

## 1.0 Case reports in the context of research in evidence-based medicine

Since beginning to search for **approaches that ‘can really help someone who is sick’**, people have relied on the **advice of experts** and also **examined whether a method is helpful**, sufficient or even harmful. This **systematic critical effort for investigation** took a more concrete form when the term **Evidence-Based Medicine (EBM)** first appeared in a 1990 publication, though its origins can probably be traced to the late 1970s.

- EBM is about **‘integrating individual clinical expertise and the best external evidence’** (Sackett et al., 1996)
- This means that ‘...good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough.’ (Sackett et al., 1996)
- ‘Clinical expertise includes the general basic skills of clinical practice as well as the experience of the individual practitioner...’ (Haynes, Devereaux and Guyatt, 2002).

EBM research includes many types of evidence from many sources. Sources of evidence are often put in hierarchical order according to their **internal validity**.

The **‘standard’ evidence hierarchy** used by the EBM approach from top down is:

- Systematic reviews and meta-analyses, followed by
- RCTs
- Cohort studies
- Case-control studies
- Cross-sectional surveys, and at the base
- Case reports (Notice that? Case reports!)

Other versions relevant to complex interventions, such as the Evidence House (Jonas, 2001) or the circular approach (Walach et al., 2006) consider not only internal validity but **external validity** (whether study results are generalizable) and **model (or ecological) validity** (whether study results can be used in real-life situations).

### Types of Research

**Quantitative research** controls confounding variables, isolating the tested treatment’s effect, achieving strong internal validity and implying causality. It is valued for its’ statistically causal inferences.

**Qualitative research** aims to seek answers by asking non-quantifiable questions and are more appropriate for ‘what’, ‘how’, ‘why’ types of questions.

**Mixed methods research** is an approach in which the researcher uses both qualitative and quantitative approaches in a single study. It is able to generate evidence containing both statistically causal inferences and more complex, non-reductive qualitative explanations.

**Basic domains of research** that we could consider useful for shiatsu:

- **Sociocultural:** Includes questions related to how patients perceive and experience care, how practitioners evaluate and explain the practice, or why people study or receive shiatsu...

- **How effective and safe it is:** includes questions that deal with issues about the practice of shiatsu, like intervention techniques, session time span, frequency of sessions, effects of a session, safety issues, how this can be measured, etc.
- **How it compares to others:** researchers will compare their interventions with other bodywork modalities/healthcare methods such as those of medicine, psychology, Chinese medicine, etc.
- **How it works:** underlying physiological mechanisms, such as seeking evidence of how shiatsu causes an effect on the autonomic nervous system, or produces other changes in the body.  
- based on (Cassidy and Hart, 2003)

**Case reports** are relevant for shiatsu when we consider that many studies require numerous patients, collaboration of researchers and significant funding in contrast to studies that involve a single patient, are done by one person and can be based on partly volunteering the required time.

#### **Studies that require fewer resources:**

- **Case study:** a research method of qualitative nature that is well suited for mixed methods research too. It requires a variety of research skills and multiple sources of data. As with all research involving humans, case studies require prior ethics approval at an ethics commission in order to be done.
- **N-of-1 trial:** an experimental study design aimed to determine the effect of an intervention in single participants. It can be done in studies with one or with many participants.
- **Case report:** a necessity for a case report is the systematic record-keeping by the practitioners, not only as an element of good professional practice and quality healthcare delivery but to support well-documented case reports or even research. Case reports are retrospective descriptions and constitute the first level of evidence, over which all the research hierarchy is built. Case reports do not need prior ethics approval, yet the informed consent of the patient should be ensured for the manuscript prior to the submission to a journal.

## 2.0 What does a case report look like?

To understand how case reports are structured, it is a good start to **read existing case reports in shiatsu or related fields**. We recommend you start with the renowned peer-reviewed *International Journal of Therapeutic Massage & Bodywork* ([www.ijtmb.org](http://www.ijtmb.org)).

Imagine you are **looking for specific cases** to help you with a particular issue in your practice:

- First, narrow down your search with **keywords**
- Next look at the **titles** of the case reports to tell you what they are about
- Then you may review a short summary of the report, the **abstract**, in order to decide if you want to read the whole **report**.

Exactly for this situation, **experts have established guidelines** for creating case reports with a **common structure in order to support efficient comparison**, content accuracy and sufficiency:

- 2013 Care Checklist of the Care Case Report Guidelines: [www.care-statement.org/checklist](http://www.care-statement.org/checklist)
- Adaptation of the CARE Guidelines for Therapeutic Massage and Bodywork Publications: [www.ijtmb.org/index.php/ijtmb/article/view/251](http://www.ijtmb.org/index.php/ijtmb/article/view/251)

As an example, we will review the case study by Angela Burke from 2014 (while this is a case study, rather than a case report, it follows the same structure):

- *Zen Shiatsu: A Longitudinal Case Study Measuring Stress Reduction in a Child with Autism Spectrum Disorder*: [www.ijtmb.org/index.php/ijtmb/article/view/246](http://www.ijtmb.org/index.php/ijtmb/article/view/246)

This title includes the term ‘case study’, informing the reader of what it is. The term ‘case report’ would be used in the title of such a paper. Notice how the abstract of Burke is divided into **Introduction, Objectives, Methods, Results and Conclusions** according to the general recommendations of the Care Checklist and its Adaptation for Therapeutic Massage and Bodywork Publications. Then, in the report itself, you will also find the sections **Discussion, References** and further: Acknowledgements, Conflict of Interest, and Copyright. Case reports also need to include the Informed Consent of the client.

For further exploring you can browse through one of the largest online libraries about research papers in medicine. Take care to focus on ‘peer-reviewed’ publishings by renowned journals, for example: United States National Library of Medicine ‘Pubmed’: [www.pubmed.ncbi.nlm.nih.gov](http://www.pubmed.ncbi.nlm.nih.gov)

### 3.0 How to start and proceed with a case report?

Basically, you can start **organizing your practice in advance** by documenting the concern, the treatments and process of your clients systematically. If you do not have a **systematic document** at hand, we recommend this as an example:

- MYMOP, the Measure Yourself Medical Outcome Profile, gives you the opportunity to use a validated survey for monitoring the development of your clients. [www.shiatsu-research-network.org/j39/index.php/building-research-literacy/22-standards-for-qualitative-research](http://www.shiatsu-research-network.org/j39/index.php/building-research-literacy/22-standards-for-qualitative-research)

#### 1) After an interesting case occurs, **ask yourself these questions to clarify your focus:**

- Which message do I wish to communicate?
- Who is my audience?
- Is my case interesting to other practitioners?
- Does this case involve an unusual condition?
- Does it involve a novel treatment approach?
- Is my case about an outcome?
- An diagnostic assessment? An intervention? An unexpected complication during treatment? An unexpected outcome for one condition when treating for another condition?
- Have any similar cases been previously published by other practitioners?

For the last question you will need to do a literature search. Here you can start with online sources as recommended in chapter 2.0.

#### 2) Describe **WHAT** happened:

**Gather the necessary information and summarize it visually as a timeline and as a narrative** e.g.: the information about your client, clinical findings, shiatsu specific diagnosis, your therapeutic interventions, duration and frequency of the treatments. This will lead you to the **METHODS** chapter. Describe the outcome and results in the **RESULTS** chapter. You can find more detail in the 2013 Care Checklist of the Care Case Report Guidelines. ([www.care-statement.org/checklist](http://www.care-statement.org/checklist))

Keep in mind that the description of your diagnostic assessments and therapeutic interventions has to fit your audience and the journal you choose for publishing your case report (see chapter 5.0)

For further reading regarding the detailed writing process see: [www.care-statement.org/writing-a-case-report](http://www.care-statement.org/writing-a-case-report)

### 3) Write the remaining parts of the case report:

**INTRODUCTION:** Outline briefly why this case report is important and cite scientific and historical literature whenever possible. Mention the therapeutic intervention and refer to articles giving an overview of the specific shiatsu technique and/or its usage in the specific field of the case report.

**DISCUSSION:** Describe the strengths and limitations in your work regarding the case. Discuss relevant literature about shiatsu, bodywork or (complementary) medicine. Give arguments for the conclusions you draw.

**CONCLUSION:** Usually one paragraph with the 'take-home' message with carefully prepared arguments at the end of the discussion.

**ABSTRACT, Key Words, References, Acknowledgement, Informed Consent and Patient Perspective:** see: [www.care-statement.org/writing-a-case-report](http://www.care-statement.org/writing-a-case-report) Part III.

*That's it, or rather: your journey may start now!*

**Additional information:** When documenting the concerns of clients, it might be beneficial to use other or additional scales to measure the outcome of your treatments. Here are some links:

#### **Sleep Disturbance**

- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=183&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=183&Itemid=992)
- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=182&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=182&Itemid=992)

#### **Pain**

- A very simple form:  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=896&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=896&Itemid=992)
- Accounting for the variation of pain intensity:  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=135&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=135&Itemid=992)
- Pain quality:  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=783&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=783&Itemid=992)  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=779&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=779&Itemid=992)
- Constraints of activities due to pain:  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=164&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=164&Itemid=992)

#### **Anxiety**

- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=22&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=22&Itemid=992)

#### **Fatigue**

- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=822&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=822&Itemid=992)

#### **Health-Related Quality of Life**

- HRQoL Short Form-36: [www.rand.org/health-care/surveys\\_tools/mos/36-item-short-form/survey-instrument.html](http://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html)
- HRQoL Short Form-12: [www.rand.org/health-care/surveys\\_tools/mos/12-item-short-form.html](http://www.rand.org/health-care/surveys_tools/mos/12-item-short-form.html)

#### **Positive Measures**

- Ability to Participate in Social Roles and Activities  
[www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=21&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=21&Itemid=992)

Since some people experience Shiatsu as a method to develop a sense of purpose in their life (Schrievers, Schätze des Shiatsu, 2017) it might be interesting in certain cases to use a measure for **Meaning and Purpose**:

- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=266&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=266&Itemid=992)
- [www.healthmeasures.net/index.php?option=com\\_instruments&view=measure&id=662&Itemid=992](http://www.healthmeasures.net/index.php?option=com_instruments&view=measure&id=662&Itemid=992)

## 4.0 Why case reports?

**We can increase the evidence-base for shiatsu. Also:**

- Case reports are smaller research projects that are easier to do.
- They are based on your clinical experience with patients.
- Are basis for further research studies – a foundation for larger studies (e.g. case series or randomised controlled trials).
- They build your confidence in the world of research by starting with a smaller project.
- They allow you to build your research skills and grow as a practitioner.
- Case reports provide valuable information to share with patients and colleagues.
- They are a great way to increase awareness of shiatsu and its many benefits.
- They are a wonderful way to share knowledge with the shiatsu community.
- They can be the starting point for further work and research opportunities.

## 5.0 How and where to publish case reports?

Once you complete your case report, write it up for publication. There are some good guides on writing your case report and **several things to consider when considering publishing**:

- Follow the CARE guidelines as adapted for bodywork and **look at the submission requirements of the journal** you intend to submit to. They will have formatting requirements, word count for submissions and often provide a guide on what to include in your manuscript.
- Look for a **peer-reviewed, open-access journal that publishes studies on bodywork or the condition** you are exploring. Peer-reviewed means several experts review your manuscript to determine if it is appropriate for the journal, well written and meets the journal's standards.
- Ensure that you find a **reputable peer-reviewed journal**. Some journals that are predatory in nature. **Predatory journals are exploitative and should be avoided.**
- To **determine if a journal is legitimate**, check their website. They should be indexed in a well-established database and the publisher should belong to a professional organization. For further information go to [www.beallist.net](http://www.beallist.net) or [www.predatoryjournals.com/](http://www.predatoryjournals.com/)
- **Don't be discouraged** if they feel it is not a good fit for their journal or if they request changes or clarification of portions of your manuscript – that is normal prior to publication.
- **Many journals have a publishing fee**, which can be a hindrance to practitioners. If you do not have funding for your case study, **look for a journal with no publishing fee.**

**Some examples of peer-reviewed journals are:**

- International Journal of Therapeutic Massage & Bodywork: [www.ijtmb.org](http://www.ijtmb.org)
- Journal of Integrative Medicine: [www.jcimjournal.com/EN/2095-4964/home.shtml](http://www.jcimjournal.com/EN/2095-4964/home.shtml)
- European Journal of Integrative Medicine: [www.sciencedirect.com/journal/european-journal-of-integrative-medicine](http://www.sciencedirect.com/journal/european-journal-of-integrative-medicine)
- Alternative Therapies in Health & Medicine: [www.alternative-therapies.com/](http://www.alternative-therapies.com/)
- Journal of Bodywork and Movement Therapies: [www.bodyworkmovementtherapies.com/](http://www.bodyworkmovementtherapies.com/)

- Once your case report is published in a peer-reviewed journal, consider writing a **short summary report** for the journals of **shiatsu associations and societies**. This is a great way to reach more practitioners.
- **Share your case report with other healthcare practitioners** who specialize in the condition or type of patient your report addressed. This can lead to referrals or further research projects.
- **Share your case report with organizations** related to the condition you addressed. This may increase awareness of shiatsu, connect you with others with similar interests and lead to new patients.

We hope you are interested in creating case reports! Further information is on our website: [www.shiatsu-research-network.org/](http://www.shiatsu-research-network.org/), Subscribe to the general newsletter, for live discussions. We also offer support and guidance with your case report: [admin@shiatsu-research-network.org](mailto:admin@shiatsu-research-network.org)

#### References

- Burke A., 2014. Zen Shiatsu: A Longitudinal Case Study Measuring Stress Reduction in a Child with Autism Spectrum Disorder. *International Journal of Therapeutic Massage & Bodywork: Research, Education, & Practice*, 7(4), 23-28. <https://doi.org/10.3822/ijtmb.v7i4.246>
- Cassidy, C.M. and Hart, J.A., 2003. Methodological issues in investigations of massage/ bodywork therapy: Part III: *Journal of Bodywork and Movement Therapies*, 7(3), pp.136–141.
- Gagnier JJ, Kienle G, Altman DG, et al., 2013. CARE Group. [The CARE Guidelines: Consensus-based Clinical Case Reporting Guideline Development](#). *Glob Adv Health Med*. 2013 Sep; 2(5): 38–43. doi: 10.7453/gahmj.2013.008
- Guyatt, G., Cairns, J., Churchill, D. et al., 1992. Evidence-Based Medicine: A New Approach to Teaching the Practice of Medicine. *JAMA*, 268(17), pp.2420–2425.
- Guyatt, G.H., Haynes, R.B., Jaeschke, R.Z. et al., 2000. Users' Guides to the Medical Literature: XXV. Evidence-Based Medicine: Principles for Applying the Users' Guides to Patient Care. *JAMA*, 284(10), pp.1290–1296.
- Haynes, R.B., Devereaux, P.J. and Guyatt, G.H., 2002. Clinical expertise in the era of evidence-based medicine and patient choice. *Vox sanguinis*, 83 Suppl 1, pp.383–386.
- Jonas, W.B., 2001. The Evidence House: How to Build an Inclusive Base for Complementary Medicine. *The Western Journal of Medicine*, 175(2), pp.79–80.
- Munk N., Boulanger K., 2014. Adaptation of the CARE Guidelines for Therapeutic Massage and Bodywork Publications: Efforts To Improve the Impact of Case Reports. *International Journal of Therapeutic Massage & Bodywork: Research, Education, & Practice*, 7(3), 32-40. <https://doi.org/10.3822/ijtmb.v7i3.251>
- Riley DS, Barber MS, Kienle GS, et al., 2017. [CARE guidelines for case reports: explanation and elaboration document](#). *J Clin Epidemiol*. 2017 May 18. pii: S0895-4356(17)30037-9. doi: 10.1016/j.jclinepi.2017.04.026.
- Sackett, D.L., Rosenberg, W.M.C., Gray, J.A.M. et al., 1996. Evidence Based Medicine: What it is and What it isn't. *BMJ*, 312(7023), pp.71–72.
- Smith, R. and Rennie, D., 2014. Evidence Based Medicine - An Oral History. *BMJ*, [e-journal] 348(g371). <http://dx.doi.org/10.1136/bmj.g371>.
- Walach, H., Falkenberg, T., Fønnebo, V. et al., 2006. Circular Instead of Hierarchical: Methodological Principles for the Evaluation of Complex Interventions. *BMC Medical Research Methodology*, [e-journal] 6(29). <http://dx.doi.org/10.1186/1471-2288-6-29>.

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