Acta Scientific Pharmaceutical Sciences

Volume 1 Issue 6 December 2017

Short Communication

Systemic Reviews: Why Scientific Society in Need

Jilan A Nazeam*

Lecturer of Natural Chemistry, Faculty of Pharmacy, October 6th University, Egypt

***Corresponding Author:** Jilan A Nazeam, Lecturer of Natural Chemistry, Faculty of Pharmacy, October 6th University, Egypt.

Received: September 23, 2017; **Published:** December 18, 2017

Recent decades have seen the replacement of authoritative reviews by fully systematic assessment of the literature. Enthusiasts of the authoritative/opinionated review would argue that this method allows the reviewer to negate poorly conducted research from both quantitative and qualitative consideration, but such a method inappropriately allows the biased, imprecise and 'unreliable' presentation of evidence. A systematic literature review (SR) attempts 'to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question' (Cochrane definition, 2013). It characterized by being objective, systematic, transparent and replicable.

Criteria of SR

Unlike to narrative review, systematic review should include focused question, contain comprehensive; explicit search resources. Selection of topic should be criterion-based; and uniformly applied with evidence based inference.

Special Characteristics of SR:

- Clearly stated set of objectives with pre-defined eligibility criteria for studies.
- Explicit, reproducible methodology.
- Systematic search that attempts to identify all studies that would meet the eligibility criteria.
- Assessment of the validity of the findings of the included studies.
- Systematic presentation, and synthesis, of the characteristics and findings of the included studies.

A good systematic review might achieve most or all of the following [4-6]:

- Establish to what extent existing research has progressed towards clarifying a particular problem;
- Identify relations, contradictions, gaps, and inconsistencies in the literature, and explore reasons for these (e.g. by proposing a new conceptualisation or theory which accounts for the inconsistency);
- Formulate general statements or an overarching conceptualization (make a point, rather than summarizing all the points everyone else has made; Sternberg, 1991);
- Comment on, evaluate, extend, or develop theory;
- In doing these things, provide implications for practice and policy;
- Describe directions for future research.

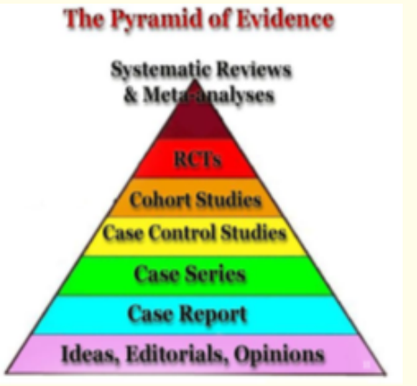
Why need?

According to recent statistical analysis; too much trials were detected; 25000 biomedical journals in print and 8000 articles published per day, all studies not equally well designed or interpreted.

So, we need a study of studies:

- To summarize evidence from studies that address a specific clinical question, as a new evidence changes scientific community point of view such as the patient management during the clinical studies.
- To explain differences among studies on the same question. Sometimes it is difficult to get evidence when it is needed
- To limit bias (rigorous methodology & clear reporting).
- Knowledge and clinical performance deteriorates with time without an attempt to keep up-to-date
- Support Evidence Based Practice.
- Research and publication.
- Personal professional development.

Why SR on the top of evidence pyramid: It because of meticulous methodology, peer reviewed, relatively large sample size and it ensures the highest quality evidence.



Method to develop a search protocol

Source of articles includes; Electronic databases, bibliography of selected articles, hand searching journals, "Gray" literature, key informants, web Searching. The PubMed, Medline/OvidSP (includes EMBase), Web-of-Science and BIOSIS search engines should be considered. Furthermore, to reduce the influence of publication bias, abstracts presented at an appropriate and justified selection of conferences should be manually searched.

Protocol to do a SR, we should answer the following questions:

- What is the title?
- What is the context and what are the conceptual issues?
- What is the aim?
- What is the research question?

- What is the search strategy?
- What are the inclusion / exclusion criteria?
- How will the data be extracted and analyzed?
- How will the quality of studies be assessed?

What info to extract

- Will depend on study question it basically includes; study author, year of publication, year of study, sample size, study design, study population details, outcome measure definition, exposure measure definition, effect size and some other authors comments.

What info to extract

- If sufficient quantitative data is found, it may be appropriate to conduct a meta-analysis,
- Using statistical methods to present and assess the data collected by primary studies.
- This method is of particular use in reviewing the efficacy of a therapy or diagnostic test,
- Provided it is measured quantitatively and is comparable between studies.

With increasing focus on generating guidance and recommendations for practice through systematic reviews, healthcare professionals need to understand the principles of preparing such reviews.

Suggested External Resources and Additional Reading

1. The Cochrane Library.
2. A BMJ article on meta-analysis.
3. Two recommended checklists for critical appraisal of study design; CAMARDADES (http://www.camarades.info/) and CONSORT (http://www.consort-statement.org/)

4. Baumeister RF and Leary MR. "Writing narrative literature reviews". *Review of General Psychology* 1.3 (1997): 311-320.
5. Bem DJ. "Writing a review article for Psychological Bulletin". Psychological Bulletin 118 (1995): 172-177.
6. Cooper HM., *et al*. "The handbook of research synthesis and metaanalysis (2nd edition)". New York: Russell Sage Foundation (2008).
7. Kline RB. "Beyond significance testing: Reforming data analysis methods in behavioral research". Washington, DC: APA Books, Chapter 4 (2004).

Volume 1 Issue 6 December 2017