

## Evidence-Based Physiotherapy – a Shot in the Foot?

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The search for an excellent level of health care provision, coupled with the need for the rational use of treatment and prevention methods for kinetic-functional disorders has resulted in physiotherapists making decisions within their routine practice based on scientific evidence. The term “evidence-based medicine” emerged in the 1980’s to describe the problem-based learning used by McMaster University Medicine School. Evidence-based practice (EBP) and evidence-based health care comprise the same concepts and principles of evidence-based medicine; such terms are used by different professionals and in different health care contexts. EBP has been sustained by a tripod that takes into account the synthesis of the best external evidence or research, the professional experience of the health care provider and the values and preferences of the patient, i.e. focusing on the patient and family. Research undertaken judiciously provides certainty to assist in clinical decision making.

However, the argument here is that the methods of investigating the effectiveness of physiotherapy be incorporated into the designs of studies examining certain types of problems that, although central to the study, such methods can lead to restricted types of responses. A double-blind randomized clinical trial may not respond correctly, for example, about the effectiveness of an intervention in a group of patients with kinetic-functional alterations due to Parkinson’s disease, chronic lower back pain or other disorders/diseases. The standardization of this type of study does not apply to phenomena with multiple risk factors, with endless threats and causes. This constant quest for standardization of methods does not take into account the kinetic-functional, social, economic and environmental causes which may be compromising the effectiveness of physiotherapy. To quantify this information, we conducted a brief survey of the results and findings from systematic reviews published in 2011 that tested one or a group of modalities of physiotherapy [1]. To that end, we used the electronic database PubMed with descriptors extracted from the Medical Subject Headings (MeSH) as follows: 1- “Physical Therapy Modalities” NOT “Dance Therapy” NOT “Yoga” NOT “Tai Ji”; 2- “humans”; 3- LIMITS “English [lang]” AND “systematic[sb]”; 4- 1 AND 2 AND 3.

As a result, we found 217 studies, of which 159 studies met the eligibility criteria of our research, i.e. intended to demonstrate the efficiency of any modality of physiotherapy and/or affinity areas. The result is surprising, as we evaluated that 87 (54.7%) of the studies found that there is not enough evidence to support the effectiveness of the physiotherapeutic procedures when being compared to the placebo group and/or another procedure. Actually, the evidence of five small placebo-controlled trials does not support the use of ultrasound in the treatment of lower back pain [2]. However, this isolated modality is not the only consideration in the decision-making of physiotherapists. Another example are the studies that evaluated the effectiveness of physiotherapy for a few functional aspects such as quantification of the number of stride that a patient with Parkinson’s disease makes per minute or the isokinetic evaluation of peak torque of palmar pressure of a patient with hemiplegia due to stroke. Are we asking the right questions? Or are we answering them wrong [3]?

We need to rethink a new paradigm of evidence-based physiotherapy with models focused on multifactorial aspects, assuming the

study of functional outcomes which may be applied in the decision-making reality of the physiotherapist [4]. Otherwise we will continue conducting research with little potential for significant consequences for the functional health of the population and following a false failure rate of physiotherapy. Research never replaces the experience and reasoning of the professional for deciding which intervention is effective or not for a particular patient.

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