

Editorial

The systematic review of systematic reviews has arrived!

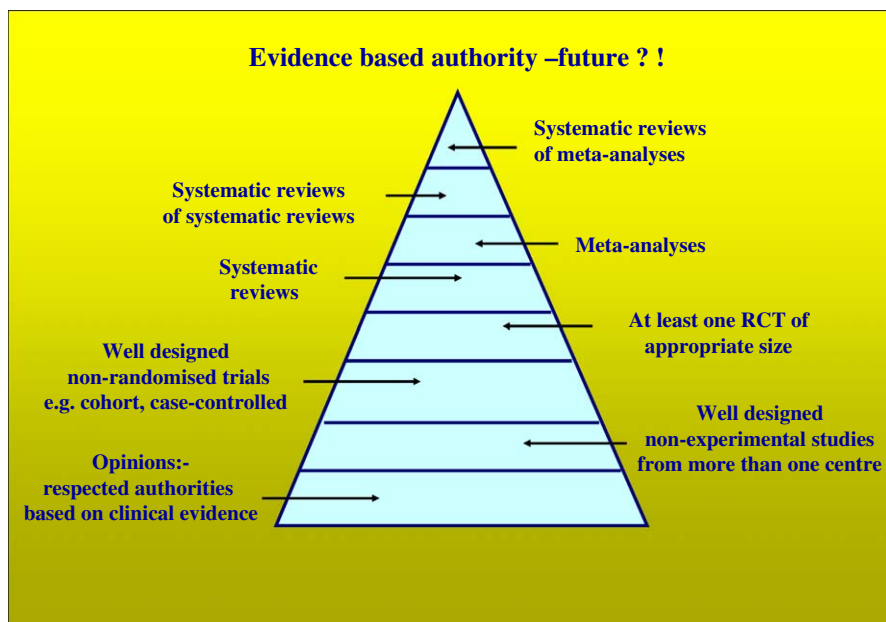
April saw the publication of Ernst and Canter's (2006) paper, "A systematic review of systematic reviews of spinal manipulation". The summary statement concluded that "considering the possibility of adverse effects this review does not suggest that spinal manipulation is a recommendable treatment".

The media hype in the United Kingdom rose to a deafening crescendo with most of the media focus on osteopathy and chiropractic, even though the review has included a number of studies incorporating manipulative physiotherapy.

Systematic reviews are usually regarded as the peak of evidence to judge the efficacy of an intervention. Thus it is disappointing to be able to detect fundamental problems in this review, considering its impact in the popular press. The paper Ernst and Canter (2006) includes systematic reviews focusing on a heterogeneous

dizziness, and a paper on any condition!). Reviews were selectively chosen from the years 2000 to May 2005. The paper included no reference to a methodological approach used in the appraisal in the systematic reviews contained within the article and did not go back to source. No critical appraisal of the pre-existing systematic reviews was offered. In addition, the interventions were poorly described and defined and were heterogeneous i.e., the reviews included a range of manual therapy techniques, although the article title referred to spinal manipulation only. The authors comments on the included systematic reviews unfortunately appeared to be selectively biased. One is left asking the question why?

As mentioned we know that the accepted hierarchy of evidence as it is held currently in the health arena, shows systematic reviews to be the gold standard level of



collection of problems (low back pain, neck pain, neck problems, chronic headache, non-spinal pain syndrome, dysmenorrhoea, infantile colic, asthma, cervicogenic

evidence, but in view of the recent developments how will the hierarchy will look in a few years time if we do not take stock now?

It is worth reflecting on issues with the model in the current context. Systematic reviews are recognized as the highest level of evidence, but to be at this highest level they must include multiple, well designed randomized control trials. Hence the systematic review is only as good as the original studies it includes and the systematic reviewers interpretation of the studies. There are several additional known problems associated with systematic reviews. The primary studies do not necessarily reflect contemporary practice largely due to the time at which they were published and also due to the fact that the research base is evolving all the time. Frequently we see the pooled studies include heterogeneous patients, professions and interventions which are often poorly defined and described.

The quality of interventional approach is never assessed in systematic reviews. The only assessment that takes place is with regards to the quality of the randomized control trial design. Following the CONSORT statement (Moher et al., 2001) can help to rectify this. Worryingly many of the author teams associated with systematic reviews do not include an expert in the interventions used, therefore the interpretation of randomized control trials including interventions with which the author team are not strictly familiar can be flawed if clear definitions of terms have not been included in the original randomized control trial write up.

Generally speaking, the systematic review can for a number of reasons muddy the waters of understanding and foil attempts to get to the truth rather than clarifying the evidence base picture.

The systematic review of systematic reviews is an untested methodology at best and might take us even further away from the truth. It has become popular in medicine but it is worth reflecting on the fact that many hard science subject areas, for example chemistry, believe that the systematic review itself is poor science.

If anything positive has come out of this new publication, it must be that it raises the need for all the professions engaged in manual therapy to do several things:

Increase the amount of research in the field to include standardized data collection, qualitative, experimental and randomized control trial studies which are well designed.

Refine and closely define the terms used in manual therapy so that techniques are not subject to misinterpretation.

Clearly publish the probable and possible known effects and side effects of these individual techniques.

Increase the development work on clinical sub-grouping.

Develop a system for assessing the quality of interventions included in randomized control trials.

So lets get back to proper science and discover the real truth if we can.

References

- Ernst E, Canter PH. A systematic reviews of systematic reviews of spinal manipulation. *Journal of the Royal Society of Medicine* 2006;99:189–93.
- Moher D, Schulz KF, Altman DG. The CONSORT Statement: revised recommendations for improving the quality of reports of parallel group randomised control trials. *BMC Medical Research Methodology* 2001;1(2):1186–97.

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