

Appendix B

Research Literacy

As discussed in Chapter 1, evidence-informed practice is the habit of making clinical decisions that balance three factors: practitioner expertise, client goals and values, and the best research evidence that is available. How much each of those three factors influences treatment choices may change with each client on each day, but to offer the best that massage therapy has to give, it is essential that each of them be included in the decision-making process.

The main part of *A Massage Therapist’s Guide to Pathology—Critical Thinking, Practical Application* is dedicated to broadening your knowledge—that is, the “practitioner expertise” circle. In this appendix, we focus on the “best research evidence” circle and introduce some key concepts about research literacy. But before we get to that, we need a little background (Figure B.1).

The Scientific Method

Humans share a basic need to understand their world. We do this by making observations, and then testing them to see if those observations are correct. Research is simply the use of the scientific method to test our observations.

The scientific method is a set of steps that can be adjusted for virtually any scientific study, from physics to biology. For the context of massage therapy, it can be described as five basic steps:

- Form a question based on an observation
- Develop a hypothesis
- Test the hypothesis
- Analyze the results
- Share your findings

A published research article, *Myofascial Massage for Chronic Pain and Decreased Upper Extremity Mobility After Breast Cancer Surgery*,¹ provides clear examples of these steps.

¹Jeanne Massingill, Cara Jorgensen, Jacqueline Dolata, and Ashwini R. Sehgal. “Myofascial Massage for Chronic Pain and Decreased Upper Extremity Mobility After Breast Cancer Surgery.” *International Journal of Therapeutic Massage & Bodywork: Research, Education, & Practice* 11, no. 3 (September 1, 2018): 4–9.

1. Form a question about the natural world, based on observation and looking at what other experts have said on the topic.

Women who have undergone breast cancer surgery often experience pain and limitation of movement in the breast/chest/shoulder area. Both myofascial massage and relaxation massage have been seen to improve some of these symptoms. How would these two interventions compare? Is one better than the other?

2. Develop a testable hypothesis about how massage or bodywork might influence that observation.

Is one version of massage therapy substantially more effective than another for help with pain and limitation for women who have had surgery for breast cancer?

3. Carry out an experiment that tests your hypothesis. Try to control the circumstances around your test so that you can accurately connect the experiment to the outcomes.

- The MetroHealth Medical Center’s Institutional Review Board oversaw this study.
- Eligible participants (women older than 18 years who had had breast cancer surgery 3–18 months prior and who reported pain and lack of mobility) were recruited.
- Baseline assessments were gathered by telephone survey to establish pain levels, lack of mobility, and other factors.



FIGURE B.1 Evidence-informed practice

- iv. Participants were randomized into intervention (myofascial massage) and control (relaxation massage) groups.
- v. Each participant received two 30-minute massages each week for eight weeks, for a total of 16 massages at a clinical spa. Two licensed massage therapists followed preset protocols for myofascial massage of the affected chest and shoulder areas. Treatments were narrowly varied depending on tissue response, pliability, and feedback from clients. Participants in the control group received the same number of minutes and sessions, but the treatments provided full-body relaxation massage with no specific work on the chest and shoulder areas. A total of 20 subjects participated in the study.
- vi. After the sessions were concluded, a study coordinator who was blinded to which arm each participant belonged repeated the phone surveys for pain, limitation of movement, and other factors.

4. Analyze your results and draw appropriate conclusions.

- A total of 97% of all scheduled massage sessions took place; this is an excellent adherence rate.
- The baseline scores of both groups were similar, suggesting that randomization was successful.
- The post-treatment measures for pain and mobility limitations changed for both groups, but the changes were significantly greater for those in the intervention group.
- Participants in both groups were positive about their experience and reported improvements in other areas, including sleep and mood.
- Conclusion: Myofascial massage is a promising treatment to address pain and mobility limitations following breast cancer surgery. While more research using more participants and longer duration is called for, this is a relevant finding for prescribing physicians and policy makers.

5. Communicate your results.

This study was published in *The International Journal of Therapeutic Massage and Bodywork* in 2018.

STUDENT ACTIVITY

Write down a brief, five-step, scientific-method process involving any experiment about massage that you would like to do.

It is important to point out that the scientific method can be much broader and complex than is presented here, but this model provides a good starting point for this discussion.

The Language Barrier

Many people who are new to research become frustrated with trying to read scientific articles because the language seems so dense, obscure, and impersonal. Several issues contribute to this perception. One is that good scientists are not always gifted writers; that is not their primary focus. In addition, the language of research is extremely precise so that every reader is likely to understand it in the same way. For this reason, similar words such as “efficacy” and “effectiveness” have different meanings; “bias” does not mean fabric cut on a 45-degree angle, and “double blinded” does not mean that someone wore a two-layered blindfold.

Table B.1 provides some basic vocabulary words that will help readers begin to make sense of research articles. It is not comprehensive, but it provides a strong start.

Is Massage Therapy an Art or a Science?

The practice of massage is as old as the human instinct to rub tired muscles or to stroke a fussy child. But massage therapy as a health care intervention has been investigated scientifically for only a short time.

For generations, massage practitioners around the world have been taught from rich cultural traditions. Most of these modalities developed because observations suggested that welcomed touch seems to lead to positive changes in health. Variations in how touch is employed have yielded tremendous diversity that ranges from qigong to lomilomi to proprioceptive neuromuscular facilitation.

More recently, our field has developed some capacity to rigorously question the extent to which some of these revered historical modalities really work, or whether some are better than others to achieve specific goals. We have also begun to examine whether some of the proposed mechanisms or explanations for those techniques are accurate, and the answers are sometimes surprising.

The application of the scientific process to the art of massage therapy sometimes creates tension in the field. Many people feel that if massage therapy is to hold a credible place in the health care system, then it needs to meet the same standards