

Neural Mobilization: A Systematic Review of Randomized Controlled Trials with an Analysis of Therapeutic Efficacy

Firstly, I congratulate Ellis and Hing for performing this systematic review on therapeutic efficacy in clinical neurodynamics. It is an early and essential step in going beyond 'anecdotal evidence', a much needed move in this exciting area. What I like about it is that it is methodical, candid and claims no more than there is evidence for. As I see it, the review also highlights a number of key points.

There is certainly a need for better quality studies, as stated by the authors. Ellis and Hing have used rating tools that have been well established in ascertaining if the reviewed studies show a significant therapeutic effect. But I am not sure about the validity of taking parts of other rating systems and integrating them with a system that they appear to have created for this purpose. I am also not sure how this subsystem rates in comparison with other rating tools and whether it is valid from an epidemiological point of view. These points I can not comment on but I do feel that questions about the methodology should be raised. This may actually be an area of study in its own right and relates to the limitations of this review in its capacity to be generalized to larger clinical populations.

For me, one of the key issues is blinding. Few of the studies that are available actually used comprehensive blinding techniques. The idea of blinding is to assess the effect of a therapy and remove the effect of the therapist so that the outcome is *therapy* based rather than *therapist* based. Naturally psychosocial (e.g. therapist-patient) mechanisms participate in all therapy, but it is still ideal to find out which biophysical components are relevant, so that a common thread can be found that links to the causal mechanisms for all humans. This therefore produces universal results that can be applied to more people in pain. Consistent with Ellis' and Hing's statements, the size of their subject matter was limited on account of lack of scientific rigour and I feel that blinding is one of those critical aspects.

Also, the systematic review in the present capacity aims to derive statements as accurate as possible as to the effect of treatment over large populations. Even though this is completely desirable, there are still grounds for performing qualitative research in this area in which quantitative research is not always possible. For instance, patient-therapist interactions are critical in affecting patient compliance which inevitably produces physical effects in the tissues. So even though this systematic review is appropriately directed at the holy grail (high level evidence), the therapist should not be deterred from using their clinical acumen in dealing with subtle nuances that have not yet been measured. There is simply much more research to be done before we can base treatment on randomised controlled trials and I am not aware of any systematic review or meta-analysis system for evaluating large scale qualitative phenomena, *yet*.

The good news is that there seems to be a small amount of evidence in support of therapeutic efficacy in clinical neurodynamics. But choosing the right technique for the right patient based on causal mechanisms is fraught with difficulty when it comes to heterogeneous groups (in agreement with Ellis and Hing). For instance, non-specific low back pain is coming under quite some scrutiny in relation to subcategories based on causal mechanisms and what we should be doing is researching neurodynamic disorders in the same way - but rather than calling them 'non-specific neurodynamic disorders', or 'non-specific such-and-such pain', i.e. researching heterogeneous groups, we should be calling them 'undifferentiated disorders'. This is critical because there is growing evidence for the notion that 'non-specific' disorders are actually disorders in which 'we-can't-make-a-diagnosis'. In these cases, the patient leaves the clinic with 'Gosh they don't know what's wrong, it must be serious', which is clearly disadvantageous. So I would champion the cause of the term 'undifferentiated disorder' in relation to clinical neurodynamics. This places the responsibility back on our shoulders to differentiate the causal mechanisms, toward which the treatment can be directed specifically. This would then give birth to new opportunities to evaluate specific disorders with specific techniques with randomised controlled trials in common threads (homogeneous populations). This would then provide Ellis and Hing with more material to work with and offer a more direct line to the goal of high quality systematic re-

views and ultimately meta-analyses, then meta-analyses of meta-analyses. This is very much in agreement with Ellis and Hing.

In relation to determining a minimal change sufficient to produce a clinical improvement, this is controversial and will not be solved in this discussion. But my position is that, whilst these methods are important on a large scale basis, for the individual, this is quite personal and subjective and revolves around what value the individual places on the improvement. Many variables influence this but we still do not have methods for evaluating all these aspects, even though they are very important for some patients. The systematic review can at times be in competition with individuality and, whilst we need more of Ellis and Hing's work, we should not lose sight of the fact that manual therapy is still very much an area for individuals.

Ellis' and Hing's version of limited evidence is yet to be agreed on in relation to other gold standards and I feel that more work must be done on how to ensure that such a classification of evidence matches and compares with other tools in this area. However, in agreement with the authors' comments, the capacity for this review to be generalised to a larger clinical population is limited but it is to their credit that they openly state this, which highlights the value of their comments and conclusions. Again, Ellis and Hing rightly state the importance of further study with greater scientific rigour.

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