

Scientific medical research Summaries and some past papers

Lectures 1-5

2-Which of the following points toward the selection of key indicators that would provide evidence for the success of the intervention in a reviewed study ?

Answer: B

- a. Concept mapping
- b. PICOT
- c. Practical questions
- d. Brainstorming

9-Which of the following is Not a feature of a good research question?

Answer: D

- a. The first step in a successful research project
- b. Different from previous work .
- c. Can be measured
- d. Has a consensus about the answers

From sheets:

Chapter 2

2.1 → **practical questions**: derived from clinical practice or personal experience

2.2 → **brainstorming**: used to creat along list of possible research topics, No need to well formed idea
→ **concept mapping**: to identify central themes that might by worth exploring [complementary to Brain storming], focus into specific research question.

2.5 → **PICOT**: [patient or population, intervention, comparison, out come, time frame

Definition → a frame work used to formulate research questions

benefit → apoint to word the selection of key indicators that would provide evidence for the success and interventions, helpful for addressing clinical research question and inter vention study

Additional notes :

1. **A good research questions** → ends in question mark and must be testable [can measured and examined]
2. **In Brain storming we ask about** → Values, skills , personal growthes skills want to develop], connections [data source or pop. Source might be available], Jop and course requirements, gaps in literature [informations that note currently available]

12-Which database is sponsored by the U.S. National Library of Medicine and features only journals that have applied for inclusion and passed through a review process ?

Answer: C

- a. SCIELO
- b. National MedLib
- c. MEDLINE
- d. EBSCO

18-What database, developed by the U.S. National Library of Medicine, can be helpful for identifying the full extent of a research area and for narrowing the scope of a research area ?

Answer B

- a. MEDLINE
- b. MeSh (Medical Subject Headings Database)
- c. PubMed
- d. MedWatch

26-Because many peer-reviewed journals are not included in the databases, especially journals in languages other than English, which search engine may be helpful for identifying additional relevant abstracts ?

Answer:A

From sheets : following page

- a. Google Scholar
- b. LexisNexis
- c. Ovid international
- d. SPORTDiscus

Chapter 2

2.3 → **keywords** → use the MeSH database to identify related ideas and expand or narrow theme, available from pubmed.org [identifying the full extent of a research area and for the narrowing the scope of research area

MeSH database: tree-like concept data mapping.

Chapter 3

3.3 → example of database that are free-to the public

↳ **PMCI** (European pubmed central), SciELO & LILACS, AJOL, Pubmed (National library of medicine)

→ example of usually subscription data base

↳ **CIHAHL:** contains some medicine journals.

↳ **Embase:** A product of elsevier company

↳ **MEDLINE:** aka medicus index, part of pubmed

↳ **PsycINFO:** related to psychology, 3rd party database

↳ **Web of Science:** Thomson Reuters → database that are made by a publisher on their own

↳ **EBSCO, JSTOR, Ovid, ProQuest:** big companies. usually paid not free → collect on one database for

access

↳ **LWW, SAGE, T&F, Wiley:** company specific databases, smaller company

The difference btw medline and pubmed

Pubmed → includes doc are not published in peer-reviewed journals

Medline → only peerviewed journals

Pubmeds → keywords from your mind

Medline → specific keywords

Pubmed → more comprehensive

Medline → sub-database

Google scholar → a supplement search with general search engine may be helpful for identifying additional relevant abstract, related to journals not published in English

Additional notes

1. **Informal sources** → nontechnical information from trusted sources [CDC, WHO], fact-sheets are not part of the formal peer-reviewed scientific literatures [Wikipedia → called open source]
2. **Statistical reports** → published by organizations, governments and they can be relied on.
3. **Abstract** → a paragraph-length summary of an article, represent a brief description of the publication, we use keywords to search multiple abstract
4. **Abstract data base should be** → search with keywords or mesh terms, use boolean operation, consider any limiters related republication years or language.
5. **Free full text PDF's** → google scholar, premed, journal websites, library subscription [e-journals]

4-Most researchers serve as what type of co- authors before moving into the lead author role for the first time ?

- a. Consultants
- b. Middle co-authors
- c. Last author
- d. Mentors

Answer B

10-The senior author, usually the primary research supervisor for a student or research group, is often listed as:

Answer C

- a. Second author
- b. Guest author
- c. The last author
- d. First author

11-In what manner are authors generally listed on a manuscript?

Answer: A

- a. In order according to contribution to the project
- b. In order according to level of education
- c. In reverse order according to contribution to the project
- d. In alphabetical order

29-An individual who is given honorary co- authorship without having significantly contributed to the work is referred to as which of the following ?

Answer A

- a. Gift authorship
- b. Associate authorship
- c. Silent authorship
- d. Ghost authorship

From sheets

Chapter 6

6.1 →co-authorship [decision about co- authorship should be made early in the research process

- most researchers start as middle authors before becoming a lead [first] author
- Co-author should adhere to standards, pay attention to details, provide feedback, ask questions

6.2→authorship criteria[ICMJE]

*No gift authorship→co-author ship awarded to a person who hasn't significantly to the study

*No ghost authors: person who have made a substantial contribution to the research or writing of a manuscript but aren't named as authors.

6.3 authorship order

*first author: who dose most of writing

*last author : senior author

*remaining authors: listed in order of contribution , author with equal contribution listed in alphabetical order

3-Which of the following is FALSE regarding choosing Senior Researcher?

- a. Usually the primary research supervisor for a student or research group .
- b. Must be heavily involved in the day-to-day details of the study .
- c. Meet authorship criteria by providing clarity and direction along the way and by providing critical feedback on the manuscript
- d. Often listed as the last author even if he or she was heavily involved in all aspects of the work and might otherwise be the second author

هلا هاد السؤال مفروض انه بيتجاوب من الفقرات الي فوق بس ما عرفت اجاويه 😊

10-Which of the following is an appropriate study goal ?

- a. To compare the effect of high blood lead level among kindergarten students in Amman based on their gender .

• Answers Highlighted in yellow

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- b. To determine whether children with low blood lead level have higher academic achievement than children with high blood lead level
- c. To identify the prevalence of high blood level in a representative sample of kindergarten students in Amman
- d. To assess the impact of lead poisoning on school performance among kindergarten students in Amman.

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15-At what point should the researcher identify three or more specific objectives that stem from the main study goal ?

- a. After completion of the abstract
- b. Prior to the literature review
- c. After finalizing the overarching study goal
- d. Prior to development of a conceptual model

15-Which of the following is TRUE regarding choosing the appropriate study approach ?

- a. After determining the study goal, the researcher should identify three or more specific objectives that stem from the main study goal ?
- b. If new data will be collected, the researcher has great freedom in selecting study topics and can easily recruit an adequate number of participants .
- c. Secondary studies are based on a thorough review of existing literature
- d. If the plan is to synthesize current knowledge by conducting a literature review, the researcher must be prepared to track down the abstracts of all relevant articles.

What about sheets?
↳ in the next page

- Side note → if new data will be collected, the researcher has great freedom in selecting study topics but may struggle to recruit adequate number of participants

From sheets

Chapter 4

4.1 → study approach → after identifying general research topic, researcher needs to develop a specific research goal and workable research plan

- types of study → primary → collect and analyze new data [recruit participants, possible source population
→ secondary → analyze an existing data [source of usable data files question that explore the available data.]
→ tertiary → review an existing literature [systematic review, meta analysis]

4.3 → study goal and specific objective →

- *describe incidence or prevalence of particular exposure or disease
- *to assess health related needs of a community
- *to compare level of exposure or disease in two or more populations
- *to identify possible risk factors
- to test the effectiveness of a new preventive intervention.
- Evaluate whether an intervention shown to be successful in one population is equally in a second population
- To examine the impact of a program policy
- To synthesis existing knowledge

4.4 → checklist for success →

- good research project described by [feasible, interesting | novel, ethical, relevant]

28-Which of the following is sketched out using boxes and arrows that illustrate the various relationships that will be evaluated during the study?

- Perceptual framework
- Conceptual framework
- Experimental framework
- Theoretical framework

Answer: B

30-Critical reading involves asking a series of questions about what aspect of a study in order to ascertain how well a particular study was designed, conducted,

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interpreted, and reported and to assess how likely it is that the resulting paper presents the truth about a particular research question in a particular population at a particular place and time ?

- Internal validity
- Sensitivity
- Specificity
- External validity

Answer: A

8-Which of the following is FALSE regarding reviewing the literature ?

- a. Gaps in the literature represent the possibility of contributing to advancing a field of research
- b. Annotated bibliography is used to track articles identified during literature review .
- c. For a research project to be considered original, it needs to totally different from previous work .
- d. The only way to truly understand a study is to read the full text of the article.

19-Which of the following is TRUE regarding the mentor-mentee relationship ?

- a. All conversations will yield a mentor-mentee relationship
- b. The mentor can get paid by the mentee based on their agreement .
- c. One mentor can provide all of the professional mentorship that a mentee requires
- d. It is a formal or informal relationship for professional development.

Additional notes Chapter 3

Chapter 3 it's about literature review

- **critical reading** → read abstract & look at table and figures, read or skim read, review article reference list
- **Internal validity** → related to the structure of the article, time of journal published , researchers and their experience [that what to extent the qualify of the paper → in addition to that a reader should ask what was the goal of study? Were the methods? Was the main study question answered? **In addition to that internal validity of a study in order to ascertain how well a particular study was designed, conducted, interpreted and reported and to assess how likely it is that the resulting paper present the truth.**
- **External validity** → generalizability, how likely is it that' the result of this study apply to other population [you can generalize your results to populations other then population the population that you studied in → the reader should ask → have replication study? To what other population might the result apply
- **Annotated bibliographies** → briefly summarize an article or report, used to track articles during literature review
- **The only way to truly understand a study is to read the full text from the article**
- **To make research original** → needs to have only one substantive difference from previous work e new exposure 1.

Chapter 4

- **conceptual framework** → the key relation ship btw EDPs, using boxes and arrows that illustrate The various relation ships that evaluated during the study.
- **Theoretical framework** → draws on existing model in the literature to explain key relationship, based on extensive review of the published literature

Chapter 5

- **scientific research** → rarely completed by one person
- **Lead research** → who will do the majority of work
- **Senior researcher** → an experienced researcher who divide the work of new investigator
- **Mentees need to know before entering** → time availability, frequent and style for communication, roles and responsibility, expectation
- **Mentees need to do after entering** → communicate often, ask questions, complete tasks on time, be honest maintain records, Express gratitude