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A short methodology for Beginners

Part 1: Evidence



Prof. Dr. Harald Walach

In this series of (blog-)articles I'll gradually develop an online tutorial on the key elements of methodology which can serve as a reference for physicians, those interested in medicine,, journalists, methodical laypeople, and students. In the end these entries will comprise a small study compendium. Contributions from others are welcome.

Harald Walach

Part 1: Evidence: an unreflected battle cry

The founding fathers of Evidence Based Medicine (EBM) made it clear that EBM means:

- a) the best available information from the scientific literature PLUS
- b) the professional opinion of the treating physician PLUS
- c) the preference and the request of the patient.

All three should be combined in decisions based on evidence-based medicine.

This process of decision making is shortened in the German debate due to the typical German obedience to everything seen and accepted as authority. Then there is also human nature and the tendency to stop thinking when one hears a word seemingly saying it all and therefore finishing the debate.

We tend to think of the Anglo-Saxon world as authority. Therefore, we stop thinking when someone says EBM: We assume that only data from randomized, and perhaps placebo-controlled, trials should be considered. Everything else is irrelevant. This opinion is not only factually false but is also scientifically, politically and practically dangerous for our health. I will provide a more meaningful interpretation of EBM than the usual in a step by step process.

What constitutes good empirical evidence of a quality necessary to support medical decision making? At the moment, the term "evidence" is a battle cry uttered by all sorts of people in order to fight what they dislike. On the one hand critics suggest that complementary medicine lacks evidence. On the other hand critics of established clinical medicine use it in order to emancipate themselves from medical authority figures in the name of science, and they also use their science to protect and shield themselves against the imposing behavior of the establishment. Additionally, regulatory agencies use EBM to separate the chaff from the putative wheat and writers of review

articles use it in order to make things easy and to avoid thinking too much. Finally, EBM appears to be a good excuse to consider only a portion of the existing information.

This is exactly the point where we need to start thinking:

What exactly does it mean to rely on scientific data?

What kind of data, for which type of question, do we need?

Do these data already exist? If not, can we create them? How exactly?

And finally: What do we already know?

I suggest that you do this thought and research exercise as preparation for your methodological education:

Look for a clinically relevant area which you have encountered often in your work, in your life or in your family.

One example is chronic back pain or chronic polyarthritis. Look up the appropriate guidelines of an appropriate professional society. What is recommended? Then ask yourself: On what basis is this recommendation made? Track the literature back to the original studies and check a) the inclusion and exclusion criteria, and b) the duration of the treatment which was tested in this study. It would also be useful to consider whether c) the number of patients in the study was large enough to detect potential side effects. If this is not the case, look for d) a sufficiently long and large-scale observational study in the literature. For copyright reasons I cannot spare you the effort of seeking this information yourself. Participants of our KMKH study course will in due course find these on our proprietary learning platform.

Stay tuned for second part of the series coming soon!

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About the Author



Prof. Dr. Harald Walach
walach@europa-uni.de

Harald Walach is a clinical psychologist, philosopher, science historian, and a professor of complementary medicine research methodology and naturopathic medicine. He is also the director of the Institute for Transcultural Health Sciences (Intrag) at the European University Viadrina Frankfurt (Oder). His fellow experts of his field regard him as researcher with an excellent reputation and the magazine "Explore" cites him as "one of the most outstanding European researchers in the field of complementary and alternative medicine".