

Welcome to

THE PALESTINIAN CLINICAL RESEARCH CLUB

How to Conduct A Systematic Review

IMET2000

The International Medical Education Trust



Outline for the workshop

- Why A Systematic Review (SR) Matter?
- How to conduct a SR: learn by example
- How to complement a SR with meta-analysis:
learn by example

Why A Systematic Review Matter?

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Why a SR matters: Outline

- **What is a systematic review (SR)**
- **Brief History of SRs**
- **Key Steps if you are thinking of conducting a SR**
- **Why SRs are important**

Levels of Evidence



What is a systematic review?

A potent mean to comprehensively record and assess the state of knowledge on a particular topic.

SRs search, appraise and collate all relevant empirical evidence in order to provide a complete interpretation of research results.

History of Systematic Reviews

1753

- The SR conducted in by James Lind
- A concise and unbiased summary of evidence on scurvy^{8 9}.

1970-1980

More attention was paid to the growing need to improve the state of evidence synthesis.

Why are SRs important?

Research Perspectives

1. deliver a clear and comprehensive overview of available evidence on a given topic.
2. help identify research gaps in our current understanding of a field.
3. highlight methodological concerns in research studies that can be used to improve future work in the topic area
4. identify questions for which the available evidence provide clear answers and thus for which further research is not necessary

Why are SRs important?

Researcher Perspectives

- ◆ refine your knowledge on the subject area of interest
- ◆ develop new research ideas
- ◆ gain critical skills in synthesising existing literature.

5 Key Steps in Conducting SRs

Before you start

Do you we need a systematic review on that topic??

First step

Define your research question explicitly by using the PICOTS (**P**opulation, **I**ntervention, **C**omparator, **O**utcome, **T**iming, **S**etting) framework

Second Step

Register the protocol for the review on PROSPERO (<https://www.crd.york.ac.uk/prospero/>),

5 Key Steps in Conducting SRs

3rd Step

You must adopt a comprehensive, objective and reproducible search strategy to capture all relevant sources of evidence.

4th Step

Use your predefined eligibility criteria, to analyze the screened search results to extract data from papers meeting your legibility criteria

5th Step

Don't forget to assess the risk of bias

To Summarise

- The more Data there is the more confident we can be.
- SRs give the best estimate of any true effect.