

The Characteristics, Experiences and Perceptions of Registered Massage Therapists in New Zealand: Results from a National Survey of Practitioners

Phillip Cottingham, ND, BHSC, Grad Dip HSC, PG Dip HSc,^{1*}
Jon Adams, PhD,² Ram Vempati, PhD,¹ Jill Dunn, MHSC, BHSc (Comp Med);
Dip. Natural Therapeutics, Dip. Herb Med; RGON (non-practising),¹ David Sibbritt, PhD²

¹Wellpark College of Natural Therapies, Auckland, New Zealand, ²Australian Research Centre in Complementary and Integrative Medicine (ARCCIM), University of Technology, Sydney, Australia

Background: Massage therapy is widely recognized as offering many health benefits, with a growing number of studies finding it has value in stress management, pain reduction, and overcoming physical limitations. However, there are few studies of massage therapists practices and perceptions in New Zealand and internationally. This paper reports the findings from the first national survey examining the characteristics, perceptions, and experiences of New Zealand-based massage therapists on a range of aspects related to their role and practices.

Purpose: This study sought to ascertain the characteristics, experiences, and perceptions of massage therapists in New Zealand, particularly in the aspects of: integration of health care; attitudes and practices related to research; and evidence and attitudes to registration.

Setting: Massage practice in New Zealand (nationwide survey).

Participants: Members of Massage New Zealand (a massage practitioners association).

Research Design: Massage practitioners were surveyed online, using a 65-part questionnaire, on a range of characteristics of their practices and their attitudes to research, integration, and registration. Statistical analysis was performed using STATA. Statistical significance was set at 0.05.

Main Outcome Measures: Four hundred massage therapists (MTs) were invited to participate and 115 responded, providing a response rate of 29%. MTs valued research (95%) and perceived that it had an impact for their practices (88%). Significant correlations were found for research value and: mean case-load ($p = .009$) and level of academic qualification ($p = .004$). The majority of MTs (79%) supported integration with conventional practitioners, and 83% referred clients to general practitioners, with 75% receiving referrals from general practitioners. Ninety-three percent of MTs supported registration, with 67% of those supporting statutory registration.

Conclusion: Massage practitioners perceive that they make a significant contribution to health care,

but area of practice, such as research, and referral and integration into mainstream health care require more in-depth investigation.

KEY WORDS: massage; health care survey; perception; practices; integrative medicine; referral; government regulation

INTRODUCTION

Massage therapy (MT) is one of the most popular forms of complementary and integrative medicine (CIM) with the general public.⁽¹⁻⁷⁾ The perceived health benefits for MT users include: emotional well-being and reduced physical limitation;⁽⁸⁾ pain reduction;⁽⁹⁾ stress reduction; enhancing sleep; injury repair and enhancing recovery from injury.⁽¹⁰⁾

A number of studies of MTs have been conducted worldwide, investigating MTs practice characteristics and perceptions of aspects related to their practices (see Table 1). Some studies have focused on the therapeutic encounter and how MTs approach the treatment of patients and conditions^(11,12) and others have investigated MTs' perceptions and practice characteristics.⁽¹³⁻¹⁵⁾

The practice of MT in NZ is regulated, under a voluntary registration system by Massage New Zealand (MNZ), the only professional body in NZ that regulates MTs.⁽¹⁶⁾ At the time of the survey reported here, MNZ had 400 members.⁽¹⁷⁾

To date, there has only been one New Zealand (NZ) study of the practices of MTs, investigating: MTs' profiles; a range of practice characteristics and referral patterns; modalities used; conditions treated; and a selection of professional issues. This work, conducted in 2008, provides early descriptive data regarding MTs' practice across NZ.⁽¹⁴⁾

A 2013 study has shown that, in 2006, Australian MTs comprised the largest number of CIM providers per head of population (1:2,424). Comparatively, in 2006, NZ had one MT for every 3,167 people.⁽¹⁸⁾

MTs' attitudes and perceptions of the value of regulation and registration have been investigated in

COTTINGHAM: SURVEY RESULTS

TABLE 1. Comparison of International Studies of Massage Therapists

<i>Research Paper</i>	<i>Country</i>	<i>Study Method</i>	<i>Key Domains</i>	<i>Regulation & Funding</i>	<i>Research and Evidence-Based Practice</i>	<i>Integration & Referral</i>	<i>Alignment t National Strategic Health Objectives</i>	<i>Academic Qualifications</i>
Smith, et al. ⁽¹⁴⁾	New Zealand	Quantitative survey of registered massage therapists (n=66)	Demographics Workload Practice characteristics Referral Patterns Treatment characteristics (modalities offered; conditions treated) Professional issues (indemnity insurance)	Not discussed	Not discussed	Common sources of referral were: physiotherapists (67.2%); general practitioners (60.3%); chiropractors (34.5%), and osteopaths (25.9%). Common referees were: Doctor or general practitioner (69.7%); Osteopath (66.7%); Physiotherapist (60.1%); Homeopath or naturopath (47.0%); Acupuncturist (43.9%); Chiropractor (43.9%); Podiatrist (36.4%); Sports medicine specialist (27.2%); Yoga, Feldenkrais, or Alexander technique practitioner (27.2%); Counsellor (25.8%); Craniosacral therapist (25.8%); other Massage therapist (18.2%)	Not discussed	Ranged from a certificate to a baccalaureate degree, with a post-high school diploma (from a polytechnic or other tertiary training provider) being the most commonly reported qualification (89.4%).
Smith ⁽¹⁹⁾	New Zealand	Mixed methods approach Survey of massage therapists Voluntary, purposive, quota sampling was used to select interview participants including massage students	Demographics	“Regulation, cohesion and set standards as being most valuable for growth within the industry.”	Agreement with degree level education linked to evidence-base required for practice	Not discussed	Not discussed	Over three quarters of participants (97/123, 78.8%) held a certificate or diploma massage qualification, with a bachelor’s degree in massage therapy (12/123, 9.8%) being less common 49.6% of the participants agreed that degree level education should be the minimum qualification to practice

COTTINGHAM: SURVEY RESULTS

Leach ⁽¹⁸⁾	International survey (NZ data included)	Quantitative Analysis of census data for five countries (NZ included, n=1272)	Massage workforce size Demographics Workloads Weekly income Academic qualifications Areas of employment	Not discussed	Not discussed	Not discussed	Not discussed	New Zealand High school or certificate (38.4%); Diploma or advanced diploma (36.1%) Bachelor degree (13.4%) Graduate diploma or certificate (3.5%) Postgrad. Degree (1.2%) No qualif. Or not stated (8.5%)
Wardle, et al. ⁽⁵²⁾	Australia	5 question telephone survey of Association of Massage Therapists (Australian)	Demographics Practice characteristics	Not discussed	MTs (56.1%) relied on research dissemination provided by their professional association A significant number of respondents (39.2%) are more active accessing articles online and other journals. Income and continuing professional education were significantly associated with an active approach to research amongst massage therapists.	Not discussed	Not discussed	Not discussed
Porcino, et al. ⁽¹⁵⁾	Canada (Alberta)	Mixed methods (quantitative survey and semi-structured qualitative interviews)	Demographics Modalities utilised Training characteristics Workloads Assessment (of effectiveness) methods Research and regulation links	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed

COTTINGHAM: SURVEY RESULTS

Porcino, et al. ⁽¹¹⁾	Alberta, Canada	Secondary analysis of quantitative data collected in a previous combined methods study of massage therapists	Demographics Practice characteristics and methodologies	Not discussed	Not discussed	Practitioners described a gradual development of decision-making processes as tools for integration. Most practitioners see integration as their administering different types of body therapy. Lack of integration of therapies and practitioners linked to education. No discussion of referral.	Not discussed	Not discussed
Gowan-Moody, et al. ⁽³⁴⁾	Canada	Quantitative survey	Demographics Research attitudes, perceptions and beliefs Self-reported research skills Research use and factors influencing research use	Regulation positively influences EBP	87% agreed that research added credibility to the profession 93% agreed that research leads to improved client care 93% agreed that research helps to evaluate existing treatment	Not discussed	Not discussed	Not discussed
Kania-Richmond, et al. ⁽³⁶⁾	Canada	Mixed methods: survey & semi-structured interviews	Not discussed	Not discussed	Some participants involved in research processes to evaluate treatment, none as researchers	Education critical to preparing therapists to work in an integrative environment.	Not discussed	Not discussed
Baskwill & Dore ⁽³⁵⁾	Ontario, Canada	Mixed methods survey	Demographic data Awareness of evidence and information sources	Not discussed	Therapists rate research information at high importance, but low frequency of use. Lack of access to researched information may contribute to this situation.	Not discussed	Not discussed	Not discussed
Cherkin, et al. ⁽³²⁾	USA	Quantitative telephone survey of 4 CIM professions (including MT)	Demographics Training characteristics Practice characteristics Workload	Not discussed	Not discussed	Not discussed	Not discussed	Not discussed

Sherman, et al. ⁽¹²⁾	US (Connecticut & Washington)	Quantitative telephone survey of massage practitioners	Demographics Reasons for patient visits Interaction between MTs and other health professionals Practice characteristics (assessment and therapies applied)	Not discussed	Not discussed	Patients are mainly self-referred (70%); referral from physicians (osteopathic and GPs) (7.5%)	Not discussed	Not discussed
Stuttard ⁽³⁸⁾	UK	Qualitative interviews with focus groups	Demographics Evidence based practice in massage Regulation	Regulation seen as a significant factor in development of EBP in massage	Need for ongoing education in research and EBP Availability of databases an important factor in development of EBP Links to universities important in development of EBP in massage	Not discussed	Not discussed	Not discussed
Perlman, et al. ⁽⁴⁰⁾	USA	Qualitative interviews	Limited demographic data Experience of participating in a clinical trial	Not discussed	Massage can be promoted through research Increased perception of the value of research	Not discussed	Not discussed	Not discussed

a number of studies in NZ,^(19,20) Australia,^(21,22) and Canada.⁽²³⁾ Findings from these studies illustrate the importance of understanding practitioner perceptions and practices to inform the emergent professions of CIM, such as MT,^(24,25) an issue highlighted by the NZ Ministerial Advisory Committee (of CIM) in its identification of the need for “quality, unbiased information on the safety and efficacy of CIM modalities, and for further work to be done to identify and address consumers’ needs for information about the practice of CIM in New Zealand”.⁽²⁶⁾

Inspired by the other international studies and the Ministerial Advisory Committee’s recommendation, researchers from two colleges delivering massage education developed a survey to collect data on CIM practitioners’ perceptions and practices in NZ. This paper reports the findings from this survey.

A comprehensive literature search identified only one paper⁽¹⁴⁾ on CIM practitioner attitudes and perspectives in NZ. The importance of understanding evidence for CIM practice⁽²⁷⁾ led to the development of a survey investigating perceptions

and practices among CIM practitioners. This paper reports findings from this survey with regards to MTs’ characteristics, experiences, and perceptions in NZ and makes comparison with similar studies in NZ and internationally.

METHODS

A largely quantitative online survey was administered to a range of practitioners (including MTs, naturopaths, herbalists, and homeopaths) in NZ, examining their characteristics, perceptions, and experiences relating to a range of key practice-related issues, such as use of evidence in MT practices and integration with other health care practitioners. Using an online platform (via Survey Monkey), the survey included seven domains: demographic practitioner data; practice and referral characteristics; academic qualifications; perceptions and experiences regarding research; integration; registration, and alignment to the NZ health strategy.⁽²⁸⁾

Sample

A convenience sampling approach was utilized. MTs were recruited through Massage New Zealand (MNZ), the NZ professional body for MTs with a membership (at the time of the survey) of 400. (At the time of the survey there were approximately 1,400 MTs in NZ.⁽²⁹⁾ However, MNZ is the only organization that registers MTs in NZ; therefore, it was selected for collection of data.) A similar approach has been employed by another survey of MTs in NZ.⁽²⁸⁾ The total dissemination of the survey was to 1,067 CIM practitioners. This paper reports on the data obtained from MTs only.

Data Collection

Ethics approval was granted by the NZ Ministry of Health National Ethics Advisory Northern A Committee⁽³⁰⁾ and, for ongoing analysis, the ethics committee of the University of Technology Sydney, Australia.⁽³¹⁾ Informed consent was implied by participation, per the NZ national ethics committee guidelines.⁽³⁰⁾ Participants were invited to complete the survey via letters that were sent to prospective participants by their respective associations. The raw data were then downloaded by the survey team onto spreadsheets.

Statistical Analyses

Descriptive analysis was conducted (using Excel software) and included frequencies, percentages, means, and standard deviations, where applicable. Bivariate associations between categorical variables used a chi-square test, with a Student's *t* test being applied to test mean differences across categorical variables. Statistical analyses were conducted using Stata[®] software. Statistical significance was indicated by a *p* value of $< .05$.

RESULTS

One hundred and fifteen MTs responded to the questionnaire (representing 29% of MNZ membership at the time of the survey). Respondents consisted of 86% females and 14% males, which closely related to the gender make up of MNZ membership at the time of the survey (80% female, 20% male). Forty-one percent of respondents were aged less than 45, with 42% aged between 45 and 54, and 18% aged 55 or older. The base level of qualifications for majority of MTs (64%) was diploma or advanced diploma. Some respondents did hold higher qualifications, with 9% holding a post-graduate degree.

Practice Characteristics

MTs' practices were located mostly in cities (58%), with 31% in towns and 11% rurally. Fifty percent of

MTs utilized professional rooms, with 32% utilizing their own homes and 10% consulting via mobile practices, either going to the client's workplace or homes. Most MTs practised part-time (61%), with 36% full-time and 3% practising occasionally. Mean practitioner hours per week were 18.6 ($n = 106$, $SD = 10.6$), with 47% practising over 20 hours per week. Massage therapy consultations were an average duration of 68 minutes for the initial visit and 58 minutes for follow-up consultations. Average total caseloads per month were 45.6 ($SD = 37.0$), with median caseloads per month being 39 comprising 11.4 ($SD = 16.1$) new clients per month and 35.3 ($SD = 28.8$) follow-up clients per month. On average, 4.7 hours per week ($n = 37$, $SD = 3.7$) were spent in training (massage therapy professional development). Most other mean massage therapy-related hours per week were spent in teaching faculty ($n = 18$, mean 10.5, $SD 9.1$) followed by practice-related tasks (mean = 4.7; $SD = 7.0$).

Research

The majority of MTs (95%) perceived research as having value for their practice, with 88% stating that it impacts (highly or moderately) on their practice. Table 2 depicts the associations between practitioner characteristics and research value and research utilization. A significant inverse association ($p = .009$) was found between mean case-load and the value placed on research. Those practitioners who considered research as having value for their practice spent an average of 17.9 ($SD = 10.3$) hours in clinical practice, compared to the 28.8 ($SD = 7.6$) hours spent in clinical practice by those MTs who perceived research as having no value for their practice. Another significant association was found between academic qualification and value placed on research ($p = .004$), with those who hold a certificate or diploma more likely to value research. No significant associations were found between research impact (on MTs' practice) and years of experience, practice hours per week, training hours per week or average caseload per month.

While 46% of respondents reported having the skills to interpret research within their clinical environment, only 15% reported having the skills to conduct research. Sixty-seven percent of the MTs reported that they did not keep up-to-date with research findings. Evidence from research was sourced by the MTs from: association journals (64%); web articles (54%); health-specific magazines (45%); news articles (45%); online scientific journals (34%); association meetings (21%); peer reviewed journals (21%); newsletter from manufacturers (17%); and international conferences (12%). The reasons given by MTs for not having skills to interpret research were: insufficient time (52%); insufficient skills in reading research papers (20%); financial restraints (7%); no access to databases (7%); and the view that it is not important to MTs' practices (7%).

TABLE 2. The Association Between Massage Practitioner Characteristics and Aspects of Research

Practitioner and Practice-Related Characteristics	Using Research for Validating Practice			Research Impact on Practice		
	Useful (n=98)	Not Useful (n=5)	p value	High/Moderate (n=91)	Low (n=12)	p-value
	Mean (SD)	Mean (SD)				
Years of Experience	8.8 (6.6)	10.6 (8.0)	0.556	8.9 (6.6)	8.6 (7.1)	0.853
Hours Spent on CAM-Related Training	4.97 (8.4)	2 (-)	-	5.2 (8.7)	1.3 (0.6)	0.448
Hours Spent on Administrative Tasks	5.2 (4.5)	3.3 (1.5)	0.485	5.1 (4.5)	4.7 (3.8)	0.816
Average Case-Load Per Month (all)	45.3 (36.2)	89.0 (34.0)	0.009	47.0 (37.4)	53.8 (37.1)	0.642
Age	%	%		%	%	
22-44	40.8	20.0	0.354	41.8	25.0	0.265
>44	59.2	80.0		58.2	75.0	
Education						
Certificate/Diploma	65.3	25.0	0.004	60.9	80.0	0.363
Under-graduate	5.3	50.0		7.2	10.0	
Post-graduate	29.3	25.0		31.9	10.0	
Sufficient Skills to Conduct Research						
Yes	17.6	25.0	0.705	17.4	22.2	0.722
No	82.4	75.0		82.6	77.8	
Sufficient Skills to Interpret Research						
Yes	71.2	33.3	0.161	69.0	80.0	0.605
No	28.8	66.7		31.0	20.0	

Regulation and Funding

Ninety-three percent of MTs supported registration for massage therapy (n = 97). Of the MTs who supported registration, 67% supported statutory registration, 31% supported voluntary registration, with 1% supporting other types (non-specified). No association was found between MTs' support for registration and practitioner age ($p = .291$), level of academic qualification ($p = .755$) or years of experience in MT ($p = .142$) (see Table 3).

A combination of private (insurance) and government subsidies for funding MTs' practice was favoured by the MTs (67%), with only 3% of the respondents preferring government subsidies alone.

Integration

The majority of MTs were supportive of integrating their own clinical patient care with a range of conventional care practitioners (CCPs) including with GPs (81%), specialists (78%), and physiotherapists (81%). Eighty-three percent of the MTs surveyed currently referred patients to CCPs. Two percent of MTs' mean annual caseloads were referred to CCPs and 2% (of mean annual caseloads) were received from CCPs. MTs' average number of referrals (per annum) of patients to CCPs were as follows: GPs (6.5); specialists (6.7); physiotherapists (8.1); midwives (11.7); nurses

(13.5); dietitians (6.7); and clinical psychologists (8.5). A significant positive association was found between MTs' referral to GPs and MTs' average caseload per month ($p = .025$), with those reporting smaller caseloads per annum being less likely to refer to a GP. No other significant associations were found between referrals to CCPs and MTs' characteristics, practices or perceptions (see Tables 4–8). The main reported reasons for referral to CCPs by MTs were: for conditions outside the MTs' scope of practice (83%); for medical diagnosis of condition (68%); for conditions more suited to other treatments (67%); where warning signs indicate further investigation (63%); to gain clearance or rule out contraindication for CIM treatment (62%); for conditions too severe for the MTs to deal with (56%); and for conditions MTs training did not cover (53%). Seventy-four percent of referrals to CCPs were conducted through word of mouth, with 21% by referral letter, 20% by e-mail, and 15% by telephone.

Seventy-five percent of MTs reported receiving referral from CCPs. The average number of referrals received from CCPs per annum by the MTs were: GPs (5.6); specialists (9.6); physiotherapists (8.4); midwives (8.9); nurses (13.3); dietitians (18.2); and clinical psychologists (12.6). Seventy percent of referrals from CCPs were conducted through word of mouth, with 14% by referral letter, 13% by telephone, and 12% by e-mail. No significant associations were

COTTINGHAM: SURVEY RESULTS

TABLE 3. The Association Between Massage Practitioner Characteristics and Aspects of Regulation and Funding

Practitioner Characteristics	In Favour of Registration			In Favour of Combined Government and Private Funding			
	Yes (n=88)	No (n=9)	p value	Yes (n=66)	No (n=33)	p value	
	Mean (SD)	Mean (SD)					
Years of Experience	8.6 (6.4)	12.2 (8.9)	0.142	8.0 (6.5)	10.1 (6.6)	0.163	
	%	%		%	%		
Age	22-44	37.5	55.6	0.291	42.4	36.4	0.562
	>44	62.5	44.4		57.6	63.6	
Education	Certificate/Diploma	65.7	71.4	0.755	62.8	68.0	0.795
	Under-graduate	7.4	0.0		7.8	4.8	
	Post-graduate	26.9	28.6		29.4	28.0	

TABLE 4. The Association Between Practitioner Characteristics and Referrals Made Between Massage Practitioners and GPs

Practitioner and Practice-Related Characteristics	Annual Number of Referrals Made to a GP			Annual Number of Referrals Received From a GP			
	<6 (n=35)	6 or more (n=45)	p value	<6 (n=37)	6 or more (n=23)	p value	
	Mean (SD)	Mean (SD)					
Years of Experience	12.1 (10.3)	10.1 (8.2)	0.346	2.9 (1.6)	3.3 (1.5)	0.275	
Average Case-Load Per Month (all)	23.8 (22.6)	39.4 (33.8)	0.025	33.9 (24.4)	41.6 (36.0)	0.298	
	%	%		%	%		
Age	22-44	37.1	40.9	0.733	25.0	26.1	0.925
	>44	62.9	59.1		75.0	73.9	
Education	Diploma	50.0	42.9	0.130	34.5	53.3	0.261
	Under-graduate	39.3	25.7		44.8	20.0	
	Post-graduate	10.7	31.4		20.7	26.7	

TABLE 5. The Association Between Practitioner Characteristics and Referrals Made From Massage Practitioners to Specialists

Practitioner and Practice-Related Characteristics	Annual Number of Referrals Made to a Specialist			
	<6 (n=30)	6 or more (n=9)	p value	
	Mean	(SD)	Mean (SD)	
Years of Experience	11.5 (9.4)	8.5 (7.1)	0.413	
Average Case-Load Per Month (all)	26.6 (19.0)	49.0 (36.1)	0.020	
	%	%		
Age	22-44	40.0	37.5	0.898
	>44	60.0	62.5	
Education	Diploma	45.4	57.1	0.532
	Under-graduate	36.4	14.3	
	Post-graduate	18.2	28.6	

COTTINGHAM: SURVEY RESULTS

TABLE 6. The Association Between Practitioner Characteristics and Referrals Made Between Massage Practitioners and Physiotherapists

Practitioner and Practice-Related Characteristics	Annual Number of Referrals Made to a Physiotherapist			Annual Number of Referrals Received From a Physiotherapist		
	<6 (n=23)	6 or more (n=6)	p value	<6 (n=12)	6 or more (n=6)	p value
	Mean (SD)	Mean (SD)				
Years of Experience	12.0 (10.2)	5.5 (6.8)	0.160	2.8 (1.8)	3.3 (1.4)	0.559
Average Case-Load Per Month (all)	38.7 (29.4)	24.7 (15.1)	0.275	43.1 (23.0)	31.0 (44.9)	0.455
	%	%		%	%	
Age						
22-44	34.8	50.0	0.494	50.0	16.7	0.171
>44	65.2	50.0		50.0	83.3	
Education						
Diploma	50.0	25.0	0.450	42.9	33.3	0.961
Under-graduate	43.8	50.0		28.6	33.3	
Post-graduate	6.2	25.0		28.6	33.4	

TABLE 7. The Association Between Practitioner Characteristics and Referrals Made Between Massage Practitioners and Midwives

Practitioner and Practice-Related Characteristics	Annual Number of Referrals Made to a Midwife			Annual Number of Referrals Received From a Midwife		
	<6 (n=22)	6 or more (n=16)	p value	<6 (n=20)	6 or more (n=17)	p value
	Mean (SD)	Mean (SD)				
Years of Experience	12.8 (10.2)	9.8 (7.4)	0.346	2.7 (1.9)	2.9 (1.5)	0.685
Average Case-Load Per Month (all)	35.1 (28.8)	36.3(30.7)	0.909	29.0 (27.1)	40.0 (27.4)	0.234
	%	%		%	%	
Age						
22-44	29.2	56.3	0.087	30.0	41.2	0.478
>44	70.8	43.7		70.0	58.8	
Education						
Diploma	41.2	50.0	0.114	40.0	45.4	0.497
Under-graduate	41.2	8.3		40.0	18.2	
Post-graduate	17.6	41.7		20.0	36.4	

TABLE 8. The Association Between Practitioner Characteristics and Referrals Made Between Massage Practitioners and Clinical Psychologists

Practitioner and Practice-Related Characteristics	Annual Number of Referrals Made to a Clinical Psychologist			Annual Number of Referrals Received From a Clinical Psychologist		
	<6 (n=26)	6 or more (n=12)	p value	<6 (n=11)	6 or more (n=4)	p value
	Mean (SD)	Mean (SD)				
Years of Experience	14.0 (2.2)	9.3 (7.9)	0.196	3.4 (1.9)	4.3 (0.5)	0.374
Average Case-Load Per Month (all)	37.0 (26.2)	45.8 (29.1)	0.367	35.5 (21.3)	76.6 (54.8)	0.047
	%	%		%	%	
Age						
22-44	23.1	54.6	0.062	27.3	50.0	0.409
>44	76.9	45.4		72.7	50.0	
Education						
Diploma	55.6	57.1	0.446	100.0	66.7	0.168
Under-graduate	33.3	14.3		0.0	0.0	
Post-graduate	11.1	28.6		0.0	33.3	

found between referrals from CCPs and MTs characteristics, practices or perceptions (see Tables 4–8).

Contribution to National Health Objectives

The perceptions of MTs with regard to ways in which they contribute to NZ Ministry of Health-published public health objectives⁽²⁸⁾ included: increasing physical activity (83%); improving nutrition (68%); reducing smoking (41%); reducing obesity (39%); reducing the incidence and the impact of cardiovascular disease (32%).

DISCUSSION

Most MTs in our study were not in full-time practice, which suggests that MTs' practices may not be their sole source of income. This is similar to other studies in NZ and internationally. Whilst many of these previous studies may not be as nationally representative of the MT profession examined, they provide useful comparisons with our study findings. A small ($n = 66$) postal survey of MTs in NZ⁽¹⁴⁾ found that 57.6% had massage therapy as a sole source of income. Similarly, an Australian study of 301 randomly selected MTs belonging to the Australian Association of Massage Therapists (AMT) (19.5% of total membership) found that nearly half of MTs surveyed had fewer than 10 clients per week ($n = 141$), and for only 55% ($n = 165$), massage therapy was the sole source of income.⁽¹³⁾ However, it must be noted that AMT is not the only association representing MTs in Australia; members of Massage and Myotherapy Australia, which is the largest association representing MTs across that country, were not sampled in this recent Australian study. A sub-group analysis of a small US study of the characteristics of four CIM professions found that most MTs had between 10 and 17 hours of direct patient contact per week.⁽¹²⁾ Comparative modality analyses in the same study (MTs, acupuncturists, naturopaths, and chiropractors) also found that MTs had fewer contact hours per week than the other two professions.⁽³²⁾ It would be informative to the massage therapy profession and massage therapy educators in New Zealand to examine more deeply the reasons why MTs appear to have fewer hours of contact with patients compared to other health professionals.

Research

The inverse correlation between MTs' perceptions of the value that research has for practice and MTs caseload as found in our study may be partly the result of the amount of time the practitioners have to read and apply research, with those in busier practices perhaps having less time to read published research findings. It is also possible that many MTs feel that

individualization of treatment leaves little space for applying researched information.^(15,23) Nevertheless, there are implications of this lack of interest in research among MTs. One study in British Columbia identified that a lack of research had an impact on the acceptance of MTs' role in health care by other health professionals.⁽³³⁾ These findings are also reflected in a survey of MTs in Saskatchewan, where research was perceived by MTs as adding credibility to their profession.⁽³⁴⁾ Further, Baskwill and Dore⁽³⁵⁾ found that lack of access to sources of researched information is likely to be contributing to MTs understanding of the role of researched information in massage practice. Another Canadian study showed that there is still a perceived need for more research training in MTs education.⁽³⁶⁾ Furthermore, in Canada, an investigation of the development of research understanding amongst MT students (through the use of case studies) found that, alongside the growth of research into MT and body work, competency requirements in MTs' research literacy (by the Canadian massage practice regulatory body) have also grown. This study concludes that the use of case studies in MTs' education is an important step in the process of developing research understanding among the ranks of the profession.⁽³⁷⁾ In the UK, a qualitative study showed that development of EBP was linked with education (both formal and professional development), as well as access to database information.⁽³⁸⁾

While the MTs in our study viewed research as valuable and providing information that validated some of their practices, this was not reflected in their perception of its impact on practice. The lack of impact of research in MTs' practices was also found in a study of Australian MTs,⁽¹³⁾ which indicated that MTs gain most of their researched information passively through continuing professional education (CPE), a finding that was not reflected in our study, which found no association between the various forms of CPE MTs undertake and their perception of the value of research, or the impact of research on MTs' practice. However, our study did show a significant association between academic qualifications and the value placed on research, although there was still a perceived lack of guidance in research methods and development of protocols, indicating the need for more CPE in these areas. The Australian workforce study of MTs found that the majority of MTs surveyed regularly read research articles,⁽¹³⁾ but the source of those articles is not identified, as it was in our study. The lack of evidence about the role of research within massage therapy practices indicates a potential role for massage therapy educators to educate massage therapy students in the importance of sourcing information from primary research in peer-reviewed journal articles in the development of an evidence-based practice. Another Australian study of MTs found that those reporting higher income levels from their massage practice were more likely to engage with research.⁽¹³⁾ However,

the authors conclude that neither MTs' income nor education were found to be the only determinants of engagement with research, and MTs may need to create collaborative networks with researchers and policy makers to enhance their practice.

A study of MTs' educators in the United States⁽³⁹⁾ found that research literacy was not a high competency desired for MT educators' colleagues (48.1% for colleagues working in a clinical setting, and 38.9% for their own personal therapist). A contrasting study in the US, found that some MTs have responded well to being involved in research studies (as participants), including randomized controlled trials,⁽⁴⁰⁾ and MTs are potentially well disposed to being involved in practitioner-generated research, such as case report studies.⁽⁴¹⁾ There is certainly potential in collaboration between massage therapy educators and researchers in NZ to create an agenda that allows MTs to develop into researchers, or at least active providers of interventions in research studies.⁽⁴²⁾ Such an agenda could include explorations into: how the therapeutic relationship between MTs and their clients is facilitated in practice; the role and value of educational approaches in massage therapy in enhancing MTs skill and aptitudes in clinical practice settings; and how to collect and utilize data within a massage therapy clinical practice.

Regulation and Funding

Statutory registration (SR) was favoured by most MTs in our study (56% of total respondents). In NZ, Smith⁽¹⁹⁾ found mixed views on statutory regulation amongst NZ MTs, but concluded that it is an important step in professionalization of MTs. Just over half (50.6%) of MTs in NZ surveyed by Massage NZ (Inc.) agreed that the association should work towards SR of MTs.⁽²⁰⁾ As yet MNZ has not stated explicitly that it will pursue statutory registration.⁽¹⁶⁾ The support for a combination and private funding for massage therapy found in our study may reflect the lack of funding support that MTs in NZ experience.⁽²⁰⁾

In Australia,⁽⁴³⁾ there is a similar regulatory situation, with voluntary registers being established with a 50% positive response to the Australian Massage Therapy Association survey question about whether Australian MTs should be statutory registered and funded.⁽²¹⁾

A Canadian study⁽²³⁾ found that SR is perceived by MTs to be linked with evidence-based practice, good business practice, and education curricula that include these approaches. This study also found that MTs in Canada felt challenged through practising outside the publicly funded health system. Future studies of MTs in NZ could explore the MTs perspectives of how funding affects their ability to practise massage therapy successfully.

In Europe, massage therapy is regulated in 20 countries, with 16 of those having European Union

registration, by far the greatest span of countries that recognize massage therapy. In several of the European countries, massage therapy is also government funded (wholly or partially).⁽⁴⁴⁾

These studies show that, while SR remains a goal for MTs, there is limited progress towards such regulation worldwide, with only a few countries having SR.⁽¹⁴⁾ Potentially regulation could assist with the integration of MT into mainstream health care.

Integration

The study finding support MTs desire to be integrated with mainstream health care and show some slight progress in terms of referral between MTs and CCPs in NZ. Progress in integration of MT with conventional care in NZ has been linked to the lack of research into MT effectiveness.⁽⁴⁵⁾ This may be the reason that the findings in our study indicate that, although MTs in NZ support integration of MTs with other CCPs, annual referrals to and from CCPs are not frequent. However, most MTs did refer patients and received referrals from CCPs. A previous NZ study found similar patterns of referral to and from CCPs in MTs' practices.⁽¹⁴⁾ Meanwhile, an Australian massage therapy workforce study identified MTs as receiving less than 10% of their average annual caseload from referral.⁽¹³⁾ In Singapore, 86% of CIM practitioners (with MTs being the predominant modality studied – 50%), referred to CCPs and 74% received referrals from CCPs. Unfortunately, annual referral numbers were not reported in this Singaporean study.⁽⁴⁶⁾ A UK study⁽⁴⁷⁾ found that 20% of GPs referred to MTs. But again, referral numbers were not reported. Another study in London found that, among CCPs, non-GPs were more likely to refer to MTs,⁽⁴⁸⁾ a result similar to that from our study, where only 7% of average annual referrals were from GPs. Similarly, in NZ, CCPs referrals are 1% of total caseload of naturopathic/herbalists.⁽⁴⁹⁾ Although many international studies have investigated referral patterns and attitudes among CCPs and CIM practitioners, no data are available internationally on MTs' method of referral to CCPs or how MTs receive referrals from CCPs. Given that our findings show that most referrals to CCPs occur informally (74% by word of mouth), this important information about integrative patient care seems to have been neglected by researchers, despite implications for patient safety and continuity of care. There is scope for more in-depth investigation of integrative practices between MTs and CCPs.

Limitations of the Study

The convenience sampling employed in our study means that only those practitioners who were members of the voluntary register held by MNZ were recruited for participation. This will have excluded MTs who choose not to be registered with MNZ, indicating

that any conclusions arising from this study may only be reasonably applied to MTs registered with MNZ, or similar bodies internationally. Nevertheless the response rate of 32% is not dissimilar to other health workforce studies of this kind,⁽⁵⁰⁾ particularly those where data have been collected electronically. Another possible limitation of our study is that the information from MTs is self-reported, leading to potential recall bias in the results, a comment made in other similar surveys of MTs.^(51,52)

CONCLUSION

There is an apparent integration of MT in NZ in terms of referrals and relationships with CCPs. However, research engagement may present an obstacle to further development of full integration of MT with the mainstream NZ health care system.

Several key areas, including MTs' attitudes and incorporation of researched information into practice, the need for statutory registration of MTs, and how massage therapy could be integrated into mainstream health care, require further investigation in order to contribute to a greater understanding of the role and nature of MTs' practice in the NZ health care system.

ACKNOWLEDGMENTS

The authors would like to acknowledge the comments made by the anonymous reviewer and editor, which significantly improved the focus of this article.

CONFLICT OF INTEREST NOTIFICATION

The authors declare there are no conflicts of interest.

COPYRIGHT

Published under the [Creative Commons Attribution-NonCommercial-NoDerivs 3.0 License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

REFERENCES

- Harris PE, Cooper KL, Relton C, Thomas KJ. Prevalence of visits to massage therapists by the general population: A systematic review. *Complement Ther Clin Pract*. 2014 2//;20(1):16–20. Available from: <http://www.sciencedirect.com/science/article/pii/S1744388113000893>
- Hawk C, Ndetan H, Evans Jr MW. Potential role of complementary and alternative health care providers in chronic disease prevention and health promotion: An analysis of National Health Interview Survey data. *Prev Med*. 2012;54(1):18–22. Available from: <http://www.sciencedirect.com/science/article/pii/S0091743511002477?via%3Dihub>
- Gerasimidis K, McGrogan P, Hassan K, Edwards CA. Dietary modifications, nutritional supplements and alternative medicine in paediatric patients with inflammatory bowel disease. *Aliment Pharmacol Ther*. 2008;27(2):155–165.
- McLaughlin D, Lui C-W, Adams J. Complementary and alternative medicine use among older Australian women—a qualitative analysis. *BMC Complement Altern Med*. 2012;12(1):34.
- Xue CC, Zhang AL, Lin V, Da Costa C, Story DF. Complementary and alternative medicine use in Australia: a national population-based survey. *J Alt Complement Med*. 2007;13(6):643–650. Available from: <http://dx.doi.org/10.1089/acm.2006.6355>
- Grant S, Bin Y, Kiat H, Chang D. The use of complementary and alternative medicine by people with cardiovascular disease: a systematic review. *BMC Public Health*. 2012;12(1):299. Available from: <http://www.biomedcentral.com/1471-2458/12/299>
- Sirois FM, Purc-Stephenson RJ. Consumer decision factors for initial and long-term use of complementary and alternative medicine. *Complement Health Pract Rev*. 2008;13(1):3–20.
- Munk N, Zanjani F. Relationship between massage therapy usage and health outcomes in older adults. *J Bodyw Mov Ther*. 2011;15(2):177–185.
- Madore A, Kahn J. Therapeutic massage and bodywork in integrative pain management. In: Audette J, Bailey A, editors. *Integrative Pain Medicine*. Contemporary Pain Medicine. New York, NY: Humana Press; 2008. p. 353–377.
- Liu S, Qi W, Li H, Wang Y, Yang X, Li Z, et al. Recent advances in massage therapy—a review. *Eur Rev Med Pharmacol Sci*. 2015;19(20):3843–3849. Available from: <http://www.europe-anreview.org/article/9667>
- Porcino AJ, Boon PHS, Page PSA, Verhoef PMJ. Exploring the nature of therapeutic massage bodywork practice. *Int J Ther Massage Bodywork*. 2013;6(1). Available from: <http://www.ijtmb.org/index.php/ijtmb/article/view/168/244>
- Sherman K, Cherkin D, Kahn J, Erro J, Hrbek A, Deyo R, et al. A survey of training and practice patterns of massage therapists in two US states. *BMC Complement Altern Med*. 2005;5(1):13.
- Wardle JL, Barnett R, Adams J. Practice and research in Australian massage therapy: a national workforce survey. *Int J Ther Massage Bodywork*. 2015;8(2):2–11. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4455611/>
- Smith JM, Sullivan SJ, Baxter GD. A descriptive study of the practice patterns of Massage New Zealand massage therapists. *Int J Ther Massage Bodywork*. 2011;4(1):18–27. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088528/pdf/ijtmb-4-1-18.pdf>
- Porcino AJ, Boon HS, Page SA, Verhoef MJ. Meaning and challenges in the practice of multiple therapeutic massage modalities: a combined methods study. *BMC Complement Altern Med*. 2011;11:75–86.
- Massage New Zealand. *Constitution of Massage New Zealand (NZ)*. Hamilton, NZ: Massage New Zealand; 2016. Accessed 21st March 2016. Available from: www.massagenewzealand.org.nz/Site/about/constitution.aspx
- Massage New Zealand. *Membership*. Hamilton, NZ: Massage New Zealand; 2016. Available from: <http://www.massagenewzealand.org.nz/>
- Leach MJ. Profile of the complementary and alternative medicine workforce across Australia, New Zealand, Canada, United States and United Kingdom. *Complement Ther Med*.

- 2013;21(4):364–378. Available from: <http://www.sciencedirect.com/science/article/pii/S0965229913000836>
19. Smith D. *Perceptions and Benefits of, and Barriers to, Degree-Based Education for Massage Therapy* [PhD thesis]. Dunedin, NZ: University of Otago; 2015. Available from: <http://hdl.handle.net/10523/5610>
 20. Massage New Zealand. *Report on Findings from the December 2015 MNZ Survey*. Hamilton, New Zealand: Massage New Zealand; 2016. Available from: http://massagenewzealand.org.nz/images/uploads/MNZ_survey_report_17-1-16.pdf
 21. Hughes T. *AAMT Strategic Plan 2014–2019: Towards Excellence in Practice*. Melbourne: Australian Association of Massage Therapists; 2013. Available from: <http://aamt.com.au/wp-content/uploads/AAMT-Strategic-Plan-2014.pdf>
 22. Cohen MM, Penman S, Pirotta M, Da Costa C. The integration of complementary therapies in Australian general practice: results of a national survey. *J Altern Complement Med*. 2005;11(6):995–1004.
 23. Shroff F, Sahota I. The perspectives of educators, regulators and funders of massage therapy on the state of the profession in British Columbia. *Chiropr Man Therap*. 2013;21(1):2.
 24. Meier PC, Rogers C. Reporting traditional chinese medicine morbidity—a University of Technology, Sydney, project with an emphasis on developing standards for testing and reporting data. *J Altern Complement Med*. 2006;12(6):529–534.
 25. Winnick TA. From quackery to “complementary” medicine: The American medical profession confronts alternative therapies. *Social Problems*. 2005;52(1):38–61. Available from: <https://academic.oup.com/socpro/article-abstract/52/1/38/2258967?redirectedFrom=PDF>
 26. Koopman-Boyden P, Holden D, Jones R, Martin M, McNeill J, Randle J, et al. *Complementary and Alternative Health Care in New Zealand*. Wellington: Ministerial Advisory Committee on Complementary and Alternative Health Care; 2004. Available from: [http://www.moh.govt.nz/NoteBook/nbbooks.nsf/0/C64721A66307CAD4CC256EF200701547/\\$file/Complementary%20and%20alternative%20health%20care%20in%20New%20Zealand%20-%20advise%20to%20the%20Minister%20of%20Health.pdf](http://www.moh.govt.nz/NoteBook/nbbooks.nsf/0/C64721A66307CAD4CC256EF200701547/$file/Complementary%20and%20alternative%20health%20care%20in%20New%20Zealand%20-%20advise%20to%20the%20Minister%20of%20Health.pdf)
 27. Leach MJ, Gillham D. Are complementary medicine practitioners implementing evidence based practice? *Complement Ther Med*. 2011;19(3):128–136.
 28. King A. *The New Zealand Health Strategy*. Wellington: Ministry of Health, 2000. Available from: <http://www.health.govt.nz/publication/new-zealand-health-strategy-2000>
 29. Figure. NZ. *Massage therapists in New Zealand, by Region*. Tohu: figure.NZ; 2017. Accessed 3rd May 2017. Available from: <https://figure.nz/chart/et2sX9fimsEMc4fB>
 30. *Northern A Health and Disability Ethics Committee* [website About page]. Wellington: Health and Disability Commission; 2016. Available from: <http://ethics.health.govt.nz/about-committees/northern-health-and-disability-ethics-committee>
 31. University of Technology Sydney. Human Research Ethics. Sydney, Australia: University of Technology Sydney; 2018. Accessed 31 January 2018. Available from: <https://www.uts.edu.au/research-and-teaching/our-research/about-uts-research/ethics-and-integrity/human-research-ethics>.
 32. Cherkin DC, Deyo RA, Sherman KJ, Hart LG, Street JH, Hrbek A, et al. Characteristics of visits to licensed acupuncturists, chiropractors, massage therapists, and naturopathic physicians. *J Am Board Fam Med*. 2002;15(5):378–390. Available from: <http://www.jabfm.org/content/15/5/378.abstract>
 33. Guzman MLD. *Quest for Regulation: Bringing the Rest of the Country Toward a National Standard for the Massage Therapy Profession*. Simcoe, Canada: Massage Therapy Canada; 2014. Available from: <http://www.massagetherapycanada.com/regulations/quest-for-regulation-2289>
 34. Gowan-Moody DM, Leis AM, Abonyi S, Epstein M, Premkumar K. Research utilization and evidence-based practice among Saskatchewan massage therapists. *J Complement Integr Med*. 2013;10(1):1–10. Available from: <https://www.lib.uts.edu.au/goto?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=90365114&site=ehost-live>
 35. Baskwill A, Dore K. Exploring the awareness of research among registered massage therapists in Ontario. *J Complement Integr Med*. 2016;13(1):41–49. Available from: <http://content.ebscohost.com.ezproxy.lib.uts.edu.au/ContentServer.asp?T=P&P=AN&K=113001484&S=R&D=s3h&EbscoContent=dGJyMNL80SeprY4wtvhOLCmr06ep7RSsKm4SbOWxWXS&ContentCustomer=dGJyMPGqtlCvqbJLuePfgexy44Dt6fIA>
 36. Kania-Richmond A, Reece BF, Suter E, Verhoef MJ. The professional role of massage therapists in patient care in Canadian urban hospitals—a mixed methods study. *BMC Complement Altern Med*. 2015;15(1):20.
 37. Baskwill A. Facilitating case studies in massage therapy clinical education. *Int J Ther Massage Bodywork*. 2013;6(2):20–23. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3666597/>
 38. Stuttard P. Working in partnership to develop evidence-based practice within the massage profession. *Complement Ther Nurs Midwifery*. 2002;8(4):185–190. Available from: <http://www.sciencedirect.com/science/article/pii/S1353611702906359>
 39. Menard MB. Choose wisely: the quality of massage education in the United States. *Int J Ther Massage Bodywork*. 2014;7(3):7–24. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4145003/>
 40. Perlman A, Dreusicke M, Keever T, Ali A. Perceptions of massage therapists participating in a randomized controlled trial. *Int J Ther Massage Bodywork*. 2015;8(3):10–15.
 41. Moyer CA. Practitioner-generated massage therapy research. *Int J Ther Massage Bodywork*. 2011;4(1):3. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088530/>
 42. Munk N, Stewart K, Love MM, Carter E, Elder WG. The intersection of massage practice and research: community massage therapists as research personnel on an NIH-funded effectiveness study. *Int J Ther Massage Bodywork*. 2014;7(2):10–19. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4051806/>
 43. AAMT. *AAMT Constitution*. Melbourne, Australia: Australian Association of Massage Therapists; 2016. Accessed 9th December 2016. Available from: <https://massagemyotherapy.com.au/about-massagemyotherapyaustralia/constitution/>
 44. Weidenhammer W, Lewith G, Falkenberg T, Fønnebø V, Johannessen H, Reiter B, et al. EU FP7 Project ‘CAMbrella’ to Build European Research Network for Complementary and Alternative Medicine. *Forschende Komplementärmedizin / Res Complement Med*. 2011;18(2):69–76. Available from: <http://www.karger.com/DOI/10.1159/000327310>

45. Smith DM, Smith JM, Baxter GD, Spronken-Smith R. The drive for legitimization of massage therapy in New Zealand. *Int J Ther Massage Bodywork*. 2012;5(4):21–29. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3528188/>
46. Ang SC, Wilkinson JM. A preliminary study of complementary and alternative medicine (CAM) practitioners in Singapore. *Complement Ther Med*. 2013;21(1):42–49.
47. Greenfell A, Patel N, Robinson N. Complementary therapy: General practitioners' referral and patients' use in an urban multi-ethnic area. *Complement Ther Med*. 1998;6(3):127–132. Available from: <http://www.sciencedirect.com/science/article/pii/S0965229998800046>
48. van Haselen RA, Reiber U, Nickel I, Jakob A, Fisher PAG. Providing complementary and alternative medicine in primary care: the primary care workers' perspective. *Complement Ther Med*. 2004;12(1):6–16.
49. Cottingham P, Adams J, Vempati R, Dunn J, Sibbritt D. The characteristics, experiences and perceptions of naturopathic and herbal medicine practitioners: Results from a national survey in New Zealand. *BMC Complement Altern Med*. 2015;15(1):114. Available from: <http://bmccomplementalmed.biomedcentral.com/articles/10.1186/s12906-015-0616-5>
50. Smith C, Martin K, Hotham E, Semple S, Bloustien G, Rao D. Naturopaths practice behaviour: provision and access to information on complementary and alternative medicines. *BMC Complement Altern Med*. 2005;5(1):15.
51. Gowan-Moody DM, Leis AM, Abonyi S, Epstein M, Premkumar K. Research utilization and evidence-based practice among Saskatchewan massage therapists. *J Complement Integrat Med*. 2013;10(1):1–10. Available from: <https://www.lib.uts.edu.au/goto?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=90365114&site=ehost-live>
52. Wardle JL, Barnett R, Adams J. Practice and research in Australian massage therapy: a national workforce survey. *Int J Ther Massage Bodywork*. 2015;8(2):2–11.

Corresponding author: Phillip Cottingham, ND, BHSC, Grad Dip HSc, PG Dip HSc, Wellpark College of Natural Therapies, PO Box 78-229, Grey Lynn, Auckland 1245, New Zealand
E-mail: principal1@wellpark.co.nz