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Seeking a Pragmatic Alternative to EBM

Evidence-Based Medicine (EBM)

- Randomized controlled trials and meta-analyses of RCTs are considered the "gold standard" because they are "so much more likely to inform us and so much less likely to mislead us…" than other types of evidence (Sackett 1995 p. 72).
- Scott Sehon and Donald Stanley write "[w]hat separates EBM from other approaches is the priority it gives to certain forms of evidence, and according to EBM the most highly prized form of evidence comes from RCTs (including systematic reviews) and meta-analyses of RCTs…. [W]e will take the term "evidence-based medicine" to refer essentially to the practice of taking RCTs as the strongly preferred form of medical evidence"(p. 3).

Challenges to EBM

- There is persuasive evidence that at least with marginalized communities the epistemic reliance on RCTs and meta-analyses is more likely to misinform us and more likely mislead us than EBM practitioners have acknowledged.
- Many of these challenges come from those working in epistemology of medicine and health justice, but also from those working directly in medicine.

Epistemology of Medicine

- Patients respond differently to treatments, which can arise from a number of factors—genetic, behavioral, environmental, gender, and morphological.
- Patients also differ in their likelihood of experiencing side effects related to treatment. These differences frequently are the result of genetic and environmental differences.
- This is worrisome, because as Kravitz et al. argue "average effects pertain most often to the average patient. Accordingly, those who deviate far from the average patient trial participant based on risk, responsiveness, or vulnerability may behave very differently" (p. 675).

- Marginalized groups are those whose members individually and collectively are **most** likely to differ from the average patient, these same people are those that are the least likely to benefit and may be harmed by EBM.
- This only serves to further disadvantage and marginalize these groups.

Health Justice

- The perceived context of objectivity that results from the hierarchy of evidence obscures the ways that EBM is failing in two areas.
  - Lack of plurality in who designs and funds research
  - Lack of diversity in research participants
  - These result in serious problems of evidence in EBM that tie back into the problems that Kravitz et al. highlight.

A Pragmatist Turn in Biomedicine

- **Experimental Inquiry:**
  - Key Concepts:
    - Explicit connection between knowing and doing, knowing and ethics.
    - Recognizes and seeks to understand the multiple factors that are involved in a problem.
    - Frames these within a particular historical trajectory, body, location, time, and conditions.
    - An overarching methodology that uses problems as an initiator for targeting and employing particular, and frequently multiple, methodologies (directed activity).

- Transaction
  - Key concepts
    - Embodiment such that there is no separation between mind and body and no firm demarcation between body-mind and the world in which we live.
    - Complexity and interdependences, seeks to understand relationships within a dynamic system.
    - Recognizes individual-social-political-economic-environmental system as one complex system in which people have different levels of power and agency.

Ecosocial epidemiology as a pragmatic alternative to EBM

- Key Concepts:
  - Embodiment, referring to how we literally incorporate, biologically, in societal and ecological context, the material and social world in which we live.
  - Pathways of embodiment, via diverse, concurrent, and interacting pathways.
  - Cumulative interplay of exposure, susceptibility, and resistance across the lifecourse
  - Accountability and agency (Krieger, 2011 Epidemiology and the People's Health: Theory and Context)