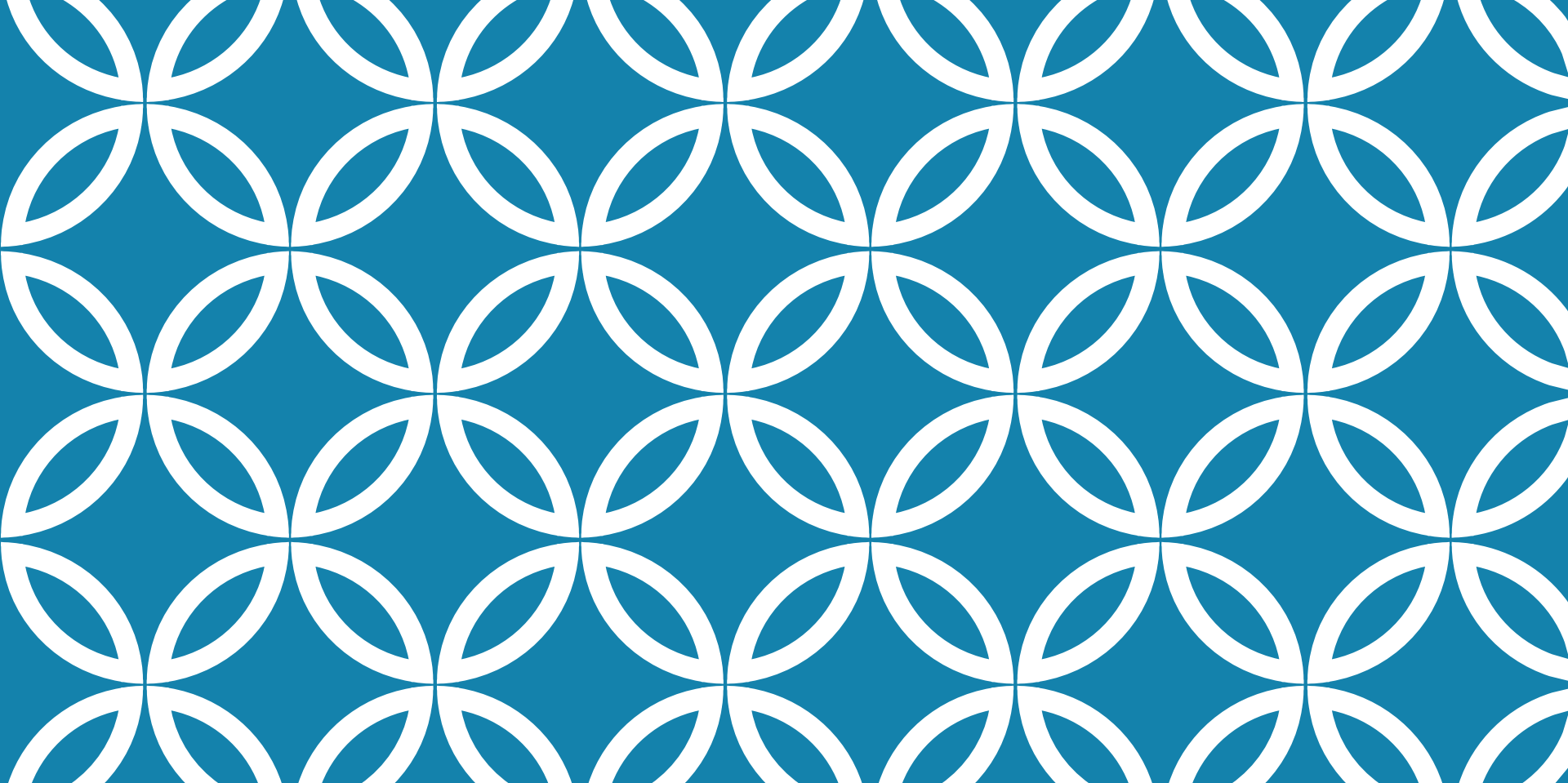


به نام خدا

کارگاه آموزشی کتابدار بالینی دانشگاه
علوم پزشکی سبزوار

زمان برگزاری: 17 و 18 بهمن ماه
1395

محل برگزاری: پردیس دانشگاه – سایت
کامپیوتر



مقالات مروری نظام‌مند و

جایگاه آن‌ها در تصمیم‌گیری بالینی

به طور کلی مقالات را به دو دسته تقسیم می کنند:

۱- مطالعات اولیه (PRIMARY STUDIES)
مطالعاتی هستند که از تحقیق مستقیم به دست می آیند از آزمایشات،
کارآزمایی بالینی و پایش ها
EXPERIMENT, CLINICAL TRAIL, SURVEY

۲- مطالعات ثانویه (SECONDARY STUDIES)
مطالعاتی هستند که با مطالعات اولیه و با کار روی داده های آنها انجام
و نتیجه بدست می آورد.

در یک دسته بندی ساده ما مطالعات مشاهده ای و غیر تحلیلی را داریم:

۱- مطالعات مقطعی (CROSS SECTIONAL STUDIES)

ساده ترین شکل بررسی های مشاهده ای و اغلب در نمونه ای از کل جمعیت به وسیله معاینه، پرسشنامه یا پژوهش انجام می شود. (مطالعه میزان وفور و میزان شیوع یا بررسی فراوانی هم می نامندش).

۲- مطالعات طولی (LONGITUDINAL STUDIES)

به مشاهدات مکرر در زمان طولانی از طریق پیگیری معاینات و ... پرداخته و هزینه آن از مقطعی بیشتر که البته اطلاعات مفیدی به ما می دهد. (بررسی میزان بروز)
این مطالعه مثل یک فیلم سینمایی و مطالعات مقطعی به مثابه یک عکس.

در یک دسته بندی دیگر ما مطالعات تحلیلی را به دو دسته تقسیم می کنیم:

۱- مطالعات شاهد موردی (گذشته نگر) (CASE CONTROL STUDIES)

۲- مطالعات هم گروهی (COHORT - STUDIES)
به نوعی از مطالعات تحلیلی مشاهده ای گفته می شود که برای بدست آوردن شواهد بیشتر جهت رد یا قبول فرضیه ماست.
می تواند آینده نگر یا جاری باشد
گذشته نگر یا تاریخی
و مرکب از دو روش قبلی

انواع مقالات در علوم پزشکی

Original Article

مقاله پژوهشی اصیل

Review Article

مقاله مروری

Case Reports

مقاله گزارش مورد

Editorial

Short Communication (short papers)

سرمقاله (سخن سردبیر)

Letter to Editor

مقاله کوتاه

نامه به سردبیر

انواع مقالات مروری در علوم پزشکی

- ◆ **Traditional** Review Articles
(Narrative Review)

مقالات مروری سنتی
مرور روایتی، نقلی (ثانویه)

- ◆ **Systematic** Review (Meta-analysis)

مقالات مروری نظام‌مند
مرور ساختاردار (ثانویه)



The Ascent of Evidence (and the exhaustion of Man)

Wissett



fig.1



fig.2



fig.3



fig.4



MEDICAL PUBLISHING SCOPE

Annually:

+20,000 journals

+17,000 new books

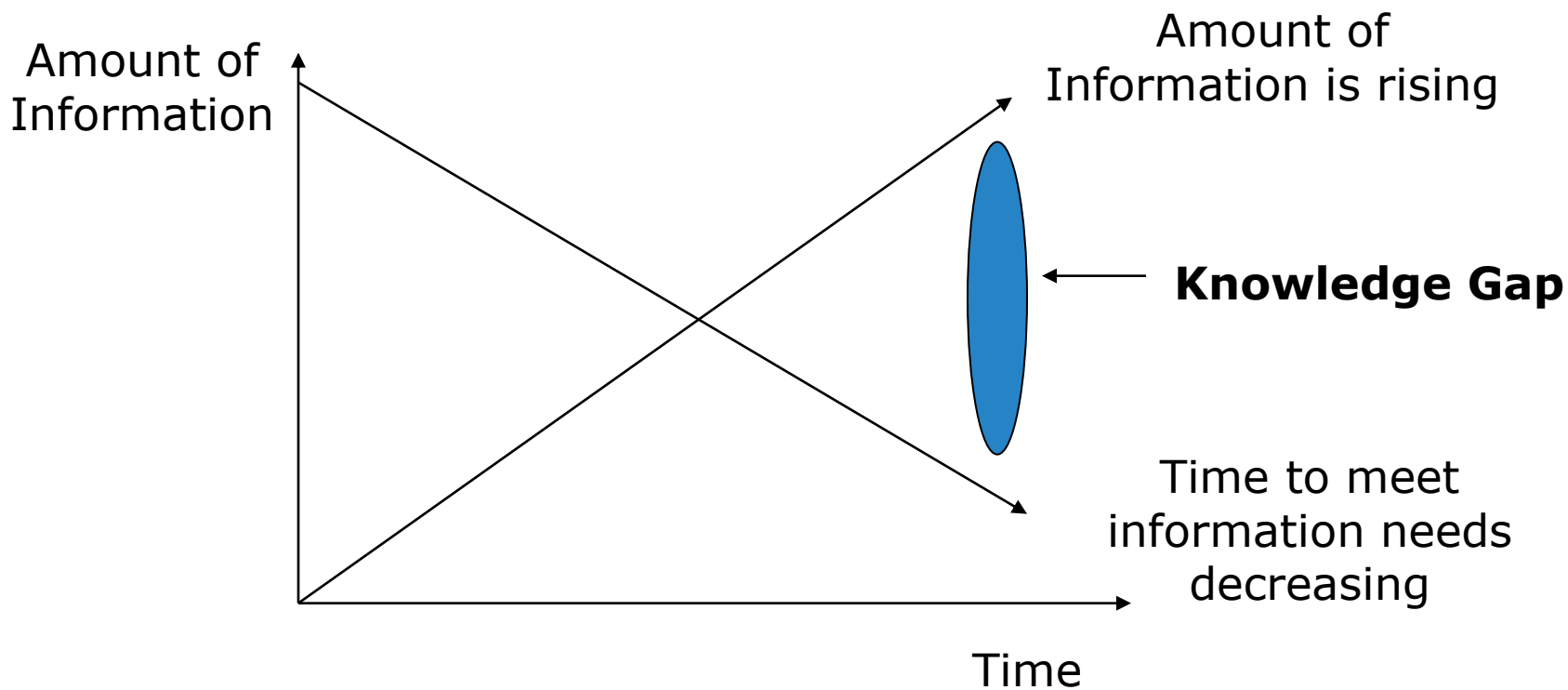
MEDLINE:

+5,000 journals

+25 Million references

400,000 new entries yearly

مشکل فاصله اطلاعاتی



The Knowledge Gap

Half-time or Half-life of
Clinical Medical Science is now

about 6 Month

Doubling time of
biomedical science was

about **19 years in 1991**

Doubling time of
biomedical science was

about 20 months in 2001

SO YOU WORK IN A JOB WHICH:

Its **half-time** (half-life) is **6 months**, &

Its **doubling-time** is **20 month**

You works in a **ever-changing** & **ever-growing** profession !

So you should **keep updating** !

FOR GENERAL PHYSICIANS TO **KEEP CURRENT:**

Read 19 new articles per day which appear in medical journals

19 x 2 hrs (Critical Appraisal) = **38 hrs per day**

Davidoff F et al. (1995)

EBM; A new journal to help doctors identify

the information they need. *BMJ* 310:1085-86.

WHAT IS 'LEVEL OF EVIDENCE'?

سطوح شواهد چیست؟

The extent to which one can be confident that an estimate of **effect** or **association** is **correct (unbiased)**.

HIERARCHY OF STUDIES

سلسله مراتب مطالعات



EVIDENCE PYRAMID

هرم شواهد

Systematic Review

Randomized Controlled Trial

Cohort studies

Case Control studies

Case Series/Case Reports

Animal research

LEVELS OF EVIDENCE

Level of Evidence	Type of Study
1a	Systematic reviews of randomized clinical trials (RCTs)
1b	Individual RCTs
2a	Systematic reviews of cohort studies
2b	Individual cohort studies and low-quality RCTs
3a	Systematic reviews of case-controlled studies
3b	Individual case-controlled studies
4	Case series and poor-quality cohort and case-control studies
5	Expert opinion based on clinical experience



SYSTEMATIC REVIEWS

Postdam Consultation on *Meta-analysis* (Cook et al, 1995) defined a systematic review as

"application of scientific strategies that limit bias to the systematic assembly, critical appraisal and synthesis of all relevant studies on a specific topic"

Postdam

SYSTEMATIC REVIEWS

Systematic review is a method of

- locating,
- appraising,
- and synthesizing evidence
- while making explicit efforts to limit bias

> a quarter of a century since Gene Glass coined the term "meta-analysis" to refer to the quantitative synthesis of the results of primary studies

A 'SYSTEMATIC REVIEW', THEREFORE, AIMS TO BE:

Systematic (e.g. in its identification of literature)

Explicit (e.g. in its statement of objectives, materials and methods)

Reproducible (e.g. in its methodology and conclusions)

SYSTEMATIC REVIEW

“Scientific tool which can be used to

summaries, appraise, and communicate the results and implications of otherwise unmanageable quantities of research” (NHS CRD, 1996)“NHS CRD ‘1996).

THEY ARE **NOT** CONVENTIONAL REVIEWS

Follow a strict methodological and statistical protocol

- more **comprehensive**
- **minimising** the chance of **bias**
- improves **transparency, repeatability** and **reliability**

تفاوت مقاله مروری سنتی و مروری نظام مند

(Adapted from Cook, D. J. et. al. (1997). Ann. Intern. Med. 126: 376-380)

Feature	Traditional Review	Systematic Review
Question	Often broad in scope	Focused question
Sources & search	Not usually specified, potentially biased	Comprehensive sources & explicit search strategy
Selection	Rarely specified, potentially biased	Criterion-based selection, uniformly applied
Appraisal	Variable	Rigorous critical appraisal, uniformly applied
Synthesis	Often a qualitative summary	Quantitative summary* when appropriate
Inferences	Sometimes evidence-based	Evidence-based

*A quantitative summary that includes a statistical synthesis is a meta-analysis

مراحل انجام مطالعه مروری نظام مند (۱)

Formulating review questions

Searching & selecting studies

Study quality assessment

Extracting data from studies

Data synthesis

قالب بندی عنوان مطالعه مروری نظام مند

The first and most important decision in preparing a review is to determine its focus

This is best done by asking clearly framed questions.

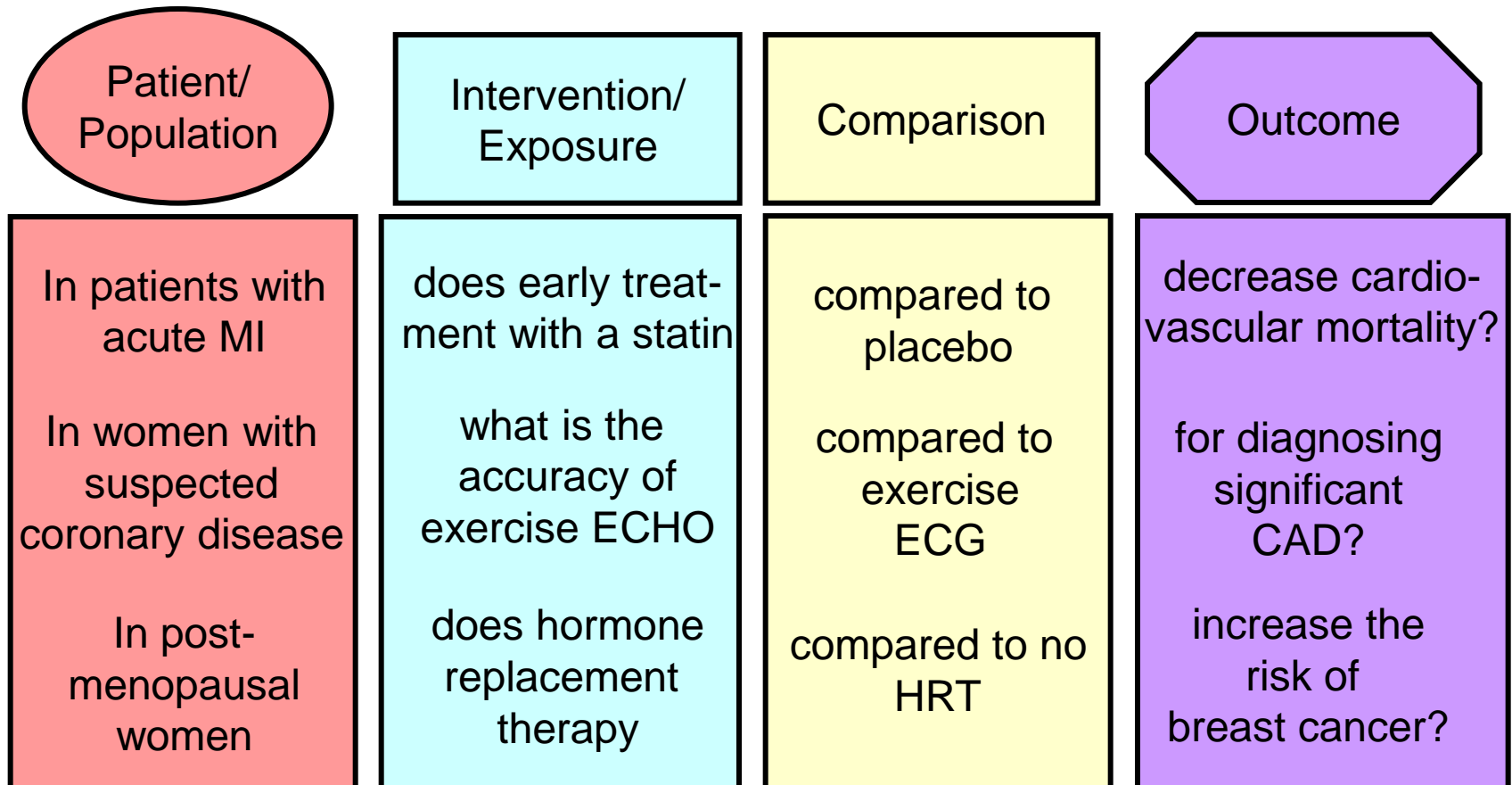
Define a four part clinical question, breaking the question down into its component parts

Question components: **PICO**

- What types of **P**atients?
- What types of **I**nterventions?
- What types of **C**omparison?
- What types of **O**utcomes?

طراحی سؤال بالینی در قالب PICO

Components of Clinical Questions



مراحل انجام مطالعه مروری نظام مند

Formulating review questions

Searching & selecting studies

Study quality assessment

Extracting data from studies

Data synthesis



SELECTING STUDIES

performing a comprehensive, objective, and reproducible search of the literature

selecting studies which meet the original inclusion and exclusion criteria

can be the most time-consuming and challenging task in preparing a systematic review

منابع اطلاعاتی مورد استفاده در مطالعات مروری نظام مند

Electronic databases

- MEDLINE and EMBASE
- The Cochrane Central Register of Controlled Trials (CENTRAL)

Conference proceedings & abstract books

Hand searching

“**Grey literature**” (thesis, Internal reports, pharmaceutical industry files)

Checking reference lists

Unpublished sources known to experts in the specialty (seek by personal communication)

Raw data from published trials

GENERATING A SEARCH STRATEGY

تولید یک راهبرد جستجو

Multiple electronic databases and the internet using a range of Boolean search-terms

Foreign language searches

Include grey literature to avoid publication bias (see subsequent slides)

Search bibliographies and contact experts

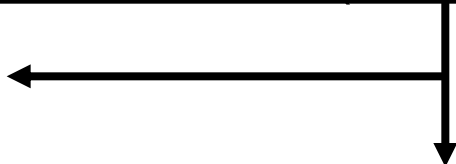
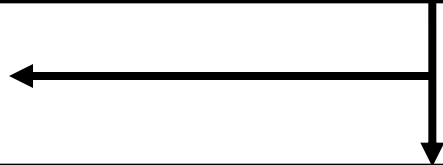
Identify potentially relevant citations
From wide searching of electronic databases &
hand searching of other appropriate resources
(n= #)

Exclude irrelevant citations
After screening all title & abstracts
(n= #)

Retrieve hard copies of all
potentially relevant citations
Identified through the above searches plus
contact with experts, sifting through reference
list & other resources
(n= #)

Exclude irrelevant studies
After detailed assessment of full text
(n= #)

Include studies in systematic review
(n= #)



مراحل انجام مطالعه مروری نظام مند (۳)

Formulating review questions

Searching & selecting studies

Study quality assessment

Extracting data from studies

Data synthesis

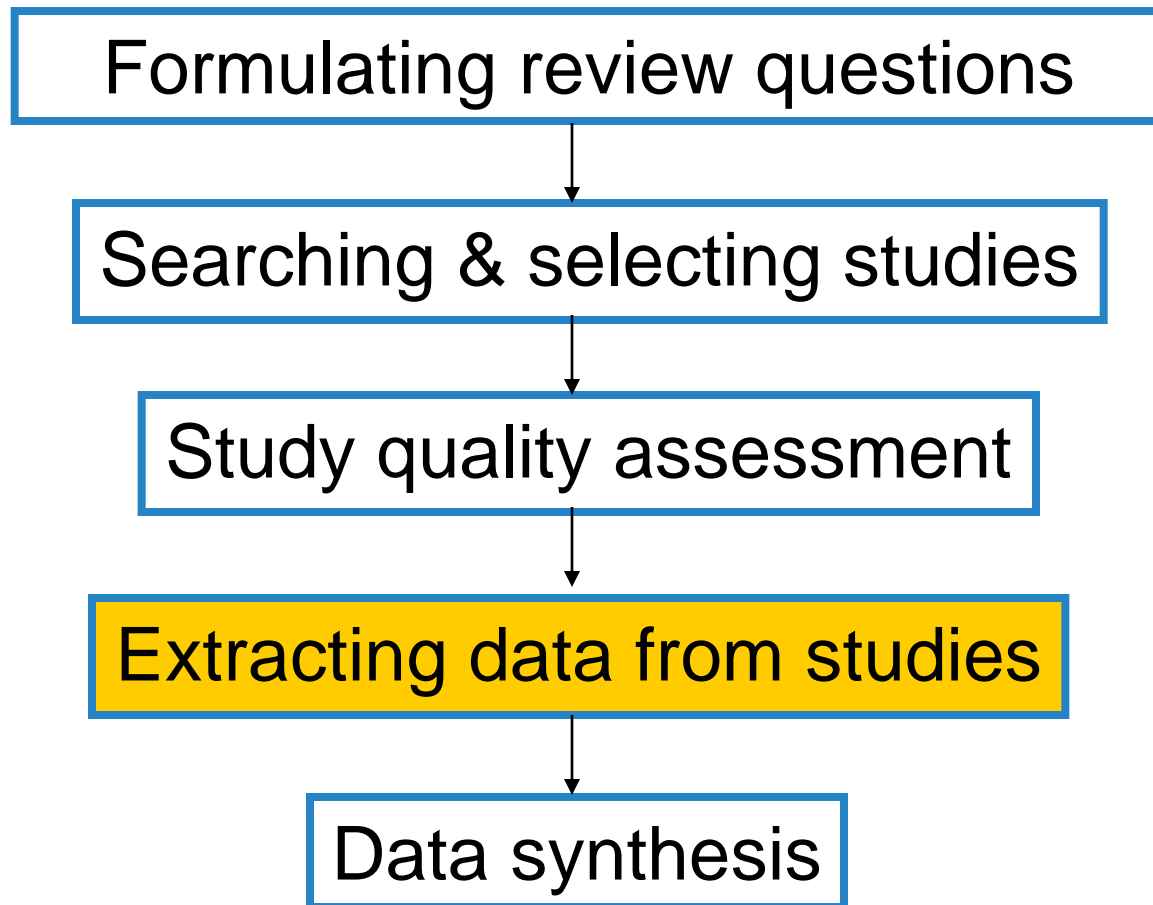
APPRAISING STUDY QUALITY

There is no such thing as a perfect study, all studies have weaknesses, limitations, biases

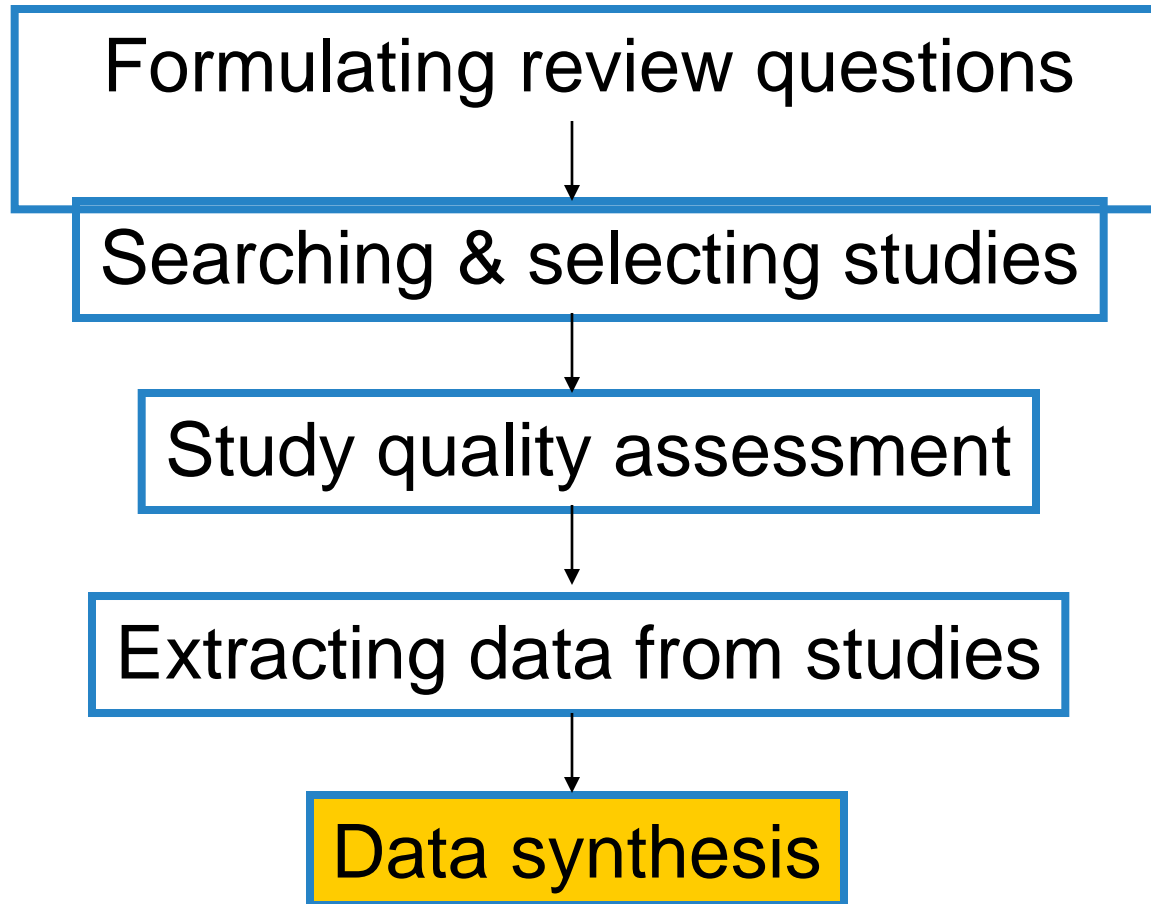
Interpretation of the findings of a study depends on design, conduct and analysis, as well as on the population, interventions, and outcome measures

The researchers in a primary study did not necessarily set out to answer your review question

مراحل انجام مطالعه مروری نظام مند (۴)



مراحل انجام مطالعه مروری نظام مند (۵)





META-ANALYSIS

when an overview incorporates a specific **statistical strategy** for assembling the results of several studies into a single estimate

سبز باشيد.

پيروز
باشيد

