

EDITORIAL

EBM: Methodical and Moral DilemmaSurekha Kishore¹, Ankur Joshi²¹Professor, Department of Community and Family Medicine, All India Institute of Medical Sciences, Rishikesh, Uttarakhand²Assistant Professor, Department of Community and Family Medicine, All India Institute of Medical Sciences, Rishikesh, Uttarakhand

Abstract	Introduction	Methodology	Results	Conclusion	References	Citation	Tables / Figures
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Kishore S, Joshi A. EBM: Methodical and Moral Dilemma. Indian J Comm Health. 2017; 29, 2: 132-133.

Source of Funding: Nil **Conflict of Interest:** None declared**Article Cycle****Received:** 12/04/2017; **Revision:** 15/04/2017; **Accepted:** 30/04/2017; **Published:** 30/06/2017This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

“Science replaces private prejudice with public, verifiable evidence.” — Richard Dawkins.

This statement by Dawkins inherits the essence of Evidence Based Medicine (EBM) which is relatively a new paradigm of clinical practice and inherently associated with the quest of lifelong-learning. EBM stands on three fundamental pillars- systematic appraisal of literature blended with expertise opinion and preferences(values) of patients for achieving optimization in decision making for a patient. All the three factors are assumed to act in coherence and not in dominance /isolation in an ideal scenario. However, as idealism is an optimistic illusion we have to accept the pragmatism in the perspective of current practices and operational strategies in EBM. This editorial is an attempt to explore and generate an insight as the consequence of the so –called realistic approach.

The first predicament which one can perceive is gradual transformation of EBM into a cook-book medicine. As mentioned earlier, the foundation of EBM relies on three pillars but sometimes much reliance on the quantitative evidences and ignoring the rest of the pillars may generate a unwanted tilt in EBM castle. John Ioannidis, who is one the one of the most cited researchers and pioneers the arena of current EBM offers very radical statements when he

says- “clinical evidence is becoming an industry advertisement tool and that “much ‘basic’ science is becoming an annex to Las Vegas casino “and some apex systematic review forums may cause harm by giving credibility to biased studies of vested interests through otherwise respected systematic reviews. The notions rings the bells among the inquisitive researchers and medicine practioners whether we should accept the evidences in their original face or should it be taken with a pinch of salt?

There is a well known proverb (I am taking the liberty to add humor)- ‘if you torture the data it will speak what you want.’ But on a serious notion are we considering the False Discovery Rate (FDR) while making the inferences? FDR is dependent on the context of the experiment (prior-probability) which is given places nearer to Bayesian approaches but not in current approaches. We over rely on p-value which is documented by several researchers as the right way to find the answer of wrong question. Usually we become mesmerized by the p-value while ignoring the associated effect size. Any evidence generated by a single study always has some countable probability of misleading with it. Are we considering these facts?

Looking from the fundamental goal of EBM (i.e. making the best informed decision for the patient) from individualistic perspective, critical appraisal of

any offered clinical strategy is rooted into four areas- relevance, validity, consistency and significance of the results. Out of these four relevance and validity can be systematically approached through EBM. External consistency is the corroboration of the study finding with the Biological rationale for the phenomena. Biology is evolving but unfortunately still can be labelled as incomplete at the molecular and genetic level. The 'macro-evidences' (generated from the quantitative research) how well can be applied at 'micro' level under these limitation, seems to be question of concern.

EBM sometimes have altered as deterministic and dominance medicine where large Randomized Controlled Trials (RCTs) and systematic reviews are been conducted by socially and economically powerful institutes and commercial organizations. The conflict of interest in such RCTs/ synthesis can distort the purpose of EBM in a completely opposite direction. The research agenda and implementation sometimes may be driven by the commercial goal in large pharmaceutical companies without actually considering the patients priorities and concerns. Another issue at the ethical plane is related with the over-ambitious reliance on EBM where all the evidences below level-1 are sometimes not accepted clamming as insufficient evidences for an intervention/treatment approach. This can be further deduced that the more stringently EBM will be applied the lesser possibilities that intervention will be proven effective. So, the negative outcomes may over-shadowed to positive outcome. From a patient perspective, this situation may be very confusing and non-deterministic. How much ambiguity or dualism may be afforded by the patient/dear ones, also a question of concern.

Let's start thinking in terms of addressing the mentioned issue from the futuristic perspective of EBM. Voices are there to apprise the element of uncertainty and to give it's proper place in EBM. EBM has to accept the notion of ignorance in less explored areas. Collective decision making by a patient and the treating physician is another important area which is yet to given its due share at EBM playground. The humane touch is as essential as hard-core evidence for the survival of a patient as the ultimate aim is the patient care in it's the best form. The third area which should be the integral constituent of EBM is to integrate and interpret the evidences free from conflict of interests of commercial organization and pharmaceuticals. EBM has to find its meaning above and ahead from quantitative mechanistic attitude.

It does not mean that we should not advocate the EBM or act as strong promoter of EBM. In fact EBM is the wonderful tool for effective and efficient clinical management at treatment plan, empowering tool at humane plan and also the life-long learning tools for the care provider. The only need at this juncture is the requirement of a unbiased non-judgmental approach to evidences and let the 'individual' find his place in the 'data-set', since every data is the living individual.

There is no medicine like hope!, no incentive so great, and no tonic so powerful!, as expectation of something good tomorrow.