Pediatric patients presenting to osteopaths in New Zealand – a snapshot survey of current practice

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Introduction

Currently in New Zealand osteopaths practice primarily as self-employed sole practitioners, occasionally in a group practice of one, two or maybe three other osteopath and only very rarely in any formal contractual relationship with other healthcare providers. There are no specialisms in practice which require further credentialing or training after graduation / entry into the profession, and any osteopath who wishes to follow any particular group of patients, or focus any particular type of presentation does so under their own volition, supported by a variable and infrequently available collection of continuing education opportunities and does not need to provide evidence of awareness of or attainment of any particular standard for their ongoing osteopathic practice.

The regulatory framework is supplied by the Osteopathic Council of New Zealand (OCNZ) which has been undergoing a process of reviewing the scope of practice and the positive and negative components of vocational, restricted and other types of scope of practice frameworks.

Paediatric practice is an area of osteopathic practice where the educational profiles of osteopaths working in New Zealand needs to be reviewed and the competencies and capabilities required for practice scrutinised, to ensure that paediatric patients and their families receive appropriate, reasonable and safe care by osteopaths.

Patient movement between complementary medicine and orthodox medical practice.

The uptake of complementary and alternative medicine (CAM) therapies by patients, and referrals from medical practitioners to CAM therapists including manipulative therapists appear to be common (Boon, Verhoef, O'Hara, & Findlay, 2004; Greene, Smith, Allareddy, & Haas, 2006; Hollenberg, 2006; Poynton, Dowell, Dew, & Egan, 2006) and there is considerable interest in CAM (including manipulative therapies) among primary care professionals (van Haselen, Reiber, Nickel, Jakob, & Fisher, 2004). Indeed, non medicinal therapies along with chiropractic and osteopathy are now widely accepted in Australia and New Zealand and can be considered mainstream (Cohen, Penman, Pirotta, & Da Costa, 2005) whilst general practitioners appear to underestimate their patients' use of many CAM therapies (Pirotta, Cohen, Kotsirilos, & Farish, 2000). CAM use in the pediatric population is also prevalent (Lim, Cranswick, Skull, & South, 2005; Sawni-Sikand, Schubiner, & Thomas, 2002; Shakeel, Little, Bruce, & Ah-See, 2007; Simpson & Roman, 2001) in various countries and this trend (for CAM use in the general population) seems to be replicated in New Zealand also (Trevena & Reeder, 2005; Wilson, Dowson, & Mangin, 2007).

Complementary and alternative medicine (CAM) is a thriving sector in Australasian health care which remains largely disconnected from the health mainstream. Social forces are coercing the two health systems into relationship in an ad hoc and uncoordinated manner as institutions and professions respond to consumer needs for integration (McCabe, 2005), and there is an increasing need for allopathic healthcare practitioners to be better informed about CAM therapies (Giordano, Boatwright, Stapleton, & Huff, 2002). Increasingly, the use of CAM practitioners is also being included in mainstream care regimen guidelines, requiring a further level of ‘integration’.

Against this backdrop of increasing patient movement between professional therapists and medical practitioners, there is a need for research into the activities and evidence for the types of therapies that patients are choosing to use. Currently there remains a wide variation in claims (often unsubstantiated with evidence) about which CAM therapy is best suited for which condition (Long, Huntley, & Ernst, 2001), this creates confusion for patients and providers alike (Hsiao et al., 2006). Despite this, research indicates (Sherman et al., 2004) that patients are willing to try a range of therapies outside the mainstream healthcare delivery system, indicating that increased research and education is required. In fact, inclusion of education about CAM therapies in healthcare education settings is not only thought to be desirable (Wetzel, Kaptchuk, Haramati, & Eisenberg, 2003) but may help professionals answer increasing patient inquiries about CAM therapies (Kreitzer, Mitten, Harris, & Shandeling, 2002).

Evidence for osteopathic practice

The evidence relating to paediatric osteopathic practice is limited (Bronfort, Haas, Evans, Leininger, & Triano, 2010), and its lack acutely recognised within the profession (Williams, 2006) although the risk does seem to be low (Hayes & Bezilla, 2006). This may be related to the general nature of osteopathic practice (focusing on soft tissue manipulation and release of tension in the musculoskeletal system through gentle non invasive manual therapy techniques) and also to the fact that osteopaths empirically avoid high velocity thrust manipulations on the pediatric spine as favoured by the chiropractic profession, although some report these as relatively safe (Miller & Benfield, 2008) according to one study. However, infant catastrophic outcomes for infants seeing CAM practitioners and cranio-sacral therapists (Holla, Ijland, van der Vliet, Edwards, & Verlaat, 2009) who are non-osteopaths using a technique developed in the early days of osteopathy, have been reported and other authors have found significant catastrophic infant outcomes following pediatric spinal manipulation (Vohra, Johnston, Cramer, & Humphreys, 2007). So, the practice of manual therapy on the pediatric population must be open to strong scrutiny.

Alongside these types of studies it is necessary to explore the reasons why parents and carers seek CAM and osteopathic care for their children, and although the reasons can be varied, there is extremely limited data on why parents seek osteopathic care in New Zealand. Only two studies were found: both Master's level Theses at UNITEC, looking at the experience of parents in the osteopathic treatment of their infants which found that some reasons why parents sought osteopathic care was uncertainty and anxiousness concerning their child (Gardner, 2011); and the other looking at the predictors of parents seeking osteopathic care for their infant, which found that an increase in age, reaching full term in the pregnancy, a low score in the Holistic and Complementary and Alternative Medicine Questionnaire (HCAMQ), or a short labour length caused an increase in odds of seeking osteopathic care, whereas being of Maori ethnicity or being referred by a midwife or Royal New Zealand Plunket nurse decreased the odds of a parent using osteopathy for their child (Gardyne, 2011). This latter is of interest also as it does indicate that there currently exists a number of pediatric referrals from midwives and Plunket nurses to osteopaths in New Zealand although the extent for this and reasons for are unknown.

Aside from research into efficacy and risk there is also limited evidence to define what on osteopaths sees paediatric patients for, what types of care are administered, what outcomes are expected and what possible risks paediatric patients are exposed to when consulting an osteopath. In the Northern America the osteopathic profession must qualify as medical doctors as well as osteopaths (MD DO), but they do practice manual medical approaches with their patients, and some information can be gleaned from research into what paediatric patients presenting to an osteopathic medical practice are seen for (G. Lund & Carreiro, 2010) with some of the main presentations being plagiocephaly, torticolis, otitis media and scoliosis. There is also case study research into the osteopathic treatment that the American MD DO practitioners may give for premature infant feeding problems to aid the introduce breastfeeding to encourage prompt release from hospital care (G. C. Lund et al., 2011). Osteopaths in New Zealand do not hold a medical qualification.

The knowledge skills and attitudes of medical practitioners give them a different competency profile to osteopaths who do not also have a medical qualification. Hence it is essential to consider what are the minimum requirements for the knowledge skill and attitudes to ensure competence for paediatric osteopathic practice, how they are different, should they be different, and what

regulatory framework is required to support paediatric osteopathic practice given that CAM therapy use (meaning osteopathy as well in this context) poses various legal, ethical and clinical issues in decision making within paediatric healthcare (Gilmour, Harrison, Cohen, & Vohra, 2011).

In order to review these issues it is first necessary to establish whether osteopaths in New Zealand are seeing paediatric patients, what types of presentations or problems people are consulting osteopaths for in this regard, and what osteopaths are doing with their paediatric patients. If osteopaths are seeing patient for minor musculoskeletal injuries after falls and tumbles for example, or sports injuries in older children and adolescents, then this may require a different competence profile than if they are seeing patients who has otitis media, torticolis in infants, nipple latching and other feeding problems, for example.

The OCNZ commissioned research into the general nature of paediatric osteopathic practice in New Zealand to begin to provide data to ensure that paediatric osteopathic practice is operating under an appropriate framework, ensuring safe and minimal risk treatment to paediatric patients. This research is presented here, and is the first of a series of proposed projects to explore the competence and the broader capabilities required for paediatric osteopathic practice.

Method

This is a mixed methods study consisting of a literature / document review, interviews with osteopathic experts (those already seeing pediatric patients), and a survey to the New Zealand population of osteopaths registered with the OCNZ. The project was undertaken as part of a Masters in Clinical Education programme at Auckland University, which granted ethical approval for the research.

This paper is reporting on the aspects of the project that led to the development and administration of a snapshot survey exploring pediatric osteopathic practice, including such things as the types of patient problems seen, ages of patients presenting, and what treatment they may have received.

Literature searches were carried out to explore the research base for indications of relevant pediatric osteopathic capabilities and knowledge, skills and attitudes (KSAs). Interviews with osteopathic experts were undertaken to explore a range of issues such as the extent of paediatric osteopathic practice /range of conditions seen, the knowledge, skills and attitudes (KSA) the individual feels is required, their personal educational journey, and data on assessment they have undertaken in paediatric osteopathy. This was undertaken through semi structured interview format, to be transcribed, coded and analysed using qualitative methods.

Emergent data on the nature of pediatric practice by osteopaths was then used to develop a data collection instrument to be used in a snap shot survey of the profession. The data collection instrument was drafted and went through various iterations by a small group of osteopathic experts, pediatric osteopaths in the field, and also osteopaths who did not see many (or any) pediatric patients. Refinement of the instrument followed, a small pilot was conducted, and after final modification and it was sent to all osteopaths registered with the OCNZ at the time of the study.

The data collection instrument contained some quantitative data (such as the age of the child, then gender of the practitioner and so on) which was analysed using descriptive statistics, and in some cases sample t-tests were used to consider any statistical relevance. Short answer responses and

open ended questions were also included, requiring qualitative analysis through coding and themeing.

The data collection instrument was completed by the osteopaths, who firstly had to answer if they did or did not treat children with osteopathy. For those that did they were then asked to complete further questions, using their clinical notes or contemporaneous records, on up t o 5 new patients (people presenting for the first time to that osteopath), who were under the age of 18 years, in a 3 month period starting from 1 August 2010. For each of those 5 patients they recorded data about their treatments, for up to 5 treatment sessions. The data from these forms were ultimately collated, transcribed into Microsoft excel and NVivo8, and the data analysed using descriptive statistics or simple qualitative review.

Sample size

The osteopathic profession at the time of the study consisted in total of around 350 members, and so it was considered reasonable to sample the whole of this population. The OCNZ provided funding for the printing and postal dissemination of the survey.

Results

Literature findings

Literature searches through Medline, CINHAL and Ask Eric produced no relevant literature on osteopathic paediatric capabilities or KSA's. Some studies were found reporting on types of paediatric patients seen by osteopaths, which included asthma (Guiney, Chou, Vianna, & Lovenheim, 2005), colic (Hayden & Mullinger, 2006), otitis media (Mills, Henley, Barnes, Carreiro, & Degenhardt, 2003), spastic cerebral palsy (Duncan, Barton, Edmonds, & Blashill, 2004), dysfunctional voiding (Nemett et al., 2008), for neurologic development (Frymann, Carney, & Springall, 1992), nipple feeding dysfunction (G. C. Lund, et al., 2011), nonsynostotic plagiocephaly (Lessard, Gagnon, & Trottier, 2011), for the heart and cardiac system (Wagner & Gudrun, 2007), middle ear effusion (Prakash & Michalik, 2010), sports injuries (Bolin), breastfeeding (Cornall, 2011), for gastrointestinal function in preterm infants (Pizzolorusso et al., 2011), the previously mentioned article concerning American pediatric osteopathic practice were the 3 most common presentations in the under 5's were noted as otitis media, skull or face deformity (plagiocephaly) and torticolis (G. Lund & Carreiro, 2010) and even a commentary on the treatment by osteopaths of children with scarlet fever in the 19th and 20th centuries (Liem & Ciranna-Raab, 2011) although no references can be found to illustrate this as an ongoing therapeutic approach nowadays. This non exhaustive list indicates that osteopaths have seen pediatric patients for a very wide range of conditions and presentations.

Interview data

In the semi-structured interviews in the study being reported here 10 osteopathic practitioners were approached through purposive sampling as being recognised within the profession as having expertise in pediatric osteopathy. These osteopaths were interviewed for 1-2 hours, the interviews were recorded, transcribed and then the data entered into NVivo8 software for coding, themeing and analysis using qualitative approaches.

The following is a list illustrating the theme identified from (of types of conditions or reasons for presentation to) the osteopathic experts, and how many times these were mentioned in the data.

breastfeeding issues	3
colic and unsettled or crying babies	5
coming with no specific presenting problem	5
Difficult or traumatic birth	5
EENT	4
Feeding problems	3
general medical disorders	2
GIT issues	6
learning difficulties	5
plagiocephaly	4
respiratory issues	1

The following are excerpts from the data in the interviews, in the osteopaths own words, discussing why people brought their children to the osteopaths, and for what reasons. These two data sets subsequently informed the development of the data collection instrument for the snapshot survey.

<Internals\expert interviews\Interview 1> - § 2 references coded [0.46% Coverage]

Reference 1 - 0.08% Coverage

we see a lot of feeding issues

Reference 2 - 0.38% Coverage

we see a lot of babies that are coming because they have had a difficult labour either because they have got problems from that or it might be secondary,

<Internals\expert interviews\Interview 10> - § 2 references coded [8.06% Coverage]

Reference 1 - 4.58% Coverage

colic, reflux, constipation, learning difficulties, kids that have had severe trauma, cerebral palsy, autism, adhd, I had kids with gall stones, quite a few episodes of those and parents not wanting the gall bladder removed as they were so young. That kind of stuff. Acute scenarios, kids that are pre sort of appendicitis, kids with lots of continuous runny noses, recurrent ear infections, lots of maybe acute infections on top of chronic infections, so kids that are more, tend to get bronchitis, but have had underlying constant colds that move into bronchitis, that kind of stuff. The odd situations where there might be tumours, not many but some

R – where it was pre diagnosed,

P – no, the kid starts limping, knee pain or hip and I had to refer them off, one with brainstem tumour that they didn't know, that we diagnosed it (well, we didn't diagnose it but we knew that there was,

R –that it wasn't quite right,

P – yes, so we have had quite a bit of that. We have had renal reflux,

Reference 2 - 3.48% Coverage

And I think it varies, if you are talking about learning difficulties, about adhd, all of those things require such multi factorial approaches that you can't just have osteopathy with that, you have to look at diet and allergies, you have to have a look at what is happening at school and emotionally, and refer them, or whatever – there are some stuff that we feel comfortable talking to them about, and some stuff we refer to other practitioners for. So that is really different, and it can be, can be but

not always a slower response, with learning difficulties. So you have to have some way of assessing it say, every 3 months to know if, OK has the child changed, what has changed, what is different, what has changed, are they reading better, or what.

<Internals\expert interviews\Interview 2> - § 1 reference coded [0.49% Coverage]

Reference 1 - 0.49% Coverage

most of what I see is very young babies, up to 3 months, some of them up to 6 months, but certainly those first few days, under a week to the first three months so getting the newborns sorted out

<Internals\expert interviews\Interview 4> - § 2 references coded [4.01% Coverage]

Reference 1 - 2.01% Coverage

There seems to be an enormous range of presentations. I predominantly see neonates, to one year, although I did see a lot of children from years 4-8 – there seems to be a toddler period where they don't come for treatment. We get quite a lot of referral for check ups after birth, latching problems, failure to achieve expected milestones, concentration, learning and coordination problems, particularly in the 4-8 year, infections, children who are just not right (parental description), diarrhoea and constipation, head shape with no other symptoms, facial asymmetries, failure to turn head either way, injuries and headaches, those are probably the common ones.

Reference 2 - 2.00% Coverage

its partly complexity and it is partly getting into the realms of how structure and function is relating to presentation, and whether that is in the realms of normal or whether we are talking about structure and function that falls outside the realm of the well child, and into the realm of injury and pathology. I sometimes touch on pathology, diagnostically e.g. pyloric sphincter stenosis that has been missed. But that is the divide, I am not on the whole I am dealing with babies and thinking 'has that baby got some weird syndrome that I should know about', on the whole I am dealing with babies who are who are basically well but not functioning properly.

<Internals\expert interviews\Interview 7> - § 1 reference coded [1.63% Coverage]

Reference 1 - 1.63% Coverage

From birth trauma to learning disabilities to ? to children with cerebral palsy, all that, well anything really. Anything that the parents or the patient might think is a viable treatment for that condition. A lot of it is word of mouth and they are doing it as an adjunct to other things. By the time they get into the clinic they have an idea about what other things may be available, treatment wise.

From these comments it can be seen that the reasons the osteopaths' consider people present to them are varied and broad, and do not easily follow a particular list of conditions or pathological problems. This would challenge the data collection instrument design, but after debate amongst some of the osteopathic experts it was decided to allow the osteopathic 'terminology' to remain, so that when a list of items to tick to record what the patient presented with, it included both subjective and objective symptoms and actual pathology or conditions recognised in standard pediatric practice, and there is a variety of overlap between headings. This list can be seen in:

Abdominal pain
Abnormality of gait
Asthma
Behavioural problems
Celiac disease
Colic
Developmental delay
Failure to Thrive

Feeding problem (including suckling difficulties, excluding reflux)
Fussy infant/baby (including persistent crying, excluding feeding problems and reflux)
Gastro-oesophageal Reflux
Head Injury
Headache (not migraine)
Hypotonia
Leg pain
Lumbar back pain
Migraine
Muscle spasm
Neck pain
Otitis media (chronic)
Scoliosis
Sports injuries
Positional plagiocephaly / Skull or face deformity
Sleep disturbance
Thoracic back pain
Torticollis
Unequal leg length
Upper respiratory infection

Whilst utilising this type of list may make data comparison more difficult between studies, it highlights how pediatric osteopathic practice currently undertaken within New Zealand, which may or require further consideration. Readers should note that this survey was primarily to record the osteopaths views and interpretations to illustrate their approach to patient care, to begin to identify if relevant knowledge skills and attitudes were appropriately prevalent. The data set was also not designed as a strong quantitative review of absolutes, and this study should be viewed as an exploratory window on current practice, giving a first insight into practice, which will need to be refined with further future research.

Following analysis of the interviews several other items for the data collection instrument for the snapshot survey were identified:

Regarding patients:

Gender, location, age of patients

Presentation types

Seeing other practitioners as well

Co-existing conditions

Regarding the osteopaths

Practising paediatric care or not

Gender, time in practice, range of formal and informal training or learning experiences

Referral to and from osteopaths to other practitioners

Osteopathic diagnosis

Osteopathic aim

Treatment / care types

Survey returns

384 registrants – postal survey sent to all registrants of the OCNZ.

81 returns – 22% of the sample - 2 reminder emails were sent to achieve this return rate.

15 people said they didn't treat children - 18.5% of returns, and 81% of the returned samples were from osteopaths who did treat children.

66 osteopaths reported on paediatric patient management.

From these 66 osteopath's descriptions:

Data was provided on 289 individual children ranging from less than one week old to 18 years old.

Of the 289, 144 were female children, 144 were male, and one child's gender was not reported.

389 treatments on males and

367 treatments on females were reported.

The child with no gender described received one treatment / session.

The 289 children each received between one and 5 treatments in the study period.

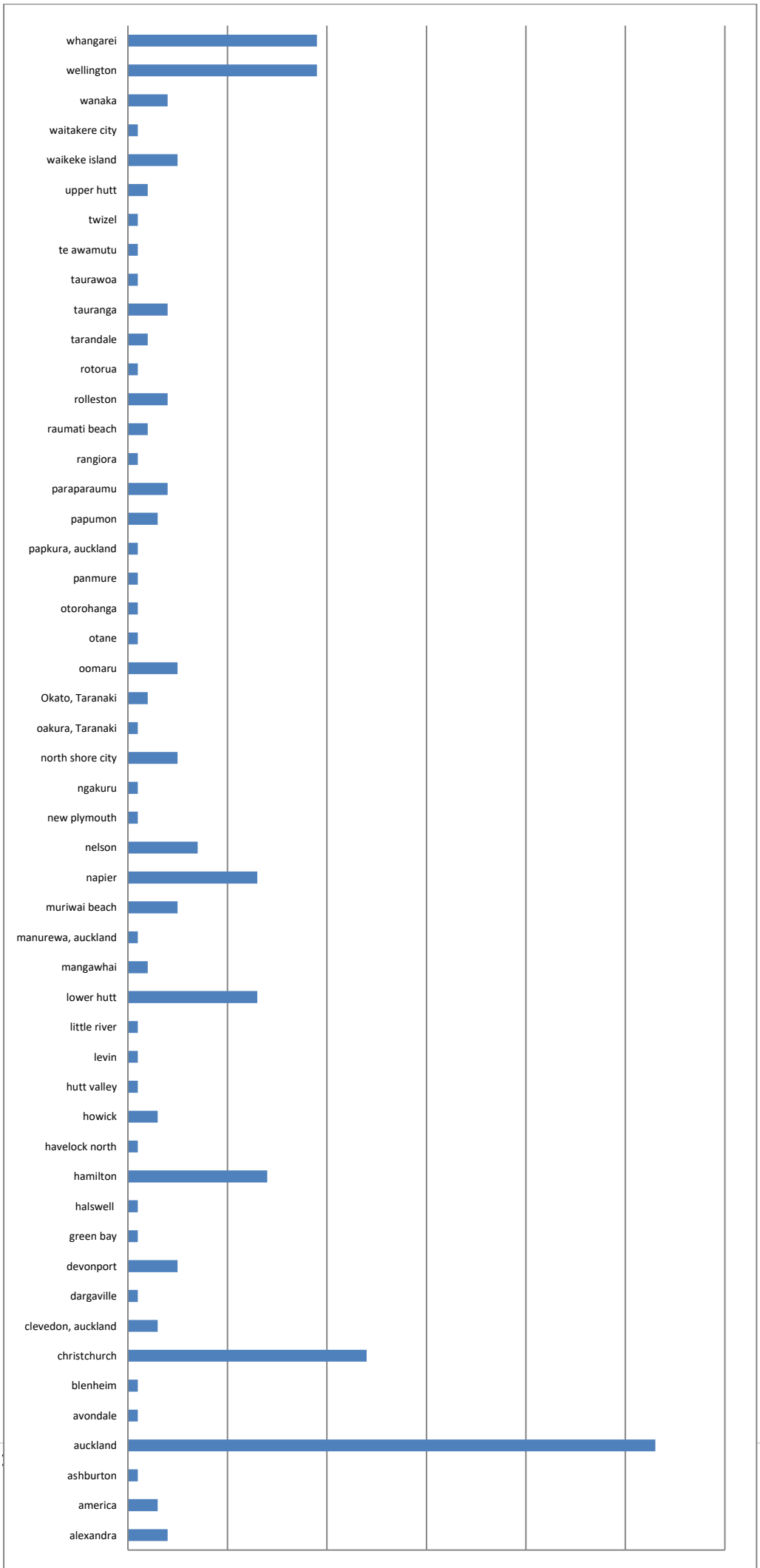
The total number of treatments recorded was 757.

Age of the patients

Age of patients	Number of patients	Male to female ratio of these children
Less than 6 weeks old	59	30 f : 29 m
6 weeks to 11 months*	53	26 f : 26 m, 1 unrecorded patient gender
1 year to 4 years	29	15 f : 14 m
5 years to 12 years	71	32 f : 39 m
13 years and over	77	41 f : 36 m

Location of patients

Although the addresses of the patients was not requested, the osteopaths were asked to note the postcode (as they had recorded it) of the patient that presented to them. This the osteopath's location was not recorded, as many patients appear to travel a variety of distances to osteopaths, whereas recording the patient location in this way at least indicates the possible spread of patients that utilise osteopathic care. This data can be seen in table.... and this indicates that osteopathic pediatric patients derive from all over New Zealand.


whangarei
wellington
wanaka
waitakere city
waikeke island
upper hutt
twizel
te awamutu
taurawoa
tauranga
tarandale
rotorua
rolleston
raumati beach
rangiora
paraparaumu
papumon
papkura, auckland
panmure
otorohanga
otane
oomaru
Okato, Taranaki
oakura, Taranaki
north shore city
ngakuru
new plymouth
nelson
napier
muriwai beach
manurewa, auckland
mangawhai
lower hutt
little river
levin
hutt valley
howick
havelock north
hamilton
halswell
green bay
devonport
dargaville
clevedon, auckland
christchurch
blenheim
avondale
auckland
ashburton
america
alexandra

Practitioner gender:

61 osteopaths who saw paediatric patients declared their gender, and there were

5 osteopaths who saw paediatric patients did not declare their gender (6%).

Of the remainder,

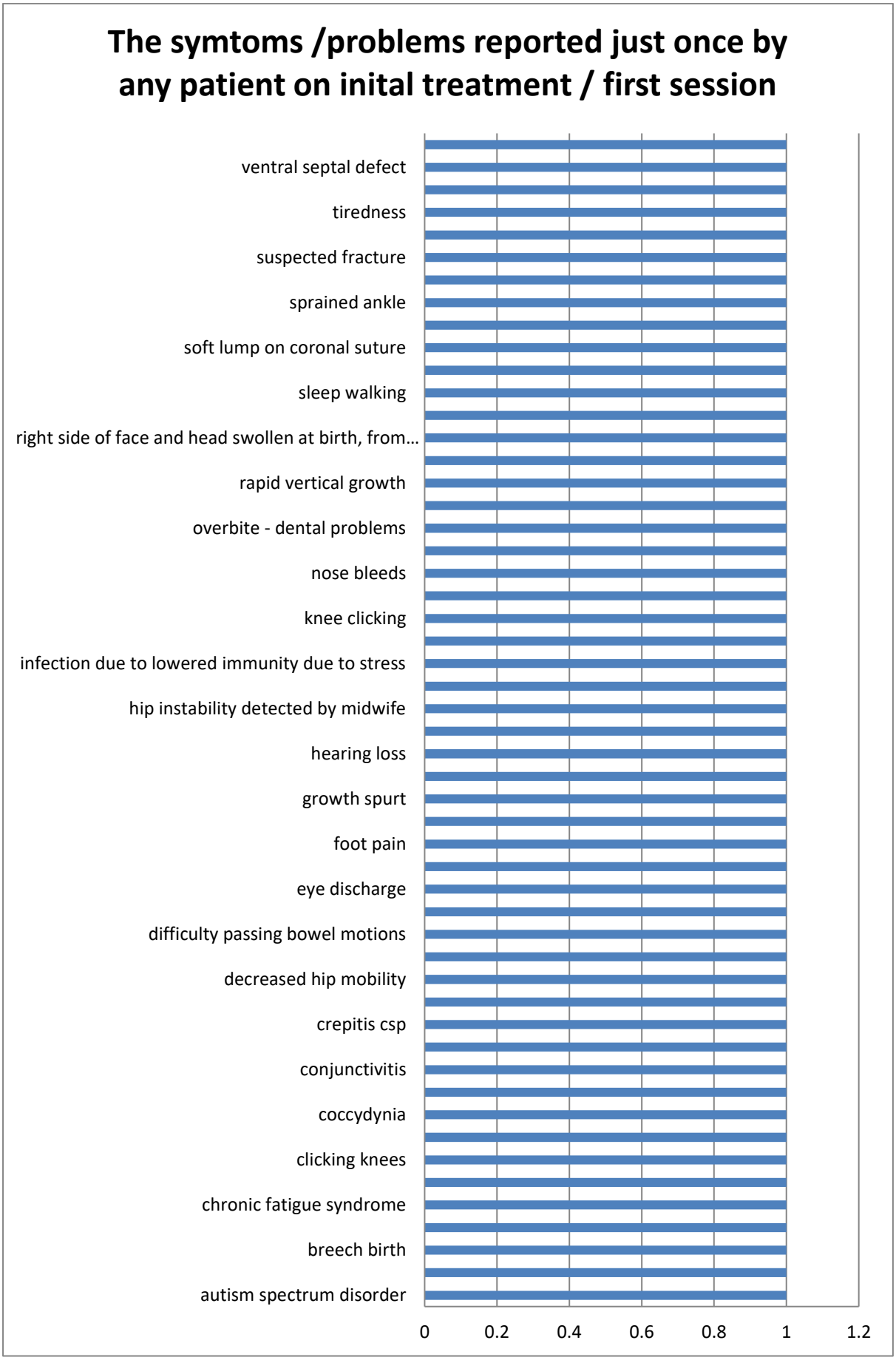
29 were female osteopaths (36%), and

32 were male osteopaths (40%).

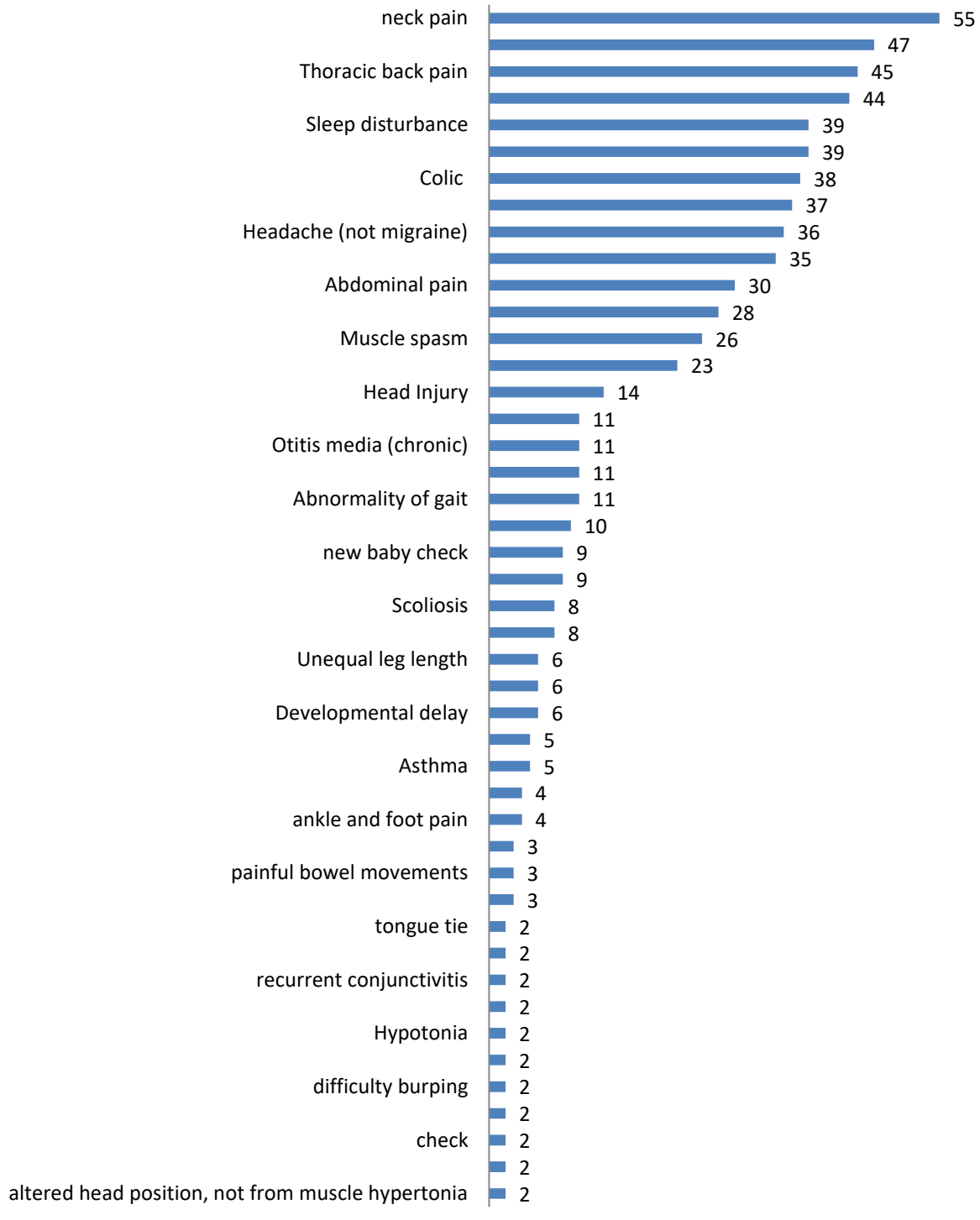
Length of time in practice

The spread of time in practice between male and female osteopaths was reviewed, and a similar spread between the two was observed. The youngest osteopath to reply had been in practice for 6 months and the oldest for 34 years. Hence paediatrics patients included in this study were seen by osteopaths who had been practising for a large range of time.

Presenting 'conditions'



The frequency of other reported symptoms / presentations on initial treatment / first session



From this it can been seen that many patients are likely to present with a variety of factors, and this is further indicated by the following table, giving the average number of 'symptoms' per child on their first presentation:

Both child genders across all osteopaths:

Symptom numbers	Both child genders	Male patients	Female patients
Average number of symptoms on initial presentation	2.57	2.58	2.55

This poses interesting questions for when we consider the treatments given by osteopaths, as the osteopath will tend to treat 'everything' all together rather than separating this conditions or presentations into discrete items and treating them separately. Further discussion on this point will be required, but is beyond the scope of this paper.

Age related presentations

The data revealed some interesting factors for the types of conditions or symptoms presenting in children of different ages, which are laid out in the following tables.

Patients who are less than 6 weeks

Top 10 conditions for these patients (n=59 patients) – musculo-skeletal and non-musculo-skeletal presentations combined.

Colic	19
Feeding problem	18
Fussy infant/baby	17
Sleep disturbance	16
Gastro-oesophageal Reflux	13
Abdominal pain	12
new baby check	9
Positional plagiocephaly / Skull or face deformity	9
Torticollis	4
constipated	3

Top 10 non musculo-skeletal conditions for these patients (n=59)

Colic	19
Feeding problem	18
Fussy infant/baby	17
Sleep disturbance	16
Gastro-oesophageal Reflux	13
Abdominal pain	12
constipated	3
Behavioural problems	1
cleft palate	1

Developmental delay	1

Top 10 musculo-skeletal conditions for these patients (n=59)

new baby check	9
Positional plagiocephaly / Skull or face deformity	9
Torticollis	4
neck turn / side preference	3
Head Injury	2
Muscle spasm	2
Scoliosis	2
breech birth issues	1
infant hip instability	1
post birth localised facial / head swelling	1

Patients who are between 6 weeks and 11 months at initial presentation

Top 10 conditions for these patients (n=53 patients) – musculo-skeletal and non-musculo-skeletal presentations combined.

Colic	17
Feeding problem	17
Fussy infant/baby	17
Sleep disturbance	16
Gastro-oesophageal Reflux	14
Positional plagiocephaly / Skull or face deformity	11
Abdominal pain	10
Torticollis	6
conjunctivitis / eye discharge	3
constipation	3

Top 10 non musculo-skeletal conditions for these patients (n=53)

Colic	17
Feeding problem	17
Fussy infant/baby	17
Sleep disturbance	16
Gastro-oesophageal Reflux	14
Abdominal pain	10
conjunctivitis / eye discharge	3
constipated	3
Developmental delay	2
Failure to Thrive	2

Top 10 musculo-skeletal conditions for these patients (n=53)

Positional plagiocephaly / Skull or face deformity	11
Torticollis	6
head turn (not Torticolis / tight muscle)	3
Muscle spasm	2
new baby check	2
Thoracic back pain	2
arm pain	1
Neck pain	1
neck turn / side preference	1
jumpy baby' / caesarian issues	1

Patients who are between 1 and 4 years at initial presentation

Top 10 conditions for these patients (n=29 patients) – musculo-skeletal and non-musculo-skeletal presentations combined.

Otitis media (chronic)	8
Behavioural problems	4
Feeding problem	4
Upper respiratory infection	4
Neck pain	3
Sleep disturbance	3
Abnormality of gait	2
Colic	2
Failure to Thrive	2
Headache (not migraine)	2

Top 10 non musculo-skeletal conditions for these patients (n=29)

Otitis media (chronic)	8
Behavioural problems	4
Feeding problem	4
Upper respiratory infection	4
Sleep disturbance	3
Colic	2
Failure to Thrive	2
painful bowel motions	2
Abdominal pain	1
Asthma	1

Top 10 musculo-skeletal conditions for these patients (n=29)

Neck pain	3

Abnormality of gait	2
Headache (not migraine)	2
Positional plagiocephaly / Skull or face deformity	2
clumsy	1
Leg pain	1
Lumbar back pain	1
Muscle spasm	1
Sports injuries	1
Thoracic back pain	1

Patients who are between 5 and 12 years at initial presentation

Top 10 conditions for these patients (n=71 patients) – musculo-skeletal and non-musculo-skeletal presentations combined.

Neck pain	21
Leg pain	18
Headache (not migraine)	16
Lumbar back pain	16
Thoracic back pain	16
Sports injuries	14
Muscle spasm	8
Behavioural problems	6
Abnormality of gait	5
Head Injury	5

Top 10 non musculo-skeletal conditions for these patients (n=71)

Behavioural problems	6
Migraine	4
Sleep disturbance	4
Abdominal pain	3
Asthma	3
bedwetting	2
constipation	2
Developmental delay	2
Otitis media (chronic)	2
complex regional pain syndrome	1

Top 10 musculo-skeletal conditions for these patients (n=71)

Neck pain	21
Leg pain	18
Headache (not migraine)	16

Lumbar back pain	16
Thoracic back pain	16
Sports injuries	14
Muscle spasm	8
Abnormality of gait	5
Head Injury	5

Patients who are 13 years and over (but less than 19 years) at initial presentation

Top 10 conditions for these patients (n=59 patients) – musculo-skeletal and non-musculo-skeletal presentations combined.

Neck pain	31
Sports injuries	31
Lumbar back pain	27
Thoracic back pain	26
Headache (not migraine)	18
Leg pain	18
Muscle spasm	13
Head Injury	5
uncomfortable defecation	5
Abdominal pain	4

Top 8 non musculo-skeletal conditions for these patients (n=59) – there were not 10 types reported

uncomfortable defecation	5
Abdominal pain	4
Migraine	4
gynaecological problems	2
Asthma	1
chronic fatigue	1
Sleep disturbance	1
infection due to lowered immunity	1

Top 10 musculo-skeletal conditions for these patients (n=59)

Neck pain	31
Sports injuries	31
Lumbar back pain	27
Thoracic back pain	26
Headache (not migraine)	18

Leg pain	18
Muscle spasm	13
Head Injury	5
Abnormality of gait	4
Shoulder	4

Discussion

From this data it can be seen that osteopaths are seeing children for a range of conditions and symptoms, and it is not clear whether these are 'diagnosed' by the parent, a medical practitioner or other healthcare provider, or by the osteopath.

Given that for the over 5's most of the conditions or problems seen were within the musculoskeletal system, such as muscular strain, sprains and sports injuries, these might arguably be what most people expect osteopaths to see, and so could arguably be covered by a general scope of osteopathic practice.

Those types of conditions or symptoms seen in patients under the age of 5 though include some problems such as sleep disturbance, ear problems, behavioural or feeding problems, constipation, abdominal pain, unsettled infant, and reflux are arguably conditions were a number of possible diagnoses may relate to the presentation and some of these are possibly serious conditions, and all of which require careful diagnosis and consideration. For these types of conditions it must be asked if osteopaths have the relevant skills, knowledge and competencies required to manage these types of patients, either within their own clinics, or as part of a referral network, ensuring that the child gets the appropriate medical care they need.

Conclusion.

This snapshot into the types of conditions and symptoms that osteopaths see in the pediatric population in New Zealand gives a first insight into pediatric osteopathic practice, and provides a useful data set for further research and consideration.

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