

A Survey of Acupuncture-Providing Registered Massage Therapists in Ontario, Canada: Motivation, Training, and Practice Characteristics

Nadine Ijaz, MSc, PhD,^{1*} Sandy Welsh, PhD,² Heather Boon, BScPhm, PhD¹

¹Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, ON, ²Department of Sociology, University of Toronto, Toronto, ON, Canada

Background: An increasing number of licensed massage therapists in several countries are providing acupuncture to their clients, but little is known about this practice.

Purpose: To characterize the motivations, training backgrounds, practice patterns, and clinical experiences of licensed massage therapists who perform acupuncture.

Research Design: The study used a cross-sectional, online survey design involving acupuncture-providing registered massage therapists (RMTs) in the province of Ontario, Canada, where acupuncture is explicitly permitted within the massage therapy profession's scope. Analysis involved descriptive statistics and thematic content analysis of qualitative findings.

Results: The survey response rate was 33.7% (n=212), representing 25.5% of all Ontario RMTs rostered to practice acupuncture. Participant demographics mirrored the RMT profession as a whole, except that providers were, on average, several years older than other RMTs. Most respondents (72.7%) had completed over 200 hours of training in acupuncture; most training included clean needle technique (96.8%), clinical supervision (93.5%), traditional Chinese medicine content (83.4%), and a final examination (96.8%). Respondents typically used acupuncture in about one-third of their sessions (mean 32.3%, SD 5.0) with an average of 10.5 weekly clients (SD 14.3). Acupuncture-providing RMTs had been initially motivated by acupuncture's potential effectiveness for musculoskeletal conditions (97.2%), a wish to attract more clients (61.3%), and physical fatigue from delivering manual therapies (48.3%). Most reported being more likely to achieve excellent clinical results (84.9%), experience greater professional satisfaction (79.9%), and attract or retain clients (64.8%) since using acupuncture. A minority also

reported earning a higher income (34.6%) and experiencing more adverse events in practice (21.5%). Qualitative responses added explanatory nuance to numeric results.

Conclusions: This study of the use of acupuncture by Ontario's licensed massage therapists represents a first scholarly account of an emerging global trend that holds promise in enhancing clinical care, professional stability, and provider longevity. Additional research is needed to investigate the practice's use in other jurisdictions, and to establish international standards for safe and effective practice.

KEY WORDS: massage; workforce survey; acupuncture; professional education; Canada

INTRODUCTION

Professionalized massage therapists include a range of manual therapy techniques in clinical practice.⁽¹⁾ One emerging practice that has to date been unreported in the literature is massage therapists' use of acupuncture. Acupuncture refers to the therapeutic manipulation of filiform needles at particular body sites, and has been widely investigated in clinical trials, with mixed results.⁽²⁾ The practice has historical and conceptual roots in traditional Chinese medicine (TCM), where it is used for a wide range of health conditions.⁽³⁾ A range of related and similar needling practices (sometimes termed 'dry needling' or 'intramuscular stimulation') have emerged in recent decades as clinical adjuncts within the scopes of physical therapists and chiropractors in some jurisdictions.⁽⁴⁾ This development has not been without controversy, related equally to: (a) whether acupuncture needles belong in the scopes of musculoskeletal care professionals; (b) what

postgraduate training standards may be sufficient to foster safe and effective care; and (c) what conceptual models (i.e., TCM or biomedical) should inform filiform needling practice.^(4,5) Although the World Health Organization published international training guidelines for acupuncture in 1998, these guidelines exclusively specified educational parameters for TCM professionals and medical doctors.⁽³⁾ The present work provides a first scholarly account of the provision of acupuncture by massage therapists, raising questions for further investigation.

Across the United States, Canada, and Australia, the use of acupuncture is widely subject to statutory regulation within a range of regulatory models. While acupuncture-related regulations vary across American states, the practice is largely authorized to East Asian medicine professionals and medical doctors. Physical therapists and chiropractors in many states have controversially incorporated filiform needles into their care using dry needling terminology, often with reference to training standards well below the WHO's 200-hour minimum recommended guideline for medical doctors.⁽⁶⁾ In several Canadian provinces, traditionally-trained acupuncturists are regulated within frameworks that permit overlapping practice scopes; and physiotherapy and chiropractic regulators in some jurisdictions permit their members to use acupuncture needles.⁽⁷⁾ In Australia, by contrast, the clinical use of acupuncture remains in the public domain, although statutory restrictions exist for the title 'Acupuncturist.' In Australia, as elsewhere, a range of dry needling training programs targeting licensed massage therapy professionals have emerged, giving rise to a growing trend in practice.⁽⁴⁾

Little is currently known about the use of filiform needles in massage therapy practice. What motivates massage therapists to seek out acupuncture training, and what types of training do they receive? How do practitioners see acupuncture fitting into massage therapy practice? To begin exploring these questions, the current work reports on a survey of acupuncture-providing massage therapists in the province of Ontario, Canada.

Ontario's Regulatory Framework for Acupuncture in Massage Therapy

While Ontario's health professional regulatory model grants occupational groups

exclusive access to restricted titles (e.g., Registered Massage Therapist, or RMT), overlapping scopes of practices are permitted between regulated professions. The province's 'controlled acts' model, furthermore, removes specified risk-bearing practices from the public domain and selectively authorizes particular professions to use these acts within their designated practice scopes. In April 2013, the province of Ontario regulated the profession of traditional Chinese medicine for the first time, granting members of that profession exclusive authority over the title of Registered Acupuncturist. Acupuncture was newly designated a controlled act in this regulatory process, and members of nine additional regulated professionals in the province—including RMTs—were also authorized to continue using acupuncture (previously an act in the public domain) within their scope.^{7†} As self-governing bodies, each of these professions was granted discretion to define a unique set of acupuncture-related educational and practice standards for its members.

In preparation for this regulatory shift, the College of Massage Therapists of Ontario (CMTO)—Ontario's massage therapy regulator—appointed a "5-person project team made up of RMTs with expertise in acupuncture practice and education" to formally define "the entry-level acupuncture practice requirements" for RMTs.⁽⁸⁾ The resulting practice competencies, performance indicators,⁽⁹⁾ and standard of practice⁽¹⁰⁾ for acupuncture were implemented in 2013 and updated in 2016. RMTs who had provided acupuncture to their clients prior to 2013 (governed by an earlier set of standards) would continue to do so under a 'grandparenting' arrangement with their regulator.⁽¹⁰⁾ That said, Ontario RMTs wishing to begin providing acupuncture within their scope would be required to complete training at institutions with curricula approved to meet the CMTO's new educational threshold.

The CMTO's competency-based model does not specify a minimum number of required training hours for acupuncture-providing RMTs. However, it requires that providers be educated to meet 24 acupuncture competencies that address foundational knowledge, risk management,

† Medical doctors, nurses, physiotherapists, chiropractors, chiropodists, naturopathic doctors, occupational therapists were the others.

treatment planning, and treatment. Training programs must furthermore include a “comprehensive practical and theoretical evaluation/examination” of practitioners’ acupuncture skills.⁽¹¹⁾ No discussion of the theoretical basis for acupuncture is evident in the CMTO’s guidelines. However, the three dozen acupuncture training programs that have to date received CMTO approval include varying proportions of Chinese medicine and biomedically-focused acupuncture instruction.

In addition, the CMTO has specified limited parameters for RMTs’ use of acupuncture, regardless of the type of training they may receive. The regulator writes:

RMTs can only practise acupuncture within their Scope of Practice. They cannot use it for anything other than the treatment and prevention of physical dysfunction and pain of the soft tissues and joints as to do so would be outside of their Scope of Practice, e.g., addiction cessation or communicating a diagnosis is outside of the Scope of Practice of Massage Therapy.⁽¹⁰⁾

No use of ‘hollow needles’ (i.e., for hypodermic injections) is permitted. RMTs who wish to use acupuncture beyond this scope are advised to apply for concurrent membership in the province’s traditional Chinese medicine regulatory body. That said, the CMTO defines cupping and moxibustion—practices historically associated with traditional Chinese medicine—as non-acupuncture “modalities to be used in the general practice of Massage Therapy”.⁽¹⁰⁾ The CMTO furthermore advises its acupuncture-practising members to “obtain additional professional liability insurance”.⁽¹²⁾ Over 800 practitioners⁽¹³⁾—representing 5.9% of the province’s full register of RMTs^{14†}—currently appear on the CMTO’s acupuncture roster.

The Ontario case presents a unique opportunity to explore the motivations, training backgrounds, practice patterns, and clinical experiences of a substantial group of massage therapists who use acupuncture to treat clients. Data from the current study, the first on this subject, promise to inform future research and debate on this emerging trend in the massage therapy field.

† This calculation is based on 14,000 RMTs reported as registered in 2018 by the CMTO.

METHODS

Sampling and Eligibility

As part of a larger study investigating the professionalization of traditional and complementary medicine occupations in Ontario, the University of Toronto’s Research Ethics Board granted approval to conduct this cross-sectional survey of Ontario’s acupuncture-practising RMTs. In early 2018, the authors used the CMTO’s public, online professional registry to identify the names of all Ontario RMTs rostered to perform acupuncture within their scope (n=832).⁽¹³⁾ Email addresses for 57.3% (n=477) of these providers were also listed on the CMTO’s site. Using public internet searches, the research team identified an additional 177 practitioner email addresses, bringing the list of emails to total 654. Twenty-nine incorrect emails were returned when the online survey was sent out; direct survey links were provided to an additional five verified practitioners. The total sample (n=630) thus represented 75.7% of Ontario’s acupuncture-rostered RMTs.

Instrument Design

Design of the survey instrument followed the Tailored Design approach.⁽¹⁵⁾ Survey questions asked participants about their demographic features, practice characteristics, acupuncture training, motivations for and experiences using acupuncture in clinical practice, and views on the inclusion of acupuncture within their scope. Some multiple-choice questions included an “other, please specify” option. A final open-ended question invited participants to share additional thoughts about the practice of acupuncture by RMTs in Ontario.

Several survey items were consistent with those included in parallel studies of Ontario’s acupuncture-practising physiotherapists, homeopaths, naturopathic doctors, and traditional Chinese medicine practitioners/acupuncturists. Pre-testing of common survey questions was undertaken with a total of 14 practitioners from across these professions who were independent from the study team. This included three acupuncture-practising RMTs who also provided feedback on profession-specific questions. The research team reviewed and discussed pre-testing feedback and incorporated appropriate changes to the survey.

Distribution and Response Rate

Using the Qualtrics online platform (<https://www.qualtrics.com/lp/survey-platform/>), the survey was distributed for anonymous, voluntary participation in early 2019. Personalized participation reminders were emailed out one, three, and five weeks after initial email recruitment notices. The survey had a response rate of 33.7% (n=212) based on email recruitment. Over one-third of respondents (35.4%, n=75) provided answers to the survey's final, open-ended question.

Analysis

Quantitative data were analyzed using descriptive statistics, and triangulated with related qualitative findings to provide an exploratory account of an emerging trend in the massage therapy profession. Excel software was used for quantitative analyses. Responses to five-point Likert scaled items are reported as proportion expressing disagreement (strongly disagree and disagree combined), neutrality (neither agree nor disagree), and agreement (strongly agree and agree combined). Qualitative responses to the survey's open-ended items were deductively analyzed by the lead author and corroborated by the study team, with reference to the survey's primary subject areas using a thematic analytic approach.⁽¹⁶⁾ Thematic analysis involves a process of progressive coding and categorization of textual content. Illustrative textual excerpts are embedded alongside numeric findings in what follows.

RESULTS

Demographics and General Practice Characteristics

Table 1 provides a detailed profile of participants and their general practice characteristics. Three-quarters of respondents identified as female, closely reflecting the gender demographics of the profession as a whole (78.2% female).⁽¹⁷⁾ As this is a first, exploratory study of acupuncture-practising RMTs, there are no prior data against which to directly compare the demographics or responses of the study population's responders vs. non-responders. As compared to Ontario's general RMT population, the majority of whom are "between 31 and 40 years old" (p. 18), most study participants

were between the ages of 40 and 49 (mean 45.7 years).⁽¹⁷⁾ The primary practice settings of surveyed RMTs also closely mirrored the patterns of Ontario's broader RMT population. Two-thirds worked predominantly in private clinic offices (66.8%), followed by home offices and other settings such as public health care institutions, spas, and fitness facilities. Just over half were working part-time (51.7%) or fewer than 36 hours per week, a figure consistent with other recent surveys of professionalized massage therapists.⁽¹⁸⁻²⁰⁾

Almost half of the respondents had completed at least one university degree in addition to their massage therapy training. Respondents' mean gross annual income was \$55,295 (CDN), and almost all participants were in active clinical practice (98.9%). Almost one-third were concurrently employed in a job outside the RMT profession. In addition to their RMT designation, thirty-four respondents (19.2%) were members of another regulated Ontario health profession, the largest number of whom were registered practitioners of traditional Chinese medicine/acupuncture (41.2%). In addition, as shown in Table 2, respondents had on average been using acupuncture in clinical practice for 7.4 years (SD 5.0).

Acupuncture Practice Patterns

Massage therapists in the study typically provided acupuncture in one-third of their client visits (see Table 2), using needles with an average (mean) of 10.5 weekly clients (SD 14.3). Most participants used acupuncture needling 'sometimes' or 'often' in the context of their massage therapy treatments, as compared to acupressure, cupping, and electro-acupuncture, which were used less often (Table 3). As outlined in Table 4, the majority of acupuncture-related referrals received by participating RMTs over the month prior were reported to be from other musculoskeletal care providers, in particular other RMTs, physiotherapists, and chiropractors. The largest number of recent acupuncture-related referrals reported as provided by RMTs was to traditional Chinese medicine practitioners, followed by to physiotherapists and to chiropractors.

Acupuncture Training

While participants' acupuncture training backgrounds varied, the majority

TABLE 1. Demographics & Practice Characteristics of Acupuncture-Practising Massage Therapists

Factor		% (n)	Mean (SD)
Gender (n=177)	Female	75.1% (133)	
	Male	23.7% (42)	
	Other	1.1% (2)	
Age (n=168)	20 – 29	2.9% (5)	45.7 (9.4)
	30 – 39	26.2% (44)	
	40 – 49	38.1% (64)	
	50 – 59	23.8% (40)	
	60 +	8.9% (15)	
Highest education – non-massage (n=177)	High school	13.6% (24)	
	College	39.0% (69)	
	Undergraduate degree	37.3% (66)	
	Graduate / professional degree	10.2% (18)	
Gross annual income \$CAD (n=144)	< \$20,000	9.0% (13)	\$55,295 (\$23,811)
	\$20,000 – \$39,999	11.8% (17)	
	\$40,000 – \$59,999	34.7% (50)	
	\$60,000 – \$79,999	28.5% (41)	
	\$80,000 – \$99,999	10.4% (15)	
	\$100,000+	5.6% (8)	
Working < 36 hours per week (n=195)		51.3% (100)	
Also working at another non-massage job (n=179)		31.3% (56)	
Dual-registered health professional (n=177)		19.2% (34)	
	Chinese medicine	41.2% (14/34)	
	Other / unspecified	58.8% (20/34)	
Working in active clinical practice (n=195)		98.9% (193)	
Primary clinical practice site (n=193)	Private clinic office	66.8% (129)	
	Home office	21.2% (41)	
	Other (e.g., spa, fitness facility)	11.9% (23)	
Feelings about current client load (n=179)	Would prefer more	21.2% (38)	
	Have just enough	65.4% (117)	
	Have too many	13.4% (24)	

(72.7%) had completed over 200 hours of related formal education (Table 5). As part of their acupuncture training, most surveyed RMTs had received clinical supervision (96.8%), instruction in clean needle technique (96.8%), and completed a final examination (93.5%). Most participants' training programs (83.4%) included instruction on traditional Chinese/East Asian medical theory pertaining to acupuncture. While most of the surveyed RMTs (85.9%) were satisfied with their

acupuncture-related knowledge, the majority expressed interest in furthering their education in biomedical approaches to acupuncture (73.8%) and/or traditional Chinese medicine (57.1%).

Motivation for Acupuncture Usage

Participants were asked whether they agreed or disagreed with a series of statements for why they decided to incorporate acupuncture into their RMT practice

TABLE 2. Practice Patterns of Acupuncture-Practising Massage Therapists

<i>Factor</i>	<i>% (n)</i>	<i>Mean (SD)</i>
Years using acupuncture in clinical practice (n=190)	0 – 4	33.2% (63)
	5 – 9	35.8% (68)
	10-14	20.5% (39)
	15-19	7.4% (14)
	20+	3.2% (6)
% of client visits using acupuncture (n=191)		32.2% (24.1)
# of clients treated with acupuncture / week (n=186)		10.49 (14.3)

TABLE 3. Use of Acupuncture-Related Modalities in Massage Therapy Practice

<i>Modality</i>	<i>Never Rarely Sometimes Often</i>			
	<i>% (n)</i>			
Acupuncture needling (n=190)	1.1% (2)	9.5% (18)	30.5% (58)	58.9% (112)
Acupressure (n=174)	19.5% (34)	13.8% (24)	33.9% (59)	32.8% (57)
Cupping (n=190)	28.4% (54)	12.1% (23)	37.9% (72)	21.6% (41)
Electro-acupuncture (n=178)	32.6% (58)	15.7% (28)	23.0% (41)	28.6% (51)

TABLE 4. Acupuncture-Related Referrals among Registered Massage Therapists

<i>Type of Professional</i>	<i>Referrals Received (n=296)</i>	<i>Referrals Provided (n=184)</i>
	<i>% (n)</i>	
Another Registered Massage Therapist	25.0% (74)	9.2% (17)
Chiropractor	19.3% (57)	17.9% (33)
Dentist	5.1% (15)	1.6% (3)
Naturopathic Doctor	6.1% (18)	7.6% (14)
Medical Doctor	12.8% (38)	7.6% (14)
Physiotherapist	19.9% (59)	20.1% (37)
Traditional Chinese Medicine Practitioner	1.4% (4)	28.3% (52)
Other Health Care Professional	10.4% (31)	7.6% (14)

TABLE 5. Acupuncture Training Received by Massage Therapists

<i>Factors</i>	<i>% (n)</i>
Duration of formal acupuncture training (n=183)	
Fewer than 25 hours	0.6% (1)
25 – 50 hours	1.6% (3)
51 – 100 hours	14.2% (26)
101 – 200 hours	10.9% (20)
201 – 300 hours	32.8% (60)
More than 300 hours	39.9% (73)
Content of training	
Clean needle technique (n=186)	96.8% (180)
Formal examination (n=187)	96.8% (181)
Clinical supervision (n=187)	93.5% (175)
Traditional Chinese medical theory (n=187)	83.4% (156)
Interest in further education	
Satisfied with current acupuncture-related knowledge (n=185)	85.9% (159)
Interested in furthering education in contemporary biomedical approaches to acupuncture (n=183)	73.8% (135)
Interested in furthering education in traditional Chinese medicine (n=184)	57.1% (105)

(Table 6). Almost all (97.2%) agreed that acupuncture would “be an effective treatment for musculoskeletal conditions”. Just under two-thirds agreed that they hoped acupuncture would help them to attract more clients. Just under half reported they were finding it “physically tiring to apply other therapeutic techniques”; and 15% had been trained in acupuncture prior to beginning work as an RMT. A small number (n=10) of participants indicated they were also motivated by “other” factors, which they detailed in narrative form. These factors included: personal experiences of acupuncture’s effectiveness; recommendations by other RMTs; and a hope that it would “prolong my career” or “increase my longevity” as an RMT.

Experiences in Clinical Practice

Both numeric and qualitative data helped to characterize participants’ experiences incorporating acupuncture into their massage therapy practices. As further detailed in Table 6, the majority

TABLE 6. Motivations for Acupuncture Use in Massage Therapy Practice

<i>Factors</i>	<i>Disagree</i>	<i>Neutral</i> <i>%(n)</i>	<i>Agree</i>
Why did you decide to incorporate acupuncture into your practice as a Registered Massage Therapist?			
I thought it would be an effective treatment for musculoskeletal conditions (n=179).	1.68% (3)	1.12% (2)	97.2% (174)
I hoped it would help me attract more clients (n=173).	9.2% (16)	29.5% (51)	63.3% (106)
I was finding it physically tiring to apply my other therapeutic techniques (n=174).	28.2% (49)	23.6% (41)	48.3% (84)
I was trained in acupuncture before I began working as a RMT (n=167).	73.6% (123)	11.4% (19)	15.0% (25)
Other (n=22).	18.2% (4)	36.4% (8)	45.5% (10)
Since incorporating acupuncture into my clinical practice, I am:			
More likely to achieve excellent clinical results (n=179).	1.7% (3)	13.4% (24)	84.6% (152)
More satisfied with my professional work (n=179).	4.5% (8)	15.6% (28)	79.9% (143)
Less physically tired after a day's work (n=179).	4.5% (8)	23.5% (42)	72.1% (129)
More likely to retain existing clients (n=179).	6.14% (11)	29.1% (52)	64.8% (116)
More likely to attract new clients (n=178).	10.1% (18)	25.3% (45)	64.6% (115)
Earning a higher income (n=179).	27.9% (50)	37.4% (67)	34.6% (62)
More likely to have adverse events in my clinical practice (n=177).	13.6% (24)	65.0% (115)	21.5% (38)

of therapists agreed that they were more likely to achieve excellent clinical results (84.6%) and expressed more satisfaction with their professional work (79.9%). Almost three-quarters agreed they were less physically tired from a day's work, and about two-thirds indicated they were more likely to attract new clients and/or retain existing clients. One-third of respondents agreed they were more likely to earn a higher income after introducing acupuncture into their treatment toolkits, although one-fifth perceived that they are more likely to observe adverse events in their practices since introducing acupuncture.

Many participants provided narrative accounts of their personal experiences treating clients with acupuncture. Most such responses were positive, echoing quantitative data related to clinical results and professional satisfaction. For example:

It is a great adjunct to massage/soft tissue work. The results are phenomenal! Acupuncture is truly a game changer. RMT-56

I have found clinical results that I would not have been able to achieve with just massage therapy. RMT-27

The addition of acupuncture has taken the efficacy of my treatments to new heights. Specifically, the ability of acupuncture to stimulate healing has enhanced injury rehabilitation and shown greater pain reducing potential than massage on its own in my experience. RMT-69

Other participants provided more detail about the clinical results they attributed to their use of acupuncture to treat pain or injury:

Acupuncture is sometimes more effective and time-saving. For example, tennis elbow treatment, five sessions may release it, but acupuncture one session is done. RMT-18

Sometimes massage lead[s] for nowhere for pain reduction, usually I switch to acupuncture for difficult cases. I managed to let a client to be able to walk with acupuncture when her doctors gave up on her and they said they cannot do anything for her. I have many satisfied clients. RMT-37

As reflected in Table 6, however, a minority of providers viewed acupuncture more neutrally in relation to their clinical successes. As illustrated in the following excerpts, such providers viewed acupuncture in positive terms, but peripheral to their work and secondary to hands-on massage. They emphasized the role of patient preference in determining their own clinical usage of acupuncture.

I think acupuncture (Western) and TCM can be a very effective modality for many healing practices. However in my own personal experience, most of my clients prefer the hands-on treatments I provide as an RMT. I have been trying to incorporate more needling into my practice, but truthfully, except in rare instances where there is an injury I can't reach through massage, most of them don't want needles from me. RMT-14

Most of my clients come in seeking Massage Therapy. If I use acupuncture, it is after educating the client about the benefits and possible outcomes of incorporating acupuncture in their treatment plan. In most cases, they are open to trying acupuncture. Like any other modality, some clients respond well, while others don't believe they derive a benefit and request massage therapy only. RMT-15

A few respondents, however, had not found acupuncture to be a valuable therapeutic adjunct to hands-on massage:

After a few years of using acupuncture in my practice, I did not see any additional benefit to my clients or my practice. I decided to stop using it. RMT-10

After having practiced massage therapy for over 23 years and acupuncture for over 10 years, I have personally found that manual massage therapy is far more effective than acupuncture for my clients. RMT-65

It should be emphasized, however, that the latter responses were very uncommon in the data, as affirmed in quantitative findings. Only three participants viewed

acupuncture negatively in relation to their own clinical outcomes, and few either disagreed or expressed a neutral stance when asked they saw acupuncture as an effective musculoskeletal treatment (see Table 7).

Acupuncture's Place in the Profession

The vast majority of participants endorsed acupuncture as an effective and safe treatment for musculoskeletal disorders; and most agreed that the practice belongs within the practice scope of RMTs (Table 7). Qualitative responses generally affirmed respondents' view of acupuncture an effective and safe treatment of musculoskeletal disorders and as belonging within the practice scope of RMTs, while also providing insight about the range of views present. Some participants articulated a straightforward endorsement for Ontario's approach to acupuncture's inclusion within the massage therapy profession. Indicative of this are the comments of three individual respondents:

TABLE 7. Massage Therapist Views on Acupuncture

<i>Factors</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>
	<i>%(n)</i>		
Acupuncture is an effective treatment for musculoskeletal disorders (n=185).	3.2% (6)	1.6% (3)	95.1% (176)
Acupuncture is a safe treatment for musculoskeletal disorders (n=185).	3.2% (6)	2.7% (5)	94.1% (174)
Acupuncture belongs in the scope of practice of Registered Massage Therapists (n=185).	5.4% (10)	8.1% (15)	86.5% (160)
Traditional Chinese medical perspectives about acupuncture are clinically useful (n=185).	11.9% (32)	18.9% (35)	69.2% (128)
Acupuncture can be effectively explained using modern Western medical perspectives (n=185).	21.6% (40)	11.9% (22)	66.5% (123)

I'm really glad that RMTs are allowed to use acupuncture in their treatments. RMT-12

I feel that the current requirements and scope of practice for RMTs to practice [are] correct and should be limited to musculoskeletal conditions only. RMT-73

I like that [Ontario's massage therapy regulator] has specific requirements for being able to use acupuncture. It protects the public. RMT-66

Several participants specifically linked their support for RMTs' acupuncture usage to providers' completion of rigorous acupuncture educational programs.

When properly trained, it is a very effective and safe method to increase results in massage clients. ... Provided that RMT's take an approved and accredited acupuncture course there should be no risk to the public. RMT-20

As long as training is adequate from a legitimate source I think it is a great adjunct to Massage Therapy treatments. RMT-26

Some asserted that the inclusion of acupuncture within massage therapists' scope enhances their professional credibility:

Acupuncture and massage therapy is an EXCELLENT therapeutic combination and with proper training I think it makes massage therapists more credible as health care professionals. RMT-27

Others RMTs situated their profession's authorization to perform acupuncture within a competitive interprofessional landscape:

Like all other modalities, if you can prove competence to an objective body, there is no reason you should be restricted in its use. I know Chiropractors, Naturopaths and Osteopaths can practice massage, we should have the same opportunities to expand [with acupuncture]. RMT-28

Finally, as also evident in the numeric survey data (Table 7), a small contingent

of respondents did not express support for RMTs to provide acupuncture; open-ended responses distinguish two primary rationale for such a position. Some RMTs, who also self-identified as registered acupuncturists with the province's traditional Chinese medicine regulator, argued that a full-time, multi-year training was necessary to foster competent practice; for example:

RMT who want to use acupuncture must complete a 2300 hours program. RMT-53

After completing a full diploma program in acupuncture, I find it hard to understand how a 300 h[ou]r program could adequately prepare and educate an RMT or any other practitioner to provide acupuncture to the public. RMT-43

As one dual-registered respondent made explicit, such participants appeared to suggest that "acupuncture should only belong to the members of [Ontario's Chinese medicine profession]." Single-registered RMTs appeared cognizant of such a view, but argued that different types of acupuncture providers should and could co-exist:

I work with two TCM practitioners so when clients need acupuncture, they book with them. Also, I feel that TCM practitioners frown upon us as we are practising acupuncture that doesn't require four years plus of training. Maybe it needs to be more clear to the public (for practitioners and for clients) about the difference between TCM and Contemporary Acupuncture? RMT-16

Taking an entirely different stance, another RMT (who had previously used acupuncture) objected to therapeutic needling on the premise that it is not aligned with an 'evidence-based' paradigm:

Even though it is in the scope of massage therapy practice, there is no research that supports [acupuncture's] effectiveness. Therefore I am almost practicing in a null capacity. Many RMT's are blinded by all kinds of advertisements about acupuncture—but research shows again and again, it does nothing to

musculoskeletal health. Anybody practicing acupuncture at the moment is practicing based on belief. That is very poor critical thinking. RMT-47

Notably, this provider also places RMTs' use of acupuncture into a broader sociocultural frame by raising concern about the potential for misleading marketing (presumably about acupuncture trainings) geared to providers. That said, other respondents expressed contrasting views aligned with an 'evidence-informed' paradigm that places more emphasis on the provider's clinical experience, while positioning the research enterprise in a larger sociocultural context:

Further research is needed to clearly demonstrate the potential of acupuncture when combined with massage therapy. Although I have gained extensive first-hand anecdotal evidence it would be helpful to have results of quality clinical research to help the public gain greater understanding, trust and willingness to accept this alternative therapy. RMT-69

Also to the issue of paradigm, as shown in Table 7, two-thirds of survey participants endorsed a view that acupuncture may be effectively explained using biomedical perspectives. Concurrently, a similar proportion agrees that traditional Chinese medical perspectives about acupuncture are clinically useful. In what follows, we discuss and contextualize these diverse findings.

DISCUSSION

This study represents a first scholarly account of an emerging trend in the field of musculoskeletal care: the provision of acupuncture by licensed massage therapists. Using a cross-sectional survey approach, acupuncture-providing RMTs in Ontario, Canada detailed their related training and practice characteristics, motivations, and clinical experiences. A significant strength of this study is its survey's response rate of 33.7%, representing participation by 25.5% of all RMTs rostered to use acupuncture in the jurisdiction. That over one-third of respondents provided narrative responses

to an open-ended question furthermore permitted a more nuanced interpretation of several quantitative findings.

While the demographic profiles of Ontario's acupuncture-providing RMTs have features both in common with (i.e., gender, practice settings, proportion of part-timers), and distinct from (i.e., more advanced age) the broader licensed massage therapist population, our study does not suggest that the population of interest is significantly distinct. Rather, given that study participants had been providing acupuncture for an average of 7.4 years, it is likely that the study cohort underrepresents recently-graduated RMTs. This hypothesis is further supported by the fact that acupuncture is typically taught to RMTs in a post-graduate context, and that many providers were motivated to incorporate acupuncture as a way to enhance or supplement their established clinical practices.

Ultimately, a significant majority felt that their professional and personal aims in practising acupuncture had been met. In particular, participants indicated that the inclusion of acupuncture in their work had increased their clinical success, lessened their physical fatigue, contributed to greater professional satisfaction and, in some cases, a higher income. These findings are of particular interest in the context of a study sample in which one-fifth of participants would have preferred to have a larger client load, raising questions about acupuncture's potential to support enhanced practice stability, economic standing or, as raised by some participants, sociocultural legitimation for RMTs.

The educational backgrounds of acupuncture-providing RMTs as reported in the current study represent an important contribution to the literature. With most participants reporting completion of formal trainings over 200 hours in duration, our study finds that Ontario's RMTs receive significantly longer trainings on average than do American physical therapists and chiropractors who are permitted to use acupuncture needles within their musculoskeletal practice scopes.⁽²¹⁾ That said, there remains an international standards gap for the use of acupuncture needles by musculoskeletal care professionals; the model put in place by Ontario's massage therapy regulator may warrant further examination in this light.

To the issue of paradigm, this study suggests that Ontario's RMTs, complementary medicine professionals trained within a biomedical framework, are substantially sympathetic to both biomedical and non-biomedical explanatory models for acupuncture. A majority of study participants both endorsed the clinical utility of, and expressed interest in, further acupuncture training from both a biomedical and Chinese medicine-based lens. Moreover, the largest number of acupuncture-related professional referrals made was to TCM providers. Given the conceptual divergence of the biomedical and TCM paradigms, RMTs' concurrent appreciation for both is itself a notable finding. However, qualitative findings suggested that inter-professional tensions between Ontario's licensed, acupuncture-practising massage therapists and the province's TCM acupuncturists may parallel those evident between traditional acupuncturists and dry-needling physical therapists and chiropractors in the United States.⁽⁶⁾

The study does have limitations. All data are based on self-report, and may thus be limited by recall and other biases. Further, it is presently unclear to what degree the present study data may (or not) reflect the views and characteristics of acupuncture-practising massage professionals in other jurisdictions. In addition, the absence of prior baseline population data about the group under study makes it impossible to assess for possible respondent vs. non-respondent variability. Regardless, this first study of acupuncture-providing massage therapists provides a descriptive entry point into an area of research that warrants further investigation.

CONCLUSION

Many questions remain about the role that acupuncture may—or may not—play, moving forward in the massage therapy profession across various jurisdictions. Additional surveys of acupuncture-practising massage therapists—both licensed and unlicensed—in other jurisdictions will help determine the transferability of the present study's findings. Related research is needed to determine the safety and effectiveness of acupuncture in the hands of massage therapists, as is a more detailed consideration of what constitutes appropriate training for such providers.

Ultimately, licensed massage therapy professionals across various jurisdictions will need to decide whether and how they wish to pursue inclusion of filiform needle usage within their statutory scopes, facing the political and inter-professional challenges that will likely accompany such a project.

ACKNOWLEDGMENTS

The authors recognize and thank the acupuncture-providing massage therapists who participated in this study. Many thanks also to students David Brulé, Katrina Lane, and Kylin Zhang for their assistance with the project. This study was funded by the Canadian Institutes of Health Research.

CONFLICT OF INTEREST NOTIFICATION

The authors declare that they have no competing or conflicting interests that may influence or bias this research.

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Corresponding author: Nadine Ijaz, MSc, PhD, Leslie Dan Faculty of Pharmacy, 144 College Street, Toronto, ON M5S 3M2
E-mail: Nadine.ijaz@utoronto.ca