group required significantly less medication than those not receiving osteopathic treatment.

General Practitioners are Gatekeepers to Health Care

GPs are often the first point of call for patients with medical complaints. GPs are mediators between the public and medical services and it is one of the key roles of GPs to refer patients onto other practitioners for further investigations or therapy. Many patients present to general practice clinics with neuromusculoskeletal complaints (Szmelskyj & Morris, 1992a). Therefore, GPs must consider which treatment option would be most beneficial for these patients, alternative therapies included. A gatekeeper is defined in Steadman's Medical Dictionary as "A health professional, typically a physician or nurse, who has the first encounter with a patient and who thus controls the patient's entry into the health care system" (Pugh, 2000, p. 734).

The New Zealand Medical Association's (NZMA's) Code Of Ethics (2002) Principle 10 states that

Doctors should ensure that patients are involved, within the limits of their capacities, in understanding the nature of their problems, the range of possible solutions, as well as the likely benefits, risks, and costs, and shall assist them in making informed choices.

(NZMA, 2002, p. 5)

Principle 12 further states

Doctors should recognise their own professional limitations and, when indicated, recommend to patients that additional opinions and services be obtained, and accept a patient's right to request other opinions. In making a referral to another health professional, so far as practical, the doctor shall have a basis for confidence in the competence of that practitioner.

(NZMA, 2002, p. 5)

This role as gatekeeper determines the powerful influence of GPs on the use of CAM by their patients (Botting & Cook, 2000). GPs must be informed on

unbiased grounds and have the knowledge to make sound clinical judgements (Berman et al., 1995). The ability of GPs to be able to offer their patients an informed choice involves the patient in the decision process. It is GPs' influence that determines which form of therapy the patient will most likely receive. This suggests that as GPs determine treatment pathways, their referral patterns largely impact various health professions, including manual therapies.

General Practitioner Referrals to Osteopathy

GPs refer to osteopathy less frequently than to physiotherapy (CSAG, 1994b; Preston-Thomas et al., 1993). Those GPs that do refer patients to osteopathy do so for only a limited range of conditions, usually back pain (Szmelskyj & Morris, 1992b). A possible reason for these differences in referrals to physiotherapy and osteopathy may be a larger more readily available population of physiotherapists.

Preston-Thomas et al. (1993) studied Auckland GPs' referral patterns to manual therapists. By surveying GPs, they found that GPs favoured physiotherapy over osteopathy and chiropractic to provide manual therapy. GPs preferentially referred patients to physiotherapists for all conditions listed in the questionnaire; acute LBP, chronic LBP, thoracic pain, acute cervical pain, chronic cervical pain, migraine/headache, posture correction and peripheral joint problems.

It is possible that Auckland GPs more readily refer to physiotherapy than osteopathy because there is a much larger population of physiotherapists than osteopaths in Auckland (Adams, 2003). This may simply reflect the fact that physiotherapy is more accessible and readily available thus influencing GP referral patterns (Carter, Densley, Galley, Holland, Jones & Dunn, 2001).

General Practitioners' Limited Knowledge of Osteopathy

Likely reasons why GPs do not refer frequently to osteopathy may include a limited understanding of osteopathy, its principles or philosophies, its scope of practice, and its training procedures. Previous studies have reported an inadequate knowledge of complementary therapies, specifically osteopathy,

amongst GPs (Pirootta et al., 2000; Szmelskyj & Mathews, 1996; Wharton & Lewith, 1986; White et al., 1997). Eighty percent of Australian GPs surveyed reported to have some knowledge of chiropractic while 60-70% had only heard of osteopathy but had no knowledge of it (Pirootta et al., 2000). In New Zealand, Preston-Thomas et al. (1993) found that all respondents reported to have knowledge of physiotherapy but only 40% had knowledge of chiropractic and 31% had knowledge of osteopathy.

Poor understanding of the wide scope of osteopathy limits the range of conditions for which this therapy is sought. Szmelskyj & Mathews (1996) provided evidence to suggest that GPs do not have a full awareness of the scope of osteopathic practice. None of the GPs surveyed by Szmelskyj & Morris (1992b) referred patients to osteopaths for the treatment of asthma, hypertension, or constipation. Szmelskyj & Mathews (1996) found that 78% of GPs surveyed in England referred patients to osteopaths, mainly for mechanical low back or neck pain, but only 20% of these GPs would refer for peripheral joint problems, suggesting that GPs would refer to osteopathy for selective conditions only. The implication is that patients who may benefit from osteopathy are not being informed of this possible option for their treatment by GPs.

Previous studies have shown that those GPs that had more knowledge, or personal experience of a particular discipline, were more likely to refer to that discipline (Berman et al., 1995; Preston-Thomas et al., 1993).

General Practitioners' Education Regarding Complementary and Alternative Medicines

If knowledge of manual therapies affects GP referral patterns, more education about manual therapies may incline GPs to refer more patients to osteopathy or chiropractic. Berman et al. (1995) and Szmelskyj & Morris (1992b) highlight the need for GPs to have access to unbiased education on complementary therapies, considering the growth of these professions. More education would

enable GPs to understand complementary therapies and recognize when a patient may benefit from referral to one. This knowledge will also empower GPs to openly discuss these alternative options with their patients.

Perkin et al. (1994) reported that GPs, hospital doctors and medical students all felt that medical students should receive some tuition about alternative therapies (84% of medical students, 75% of GPs, and 60% of hospital doctors). This sentiment was mirrored by Lewith (2000) who noted that over half of the medical schools in the UK and nearly all those in the US include some CAM familiarisation courses in their undergraduate curricula.

Studies in New Zealand and internationally have found that although GPs indicated they wanted more training in CAM (Hadley, 1988; Pirota et al., 2000), many medical schools do not provide training in these fields (Szmelskyj & Mathews, 1996; Wharton & Lewith, 1986).

Reilly (1983) suggests that because interest in CAM is not being met in undergraduate or postgraduate education, doctors could educate themselves in alternative methods. Berman et al. (1995) however, noted that while continuing education courses were the favoured option of physicians for the training in complementary medicine, there was a need for assessment of the place of CAM in undergraduate and postgraduate education.

When GPs refer patients to another therapist, it appears imperative that they must understand and be able to explain to patients what they are referring to and the benefits and risks of said treatments. Perkin et al. (1994) acknowledged that doctors have an obligation to know the potential benefits and harms of making such referrals and to do so must understand the nature of the therapy and qualifications of the therapist. Knowledge of various therapies also allows doctors and patients to make informed decisions regarding the most suitable type of therapy, and awareness of the applications and indications for osteopathic care.

Does Age of the General Practitioner Affect Attitudes Towards Complementary and Alternative Medicine?

Evidence suggests a relationship may exist between GP age and attitudes towards CAMs. Younger GPs may be more interested in CAM than older GPs (Marshall et al., 1990; Reilly, 1983). GPs with more doubts about complementary medicine are more likely to be over 50 years old (White et al., 1997). Preston-Thomas et al. (1993) found that the length of GPs' practice influenced referral rates for manual therapy citing that GPs practicing for over 20 years were least likely to refer patients for manual therapy. Perkin et al. (1994) found that pre-clinical students had a more positive attitude towards CAM than GPs or hospital doctors. Reasons considered for these differences may include inflexibility of age and specialisation. However, Szmelskyj and Mathews (1996) found no relationship between the age of the GP and referral patterns.

Summary

In New Zealand, physiotherapy has been the primary choice of manual therapy. Both GPs and their patients have become increasingly less satisfied with the orthodox medical approach (including physiotherapy) for musculoskeletal disorders and are commonly seeking alternative treatment options. Osteopathy is beneficial for sufferers of many complaints, especially lower back pain, which has become an epidemic in western society. GPs as gatekeepers need to be aware of the benefits of osteopathic treatment in order to refer appropriately. Osteopathy is a rapidly developing profession within the New Zealand health market and has recently become regulated under the HPCA Act 2003. GPs' understanding and referrals to osteopathy, however, appear limited. Consequently, osteopathy is not proposed as an option for many who might benefit from its therapeutic approach.

Significance

The extent to which GPs refer to osteopaths has been used to assess the present medical acceptance of osteopathy and obtain a clearer picture of the current strength and role of osteopathy in New Zealand. Information from GPs on what would make them more or less likely to refer patients to osteopathy provides valuable input for the promotion of the osteopathic profession and the potential for osteopaths to influence GP referrals. Osteopaths can use the results to advocate their therapy through promotion, education, and appropriate research.

The results provide a baseline for future research to compare referral rates to osteopathy, chiropractic and physiotherapy between pre and post HPCA Act 2003 legislation. The information obtained may be compared to results from future research to investigate the impact of legislation on the osteopathic profession in New Zealand. This information may provide beneficial information for other health care professions considering obtaining legislation. With the new regulation of osteopathy, the profession will become more visible to medical professionals. Statutory regulation will presumably lead to more acceptance of osteopathy in the mainstream medical environment. This could be a starting point to a future where osteopathy may not only see more referrals from GPs, but where the two professions work more cooperatively.

Information collected regarding GPs' views on the importance of their education relating to manual therapies may be valuable to those responsible for providing this education, whether this be the medical schools of New Zealand or the osteopathic community.

Methods

Introduction

Non-experimental research was conducted using a cross-sectional survey. Survey research is used to measure characteristics of a population (Depoy & Gitlin, 1994). The advantages of this design include flexibility, standardisation of the written question, the large number of respondents that can be reached, the maintenance of anonymity, and minimal expenditure (Brink & Wood, 1988; Bush, 1985; Depoy & Gitlin, 1994). Because of these advantages, a questionnaire was chosen as the survey tool. Disadvantages include responses being limited as answers to predetermined questions, the possibility of questions being interpreted differently by different subjects (Brink & Wood, 1988), data obtained being self-reported and therefore possibly unreliable (Nieswiadomy, 1993), and lower response rates than other forms of self report (Burns & Grove, 1995). These disadvantages were considered in the forming of the questionnaire and measures were taken in order to minimise these weaknesses. A range of question styles were used including open-ended questions to encourage broad responses, clear instructions were given and unambiguous questions used, anonymity of the respondents was explained to encourage truthfulness without repercussion, and the survey was user friendly promote compliance (Kaner, Haighton & McAvoy, 1998; Springer & van Marwijk, 1996).

A self-administered questionnaire was used to survey Auckland GPs regarding their referral of patients to osteopathy, physiotherapy and chiropractic, the factors that influence their referral patterns, and their attitudes towards osteopathy.

Sampling

Systematic sampling involves the selection of every k th case from a list to obtain an essentially random sample in a convenient and efficient manner (Polit, Beck & Hungler, 2001). This method of sampling was used to select 100 Auckland registered GPs from the 521 Auckland registered GPs on the Medical

Council of New Zealand's website list in April 2004. This accessible population was chosen to represent the target population of all Auckland GPs. Selection criteria was inclusion on the Medical Council of New Zealand's website list and listing in the Auckland phone book. Every 4th GP on the website list was looked for in the phone book. If a phone number was available, they were selected. Selected GPs (or their receptionists) were first contacted by phone and informed of the survey. Those who agreed to participate were sent questionnaires. This process was continued until 100 questionnaires were posted to GPs. This sampling frame was chosen because of its accessibility. Each individual GP was a sampling unit. The sample size was as large as possible to provide a more likely representation of the target population (Dempsey & Dempsey, 1996). This sample size allowed for sufficient quantitative and qualitative data to be collected for analysis.

The Questionnaire

A written questionnaire (Appendix A) designed by the researcher for this survey was based on previous similar studies (Breen, Carrington, Collier & Vogel, 2000; Perry & Dowrick, 2000; Pirotta et al., 2000; Preston-Thomas et al., 1993; Simpson, 1998; Szmelyskj & Mathews, 1996; Wharton & Lewith, 1986; White et al., 1997). The questions referred to osteopathy, chiropractic, and physiotherapy individually and collectively referred to all three as manual therapies. Using the term 'manual therapies' avoided the use of the terms 'alternative', 'complementary', or 'integrative', which could be confusing or misleading (Pietroni, 1992). The questionnaire included open and closed questions, frequency and categorical scales.

The questionnaire used is a new instrument. Therefore the research conducted is a pilot study (Nieswiadomy, 1993). The questionnaire was designed to be practical, appropriate, user friendly, uncomplicated and easy to understand and complete. The questionnaire was trialed on five people who reported that the instructions were clear and unambiguous. The length of time it took for subjects to complete was reasonable and long enough to obtain a realm of information without taking up too much time. Straightforward questions were asked and

categorical responses were requested at the beginning of the questionnaire to ease the subject into responding and encourage compliance (Clifford, 1997; Dempsey & Dempsey, 1996). The questionnaire was designed to be as reliable as possible. Open-ended questions were included to allow for individual responses and to gather a larger range of information for analysis (Clifford, 1997). Cross-check questions were included to demonstrate reliability (Nieswiadomy, 1993). The qualitative data was used to elaborate on the quantitative data.

The questionnaire demonstrated face validity and appeared to measure the intended variables (Brockopp & Hastings-Tolsma, 1995; Clifford, 1997; Frank-Stromberg, 1988; Nieswiadomy, 1993). The content of the questionnaire was compared with the available literature and previous questionnaires to encourage content validity.

The GPs were asked questions regarding demographics, knowledge of the different types of manual therapy, referral patterns, and attitudes towards osteopathy. Questions on demographics were included to investigate any relationships between demographic factors and referral patterns such as age related referral patterns. Questions relating to patient demand for manual therapies were asked to assess GP's perception of patients' demand for osteopathy, chiropractic and physiotherapy. Open-ended questions regarding attitudes and experiences were asked to cross check responses and gain unstructured data for thematic analysis (Appendix A).

Each questionnaire was mailed or faxed with a participant information sheet which explained the study, guaranteed anonymity and thanked the participant (Appendix B) along with a postage paid reply envelope to encourage its return (Dempsey & Dempsey, 1996).

Response Rate

In line with previous similar studies (Perry & Dowrick, 2000; Preston-Thomas et al., 1993; Simpson, 1998; White et al., 1997) a response rate of approximately

50% was anticipated. The number of questionnaires returned was 42/100. The data obtained provided enough information for analysis and therefore the response rate was considered adequate and no reminders were posted.

Methods of Analysis

Frequencies and percentages were used to identify differences between variables. Analysis of qualitative data was informed by an editing analysis style where the researcher interprets the data by searching for meaningful segments, categorising them, looking for similarities among them and organising them into clusters, and then examining the clusters to determine emergent themes (Crabtree & Miller, 1992; Polit et al., 2001). All open-ended responses were collated and answers examined for similarity of content and meaning. The information was then grouped into clusters of similar statements. Each cluster was examined to determine a theme that broadly described the content and meaning encapsulated within it. The process for determining each broad based theme was validated by the independent checking of two individuals with experience in analysing qualitative data, and for credibility and confirmability of the emergent themes (Polit et al., 2001). The broad themes identified were then discussed in relation to the results emerging from the quantitative data as well as relevant literature. Verbatim statements that captured the meaning of each theme were incorporated. Confirmability was further supported by the repeated themes demonstrated in the open responses, reference to these in previous literature, and the ease of classification into categories for analysis.

Ethical Considerations

The Unitec New Zealand Research Ethics Committee approved the project on the 8th March 2004 for the period 25th February 2004 to 25th February 2005.

Results

Demographics

GPs fell in 2 main age categories; 50% were between 36-45 years of age and 38% were 56–70 years of age. Only 1 GP was younger than 36 years of age and 4 were older than 70 years of age. 61% reported to be NZ European, 12% Asian, 2% Indian, 0% NZ Maori or Pacific Island and 22% were unspecified. A possible interpretation of the high percentage of unspecified ethnicities is explored in the discussion section. Years in practice ranged from 6 to over 41 (see Table 1).

Table 1 Years in Practice of GPs

Years Practice	0-5	6-10	11-20	21-30	31-40	41+	Total
	0	12	17	9	1	1	*40
	0%	30%	43%	23%	3%	3%	

*Of the 42 GPs, only 40 answered this question.

Numbers and percentages of GPs' years in practice.

Knowledge of Manual Therapies

GPs reported on their levels of knowledge of osteopathy, chiropractic and physiotherapy. They reported more knowledge of physiotherapy than osteopathy and even less knowledge of chiropractic (see Table 2).

Table 2 Levels of Knowledge of Osteopathy, Chiropractic and Physiotherapy

Knowledge level	<i>Know a lot about</i>	<i>Know something of</i>	<i>Heard of only</i>	<i>Never heard of</i>	<i>Total</i>
Osteopathy	7 17%	32 76%	3 7%	0 0%	42
Chiropractic	3 7%	36 86%	3 7%	0 0%	42
Physiotherapy	24 57%	18 43%	0 0%	0 0%	42

Numbers of GPs self-reporting their knowledge levels.
 Percentages indicate the percentage of GPs for each therapy.

Of those over 45 years of age, all reported to know at least something of osteopathy compared with 86% of those 45 years of age and younger. There appeared to be no major difference between the different ages when reporting a change in patient demand, a change in their own attitude, and attitudes towards osteopathy.

Of those GPs who have been in practice for more than 20 years, 100% report to know at least something of osteopathy and 82 % refer to osteopathy at least occasionally. Of the GPs who have been in practice for less than 20 years, fewer, but still a significant portion (90%) reported to know at least something of osteopathy. Only 62% of GPs practicing for less than 20 years referred to osteopathy at least occasionally. These differences are considered in the discussion section.

Although most GPs reported to know at least something of osteopathy, many comments in the qualitative section of the questionnaire illustrated a poor understanding of what osteopathy is. Comments such as the following referred to osteopathy.

“Only just heard of visceral osteopathy”

“Only have vague idea”

“Don’t know much”

“Feel undereducated”

“Minimal exposure”

Respondents disclosed that the majority of knowledge they held about osteopathy and chiropractic came from patients. However, the majority of what they know about physiotherapy came from medical school or from communication with therapists (see Table 3).

Table 3 Acquisition of GPs' Knowledge of Manual Therapies

Knowledge acquired	Medical school	From patients	Communication with therapist	Public media	Other	*Total
Osteopathy	7 15%	22 47%	16 34%	2 4%	0 0%	47
Chiropractic	6 13%	23 49%	15 32%	3 6%	0 0%	47
Physiotherapy	28 44%	8 13%	25 40%	2 3%	0 0%	63

* Many respondents ticked more than 1 box for each therapy creating variable totals.

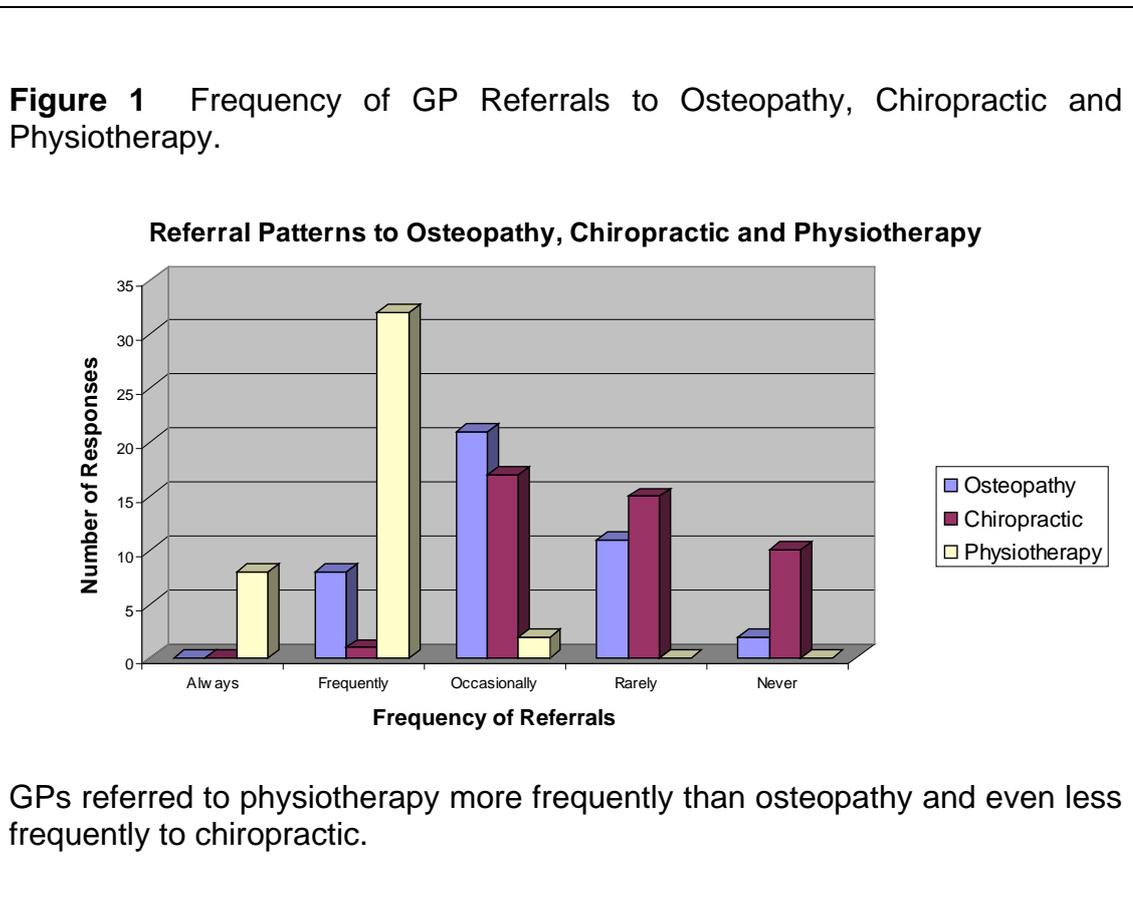
Numbers and percentages of GPs self-reporting the source of their knowledge of osteopathy, chiropractic and physiotherapy.

Frequency of Referrals to Osteopathy, Chiropractic and Physiotherapy

GPs were asked to report the frequency of their referrals to osteopathy, chiropractic and physiotherapy. Of the respondents, 100% reported to refer to physiotherapy at least occasionally, 69% referred to osteopathy at least occasionally and 42% referred to chiropractic at least occasionally. 23% never refer to chiropractic and 5 % never to osteopathy (see Figure 1).

Interestingly, GPs over 45 years of age reported to refer to osteopathy and chiropractic (75% referred at least occasionally) more frequently than the younger GPs (64% referred at least occasionally). GPs that reported to 'know a lot' about osteopathy reported to refer more frequently (86% referred at least occasionally) than those who reported to 'know something of' osteopathy (72% referred at least occasionally), while those who had only 'heard of osteopathy' referred to osteopathy least frequently (either rarely or never). This was

consistent with Preston-Thomas et al.'s study (1993), which reported that GPs with more self-rated knowledge of a profession are more likely to refer to it.



Referral for Specific Conditions

To determine what medical conditions GPs referred for, GPs were asked to indicate the frequency of their referrals to osteopathy, chiropractic and physiotherapy for a list of conditions. For all conditions listed (except constipation) the majority of referrals were to physiotherapy whereas the fewest referrals were to chiropractic. No GPs reported to refer to osteopathy, chiropractic or physiotherapy for constipation. Interestingly, some GPs indicated different preferences of treatment for acute versus chronic back pain. Referral to osteopathy for chronic lower back and cervical pain was more frequent than for acute conditions, whereas referral to chiropractic for acute conditions was more frequent than for chronic conditions (see Table 4).

Table 4 Comparison of GP Referral Rates for Various Conditions

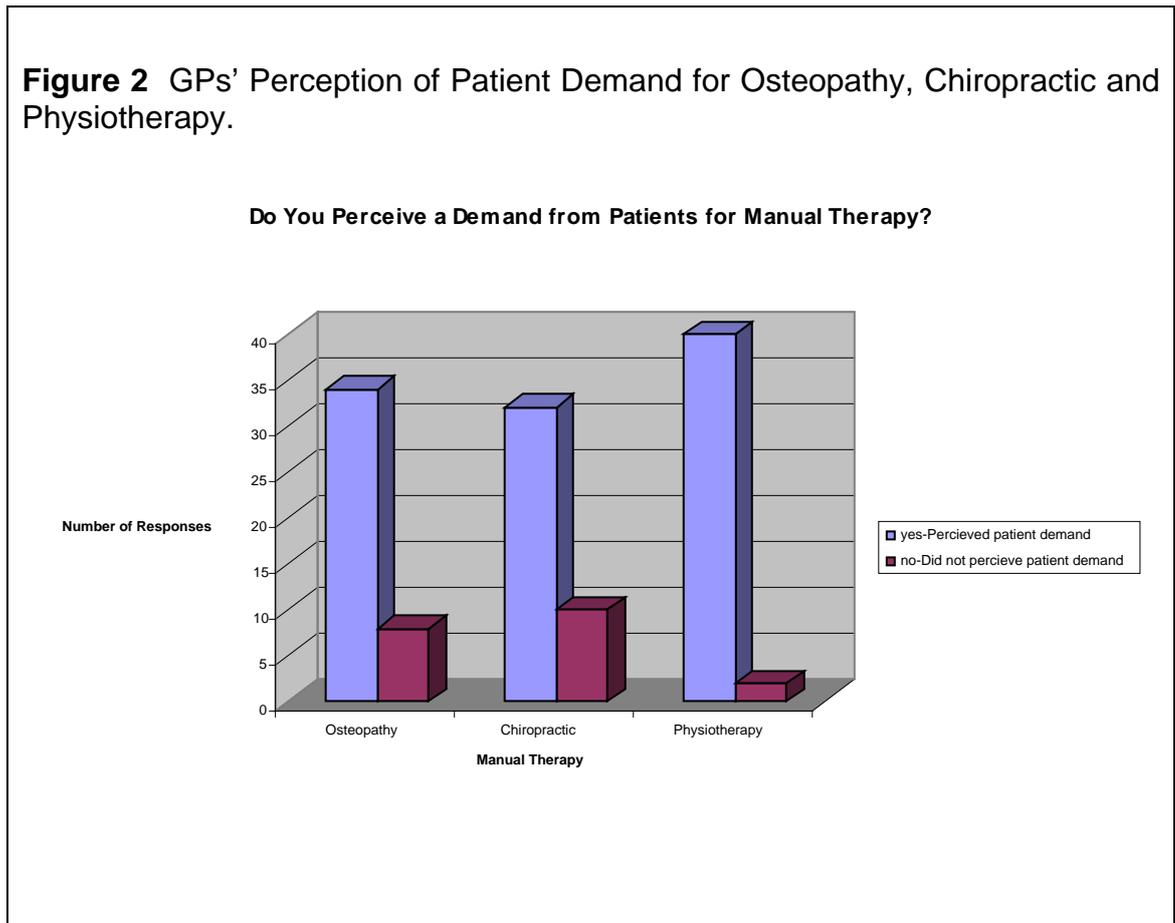
Referral Conditions	Osteopathy			Chiropractic			Physiotherapy		
	<i>Often</i>	<i>Seldom</i>	<i>Never</i>	<i>Often</i>	<i>Seldom</i>	<i>Never</i>	<i>Often</i>	<i>Seldom</i>	<i>Never</i>
Acute Lower Back Pain	25%	50%	25%	10%	56%	34%	90%	10%	0%
Chronic Lower Back Pain	29%	59%	12%	5%	56%	38%	80%	20%	0%
Thoracic Pain	28%	48%	25%	8%	60%	33%	73%	27%	0%
Acute Cervical Spine Pain	26%	41%	33%	10%	41%	49%	88%	7%	5%
Chronic Cervical Spine Pain	29%	49%	22%	5%	45%	50%	74%	26%	0%
Migraine/ Head Ache	15%	51%	33%	0%	33%	67%	25%	55%	20%
Posture Correction	8%	32%	61%	0%	21%	79%	44%	46%	10%
Peripheral Joint Problems	0%	29%	71%	0%	13%	88%	60%	26%	14%
Asthma	0%	8%	93%	0%	2%	98%	0%	38%	62%
Constipation	0%	0%	100%	0%	0%	100%	0%	0%	100%

Percentages of GPs self-reporting the frequency of their referral to manual therapies for various conditions.

General Practitioners' Perceived Patient Demand for Manual Therapies

GPs were asked to report whether or not they perceived a demand from patients for osteopathy, chiropractic and physiotherapy. Patient demand is perceived by GPs to be greatest for physiotherapy (95% of GPs perceive a patient demand) and least for chiropractic (76% of GPs perceive a patient demand) although patient demand for all three therapies is perceived as high. See Figure 2.

Figure 2 GPs' Perception of Patient Demand for Osteopathy, Chiropractic and Physiotherapy.



The majority of GPs (61%) responded that they had not perceived a change in demand from patients in the last five years. Of those GPs who did report changed patient demands, most reported an increased patient demand for osteopathy. None reported a decreased demand for osteopathy. Perceived patient demand for chiropractic was split between more demand and less demand. Factors suggested by GPs for changed demands included patients having increased awareness of alternative options and patients self-referring with changes in ACC regulations.

This survey did not measure patient demand for the various therapies. Instead it asked GPs how they perceived their patients' demand for manual therapies. The data collected is not a reflection on patients' attitudes towards the therapies but rather, an indication of the relationships between GPs and their patients with regard to manual therapies.

General Practitioners' Attitudes Towards Manual Therapies

Most respondents (98%) reported a positive attitude towards physiotherapy. The majority of GPs (62%) responded that their general attitude towards osteopathy is positive. Only 26% of GPs reported to have a positive attitude towards chiropractic (see Table 5). There was no relationship between age and years in practice with a positive attitude towards osteopathy. The majority of respondents reported no change of attitude toward all three therapies in the last five years (see Table 6).

Table 5 GP Attitudes Towards Manual Therapies

GPs'	Positive	Undecided	Negative	Total
General Attitude to Osteopathy	26 62%	14 33%	2 5%	42
General Attitude to Chiropractic	11 26%	16 38%	15 36%	42
General Attitude to Physiotherapy	41 98%	1 2%	0 0%	42

Numbers indicate the number of GPs who reported their attitudes to be positive, negative, or undecided. Percentages indicate the percentage of GP respondents for each therapy.

Table 6 Change in GP Attitudes Towards Manual Therapies in the Last 5 Years

Change in Attitude towards:	Yes	No	Total*
Osteopathy	7 18%	32 82%	39
Chiropractic	6 15%	33 85%	39
Physiotherapy	2 5%	37 95%	39

* Not all GPs answered this question resulting in a lower total number of responses.

Numbers indicate the number of GPs who reported any change or not in their attitudes towards manual therapies in the last 5 years. Percentages indicate the percentage of GP respondents for each therapy.

Whilst the majority of respondents reported no change in their attitudes towards manual therapies, some GPs did indicate that their attitude had changed favourably towards osteopathy. These changes were attributed to increased understanding of osteopathy and positive patient results from osteopathy.

“Increased positive results from osteo[path]s.”

“I now understand more about osteopathy and have seen positive results”.

“Feedback from patients and other practitioners – remained positive for physio[therapist]s, better understanding of some physio[therapy] skills, similar for osteo[path]s, negative for chiro[practor]s”.

No GP reported a negative change in attitude towards osteopathy. GPs did however, report a negative change in attitude towards chiropractors. GPs cited negative results from chiropractors and marketing modules as the reasons for this shift towards a less positive attitude. The GPs surveyed viewed chiropractors as arrogant, wrong and greedy as demonstrated by comments such as

“[Chiropractors] over-diagnose, misdiagnose, over-treat”.

“[Chiropractors] engender dependence”.

“[They require patients to] pay in advance for treatment”.

“The general tendency [of chiropractors] to market puts me and patients off”.

Specific positive or negative comments about physiotherapy were limited but included

“[I refer to physiotherapists because they are] trained in a similar medical model and seem to help”.

“I use physios less for acute back pain following research outcomes showing this to be unhelpful”.

Some GPs referred to alternative medicine as if it were inferior.

“Patients are more inclined to try all sorts of treatment nowadays from herbs, herbal remedies, etc. same applies to osteopathy and chiropractic”.

“ [I] avoid all manual therapists who are also pushing other forms of quackery (eg. homeopathy, aromatherapy)”.

This attitude differs from other GPs who saw osteopathy as more closely linked with traditional western medicine and able to play a complementary role in health care.

“Osteopathy has always been linked with the medical model”.

“ [I am] more aware of help offered by osteopaths and chiropractors”.

“Helpful adjunct to treatment”.

Influences on General Practitioners' Referrals

When asked to comment on experiences that have influenced decisions to refer to manual therapists or not, GPs mentioned a mixture of positive and negative experiences. Most discussion about osteopathy by GPs was affirmative. Positive influences included positive feedback from patients, feedback from therapists and the therapists prescribing self-care methods to patients (eg. exercises or stretches). Other factors that positively influenced referral were if the GP had personally met a therapist, been successfully treated by them, and if the GP had knowledge of the manual therapist's postgraduate qualifications. Cranial osteopaths had visited one GP's practice and explained their therapy and its safety. This established working relationships between the therapist and GP, positively influencing GP referrals to the therapist.

“[I am] more inclined to refer to someone whom I have personally met or [has been] highly recommended by my patients”.

“[I am more inclined to refer if I have received] positive feedback from patients and feedback reports from therapists about treatment given to patients”.

“[I am more inclined to refer if I have received] patient feedback, direct discussion with [the] therapist, [and] communication regarding patients seen by [the] therapist”.

“Good experience and contact with the local physiotherapist”.

“Visits to our rooms by cranial osteopaths influenced referral patterns because therapy [was] explained, safety and working relationships [were] established”.

Factors that negatively influenced GPs decisions to refer to manual therapies mainly applied to chiropractic. Negative factors included worsening of patients' conditions with chiropractic treatment, excessive use of radiographs and patients being continually asked to return for additional treatment. There were stories from patients of chiropractors requiring patients to pay for a years' treatment in advance. One GP suggested physiotherapists use too much acupuncture.

“[I] tend to find chiropractors use x-ray excessively, ... patient with disc prolapse made worse by chiropractor”.

“Chiropractors tend to get patients back repeatedly rather than teach exercises for self care, over reliance on x-rays with chiropractors”.

“Chiropractors sometimes increase symptoms on a chronic basis”.

“Negative results [from] chiropractors, excessive treatment/ aggressive treatment”.

“Manual therapists who blindly perform or order x-rays are at the bottom of my list for referral”.

“Chiropractor who claimed they could treat any disease by chiropractic turned me away”.

Referral Situations in Which a Particular Manual Therapy is Preferred

GPs indicated they would refer to one type of manual therapist over another depending on patient preference, experience with local therapists, and knowledge and experience of the therapy. Generally, physiotherapy would be the treatment of choice but alternatives would be considered if physiotherapy proved ineffective. *“I refer to physio as first choice but am happy to go along with the patient's wishes”.*

Some GPs indicated treatment modality choices to be dependent on the diagnosis. For example, physiotherapy would be the treatment of choice for rehabilitation, most musculoskeletal problems, chest, asthma or chronic obstructive pulmonary disease, chronic problems or when soft tissues are involved. Osteopathy was mentioned to be treatment of choice for headaches, children with headaches, post motor vehicle accident whiplashes, spinal treatment, chronic problems and when more gentle techniques are necessary. One GP was more inclined to refer irritable neonates to a cranial osteopath. Chiropractic was mentioned to be treatment of choice for acute dysfunction, sacroiliac joints, spinal manipulation or if the patient would like a fast result. For all conditions listed in the questionnaire, physiotherapy received the greatest percentage of referrals.

General Practitioners' Referral to Osteopathy

A generally tentative attitude was shown towards the perceived efficacy of osteopathic treatment. Although GPs see beneficial results of osteopathic treatment and are influenced by good patient feedback, they still want to see scientific evidence before referring. Responses included "*more research available*" and "*evidence based outcomes with good quality trials.*" One GP suggested that articles about osteopathy need to be written by specialists other than osteopaths to be credible. The response of one GP who said "*our belief systems and evidence clash*" illustrates the difficulty and challenge GPs have of accepting a therapy they have seen work for their patients but which is not described in the literature in a way with which they are familiar.

Information about and understanding of the therapy were other factors influencing GPs likelihood to refer to osteopathy. Responses included:

"Positive approval from our college".

"Our peer review group has asked an osteopath to attend our next meeting to inform us of his work".

One respondent suggested that a list of all practicing osteopaths in Auckland, including indications for referral would be helpful. Another respondent stated they would be more inclined to refer if they received feedback on treatment outcomes. One GP said they would be more inclined to refer patients to osteopaths if there was “*a simplified knowledge system and terms of reference for treatment*” meaning that if osteopathic terms and practices were easily understood, this would favourably influence referral patterns.

Some GPs reported situations that have made them less inclined to refer to osteopaths. Situations included a patients’ negative experience with an osteopath who made negative comments about other practitioners, treatments not being complementary, and cost being a factor in referral to osteopathy. One GP explained he had difficulty referring patients to an unregulated profession yet did not demonstrate any knowledge of the recent legislation of osteopathy within the HPCA Act 2003.

“I am less inclined to refer if the osteopaths are from an unknown training school. Some osteopaths have worthless qualifications from diploma mills, others are only enthusiastic amateurs. These practitioners degrade the reputation of those trained in genuine institutions.”

General Practitioners’ Access to Information About Osteopathy

When asked if more information relating to osteopathy should be available to GPs, the majority of GPs responded that it should. In specific, they suggested that information on the type of training, range of treatments, methods, principles, modality, and duration of treatment would be helpful. Several of the respondents specifically suggested research as a means of informing GPs of the benefits of osteopathic treatment. Responses indicated they wanted to see “*results of controlled trials to establish effectiveness of treatments*” and “*only if it is evidence-based.*” One GP suggested that case studies relating to osteopathy should be available “*[case studies] especially [of] asthma, constipation and other presentations where manual therapy referral [is a] useful but not immediate option.*”

Other suggestions were for GPs to meet the local osteopath and have pamphlets or brochures available for GPs to display at their practices. One GP suggested that osteopaths speaking to peer review groups would inform them about osteopathy. This proactive approach of GPs obtaining knowledge demonstrates openness of GPs to new ideas without the restrictive attitude of supremacy. These suggestions may provide useful information for increasing the awareness of osteopathy by both GPs and patients.

Professional Communication Between General Practitioners and Manual Therapists

GPs indicated various situations in which they would discuss confidential patient information with a manual therapist. Patient permission to do so was indicated to be necessary by half of the respondents. Many GPs also indicated they would communicate with the manual therapist *“Only if patient[s] requested such discussion”*. This is interesting as it suggests that the patient may be pressuring the GP to accept the therapist’s involvement.

Although the responses suggest that GPs prefer not to discuss all patients with manual therapists, they are willing to do so if special circumstances apply. These circumstances include failure of the patient to improve and the GP being responsible for the specific referral. GPs are also willing to discuss patients with manual therapists if the manual therapist contacts the GP. Several GPs indicated they would discuss the patient with the therapist in question for specific indications. Indications included chronic conditions and where psychosocial issues may be involved.

Some GPs reported that they would seldom or never discuss confidential patient issues with the therapist. One GP said they often do with a physiotherapist but never with an osteopath or chiropractor but gave no reason for this discrepancy. Perhaps this suggests a greater respect for the orthodox medical model.

Nevertheless, an appreciation of the benefits of a multidisciplinary approach to healthcare was illustrated by one GP who said they would discuss confidential patient information with a manual therapist *“to ensure we both understand our aims in treatment and share our understanding of probable diagnoses”*.

Discussion

Introduction

GPs refer to osteopathy more frequently than they did 10 years ago. There appears to have been a favourable shift in attitude towards osteopathy. Although most GPs reported to have some knowledge of osteopathy, they demonstrate a limited understanding of the osteopathic scope of practice. GPs would like more information about osteopathy made available to them, and cite this as a factor among others, that would make them more likely to refer their patients to osteopathy. GPs appear to view osteopathy as a form of therapy inferior to dominant medical models.

Effects of Demographics on General Practitioners' Referrals to Osteopathy

The 22% of GP respondents who did not specify their nationality may affect the relationship of the results to New Zealand culture. Definitions of and attitudes towards osteopathy, chiropractic and physiotherapy may differ internationally (for example, osteopathy being more mainstream in the US (Adams, 2003)).

Respondents over 45 years of age reported to refer to osteopathy more frequently than the younger GPs. GPs who have been in practice for greater than 20 years reported their knowledge and frequency of referral to osteopathy to be greater than those in practice for a lesser time. This was surprising as past studies had found young GPs to be more optimistic about CAM than older GPs (Ernst, Resch & White, 1995; Reilly, 1983). The young GPs surveyed in the past are now the older population of GPs and were present in the medical field at the beginning of the surge towards alternative therapies. Perhaps this explains why this generation of older GPs are more informed about CAM than the younger GPs. Present findings may however, relate to increased knowledge and experience of osteopathy with the expanded experience of age and practicing medicine. Then again, Szmelskyj and Mathews (1996) found no significant effect of age on GP referral to osteopathy and Wharton and Lewith

(1986) found GPs views of CAM were not related to the year in which they qualified.

General Practitioner Referrals to Manual Therapies Compared With Previous Studies

Results indicate that GPs refer more frequently to osteopathy than they did in 1993 (Preston-Thomas et al., 1993). The GPs surveyed referred to physiotherapy more often than osteopathy and to chiropractic least frequently. This pattern was also demonstrated in previous literature (CSAG, 1994b; Grenfell, Patel & Robinson, 1998; Perkin et al., 1994; Preston-Thomas et al., 1993). In contrast, other previous studies found GPs had a more favourable attitude towards chiropractic than osteopathy (Hadley et al., 1988; Ko & Berbrayer, 2000; Simpson, 1998; Pirotta et al., 2000). The differences in results amongst the various studies may relate to international differences in the status of osteopathic and chiropractic professions. It is beyond the scope of this research to evaluate the professional osteopathic situation in all countries mentioned in the literature although it is possible that the apparent differences in GP attitudes may be due to international variations in the establishment and acceptance of osteopathy. It is also possible that the differences between past and present results may reflect a change in GP attitudes since 1988. In New Zealand since 1988, the osteopathic profession has expanded with an increase in the number of practitioners, the establishment of a Masters level training programme, and the regulation of the profession within the HPCA Act 2003.

The increased growth and acceptance of CAM (Hadley et al., 1988; Perkin et al., 1994) may have affected this increased acceptance of osteopathy in New Zealand. This change in attitude may explain the higher frequency of referrals to osteopaths today as compared with Preston-Thomas et al's. (1993) findings.

Referral for Specific Conditions

The number of GP referrals to osteopaths in this study was greater for all conditions listed in Preston-Thomas' et al.'s (1993) study. These conditions were acute and chronic low back and cervical spine pain, thoracic pain, migraine/headache, posture correction and peripheral joint problems although for the last two conditions, the change in referral frequency was minimal.

Despite higher referrals to osteopathy, the scope of practice for which GPs refer patients for osteopathic treatment still appears to be limited. It is interesting to note that in the present study and that of Preston-Thomas et al.'s. (1993), GPs refer to osteopathy for chronic problems and refer to chiropractic for acute problems. Scheurmier & Breen (1998) studied acute low back pain patients and reported osteopathy to be the most cost-effective treatment, physiotherapy to have a greater mean average cost, & chiropractic to be the least cost effective. These studies support Cherkin, Deyo, Wheeler & Ciol's (1995) and Little et al.'s (1996) findings that there is a lack of consensus for physicians regarding treatment efficacy for low back pain.

The osteopathic profession may well benefit from exploring why osteopaths receive fewer referrals than chiropractors for acute conditions. Despite the broad scope of osteopathic practice, the present study and the literature illustrate the limited use of osteopathy for conditions other than chronic back and neck pain. Previous studies have indicated that osteopathy is beneficial for acute and chronic conditions including those previously treated unsuccessfully by physiotherapy (Carruthers, 1989; Carruthers & Gaastra, 1991; Rowse & Carruthers, 1987). Although osteopathy is mainly associated with the treatment of LBP, osteopaths spend only 50% of their time treating patients for LBP (Standen, 1993).

Of the GPs surveyed, few reported to refer to osteopathy for migraine/headache problems, posture correction, peripheral joint problems and asthma. Although osteopathy can provide beneficial treatment for constipation (Kuchera & Kuchera, 1994; Stone, 1992), no GPs referred for this complaint. These

findings corroborate with those of Szmelskyj & Morris (1992b) who said GPs see osteopathy as appropriate only for mechanical and degenerative spinal complaints. The scope of practice for which GPs refer patients to osteopathic treatment is limited by the GPs' knowledge of osteopathy.

It may be worthwhile to educate GPs about the diversity of osteopathic treatment and its approach in the management of patients with various conditions. This may be difficult to do as osteopathic practice is tailored to suit individuals. Nevertheless, general osteopathic principles could be explained in relation to various conditions. If GPs understood the realm of osteopathic therapy, they may be more inclined to refer patients to osteopathy for a wider range of conditions than spinal pain.

Knowledge of Osteopathy

Most GPs (78%) reported to 'know something of' osteopathy, however, only a few reported to 'know a lot of' osteopathy. Despite GPs responding that they are knowledgeable about osteopathy, the GPs surveyed demonstrated a limited knowledge of osteopathy illustrated by the limited conditions for which they refer to osteopaths.

The demonstrated lack of knowledge reflects previous literature (Pirota et al., 2000; Preston-Thomas et al., 1993; Szmelskyj & Mathews, 1996). Breen et al. (2000) found GPs were more comfortable referring to physiotherapy because they had a better understanding of the treatment involved and that physiotherapy terminology was less confusing than chiropractic and osteopathic terminologies.

Both the present study and that of Preston-Thomas et al.'s (1993) found that GPs have greater knowledge of physiotherapy than osteopathy or chiropractic. Preston-Thomas et al. (1993) found that all respondents had some knowledge of physiotherapy, with 98% claiming moderate to excellent knowledge. Fewer felt they had equivalent knowledge of chiropractic (40%) or osteopathy (31%).

The present survey's results indicate that GPs have become more knowledgeable about osteopathy and chiropractic in the last 10 years.

Reilly (1983) found that British GP trainees knew more about osteopathy than chiropractic, however, Hadley (1988) and Pirotta et al. (2000) found that GPs in New Zealand and Australia respectively knew more of chiropractic than osteopathy. The present survey found the level of New Zealand GP's knowledge of osteopathy and chiropractic to be similar. This may be because osteopathy has been established in Britain for longer than in New Zealand and Australia.

How General Practitioners Acquire Knowledge About Manual Therapies

GP respondents said they received more education about physiotherapy than osteopathy or chiropractic in medical school. Similarly, Szmelskyj and Mathews (1996) reported that most British GPs had been given no information about osteopathy at medical school.

Auckland GPs reported the media had a minimal contribution to their knowledge of osteopathy, chiropractic or physiotherapy. This contrasts with Preston-Thomas et al.'s (1993) suggestion that the public media plays an important role in providing GPs with knowledge of chiropractic and osteopathy. They suggested media and public opinion to be critical factors in governing the future demand for professional services. This was not evident in the present study, as only minimum knowledge for all manual therapies was perceived as coming from the media.

Preston-Thomas et al. (1993) also found that most of GPs knowledge of physiotherapy was obtained from patients, medical training or through communication with the therapist. Knowledge of chiropractic mostly came from patients but information about osteopathy was mostly obtained from communication with the therapist. In contrast, the present study found that GPs' knowledge of osteopathy came mainly from patients. This may reflect an

increased public use of osteopathy, or increased honest patient communication with their GP about their use of osteopathic therapy.

General Practitioners Want More Osteopathic Information

The majority of respondents thought that more information relating to osteopathy should be available to GPs. This supports previous findings (Szmelskyj & Mathews, 1996). Previous literature has shown that GPs and medical students felt alternative medicine should be taught at medical school (Perkin et al., 1994; Pirotta et al., 2000; Rampes, Sharples, Maragh & Fisher, 1997). No GPs in the present survey suggested that medical school training should provide GPs with information regarding osteopathy, however, they were asked specifically about GP education rather than medical student education.

One GP suggested there was a need for a simplified knowledge system. This point of view has been highlighted in the past (CSAG, 1994a). Breen et al. (2000) identified several particularly confusing osteopathic terms including 'articulation' and 'thrust'. It is important for osteopaths to understand the difficulty that GPs have with osteopathic terminologies so that osteopaths can modify their language so that GPs can understand osteopathic diagnoses and treatments. This would improve communication between osteopaths and GPs.

Factors That Would Make General Practitioners More Inclined To Refer

Better knowledge was illustrated as a factor which influences GPs to refer more frequently to osteopathy. This finding had also been highlighted previously (Berman et al., 1995; Preston-Thomas et al., 1993; Reilly, 1983).

GPs acknowledged that meeting local therapists positively influenced their referral patterns. This information may prove important to osteopaths for business promotion purposes and acceptance as part of an interdisciplinary health care team. Not only will a professional relationship be established but an opportunity to inform GPs of the indications and benefits of osteopathy is available. Both of these factors have been shown to positively influence referral patterns to osteopathy. Experience with local therapists was found to play a role

in influencing referral to osteopathy, although not to the extent previously found by Szmelskyj and Mathews (1996). They found personal contact or knowledge of an osteopath to be the most important single factor for osteopathic referral.

Feedback on treatment outcomes was mentioned as positively influencing GP referrals. This may persuade osteopaths to write feedback letters to GPs more frequently. Breen et al. (2000) stated the most popular form of feedback was a letter on completion of treatment. Most of the GPs (94%) surveyed by Breen et al. (2000) said they would welcome a follow up report for referred patients including the nature of the treatment and advice given.

Results showed that GPs were unenthusiastic about referring patients to osteopaths but would do so if the patient specifically requested. This reflects the nature of the doctor-patient relationships where patients' preferences are being heard, respected and followed up as part of a shared decision making model as discussed by Charles, Gafni and Whelan (1997, 1999). It also suggests that although GPs are resistant, patient demand is encouraging GP acceptance of alternative treatments as a part of health care.

Medical Dominance

GPs hold positions of power and control within the medical field. Traditionally, they have held knowledge unavailable to lay people and provided health services exclusive to their profession. Their infallible reputations bestowed them godlike status. Doctors assumed a dominant role and patients assumed a passive role. Medical professionals attitudes of their own superiority is what is commonly known as 'medical dominance'.

This study highlights medical dominance in that GPs act as gatekeepers to other health professionals. Saks (1991) and McKinlay and Marceau (2002) discuss the effects of legislation at the beginning of the mid-nineteenth century in establishing a medical monopoly and thus, medical dominance. Since this time, a decline in the aristocratic standing of medical doctors has been discussed by several authors (Brury, 2004; McKinlay & Marceau, 2002).

Amongst the reasons attributed to the demise of GPs' godlike status is the competition for health care services created by an increased popularity of CAM. However, Ovretveit (1985) considered the nature of medical dominance with the development of professional autonomy in physiotherapy and concluded that there had been no significant decline in medical dominance.

Nevertheless, McKinlay and Marceau (2002) examined reasons for *"The End Of The Golden Age Of Doctoring"* and compared the previous status of medical professionals in the US with the elitist status of medieval monks. Among the major reasons they proposed for the decline in status of the medical professionals, was the emergence of alternative health care providers. They suggested that these practitioners who provide health care which had previously been exclusive to medical doctors, are a competitive threat. They describe increasing numbers of more powerful CAM disciplines competing for the same patients. Furthermore, they note the creation of interdisciplinary rivalry and refer to much of the power and position of the medical profession to having been protected by professional organizations such as the British Medical Association (BMA) and American Medical Association (AMA) whose powerful influence has since declined.

Brury (2004) considered the implications in increased numbers of 'non-physician clinicians' and concluded that these create competition in a new corporate medicine market. Saks (1999) suggests the professionalisation of CAM could threaten the dominance of orthodox medicine and thus, explains the medical establishments opposition to alternative therapies. Scepticism expressed by medical professionals is, Brury (2004) suggests, due to doctors defending their territory and market.

It appears from the present study that GPs have a subconscious desire to retain primary power in the healthcare of the public.

"Osteopaths and chiropractors have existed without GPs prior approval".

"[I have become] more accepting of manual therapies".

“I have become more aware of help offered by osteopaths and chiropractors”.
“I refer to physio[therapy] as first choice but am happy to go along with the patients wishes”.

These sentiments mirror those of GPs wishing to retain control and responsibility for the patient as identified by Wharton and Lewith (1986). GPs are the primary health care providers in New Zealand and are generally the first point of call for patients. However, for complaints that can be dealt with more effectively out of the doctor’s office, GPs have the responsibility to serve their patients best by referring them to the most suitable practitioner. The naïve bias towards traditional options such as physiotherapy, based on what appears to be limited educational knowledge and awareness, disadvantage patients who may be best served by treatment from another approach.

The attitude of supremacy of the traditional model of health care is a barrier to patient-centred care. If the patient provides consent regarding their confidential issues, it is the responsibility of the GP to provide and receive information which may be essential in the management of the patient. This communication can be beneficial for GPs because an osteopath provides a different model of health care and may elicit more relevant information from the patient that the GP may not otherwise have had the opportunity to obtain.

Brury (2004) suggests that that the medical profession is making changes promoting ‘patient-centred-care’, not for the benefit of the patient, but because patients are ‘growing up’ and doctors wish to retain their power and professional privileges. He suggests that these changes will lead to more complicated interactions in health care. In addition, increased use of the Internet with its availability of medical knowledge previously accessible only to the medical profession, has been attributed to the empowerment of patients (Brury, 2004; McKinlay & Marceau, 2002). Subsequently, reliance on doctors to provide the previously unavailable information has decreased. Increased levels of public medical knowledge has “demystified” the body and served to alter the balance of power within doctor-patient relationships as patients are now armed with

knowledge prior to consultation. Personal responsibility for health has also shifted the power from paternalistic medical providers to the patient.

Communication is important within the doctor-patient relationship and may be influenced by medical dominance attitudes. Charles et al. (1997) analysed models of treatment decision making and suggested that the consumer rights movement shifted the patient's involvement in decision making beyond informed consent to include "broader principles of patient autonomy, control, and patient challenge to physician authority" (p. 682). This opinion differs from that expressed by Brury (2004) who explored the nature of patient-professional interactions from a more sceptical point of view. Brury suggested that amongst the reasons for changing doctor-patient interactions within changing medical and health care culture are 'high profile cases' involving fallible practitioners and the shortcomings of biomedicine. For example, recent health scares such as bovine spongiform encephalopathy and Creutzfeldt-Jakob disease, which have contributed to the loss of professional authority. Examples more relevant to New Zealand may include the "unfortunate experiment" of the 1960s exposed by the media in 1988 (NZRO, 2003) and the Gisborne Cervical Screening Inquiry in 1999 (Duffy, Barrett & Duggan, 2001).

McKinlay and Marceau (2002) illustrate the change in doctor-patient relationships with changes in the language that describe the relationships ie. 'doctor-patient relationships' are now 'client-provider encounters'. Also, doctors visits have shortened from 15-20 minutes to 6-8 minutes, and there have been shifts in the power with the doctor previously being in control of the patient to the 'client' now being more in control and able to 'shop around'. This empowerment of the patient reduces the control asymmetry between doctors and patients. These role changes differ from the previous paternalistic approach of doctors assuming the dominant role (Charles et al., 1999) and patients assuming the passive 'sick role' (Charles et al., 1997). Charles et al. (1997, 1999) also highlight the vulnerability of the patient and acknowledge the importance of the doctor taking responsibility in initiating discussions of different treatment options.

The respondent who communicates with physiotherapists but not with osteopaths or chiropractors again demonstrates the issue of medical dominance. Simpson (1998) found that 99% of Australian based GPs surveyed said they would consider it ethical to have professional dealings with physiotherapists. Considerably fewer GPs thought it was ethical to deal with chiropractors (35%) and even fewer thought it was ethical to deal with osteopaths (16%).

The tendency towards medical dominance expressed by GP respondents could influence patients' decisions to discuss alternative therapeutic options with their GPs. Patients may fear GPs not being supportive. *"Patients are increasingly aware of alternative options and I am usually supportive."* The indication that patients do not discuss their manual therapy with their GPs *"Patients used to keep visits to chiropractors/osteopaths secret from GPs but now are less inclined to do so"* has been noted in previous literature (Berman et al., 1995; Featherstone, Godden, Selvaraj, Emslie & Took-Zozaya, 2003; Grenfell et al., 1998; Yung, Lewis, Charney & Farrow, 1988). This secrecy may be related to patients being more accepting of and attracted to CAM than GPs are, or to patients being afraid of feeling disloyal or foolish for trying alternative options. It is suggested that the concealment of this information by patients from GPs can lead to GPs having a distorted perception of patient demand. The notion of required approval from GPs suggests that GPs assert their power to retain total responsibility for the patients' health care. This could contribute to communication barriers between GPs and their patients.

The communication between patients and GPs needs to be open so that GPs can share their technical knowledge and advice with patients so they can openly share their preferences. This would enable both parties to participate in the decision-making process. For this to occur, the GP must provide the patient with both the choice to participate in the decision making process, and the environment where the patient feels their views are valued. Unfortunately, time constraints may hinder this process as GPs may be forced to hasten the decision process without due consideration of the patients' preferences or the opportunity for the patient to express their views (Charles et al., 1997).

HRH Prince Charles (2001) believes “no one has a monopoly on medical knowledge” (p. 181) and writes of the benefits of combining the best of both worlds – orthodox and complementary medicine – to provide integrated health care for the whole community. Although he is not directly involved in the medical system, his profile provides public and political support. He highlights the need for more broad-based research to better evaluate alternative therapies and the benefits of combining orthodox and complementary therapies.

General Practitioners Want to See Scientific Evidence That Osteopathy Works

Although it is patient progress and feedback that is a major contributing factor influencing GP referrals to osteopathy, GPs still want to see the effectiveness of osteopathy supported scientifically. More specifically, GPs want to see randomised controlled trials to prove the effectiveness of osteopathy.

“[I would like to see] results of controlled trials to establish effectiveness of [osteopathic] treatments”.

“[I would like to see] studies of efficacy [relating to osteopathy]”.

“[I would like to see information relating to osteopathy] only if it is evidence based. A lot of poor research never equates to good research”.

“[I would like to see] evidence based data that the practice of osteopathy is truly beneficial”.

“[I would be more inclined to refer patients to osteopathy if I could see] scientific evidence of actual benefit”.

“[I would be more inclined to refer patients to osteopathy if I could see] evidence based outcomes with good quality trials”.

These responses highlight the need for quality scientific research illustrating the effectiveness of osteopathic treatment. This need has been previously identified (Carruthers, 1988; Ong et al., 2004; Rowse & Carruthers, 1987; Szmelskyj & Morris, 1992a; Wharton & Lewith, 1986; Williams et al., 2003). In contrast, Reilly’s study (1983) illustrated an openmindedness of young GPs and their willingness to consider therapies that do not conform to standard medical templates. He highlighted the need for research to answer the question of

“Does it work?” to avoid missing opportunities. He stated “Certainly to express an interest in the unproved is neither irrational nor unscientific. Advances in medicine are as often founded on the empirical as they are on the theoretical” (p. 338). This view is mirrored by the GP in this current survey who eloquently acknowledged “*Where our belief systems and evidence clash*” to cause difficulty in making appropriate decisions. Likewise, according to Easthope (2003), the introduction of evidence based practice in the 1990s established that it was necessary only to show that therapies work, rather than how they work.

Nevertheless, the medical profession believes the treatment modalities they use to be scientifically validated by means of randomised controlled trials and other such scientific scrutiny. The BMA (1986) suggest that the one fundamental difference between orthodox and alternative medicine is the basis of the medical profession on scientific method.

The medical profession in general expects these same procedures to validate other therapies before they will consider them sound. Not only is this difficult for alternative therapies because the funding required for such research is largely controlled by the medical profession (Saks, 1991), but alternative treatment modalities may not be reproducible under the same conditions as those of orthodox medicine. As a result, alternatives may be considered unworthy if the medical profession wishes to apply their own yard stick to other therapies.

Due to the nature of osteopathic treatment being tailored to individuals and differing amongst practitioners, it can be difficult to apply the standardised models of traditional medical evidence. Case studies however, may provide appropriate forms of evidence for GPs as they are respected and accepted forms of research that can illustrate individual situations. “*Case studies [relating to osteopathy] of especially asthma, constipation and other presentations where manual therapy referral [are] useful but not immediate options [should be available to GPs]*”.

Perhaps if GPs received more education regarding other legitimate and valid approaches in acquiring knowledge outside of the positivist (scientific)

paradigm, they may be more inclined to respond to results of this manner of research. This research may demonstrate the effectiveness of osteopathy more efficiently than randomised controlled trials.

Doubt expressed by GPs of the validity of osteopathic treatment may be lessened with the inherent acceptance of osteopathy by the New Zealand Government as demonstrated with the introduction of the HPCA Act 2003.

Inter-Professional Communication Regarding Patients

The results from this study suggest that GPs do not wish to discuss all shared patients with manual therapists unless the GP is responsible for the referral or the manual therapist contacts them. However, GPs do like to receive feedback reports from therapists and these positively influence GPs to refer. *“[I am] more inclined to refer if I received some feedback on treatment outcomes and progress.”* Feedback reports from manual therapists do not require the GPs’ personal communication yet keeps the GP informed of their patients’ well being.

The Health Information Privacy Code 1994 places responsibility on practitioners to protect patients’ rights to confidentiality (The Office of the Privacy Commissioner, 2004). Considering this, it is not surprising that many GPs referred to the need for patient permission before discussing patient issues with other therapists. GPs expressed that they have been influenced to communicate with manual therapists because of their patients’ wishes.

“[I would discuss confidential patient issues] if patient has instructed me to discuss their case with their therapist”.

“[I would discuss confidential patient issues] only if patient requested such discussion”.

It is suggested that the wishes of patients for GPs to communicate with their manual therapist indicate that public desire affects GPs’ relationships with manual therapists. It also allows for communication between the GP and patient regarding the use of manual therapy to occur. This can enhance the doctor-

patient relationship and assist in the beginnings of a multidisciplinary form of health care where practitioners from different backgrounds work together to benefit the patient.

Knowledge of Legislation

Although the questionnaire GPs completed contained a brief introduction mentioning the HPCA Act 2003, no GPs referred to this legislation in their responses. This was surprising as presumably New Zealand health care practitioners should be aware of any changes in legislation related to their profession and associated disciplines. Perhaps GPs are aware of this legislation and consider it irrelevant. However, the implication of government acceptance implied within legislation would likely affect GPs' attitudes towards those therapies. The HPCA Act 2003 assures GPs that if they do refer patients to osteopaths, the practitioner will have completed a satisfactory level of education and be deemed fit and competent to practice. The NZMA's Code of Ethics (2002) states that GPs need to have a basis for confidence in the competence of any practitioner that they should refer patients to and the HPCA Act 2003 provides GPs with regulated levels of competence.

One GP said they would be more inclined to refer to osteopaths if they have *"Assurity that they are NZRCO registered and have exclusive UK training"*. This statement illustrates a GP who is not familiar with the HPCA Act 2003 and the regulation of the osteopathic profession within this legislation. The 'NZRCO' presumably refers to the NZRO which existed prior to the HPCA Act 2003 but has since been dissolved subsequent to the formation of the Osteopathic Council of New Zealand, the regulatory body of the osteopathic profession within New Zealand.

Perhaps the limited awareness amongst GPs of the HPCA Act 2003 is simply due to the newness of the Act. The safety involved in referring patients to osteopaths assured by the HPCA Act 2003 may become more visible with the passage of time and eventually influence more GPs to make referrals to osteopathy.

Limitations of the Study

As the questionnaire was a new research tool designed specifically for this study, its reliability and validity has yet to be established by other research. Probability sampling was not used so it cannot be assumed that each element of the target population is included in the sample. Therefore, the data obtained cannot be generalised. A 42% response rate was received which although provided adequate data, cannot rule out the possibility of nonresponse bias and may not have generated the richness of data that a greater response rate may have.

The questionnaire was not tested for reliability for several reasons. The time and cost involved was beyond the scope of this study. Retesting of the same subjects would not provide anonymity, which was considered essential in obtaining truthful responses. A repeated use of the instrument in the future however, may indicate stability of the questionnaire, although, variables considered in the study are subject to change over time. In future studies, it may be more useful to examine equivalence reliability on a small test group by having subjects complete both the questionnaire and an interview, with both responses analysed to see if they obtain the same data. Nevertheless, interrater reliability was demonstrated in the thematic analysis of the data.

The questionnaire was designed to provide validity and appeared to demonstrate face and content validity although was never evaluated by independent researchers. With future use, the questionnaire may obtain further validity (Brockopp & Hastings-Tolsma, 1995; Burns & Grove, 1995). Mono-operation bias may have occurred as only one instrument was used to obtain data (Burns & Grove, 1995). Construct validity is improved in that mono-method bias is reduced in that the questionnaire used contained both open and closed questions to measure the same attitudes. Categorical responses may encourage certain responses regardless of the content, and threaten validity (Frank-Stromborg, 1988). This questionnaire, however, contained a range of question styles in order to avoid this.

The participants selected may not reflect the Auckland GP population. For example, there may be differences in that GPs from low socio-economic areas did not respond and therefore their views are not considered in this survey. The samples were selected to provide a broad range of participants. It would be beneficial in future studies to sample the GPs selectively in order to obtain a more representative population.

Nonresponse bias may have occurred in that questionnaires may only be returned by those who are interested, or by doctors with strong views on alternative medicine (Breen et al., 2000; Marshall et al., 1990; Perry & Dowrick, 2000; White et al., 1997). The possibility of non-response bias was considered although it is beyond the scope of this study to assess the attitudes of all the GPs initially approached. Respondents were given the opportunity to express a negative attitude to reduce the chances of those GPs holding negative opinions not returning their questionnaires.

Conclusion

This study highlighted the importance of GPs' understanding of what osteopathy is and the feedback they receive from patients about osteopathic treatment to greatly affect GP referrals to osteopathy. This knowledge provides osteopaths with the potential to positively influence GP referrals to osteopathy.

The lack of knowledge demonstrated by GPs about osteopathy undermines their ability to have informed opinions about it. Lack of knowledge limits the understanding that osteopathy can be complementary rather than just alternative. The superior attitude demonstrated by GPs towards osteopathy is fuelled by medical dominance and may shroud the evidence of the effectiveness of osteopathy. Misinformed attitudes towards osteopathy can be changed with education. This is an important process that will not only increase GPs' awareness of osteopathy and its benefits, but also improve the status of osteopathy within the New Zealand health care system. This will have positive implications not only for the osteopathic profession and its credibility, but also for the patients who will benefit from osteopathic treatment. This study demonstrated that greater knowledge of osteopathy results in more referrals to osteopathy, thereby making osteopathy more accessible to prospective patients.

Primarily, positive experiences and results were referred to when discussing osteopathy. Negative experiences and results were referred to when discussing chiropractic. Many opinions were expressed about chiropractic and it may be in the interests of the chiropractic profession and other manual therapy providers to examine the reasons for these attitudes and create awareness of specific pitfalls or professional traits to avoid.

Several recommendations resulting from this study can be made to the osteopathic community and individual osteopaths to encourage more referrals from GPs. These include

- Visiting local GP practices

- Publishing evidence-based research and case studies
- Providing information such as pamphlets to GPs
- Providing a list of local registered osteopaths to GPs
- Attending back pain conferences and similar events where you are likely to meet GPs
- Taking the initiative to communicate with patients' GPs with feedback letters or follow up reports
- Using caution when combining osteopathic therapy with other less accepted forms of treatment
- Encouraging patients to discuss their osteopathic treatment with their GPs
- Educating GPs on osteopathic terms not well understood or even re-examining osteopathic terminology to make it more accessible to GPs

With a predicted increase in osteopathic professionals in New Zealand and associated increased public use, GPs need to be aware of what osteopathy entails so that they can discuss it with their patients as a treatment option. This knowledge will assist the formation of effective relationships between GPs and osteopaths.

The information gained from this study allows a number of questions to be posed as a platform for further research. These include

- How would GPs prefer to obtain knowledge of osteopathy?
- Why has there been a shift in GPs' referral from chiropractic to osteopathy since the 1993 study?
- Why do GPs generally refer to chiropractic rather than osteopathy for acute problems?
- How can osteopaths form effective professional relationships with GPs?
- How will the HPCA Act 2003 affect GP attitudes and referrals towards osteopathy in New Zealand?
- How will the legislation of osteopathy affect osteopathic professional relationships with orthodox medical practitioners?

In conclusion, it is widely accepted that health care systems and patient demands are changing. Although GPs are resistant to these changes and medical dominance is still present, patient demand is forcing GPs to acknowledge alternative options. More information including scientific evidence validating osteopathy needs to be available to GPs so they can recognise indications for treatment referral and discuss osteopathy as an option with their patients. If GPs can regard osteopaths as valid health care providers, the professions can work together as an interdisciplinary team to improve health outcomes for clients. This would enable patients to be served from a broader perspective and the service of health care would be enriched.

References

Accident Compensation Corporation (New Zealand) Injury Prevention. (2000). *Active and Working! Managing Acute Low Back Pain in the Workplace. An employer's guide.*

Accident Compensation Corporation (New Zealand) Thinksafe. (2002). *Helpful advice on managing your acute low back pain.*

Accident Compensation Corporation (New Zealand) Thinksafe. (2001). *Prevent serious back injuries and manage acute low back pain.*

Accident Compensation Corporation (New Zealand) Thinksafe. (2003). *Workplace Back Plan.*

Adams, B. (2003). *The Geographic Distribution of Osteopaths in New Zealand: Implications for The Osteopathic Profession.* UNITEC: Auckland (Thesis).

Andersson, G., Lucente, T., Davis, A., Kappler, R., Lipton, J. & Leurgans, S. (1999). A Comparison Of Osteopathic Spinal Manipulation With Standard Care For Patients With Low Back Pain. *The New England Journal of Medicine*, 341(19): 1426–1431.

Astin, J. (1998). Why Patients Use Alternative Medicine. Results of a National Study. *Journal of the American Medical Association*, 279(19): 1548–1553.

Barral, J. (1993). *Urogenital Manipulation.* Seattle: Eastland Press.

Barral, J. & Mercier, P. (1988). *Visceral Manipulation.* Seattle: Eastland Press.

Berman, B., Singh, K., Lao, L., Singh, B., Ferentz, K., & Hartnoll, S. (1995). Physicians' Attitudes Toward Complementary Or Alternative Medicine: A Regional Survey. *Journal of the American Board of Family Practice*, 8(5): 361-5.

Botting, D. & Cook, R. (2000). Complementary medicine: knowledge, use and attitudes of doctors. *Complementary Therapies in Nursing & Midwifery*, 6: 41-47.

Breen, A., Carrington, M., Collier, R. & Vogel, S. (2000). Communication between general and manipulative practitioners: a survey. *Complementary Therapies in Medicine*, 8: 8-14.

Brink, P. & Wood, M. (1988). *Basic Steps in Planning Nursing Research From Question to Proposal.* 3rd Ed. Boston: Jones and Bartlett Publishers, Inc.

British Medical Association (1986). *Alternative Therapy.* London: The Chameleon Press Limited.

British Osteopathic Association. *History of the Association.* Retrieved December 1st 2004 from http://www.osteopathy.org/n_history.htm

Brockopp, D. & Hastings-Tolsma, M. (1995). *Fundamentals of Nursing Research*. 2nd Ed. Boston: Jones and Bartlett Publishers, Inc.

Brury, M. (2004). Researching patient professional interactions. *Journal of Health Services Research & Policy*, 9(1): 48-54.

Burns, N. & Grove, S. (1995). *Understanding Nursing Research*. Philadelphia: W. B. Saunders Company.

Bush, C. (1985). *Nursing Research*. Reston: Reston Publishing Company, Inc.

Cameron, M. (1998). A comparison of osteopathic history, education and practice in Australia and the United States of America. *Australasian Osteopathic Medicine Review*, 2(1): 6-12.

Carruthers, R. (1988). A Follow-up Study Of Chronic A.C.C. Patients. *The Journal of the New Zealand Register of Osteopaths*, 23-24.

Carruthers, R. (1989). A Classification of Osteopathic Patient Presentation Frequency. *The Journal of the New Zealand Register of Osteopaths*, 24-25.

Carruthers, R. & Barker, B. (1993). Weekly Frequency Of Osteopathic Patient Visits. *The Journal of the New Zealand Register of Osteopaths*, 22-23.

Carruthers, R. & Gaastra, A. (1991). Osteopathic Treatment Results for A.C.C. Patients. *The Journal of The New Zealand Register of Osteopaths*, 16-20.

Carter, R., Densley, J., Galley, C., Holland, A., Jones, L. & Dunn, C. (2001). Factors associated with GP referrals to physiotherapy. *British Journal of Therapy and Rehabilitation*. 8(12): 454-459.

Charles, C., Gafni, A. & Whelan, T. (1997). Shared Decision-Making In The Medical Encounter: What Does It Mean? (Or It Takes At Least Two To Tango). *Social Science and Medicine*, 44(5): 681–692.

Charles, C., Gafni, A. & Whelan, T. (1999). Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model. *Social Science and Medicine*, 49: 651–661.

Charles, C., Whelan, T. & Gafni, A. (1999). What do we mean by partnership in making decisions about treatment? *British Medical Journal*. 319: 780 – 782.

Cherkin, D., Deyo, R., Wheeler, K. & Ciol, M. (1995). Physician Views About Treating Low Back Pain. *Spine*, 20(1): 1-10.

Clifford, C. (1997). *Nursing And Health Care Research. A skills-based introduction*. 2nd Ed. London: Prentice Hall.

Clinical Standards Advisory Group (1994a). *Back Pain*. London: HMSO.

Clinical Standards Advisory Group (1994b). *Epidemiology Review: The Epidemiology and Cost of Back Pain*. London: HMSO.

Coulter, A. (1999). Paternalism or partnership? Patients have grown up-and there's no going back. *British Medical Journal*, 319:719–720.

Crabtree, B. & Miller, W. (1992). *Doing qualitative research*. Newbury Park: Sage.

Cumming, G. (2003). Your health, your choice. *The New Zealand Herald*, September 6-7th, 2003, p.B1.

Dempsey, P. & Dempsey, A. (1996). *Nursing Research Text and Workbook*. 4th Ed. Boston: Little, Brown and Company.

DePoy, E. & Gitlin, L. (1994). *Introduction To Research*. St. Louis: Mosby-Year Book, Inc.

Duffy, A., Barrett, D. & Duggan, M. (2001). Report of the Ministerial Inquiry into the Under-Reporting of Cervical Smear Abnormalities in the Gisborne Region. Retrieved December 28th 2004 from <http://www.csi.org.nz/background/inquiryback.htm>

Easthope, G. (2003). Alternative, Complementary, Or Integrative? *Complementary Therapies in Medicine*, 11(1): 2-3.

Eisenberg, D., Davis, R., Ettner, S., Appel, S., Wilkey, S., Van Rompay, M., et al. (1998). Trends in Alternative Medicine Use in the United States, 1990-1997 Results of a Follow-up National Survey. *JAMA*, 280(18): 1569-1575.

Ernst, E. (2000). The role of complementary and alternative medicine. *British Medical Journal*, 4(321): 1133-5.

Ernst, E. & Pittler, M. (1999). Experts' Opinions on Complementary/Alternative Therapies for Low Back Pain. *Journal of Manipulative and Physiological Therapeutics*, 22(2): 87-90.

Ernst, E., Resch, K. & White, A. (1995). Complementary Medicine. What Physicians Think of It: A Meta-analysis. *Archives of Internal Medicine*, 155: 2405-2408.

Featherstone, C., Godden, D., Selvaraj, S., Emslie, M. & Took-Zozaya, M. (2003). Characteristics associated with reported CAM use in patients attending six GP practices in the Tayside and Grampian regions of Scotland: a survey. *Complementary Therapies in Medicine*, 11:168-176.

Frank-Stromborg, M. (1988). *Instruments for Clinical Nursing Research*. Norwalk: Appleton & Lange.

Frost, H., Lamb, S., Doll, H., Carver, P. & Stewart-Brown, S. (2004). Randomised controlled trial of physiotherapy compared with advice for low back pain. *British Medical Journal*, 329: 708-711.

Fulder, S. & Munro, R. (1985). Complementary Medicine in the United Kingdom: Patients, Practitioners, And Consultations. *The Lancet*, 2: 542-545.

Grenfell, A., Patel, N. & Robinson, N. (1998). Complementary therapy: General Practitioners' referral and patients' use in an urban multi-ethnic area. *Complementary Therapies in Medicine*, 6: 127-132.

Hadley, C. (1988). Complementary medicine and the general practitioner: a survey of general practitioners in the Wellington area. *New Zealand Medical Journal*, 101(857): 766-768.

Health Workforce Advisory Committee. (2002). *The New Zealand Health Workforce. A Stocktake of Issues and Capacity 2001*. Wellington: Ministry of Health.

HRH Prince Charles (2001). The best of both worlds. *British Medical Journal*, 322:181.

Kaner, E., Haighton, C. & McAvoy, B. (1998). 'So much post, so busy with practice-so, no time! 'A telephone survey of general practitioners' reasons for not participating in postal questionnaire surveys. *British Journal of General Practice*, 48: 1067-1069.

Ko, G. & Berbrayer, D. (2000). Complementary and Alternative Medicine: Canadian Physiatrists' Attitudes and Behaviour. *Archives of Physical Medicine and Rehabilitation*, 81(5): 662-667.

Kuchera, M & Kuchera, W. (1994). *Osteopathic Considerations in Systemic Dysfunction* (2nd Ed.) Columbus: Greyden Press.

Lederman, E. (1997). *Fundamentals of Manual Therapy. Physiology Neurology and Psychology*. Bath: The Bath Press.

Lewith, G. (2000). Complementary and alternative medicine: an educational, attitudinal and research challenge (Editorial). *MJA*, 172(3): 102-3.

Little, P., Smith, L., Cantrell, T., Chapman, J., Langridge, J. & Pickering, R. (1996). General practitioners' management of acute back pain: a survey of reported practice compared with clinical guidelines. *British Medical Journal*, 312: 485-488.

Magoun, H. (1978). *Practical Osteopathic Procedures. The "Birthright of Osteopathy"*. Kirksville: Kirksville College of Osteopathic Medicine.

Maigne, J. & Vautravers, P. (2003). Mechanism of action of spinal manipulative therapy. *Joint Bone Spine*, 70: 336-341.

Maniadakis, N. & Gray, A. (2000). The economic burden of back pain in the UK. *Pain*, 84: 95–103.

Marshall, R., Gee R., Israel, M., Neave, D., Edwards, F., Dumble, J., et al. (1990). The use of alternative therapies by Auckland general practitioners. *New Zealand Medical Journal*, 889(103): 213-5.

McKinlay, J. & Marceau, L. (2002). The End Of The Golden Age Of Doctoring. *International Journal of Health Services*, 32(2): 379–416.

McPartland, J. & Pruit, P. (1999). Opinions of MDs, RNs, allied health practitioners toward osteopathic medicine and alternative therapies: Results from a Vermont survey. *JAOA*, 99(2): 101-108.

Minister of Health (1977). Memorandum For Caucus. Osteopathy Bill. Wellington. Available from Ministry of Health (New Zealand).

New Zealand Medical Association (2002). *Code Of Ethics*. Retrieved November 25th 2004 from <http://www.nzma.org.nz/about/ethics.html>

New Zealand Register of Osteopaths (2003). *Complaints and Discipline*. Wellington: New Zealand Register of Osteopaths.

Nieswiadomy, R. (1993). *Foundations of Nursing Research*. 2nd Ed. Norwalk: Appleton & Lange.

Ong, C., Doll, H., Bodeker, G. & Stewart-Brown, S. (2004). Use of osteopathic or chiropractic services among people with back pain: a UK population survey. *Health and Social Care in the Community*. 12(3): 265-273.

Ovretveit, J. (1985). Medical dominance and the development of professional autonomy in physiotherapy. *Sociology of Health and Illness*, 7(1): 76-93.

Perkin, M., Percy, M. & Fraser J.S. (1994). A comparison of the attitudes shown by general practitioners, hospital doctors and medical students towards alternative medicine. *Journal of the Royal Society of Medicine*, 87(9): 523-5.

Perry, R. & Dowrick, C. (2000). Complementary medicine and general practice: an urban perspective. *Complementary Therapies in Medicine*, 8:71-75.

Pietroni, P. (1992). Beyond the boundaries: relationship between general practice and complementary medicine. *British Medical Journal*, 305: 564-566.

Pirotta, M., Cohen, M., Kotsirilos, V. & Farish S. (2000). Complementary therapies: have they become accepted in general practice? *Medical Journal of Australia*, 172(3): 105-9.

Preston-Thomas, A., van den Bergh, L. & Maxwell, L. (1993). Referral for Manual Therapy: A Survey Of General Medical Practitioners In The Auckland Area. *New Zealand Journal of Physiotherapy*, 21(3): 25-7.

- Polit, D., Beck, C. & Hungler, B. (2001). *Essentials of Nursing Research Methods, Appraisal, and Utilization*. 5th Ed. Philadelphia: Lippincott Williams & Wilkins.
- Pugh, M. (Ed.) (2000). *Steadman's Medical Dictionary (27th ed.)* Baltimore: Lippincott Williams and Wilkins.
- Rampes, H., Sharples, F., Maragh, S. & Fisher, P. (1997). Introducing complementary medicine into the medical curriculum. *Journal Of The Royal Society Of Medicine*, 90(1): 19-22.
- Reilly, D. (1983). Young doctors' views on alternative medicine. *British Medical Journal*, 287: 337-9.
- Robbins, S. (2002). Australian Osteopathic Society. Letter to New Zealand Register of Osteopaths (unpublished).
- Rowse, C. & Carruthers, R. (1987). Osteopathic Treatment Results For Acute And Chronic Injuries. *Journal of the New Zealand Register of Osteopaths*, 1987: 7-9.
- Saks, M. (1991). Power, Politics and Alternative Medicine. *Talking Politics*, 3(2): 68–72.
- Saks, M. (1999). The wheel turns? Professionalisation and alternative medicine in Britain. *Journal of Interprofessional Care*, 13(2): 129-138.
- Schepers, R. & Hermans, H. (1999). The medical profession and alternative medicine in the Netherlands: its history and recent developments. *Social Science & Medicine*, 48: 343-351.
- Scheurmier, N. & Breen, A. (1998). A Pilot Study of the Purchase of Manipulation Services for Acute Low Back Pain in the United Kingdom. *Journal of Manipulative and Physiological Therapeutics*, 21(1): 14-18.
- Shekelle, P., Adams, A., Chassin, M., Hurwitz, E. & Brook, R. (1992). Spinal Manipulation for Low-Back Pain. *Annals of Internal Medicine*, 117(7): 590-598.
- Simpson, J. (1998). A Study of Referral Patterns Among Queensland General Medical Practitioners to Chiropractors, Osteopaths, Physiotherapists and Others. *Journal of Manipulative and Physiological Therapeutics*, 21(4): 225-31.
- Springer, M. & van Marwijk, H. (1996). Commentary: an opposing view from the Netherlands. *British Medical Journal*, 313: 734.
- St. George, I. (2002). *Good Medical Practice: a guide for doctors*. Wellington: Medical Council of New Zealand.
- Standen, C. (1993). The implications of the Osteopaths Act. *Complementary Therapies in Medicine*, 1: 208–210.

Standen, C. (2002). UNITEC Institute of Technology. Letter to New Zealand Register of Osteopaths (unpublished).

Stiles, E. (1976). Osteopathic manipulation in a hospital environment. *Journal of the American Osteopathic Association*, 76: 243-258.

Stone, C. (1992). *Viscera Revisited*. Hereford: Tigger Publishing.

Szmelskyj, A. & Mathews, S. (1996). A study of GP to osteopath referral patterns: implications for inter-professional co-operation. *JOE*, 6: 14-23.

Szmelskyj, A. & Morris, J. (1992a). A Pilot Study of the Value of Information Provision upon GPs' knowledge of Osteopathy. *JOE*, 2(2): 81-85.

Szmelskyj, A. & Morris, J. (1992b). An investigation of GPs' attitudes to and knowledge of osteopathy. *Complementary Medical Research*, 6(3): 119-123.

Thomas, K., Carr, J., Westlake, L. & Williams, B. (1991). Use of non-orthodox and conventional health care in Great Britain. *British Medical Journal*, 302: 207-210.

Thomas, K., Nicholl, J. & Fall, M. (2001). Access to complementary medicine via general practice. *British Journal of General Practice*, 51(462): 25-30.

The Office of the Privacy Commissioner. *Codes of Practice*. (Health Information Privacy Code 1994). Retrieved June 30th 2004 from <http://www.privacy.org.nz/comply/HIPCWWW.pdf>

Waddell, G. (1987). A New Clinical Model for the Treatment of Low-Back Pain. *Spine*, 12(7): 632-644.

Waddell, G. (1996). *Clinical Guidelines for the Management of Acute Low Back Pain*. London: Royal College of General Practitioners.

Waddell, G. (1999). *The Back Pain Revolution*. London: Harcourt Publishers.

Wharton, R. & Lewith, G. (1986). Complementary medicine and the general practitioner. *British Medical Journal*, 292: 1498-1500.

White, A., Resch, K-L. & Ernst, E. (1997). Complementary medicine: use and attitudes among GPs. *Family Practice*, 14(4): 302-6.

Williams, N. (1997). Managing back pain in general practice- is osteopathy the new paradigm? *British Journal of General Practice*, 47: 653-655.

Williams, N., Wilkinson, C., Russell, I., Edwards, R., Hibbs, R., Linck, P., et al., (2003). Randomized osteopathic manipulation study (ROMANS): pragmatic trial for spinal pain in primary care. *Family Practice*, 20(6): 662- 669.

Woodhouse, A. *Vital-Osteopathy*. Retrieved December 1st 2004 from <http://fp.osteopath.plus.com/main/history.html>

Yung, B, Lewis, P., Charney, M. & Farrow, S. (1988). Complementary medicine: Some population-based data. *Complementary Medical Research*, 3(1): 23-28.

Appendix A: Questionnaire

General Practitioner Referral Patterns to Manual Therapists.

This survey will investigate the referral patterns of General Practitioners to osteopaths, physiotherapists, and chiropractors to determine if there has been a change in the last 10 years. The Health Practitioners Competency Assurance Act (HPCA) 2003 will regulate the osteopathic profession and the results of this study will provide a baseline of information on the eve of legislation.

This questionnaire includes questions relating to demographics, knowledge of manual therapies, attitudes towards manual therapies, and referral patterns to these manual therapies.

Part 1: Demographics

Please tick the appropriate box for each question.

1. Age: 20-35 36-45 46-55 56-70 71 +

2. Ethnicity: N.Z. European N.Z. Maori Pacific Islander Asian Indian Other

3. Number of years in practice: 0-5 6-10 11-20 21-30 31-40 41 +

Part 2: Knowledge of Manual Therapies

Please tick the most appropriate box for each form of manual therapy.

4. Level of knowledge of manual therapists:

	Know a lot about	Know something of	Heard of only	Never heard of
Osteopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chiropractic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physiotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How did you acquire your knowledge of:

	Medical School	From Patients	Communication With Therapist	Public Media	Other
Osteopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chiropractic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physiotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 3: Referral Patterns

Please tick the most appropriate box for each form of manual therapy.

6. Do you refer patients to the following providers of care:

	Always	Frequently	Occasionally	Rarely	Never
Osteopathy	<input type="checkbox"/>				
Chiropractic	<input type="checkbox"/>				
Physiotherapy	<input type="checkbox"/>				

7. For what conditions do you refer: Please tick the most appropriate box for each form of manual therapy.

OSTEOPATHS	CHIROPRACTORS	PHYSIOTHERAPISTS
------------	---------------	------------------

	Often	Seldom	Never	Often	Seldom	Never	Often	Seldom	Never
Acute Lower Back Pain									
Chronic Lower Back Pain									
Thoracic Pain									
Acute Cervical Spine Pain									
Chronic Cervical Spine Pain									
Migraine/ Head Ache									
Posture Correction									
Peripheral Joint Problems									
Asthma									
Constipation									

Part 4: Patient Demands

Please tick the appropriate box for each form of manual therapy.

8. Do you perceive a demand from patients for:
- | | | |
|----------------|--------------------------|--------------------------|
| | Yes | No |
| Osteopathy? | <input type="checkbox"/> | <input type="checkbox"/> |
| Chiropractic? | <input type="checkbox"/> | <input type="checkbox"/> |
| Physiotherapy? | <input type="checkbox"/> | <input type="checkbox"/> |

9. Do you perceive these demands to have changed in the past 5 years? Yes No

If so how? _____

Part 5: Attitudes towards Manual Therapies

Please tick the appropriate box for each form of manual therapy.

- | | Positive | Undecided | Negative |
|--|--------------------------|--------------------------|--------------------------|
| 10. What is your general attitude to Osteopathy? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| What is your general attitude to Chiropractic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| What is your general attitude to Physiotherapy? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

		Yes	No
11.	Has your attitude changed in the last 5 years towards Osteopathy?	<input type="checkbox"/>	<input type="checkbox"/>
	Please explain why	Chiropractic? <input type="checkbox"/>	<input type="checkbox"/>
		Physiotherapy? <input type="checkbox"/>	<input type="checkbox"/>

12. Outline situations or circumstances when you would discuss confidential patient issues with a manual therapist. Please include your rationale.

13. Outline with rationale the situations when you would refer to one type of manual therapist rather than another.

14. Please comment on your experiences with manual therapists that have influenced your decisions to refer to them or not.

Part 6: General Practitioners Relationship with Osteopaths

The following questions have been included to obtain further information specifically relating to General Practitioners relationships with osteopaths.

15. Should more information relating to osteopathy be available to General Practitioners? Please explain.

16. What would make you more or less inclined to refer patients to Osteopaths?

Thank you for taking the time to complete this questionnaire. Your cooperation is much appreciated. Please feel free to add any further comments you may have in the remaining space.

Appendix B: Participant Information Sheet



Participation Information Sheet

A research project submitted in partial requirement for the degree of Master of Osteopathy, Unitec New Zealand, 2004.

This is a study of GP referral patterns to manual therapists and attitudes towards osteopathy. Its aim is to obtain a point of view of the placement of the osteopathic profession amongst the New Zealand health system. You have been selected to complete the following questionnaire. The questionnaires will remain anonymous and there will be no consequences for you should you decide to participate or not. Return of the questionnaire indicates voluntary participation.

The research is being done by Sarah Jackson (post-graduate student) and supervised by Carol Horgan and Maurice Drake from the School of Health and Community Studies at Unitec. This research project has been approved by the UNITEC Research Ethics Committee from the 25th February 2004 to the 25th February 2005.

It would of great assistance if you would be kind enough to take a few moments to answer the following questions and return the completed form in the envelope provided. If you have any questions please feel free to contact me on e-mail at jackss02@studentmail.unitec.ac.nz

Many thanks for your cooperation,
Yours Sincerely,
Sarah Jackson

Full name of author: Sarah Jackson

Full title of thesis/dissertation/research project ('the work'):
Opening the gates: Factors Influencing
General Practitioner Referral to Osteopathy

Practice Pathway: Health Care

Degree: Master of Osteopathy

Year of presentation: 2004

Permission to make open access

I agree to a digital copy of my final thesis/work being uploaded to the Unitec institutional repository and being made viewable worldwide.

Copyright Rights:

Unless otherwise stated this work is protected by copyright with all rights reserved.
I provide this copy in the expectation that due acknowledgement of its use is made.

AND

Copyright Compliance:

I confirm that I either used no substantial portions of third party copyright material, including charts, diagrams, graphs, photographs or maps in my thesis/work or I have obtained permission for such material to be made accessible worldwide via the Internet.

Signature of author: Sarah Jackson

Date: 01 / 11 / 2016