

P R A C T I C E

Exploring the Nature of Therapeutic Massage Bodywork Practice

Antony J. Porcino, BSc, PhD, HSI,^{1*} Heather S. Boon, PhD² Stacey A. Page, PhD³
Marja J. Verhoef, PhD⁴

¹School of Nursing, Faculty of Applied Sciences, University of British Columbia, Vancouver, BC, Canada,

²Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, ON, Canada,

³Office of Medical Bioethics, Faculty of Medicine, University of Calgary, Calgary, AB, Canada,

⁴Department of Community Health Sciences, Faculty of Medicine, University of Calgary, Calgary, AB, Canada

Background: Research on therapeutic massage bodywork (TMB) continues to expand, but few studies consider how research or knowledge translation may be affected by the lack of uniformly standardized competencies for most TMB therapies, by practitioner variability from training in different forms of TMB, or from the effects of experience on practice.

Purpose: This study explores and describes how TMB practitioners practice, for the purpose of improving TMB training, practice, and research.

Participants & Setting: 19 TMB practitioners trained in multiple TMB therapies, in Alberta, Canada.

Research Design: Qualitative descriptive sub-analysis of interviews from a comprehensive project on the training and practice of TMB, focused on the delivery of TMB therapies in practice.

Results: Two broad themes emerged from the data: (1) every treatment is individualized, and (2) each practitioner's practice of TMB therapies evolves. Individualization involves adapting treatment to the needs of the patient in the moment, based on deliberate and unconscious responses to verbal and nonverbal cues. Individualization starts with initial assessment and continues throughout the treatment encounter. Expertise is depicted as more nuanced and skilful individualization and treatment, evolved through experience, ongoing training, and spontaneous technique exploration. Practitioners consider such individualization and development of experience desirable. Furthermore, ongoing training and experience result in therapy application unique to each practitioner. Most practitioners believed they could not apply a TMB therapy without influence from other TMB therapies they had learned.

Conclusions: There are ramifications for research design, knowledge translation, and education. Few practitioners are likely able to administer treatments in the same way, and most would not like to practice without being able to

individualize treatment. TMB clinical studies need to employ research methods that accommodate the complexity of clinical practice. TMB education should facilitate the maturation of practice skills and self-reflection, including the mindful integration of multiple TMB therapies.

KEY WORDS: complementary therapies/methods; massage; musculoskeletal manipulations; clinical competence; decision-making; qualitative research; clinical practice

INTRODUCTION

Therapeutic massage bodywork (TMB) comprises a group of the more frequently used complementary and alternative medicine services in Canada and elsewhere^(1,2). TMB encompasses at least 170 therapies and their variants; 77 were identified in the larger study from which this article was developed⁽³⁾. All use one or more massage techniques (kneading, stroking, pressing, vibrating, holding, etc.) on the soft tissues, viscera, and joints as the method(s) of application. TMB such as shiatsu, reflexology, and craniosacral therapy, therefore, all involve the provision of massage/therapeutic massage. For this article, "massage therapy", the most commonly researched TMB, will always refer to the therapy comprising at least five therapies: Swedish massage, aromatherapy, hydrotherapy, stretching, and trigger point therapy. Most TMB therapies have not been uniformly standardized with respect to their definitions, training components or practice competencies. Given that over 94% of TMB practitioners are trained in two or more forms of TMB (with a median of eight TMB therapies) and may apply more than one TMB during a treatment session, blending of those therapies' techniques likely occurs⁽³⁾.

While there is a plethora of published testimonials from enthusiastic TMB patients available online and in advertising materials, the body of TMB research

is still small, with most research focusing on massage therapy. Some published research suggests that people experience beneficial outcomes from TMB treatments, particularly for general clinical conditions such as stress, anxiety, and depression, and sometimes for localized pain or mobility⁽⁴⁻⁶⁾. In contrast, results of specific clinical research are frequently inconclusive or show no benefit, such as those summarized in the systematic reviews for deep transverse friction massage for the treatment of tendinitis⁽⁷⁾, massage for low-back pain⁽⁸⁾, abdominal massage for labor pain⁽⁹⁾, and massage for mechanical neck disorders⁽¹⁰⁾. While textbooks and courses instruct practitioners in rote assessment and technique application, the instructional and research literature lacks a detailed description of experienced practitioners' process of practice: the "why, how, and when" of the assessment and therapy application choices occurring during practice, including influences on the concomitant decision-making. Therefore, little is understood about how total training and experience, or idiosyncratic differences in treatment application by practitioners, may affect treatment outcomes in clinical practice or research. TMB practitioners have commented that from their perspectives the translation of research to practice is also challenged by the differences in treatment context (i.e., research vs. clinical)⁽³⁾. A rich, qualitative description of the process of clinical practice is therefore needed to better inform TMB research design and reduce the research translation gap. These descriptions of practice will additionally offer TMB educators insight into how to help students and established practitioners more effectively, and efficiently develop skills and expertise to address the complexity of clinical practice.

METHODS

The secondary analysis presented here is based on the extensive qualitative interview data collected in a combined methods study consisting of a quantitative survey and qualitative semistructured interviews focused on describing the training choices and decision-making factors that influence clinical practice of TMB practitioners⁽³⁾. In the larger study, four themes were developed in relationship to the survey data, two of those themes specific to practice⁽³⁾. In this study, these two themes are extensively expanded and deepened to rigorously explore and describe the clinical process of practice of experienced, multiple-therapy-trained practitioners.

Sampling

A questionnaire package including an interview participation form was sent to 5,242 TMB practitioners in Alberta, Canada⁽³⁾. Practitioners

self-identifying as practicing two or more TMB therapies were invited to volunteer for an interview. Of the 791 participants completing questionnaires, 283 volunteered for interviews⁽³⁾.

The interview participation form captured information on the participant's gender, location of practice (urban, semi-urban, rural), clinic type(s), and therapies practiced. These categories were used to purposively select interview participants, allowing for maximum variation. Selection of participants continued until saturation of data was achieved⁽¹¹⁾; 19 interviews were completed. Those not interviewed were thanked for their interest. Each interviewed participant received a \$40 honorarium.

Data Collection

The semistructured interview guide was based on discussions with TMB practitioners, personal experience of the principal investigator as a multiple-therapy trained TMB practitioner, and perceived gaps in the literature regarding the process of practice. The interview guide questions 6 to 11 (Table 1) are relevant to this article. After obtaining informed consent, the principal investigator conducted all interviews, in person or by telephone, using the interview guide. The interviews lasted between 30 and 70 minutes. Each interview was audio recorded, transcribed verbatim, and reviewed for accuracy before coding of the interview began.

TABLE 1. Interview Guide (final version), Questions Relevant to Process of Practice

6.	How do you use these therapies in your practice? (prompt for defining separation or mixing of therapies, any specific training on combining, attitudes, concerns, reasons, etc.)
7.	How do you choose which therapies to use together? What are the influences on your decision to use one technique or therapy over another?
8.	What forms of feedback do you use? How do you know when you are done in a specific area or using a specific technique/therapy?
9.	What was your process for learning how to use therapies together like this?
10.	Have some techniques or your experience changed the way you practice other techniques? Is this common for you? In what ways?
11.	Do you think that your later training and experience has changed you such that you could no longer offer your modalities as purely as when you first learned them? Could you provide a pure therapy if you had to?
16.	Is there anything else about the decisions, use, or training in therapies that you'd like me to know before we wrap up?

Analysis

With little published clinical work regarding the process of TMB practice, a qualitative descriptive analysis of the data was conducted⁽¹²⁻¹⁴⁾. Following Sandelowski⁽¹²⁾ and Neergaard et al.⁽¹³⁾, this approach synthesizes an understanding and explanation of the phenomenon while minimizing subjective interpretation of the data. Pertinent concepts are located within the data and labeled with representative codes. The codes are then clustered into groups that comprise conceptual themes explaining distinct aspects of the phenomenon.

The computer program ATLAS.ti⁽¹⁵⁾ was used to assist data organization and analysis. Data analysis took place throughout the process of interviewing, so that perceived gaps in the data could be addressed. This process, described elsewhere⁽³⁾, included the identification of concepts in the data using “codes”, comparisons of those codes between the interviews, and regular review of the interviews for variations in meaning. The exploration of interview data specific to the practice of TMB as described here began by seeking conceptual similarities and differences for similar practice phenomena between interviews. Codes were revised as better understanding of participants’ concepts developed. Codes relating to specific aspects of practice were clustered together. Themes and subthemes representing clusters of codes were refined to provide the best fit to the data. Codes and themes were finalized after no new variations or insights into meaning were perceived. Analysis included exploration and comparison between practitioners with differing types of TMB practices and years of experience to examine possible similarities and differences in practice.

Ethics Review

The Conjoint Health Research Ethics Board at the University of Calgary granted ethics approval for this study. All personal identifiers have been removed or disguised to preserve confidentiality.

RESULTS

Participants

While the 19 participants indicated on the volunteer forms that they practiced between two to ten (median five) TMB therapies, during the interviews most practitioners described being trained in a greater number of therapies (five to 17, median ten, not including introductory courses). Many participants also discussed taking introductory courses in additional therapies, as well as taking training in non-TMB therapies. Sociodemographic and practice descriptors of the participants are in Table 2. While years in

practice was not a selection criteria, it is included for understanding the data context.

The interviews with practitioners produced a large, diverse body of data regarding the process of applying TMB therapies. Key aspects of the process of practice are described by the two main themes:

- 1) all treatment is individualized; and
- 2) each practitioner’s practice of TMB therapies evolves.

The first theme details the physical processes involved in practice, including the subthemes of individualization during assessment, individualization during therapy application, and using “toolkit” techniques or therapies. The second describes how practitioners’ clinical treatments change because of ongoing learning and experience, including the

TABLE 2. Participant Characteristics (N = 19)

Gender	Female = 15; Male = 4
Work setting (n, not exclusive)	Shared clinic (4), private clinic (6), home clinic (4), salon (1), fitness club (1), spa (4), chiropractic clinic (2), medical clinic (1), outcalls/on-site (1)
Years in practice	Median: 10. Range 3 – more than 30 years
Number of TMB therapies trained in (not including introductions)	Median 10. Range 5 – 17. The TMB therapies practiced by the participants include: acupressure, Alexander Technique, aromatherapy, A.R.T., Aston patterning, Bowen, chair massage, Chi Nei Tsang, craniosacral therapy, Esalen, gyrokinetics, hot/cold stones massage, hydrotherapy, Indian head massage, lomi lomi, manual lymph drainage, massage therapy, maternal/pregnancy massage, myofascial release, Onsen, PNF, rebalancing, Raindrop Therapy™, reflexology, shiatsu, sports massage, St. John Neuromuscular Therapy, structural integration, Swedish massage, Thai massage, trigger point therapy, and Visceral Manipulation™.
Non-massage therapists	No massage therapy training: 2 Not practicing massage therapy: 1
Number of introductory TMB courses taken ^a	Median 2, range 0 – 5
Number who also practice therapies that are not TMB (n)	12. The non-TMB therapies described include: devices, bio-energy therapies (e.g., Reiki), nutrition, hypnosis, ingested/topical products, systems approaches (shamanism, counselling).

^aIntroductory courses were not systematically pursued during the interviews. Some practitioners only described these using “a bunch”, “some”, “a few.” These were taken as meaning “more than one”, and were quantified as 2 for the calculation of the median.

subthemes of exploring treatment options and exploring therapy integration.

Theme 1: All Treatment is Individualized

All practitioners described processes of adapting their assessments and therapy application to the needs of each patient from the first moment of arrival at the clinic and throughout treatment, for each treatment session. “Every [patient] has to be individualized, ‘cause everybody is different” (Practitioner 16). There are two inter-related stages of individualization: during assessment and during therapy application. These two topics are expanded in the two main subsections below.

Assessment, examination with concomitant feedback by means of directed touch, is fundamental to clinical practice. This assessment informs the practitioner’s ongoing decision-making and response to the patient’s tissue state or reaction to therapy application at any moment. The application of therapy also involves touch. Thus, as the therapy techniques are applied, assessment feedback from the tissue is occurring simultaneously. Several practitioners described that occasionally it is difficult to differentiate these functions during engagement with the patients’ tissues. This simultaneous assessment-therapy application feedback cycle is an inherent part of the individualization process.

A diagram (Figure 1) was developed to tie together the many explored components of practice, as described by the practitioners in the sections below. The diagram components are the inter-related processes that together comprise regular clinical practice.

Individualization during assessment

Initial assessments

When patients first visit a TMB practitioner for a treatment session, regardless of any previous medical diagnosis, the practitioner conducts an initial assessment that involves learning about the patient’s

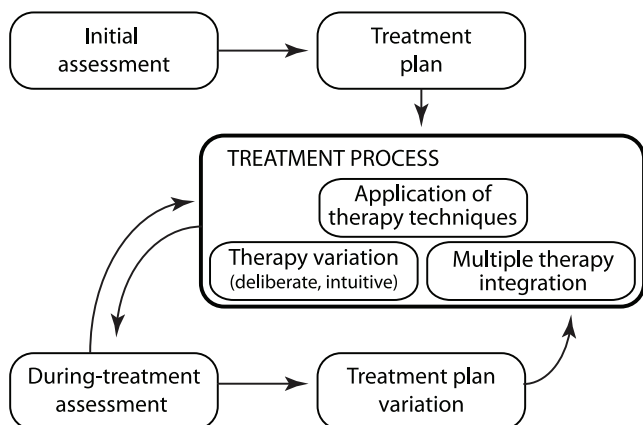


FIGURE 1. The process of treatment individualization.

medical history, the current goals for the patient visit, the patient’s experience of the problem or reason for the treatment session, and the patient’s treatment preferences. The practitioner will undertake a physical exam that may include visual and movement assessments, range of motion or other function tests, and palpation of the tissues. Practitioners described many palpation cues in the tissues including levels of tension, texture and density, temperature, tone (elasticity in the muscle), adhesions or separation of the muscle fibres or bundles, and initial “ease of movement” through or into the tissues.

Based on the assessment, practitioners develop a session treatment plan and discuss it with the patient. The plan includes the practitioners’ understanding of the patient’s issue(s) and treatment/therapies preferences, their planned approach of treatment, and consent for treatment. Depending on the assessment, a plan may include multiple sessions with progressive treatment goals and planned changes to, or inclusion of, different therapies. Reassessment occurs at the beginning of each session to determine progress and suitability of the planned treatment. Several practitioners mentioned that they “get to know” a patient’s tissues over time and thus learn how to improve each patient’s treatment plan and care.

Other areas of expertise are brought to bear on the initial assessment, including potential contraindications and experience, as illustrated by the following comment:

“I’m so used to looking at people that they just walk in and I’ll say, ‘Oh-oh-ohhh, it’s your lower backside. Ouchie! Now, that would be that glute’ [gluteus muscle]. And I’m right! I think it just comes with time, experience” (Practitioner 9).

During-treatment assessment

Practitioners described how assessment during therapy application incorporates many of the same assessment cues and process as described above, but focuses more on perceiving changes, especially the palpatory cues within the patients’ tissues of texture, tone, temperature, ease of movement through the tissues, adhesions, and involuntary movements. Practitioner 10 described knowing when work in an area was complete by experiencing the tissues “repelling” and “pushing away” the practitioner’s hands. The extent of the palpatory information gathered may be quite distant from the area being worked, a phenomenon described by several practitioners.

Practitioner 14 depicted the development of “discrete palpatory sensitivity” and the effect of that development on the treatment assessment and therapy application decisions that are made:

“Developing discrete palpatory sensitivity is something that lots of different people work at. ...Putting a hair underneath a page of the phone book and slowly adding more and more

pages and being able to still locate the hair over a period of time... Putting a coin on a big sheet on a [massage] table and then getting people to pull on [the sheet progressively farther from the coin] and be able to see if they can locate where the coin is. These are very like receiving response back from the tissue about what's happening farther away... The more we can become aware of those effects, that the rebound or lack of response that I'm feeling in the shoulder actually flows all the way from the lower back, goes down, and it's something that's stuck at the ankle, is not 'off the page' once you start following the rationale of that flow."

Practitioners also described verbal feedback between patient and practitioner as an important factor in assessment during therapy application.

Intuition as an important assessment tool

Over half of the practitioners describe the use of intuition as an assessment tool, especially during therapy application. Different levels and types of intuition cues were described, from simply letting the hands do what they want to do—"following the hands"—(Practitioners 2, 4, 10, 11, 12); or their hands "acting like radars" honing in to the important areas (Practitioners 9, 17); to more intuitive "knowing" what should be done next (Practitioners 4, 13, 17, 18); seeing the energy of the patient's body or seeing other interpretive imagery like symbols and using that as part of the feedback process (Practitioners 17, 18); being "drawn" or "pulled" to another part of the body (Practitioners 7, 9, 10, 17, 18); or feeling the patient's response or need in their own body (Practitioner 14, 17). These descriptions of the use of intuition in therapy invoke a subjective explanation for assessment that may be based on an unconscious processing of one or more cues (e.g., "like opening up the peripheral vision...heightening all of your senses" (Practitioner 13).

Individualizing during therapy application

Participants were asked about factors that affected how, when, and why they chose what to do during practice. Practitioners explained that they were constantly assessing and then deciding whether to continue with the current therapy or technique choice, stroke choice, or direction or depth of the current technique, or whether some kind of change in therapy, technique area, or stroke characteristic was needed. Even "standard" routines would be varied if such need were perceived. The treatment process as described had both deliberate and unconscious decision-making elements that vary the application of the therapy techniques.

Deliberate individualization

Practitioners apply deliberate, conscious decision-making processes during therapy application, such as

monitoring whether a specific therapy, technique, or stroke is achieving the desired response, and if not, deciding to switch to a different one. Practitioners are constantly evaluating their treatment effectiveness and learning from it, both through in-the-moment reflection of their treatment and through observation of the same client over multiple visits.

"I noticed two things in my practice. One was that things that worked with one person would not necessarily work with the next person, and so I needed to understand why that was, how could I get more effective. And second of all was that things that worked for one person, the next time would not necessarily work with them" (Practitioner 14).

Finding the best therapy or technique for a situation may sometimes involve guessing or trying one or more options.

"Sometimes it's desperation. Like I'll say, 'if this doesn't, [pause] you know, maybe it's this: Maybe I should try this.' ... A lot of it's experience. The longer I do this the more instinct I have..." (Practitioner 15).

Spontaneous individualization

The spontaneous element includes more automatic practitioner response and action based on the intuitive/unconscious feedback as described in the above section titled "Intuition as an important assessment tool". It includes the moment-to-moment adjustment of the therapy application based on the on-going assessment, which, with experience, becomes increasingly automatic. For the interviewees, spontaneous response was a common part of the treatment process.

"I could almost not have any awareness and my hands would still be responding. It's just like green light, red light, and yellow light when you're driving. You don't have to think about it anymore, but you're responding to some kind of a cue that's coming into your hand" (Practitioner 12).

Using "toolkit" techniques and therapies

The practitioners described how they usually use one, two, or three preferred TMB therapies as their treatment foundation. These foundational therapies comprise specific techniques and routines bound together by unifying concepts and theory that enable the practitioner to choose and apply techniques as he or she sees fit. At any moment, practitioners may choose to incorporate techniques, skills, or ideas from supplementary therapies, or may switch over to the supplementary therapy, in order to benefit from its particular strength(s) or perspective on a treatment issue. Many practitioners described these supplementary techniques and therapies as comprising their "toolkit" for enhancing treatment. Two examples of using toolkit techniques are employing a "listening hands" approach from craniosacral therapy during a massage therapy assessment, and applying an acupressure point stimulation during structural integration work. An example of using a toolkit therapy

would be incorporating a brief session or treatment protocol of manual lymph drainage or neuromuscular therapy during a shiatsu treatment.

Practitioners explained that the extent to which a toolkit technique or therapy may be used depends on several limiting factors including: 1) the extent to which the foundational therapy is taught as rote patterns and variations; 2) the degree of difference and lack of complementarity between the foundational and the added toolkit techniques/therapies; 3) the level of difficulty in drawing on or switching over to the toolkit techniques/therapies; and 4) beliefs about the value or importance of practicing a foundational therapy free from influences of other therapies or the incorporation of toolkit techniques. Because of these limiting factors, several practitioners described providing one or more therapies without inclusion of toolkit techniques or therapies. Using toolkit techniques and therapies to individualize treatment is a characteristic part of the evolution of practice, initiating the integration of multiple therapies (integration is explored further as part of Theme 2).

In summary: individualization

The value of assessment is in the information it provides for making treatment decisions in all stages of the individualization process. Individualization continues during the adjustments and decisions made during the application of therapies through both deliberate and spontaneous individualization of the treatment course at any moment. Most of the therapists use their preferred therapies as the foundation for their treatments, but individualize treatment by incorporating toolkit techniques and therapies to best serve the needs of the patient at any given moment.

Theme 2: Each Practitioner’s Practice of TMB Therapies Evolves

Many of the practitioners described the deliberate development of particular skills or knowledge. This includes exploration of treatment options when faced with clinical decisions, as well as learning new skills from engaging in additional education. They also explained how, over time, experience refined and increased the complexity of therapies they delivered. This arises from their developing clinical expertise and confidence in their ability to effectively individualize treatments.

“I think [being able to combine or transition between therapies] is a very important skill, but I think it’s also the difference between knowledge and wisdom. And that kind of thing only comes over time—and learning to trust what you know. So, falling back on your knowledge of course, [pause] but the wisdom from doing thousands and thousands of treatments has taught me how to be a better therapist” (Practitioner 7).

Exploring treatment options

When asked about how they learned what worked best for a situation, or how to integrate therapies, most practitioners described developing processes of self-directed exploration and reflection. Few of the interviewed practitioners were taught how to consciously approach the ongoing development and evaluation of their practice skills and techniques or how to integrate therapies. Two practitioners pointedly outlined the need for such training.

A practitioner’s decision-making process can be methodical or spontaneous when refining an approach to consistently arising therapeutic situations. Several practitioners described how they would methodically test different treatment options, such as different therapies or techniques, suggested by colleagues and the literature. Several practitioners also described a more spontaneous, in-the-moment exploration process—“I just started one day thinking, ‘Okay, you know I think this would work better’” (Practitioner 9). They will continue to explore treatment options until they find a solution. These exploration processes will slowly develop and confirm a personalized repertoire of approaches that they apply to similar situations.

Exploring therapy integration

Participants described several integration processes for the use of multiple therapies, which we have labeled as 1) sequential, with planned completion of one therapy process before another begins; 2) flowing, which involves seamlessly moving from one therapy to another as the need arises; and 3) blending, during which techniques of one therapy are used along with other techniques, or in which techniques of one therapy are altered by the technique, experience, or theory of one or more other therapies. While sequential integration is usually deliberate, flowing and blending integration can be deliberate or spontaneous. Regarding the limitations on the potential use of toolkit techniques and therapies described above, some therapies do not integrate well for practical reasons (such as equipment requirements or preparation), and some practitioners strive to practice certain therapies free of influence from other therapies or may do so upon patient request. However, the majority described integration as a fundamental part of their practice because it enables more ways to respond during the assessment–therapy application process, allowing for a more refined therapeutic application of skills, and thus more effective delivery of individualized care. Generally, because few courses explicitly teach integration, it is a practitioner-specific process learned through experience and shared between colleagues.

Practitioners’ opinions were split as to whether the effects and influences of integration could be unblended or unwoven once begun. Some asserted that they practiced therapies as if uninfluenced by other therapies, or could do so with effort if asked to isolate and provide a given therapy. Other practitioners were

doubtful that this could be done or would not want to try, and a few postulated it would not be possible for them or any practitioner because each additional therapy learned provides an additional layer of perception or experience, irrevocably changing practice.

“I know that even if someone has done an introductory course, it is possible that they learned [at least] one technique that they find is real useful. They will use it a lot. And it just becomes blended into the other things that they [practice]” (Practitioner 1).

“It is really hard to separate each different therapy because they all get blended and combined in different ways as each specific therapist sees fit” (Practitioner 3).

Most practitioners described how their TMB practice has evolved from the learning of, and then integration of, multiple therapies. Integration leads to more personal repertoires and technique applications, enhanced by more nuance and sensitivity during the application of therapies, and a better perception of therapeutic need. “Craniosacral affected my touch in all of my therapies. I’m very, very sensitive to anything now” (Practitioner 8).

In summary: the evolution of practice

All practitioners described the development of nuance and sensitivity in their work, and an ability to individualize treatments. Developing expertise requires experience—time to evaluate over the course of many treatments the outcomes of their exploration of treatment options and therapy integration.

DISCUSSION

The themes and concepts described here may seem familiar, generic, and broad to many TMB practitioners. A key feature of the results is that most issues and processes discussed were similar across the practitioners, regardless of the therapies practiced or years in practice. This may, in part, be due to the selection of practitioners trained in more than one form of TMB. However, other research indicates that a majority of TMB practitioners are trained in a variety of TMB therapies^(3,16). This study therefore provides a basis for comparison of individual therapy and practitioner practices if needed. The broader purpose for developing this material is to have a clear and accurate published description of how practice in TMB generally occurs. This can enable better development of TMB research by ensuring that relevant, intrinsic features of clinical practice can be consistently considered throughout research design and analysis.

Consideration of Expertise in the Practice of TMB

Most of the practitioners’ quotes above reference the development, use, or trust in experience to facilitate the ongoing decision-making process during

treatment. The participants’ descriptions of treatment decision-making and therapy integration point to the process of practice as being a learning process over the course of many treatments, through reflection on the application of evolving skills, both consciously and intuitively applied. The confident application of treatment depicted by the more experienced TMB practitioners included fluid shifting between therapies or techniques, and in-the-moment assessment-therapy application response. Corresponding educational theories concerning the development and application of expertise were developed by the Dreyfus brothers^(17,18) and Schön⁽¹⁹⁾. The end-stage of the Dreyfus brothers’ model of development of skill acquisition is expertise, in which a performer has “an immediate intuitive response to each situation”⁽¹⁷⁾ (p.3). “This intuition is possible because each typical whole salient situation, unconsciously synthesized from several experienced concrete situations, now has associated with it a specific response or type of response which experience has shown to be appropriate”⁽¹⁸⁾ (p. 146).

In developing his thesis regarding reflection- and knowing-in-action, Schön⁽¹⁹⁾ described the internalization and resultant spontaneous use of knowledge and experience, changing a practitioner from rule-bound novice to intuitive-reacting expert. The practitioners’ confidence in their skills and in integrating multiple TMB techniques and the prevalence of the intuitive processes among the TMB practitioners suggests that an evolution toward Schön’s “reflection-in-action” or Dreyfus’ “intuitive-reacting” expert is the norm. Many of the intuitive processes described by more than half of the TMB practitioners are consistent with Schön’s intuitive “actions, limitations, and judgments which [practitioners] know how to carry out spontaneously”⁽¹⁹⁾ (p. 54) and are therefore difficult to describe or verbalize. The purpose here is not to argue for or against the possibility of any specific source of intuitive information, but to consider that intuition has many forms of input and leads to very specific, often spontaneous yet sometimes deliberated, clinical TMB treatment responses.

Consideration of the Study Limitations

While there was substantial variation in the details provided by the interviewees, data saturation was reached with the developed themes encompassing the practitioners’ diversity of experience. The practitioners interviewed for this study were part of a larger study, in which the mixed methods results were placed in context relative to therapeutic massage providers throughout North America. Within that context, the study population, comprising TMB practitioners in Alberta, Canada, is not significantly different from elsewhere in North America (though, on average, with fewer hours of training than of the standardized trainings in Ontario or British Columbia, Canada). The interviewed practitioners do differ somewhat

from practitioners generally in that the interviewed practitioners have more years' experience (median ten years versus eight in the larger study's survey respondents), and were trained in a few more therapies (median ten TMB therapies versus eight in the larger study). These differences should not affect the potential relevance or application of what was learned to practitioners in similar environments or with similar types of training/forms of practice. However, for TMB therapies with very controlled treatment application and TMB practices in areas or cultures with well-established traditions and more limited therapy training options, therapeutic treatment variation and therapy integration as expressed by the interviewed practitioners may not be applicable.

Additionally, with a median ten years of experience, the data—and therefore the discussion and conclusions—reflect experienced practice. While the data therefore may be of interest to new practitioners and have relevance to their education (discussed below), they presumably do not reflect the practice of new practitioners^(18,20), which would likely be similar to the earlier levels of expertise described by Dreyfus⁽¹⁸⁾.

Ramifications for TMB Research and Education

Two studies found significantly increased positive outcomes from advanced student or expert-level practitioners relative to student practitioners^(21,22). Both studies conclude that the proficiency and experience of the advanced or expert practitioners may be contributing to the results, but do not explore why. The results of our study suggest that experience and training alters the practice, likely permanently, of many TMB therapies, producing idiosyncratic practice—and expertise—within the framework of the theory and skills of a given therapy or combination of therapies. This change in therapy provision will likely result in refined conscious and unconscious individualization. Therefore, when developing research, there must be careful consideration of the impact on the research outcomes of the participating TMB practitioners' intuition and expert-level practice developed through experience. Capturing the intuitive and deliberate responses to clinical situations, including the moment-by-moment needs assessed within each patient, and accommodating the likelihood that idiosyncratic practice cannot be eliminated from practitioners' treatments, presents significant challenges to effective research of TMB practices.

Many TMB clinical trial treatment protocols are simplistic and prescribed, rarely reflecting normal practice, because such restriction and control of treatment provision provides the greatest ease of outcomes measurement and analysis. Other TMB research studies attempt to circumvent the issue of differences between practitioners by using a single practitioner to provide all treatments. In both situations there is a

barrier to the translation of the research results into practice because of the difference between those situations and how practitioners conceive and experience clinical practice. Studies using students or inexperienced practitioners will also create research translation problems because few experienced practitioners practice in the rote simple manner of a student or recent graduate^(18,20).

The complexity of practice and potential for multiple inputs to be contributing to successful treatment outcomes make TMB clinical trials, including randomized controlled trials, strong candidates for combined methods research. (Details of this particular methods issue are discussed a separate paper⁽²³⁾.) Pragmatic trials and comparative effectiveness trials can help address many of the issues caused by the individualized nature of clinical practice. These methodologies can do so because they do not require uniformly applied treatments, but rather focus on achieving specific treatment outcomes⁽²³⁻²⁷⁾. The construct of a treatment protocol within TMB research should embrace the natural variation inherent in TMB practice. This could be achieved, for example, by precisely recording a practitioner's initial and ongoing assessments and therapy(s) application for a specific treatment issue or using a delineated but somewhat flexible routine (see for example a recent multimodal physiotherapy trial⁽²⁸⁾), and then reviewing what the practitioner focused on during treatment and why.

Finally, these issues are likely not limited to TMB practice. For example, regarding physiotherapy, Roskell et al.⁽²⁹⁾ commented:

“Some authors have suggested that research has not informed clinical practice in more significant ways because it fails to acknowledge the ‘private knowledge’ (Robertson, 1996) and tacit skills (Richardson, 1993) which characterise expert practice. These elements of intuitive practice are difficult to verbalise to others and stimulating debate in these areas is vital if coherent research questions and appropriate methodologies are to be forthcoming” (p. 229).

In depicting the complexity of practice and the normal process of individualization of treatment, our study has articulated some of this “private knowledge” and “intuitive practice” in the field of TMB, which may help stimulate the development of practice-reflective research methods. These issues and corresponding research solutions should therefore be actively sought and evaluated in the research of other health professions that also implement in-the-moment response to patient needs.

Equally important to the ramifications for research are the implications for TMB education. Teachers will bring their own experience to any therapy in a training program. Each body of TMB therapy practitioners will need to decide the value of their teachers' variability to the therapy's body of knowledge. Creating therapy-wide agreed-upon competency standards for

each TMB being taught would be prudent if the core or root techniques are to be consistently transferred to the next generation. Most of the interviewed practitioners believed their TMB training programs did not prepare them for consciously and efficiently developing advanced skills and expertise, a process instead left to personal exploration. Both Schön and the Dreyfus brothers explain how the development of expertise comes from integrating and embodying experience, which in turn is facilitated by conscious self-reflection of action in practice^(18,19,30). Therefore, based on the interview data, at least three related educational concepts can be proposed: 1) Train students to consciously reflect on how they are learning their skills and techniques, and how to consciously deliberate on the results of their actions in practice; 2) Discuss whether the therapy makes an effective foundational therapy that easily incorporates toolkit techniques or therapies, or whether it is best in isolation, and why; and 3) Discuss how, as practitioners, students might best learn to integrate other therapies (TMB or other) into their own repertoires of techniques, or guard against undue influence or integration if that might be needed in a given clinical situation or desired by a therapy's body of practitioners.

CONCLUSION

This is the first detailed exploration of the nature of TMB practice, describing many facets of the complex and multilayered information inputs and decisions that comprise TMB treatment at any moment during a TMB session. These results reveal that TMB is an intricate feedback loop of assessment and therapy-application decisions occurring continuously throughout practice. The individualized process of a patient's treatment is intrinsic to the process of practice. No individual patient-treatment program will ever be alike, perhaps not even from the same practitioner. In such a fluid situation, the potential of practitioner-specific practice to adversely affect research results must be carefully scrutinized, even when "standardized" protocols are used. Research methods best able to accommodate the flexibility of practice must be considered. Educators should consider how best to prepare students for practice that requires ongoing clinical reflection and self-education, and will likely involve learning skills from other therapies that could alter the practice of the therapy they teach.

ACKNOWLEDGEMENTS

The authors wish to thank the interviewed practitioners for their willingness to explore their process of practice, working to articulate the intrinsic, day-to-day application of therapeutic massage bodywork during our interviews.

CONFLICT OF INTEREST NOTIFICATION

The authors are not aware of any conflicts of interest or potential conflicts of interest regarding the material in this manuscript. The Massage Therapy Foundation, funder of the study, had no role in the design of the study; in the collection, analysis and interpretation of the data; in the writing of the resultant articles; or in the decision to submit this article for publication. While the lead author is currently the Executive Editor of the IJTMB, the article was appraised by the Practice Section Editor and anonymously reviewed like any other IJTMB article.

COPYRIGHT

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

REFERENCES

1. Esmail N. Complementary and alternative medicine in Canada: trends in use and public attitudes, 1997-2006. The Fraser Institute Report No.87. Vancouver, Canada: The Fraser Institute; 2007.
2. Barnes PM, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults: United States, 2002. Advance data from vital and health statistics, no. 343. Hyattsville, MD: National Center for Health Statistics; 2004.
3. Porcino A, Boon H, Page S, et al. Meaning and challenges in the practice of multiple therapeutic massage modalities: a combined methods study. *BMC Complement Altern Med*. 2011;11(1):75.
4. Fellowes D, Barnes K, Wilkinson S. Aromatherapy and massage for symptom relief in patients with cancer. *Cochrane Database of Systematic Reviews*. 2008(3). Epub 8 OCT 2008.
5. Viggo HN, Jørgensen T, Ørtenblad L. Massage and touch for dementia. *Cochrane Database of Systematic Reviews*. 2006(4). Epub October 8, 2008.
6. Hillier SL, Louw Q, Morris L, et al. Massage therapy for people with HIV/AIDS. *Cochrane Database of Systematic Reviews*. 2009(1). Epub January 20, 2010.
7. Brosseau L, Casimiro L, Milne S, et al. Deep transverse friction massage for treating tendinitis. *Cochrane Database Systematic Reviews*. 2002(4). Epub January 21, 2009.
8. Furlan AD, Imamura M, Dryden T, et al. Massage for low-back pain. *Cochrane Database of Systematic Reviews*. 2008(4). Epub June 16, 2010.
9. Smith CA, Collins CT, Cyna AM, et al. Complementary and alternative therapies for pain management in labour. *Cochrane Database of Systematic Reviews*. 2006(4). Epub January 21, 2009.
10. Haraldsson BG, Gross A, Myers CD, et al. Massage for mechanical neck disorders. *Cochrane Database of Systematic Reviews*. 2006(3). Epub October 8, 2008.
11. Strauss A, Corbin J. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, 1st edition. London, UK: Sage; 1990.

12. Sandelowski M. Whatever happened to qualitative description? *Res Nurs Health*. 2000;23(4):334–340.
13. Neergaard MA, Olesen F, Andersen RS, et al. Qualitative description—the poor cousin of health research? *BMC Med Res Methodol*. 2009;9(52):5.
14. Thorne S. *Interpretive Description*, 1st edition. Walnut Creek, CA: Left Coast Press; 2008.
15. ATLAS.ti Scientific Software Development GmbH. *ATLAS.ti—The Knowledge Workbench LM* (version 6.0.0.1) [computer program]. Berlin, Germany: ATLAS.ti Scientific Software Development GmbH; 2009.
16. American Massage Therapy Association. *2010 Massage Profession Research Report*. Evanston, IL: AMTA; 2010.
17. Dreyfus HL. *What is Moral Maturity. A Phenomenological Account of the Development of Ethical Expertise. Section A: A Phenomenology of Skill Acquisition*. 1986 [cited 2011 July 27]. Available from: http://www.alpheus.org/TS_Open/SkillAcquisitionTableText.pdf
18. Dreyfus SE. Formal models vs. human situational understanding: Inherent limitations on the modeling of business expertise. *Office: Technology and People*. 1982;1:133–165.
19. Schön DA. *The Reflective Practitioner*, 1st edition. New York: Basic Books; 1984.
20. Benner P. *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. NY: Prentice Hall; 2000.
21. Donoyama N, Shibasaki M. Differences in practitioners' proficiency affect the effectiveness of massage therapy on physical and psychological states. *J Bodywork Movement Ther*. 2010;14:239–244.
22. Moraska A. Therapist education impacts the massage effect on postrace muscle recovery. *Med Sci Sports Exerc*. 2007;39(1):34–37.
23. Porcino AJ, Verhoef MJ. The use of mixed methods for therapeutic massage research. *Int J Ther Massage Bodywork*. 2010;3(1):1–11.
24. Verhoef M, Lewith G, Ritenbaugh C, et al. Complementary and alternative medicine whole systems research: beyond identification of inadequacies of the RCT. *Complement Ther Med*. 2005;13(3):206–212.
25. Verhoef M, Vanderheyden L. Combining qualitative methods and RCTs in CAM intervention research, p. 72–86. In: Adams J, editor. *Researching Complementary and Alternative Medicine*. Milton Park, Oxon: Routledge; 2007.
26. Horn SD, Gassaway J. Practice-based evidence study design for comparative effectiveness research. *Med Care*. 2007;45(10):S50–S57.
27. MacPherson H. Pragmatic clinical trials. *Complement Ther Med*. 2004;12(2-3):136–140.
28. Bennell KL, Egerton T, Pua YH, et al. Building the rationale and structure for a complex physical therapy intervention within the context of a clinical trial: a multimodal individualized treatment for patients with hip osteoarthritis. *Phys Ther*. 2011;91(10):1525–1541.
29. Roskell C, Hewison A, Wildman S. The Theory-practice gap and physiotherapy in the UK: insights from the nursing experience. *Physiother Theory Pract*. 1998;14(4):223–233.
30. Schön DA. *Educating the Reflective Practitioner*, 1st edition. San Francisco, CA: Jossey-Bass Publishers; 1987.

Corresponding author: Antony J. Porcino, BSc, PhD, HSI, School of Nursing, Faculty of Applied Sciences, University of British Columbia, T201–2211 Wesbrook Mall, Vancouver, BC, Canada V6T 2B5
E-mail: antony.porcino@nursing.ubc.ca