FORMULATING A RESEARCH QUESTION

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- A good research question (RQ) forms backbone of a good research, which in turn is vital in unraveling mysteries of nature and giving insight into a problem.

Bryman, A. (2007). The research question in social research: what is its role?. *International journal of social research methodology*, *10*(1), 5-20.

- RQ identifies the problem to be studied and guides to the methodology. It leads to building up of an appropriate hypothesis (Hs).
- Formulation of a good RQ is undoubtedly one of the first critical steps in the research process, especially in the field of social and health research, where the systematic generation of knowledge that can be used to promote, restore, maintain, and/or protect health of individuals and populations

Riva, John J., et al. "What is your research question? An introduction to the PICOT format for clinicians." *The Journal of the Canadian Chiropractic Association* 56.3 (2012): 167.

Characteristics of Good Research Question

- "The most successful research topics are narrowly focused and carefully defined but are important parts of a broad-ranging, complex problem."
- A good RQ is an asset as it:
  - Details the problem statement
  - Further describes and refines the issue under study
  - Adds focus to the problem statement
  - Guides data collection and analysis
  - Sets context of research.

A good research is represented by acronym FINERMAPS

- Feasible
- Interesting
- Novel
- Ethical
- Relevant
- Manageable
- Appropriate
- Potential value and publishability
- Systematic

Feasible

- Feasibility means that it is within the ability of the investigator to carry out. It should be backed by an appropriate number of subjects and methodology as well as time and funds to reach the conclusions.
- Relate the concepts of the RQ to the observations, phenomena, indicators, or variables that one can access.

- It is important to write up the problems honestly and to reflect on what has been learned.
- One should try to discuss with more experienced colleagues or the supervisor so as to develop a contingency plan to anticipate possible problems while working on a RQ and find possible solutions in such situations

Interesting

- This is essential that one has a real grounded interest in one's RQ and one can explore this and back it up with academic and intellectual debate. This interest will motivate one to keep going with RQ.

Novel

- The question should not simply copy questions investigated by other workers but should have scope to be investigated.
- It may aim at confirming or refuting the already established findings, establish new facts, or find new aspects of the established facts
- It should show imagination of the researcher.

Ethical

- This is the foremost requirement of any RQ and is mandatory to get clearance from appropriate authorities before stating research on the question.
- RQ should be such that it minimizes the risk of harm to the participants in the research, protect the privacy and maintain their confidentiality, and provide the participants right to withdraw from research.
- It should also guide in avoiding deceptive practices in research.

Relevant

- Academic and intellectual interest to people in the field you have chosen to study.
- The question preferably should arise from issues raised in the current situation, literature, or in practice.
- It should establish a clear purpose for the research in relation to the chosen field.

Manageable

- It has the similar essence as of feasibility but mainly means that the following research can be managed by the researcher.

Appropriate (A)

- RQ should be appropriate logically and scientifically for the community and institution

Potential value and publishability (P)

- Research should aim for significant economic impact to reduce unnecessary or excessive costs.
- Furthermore, the proposed study should exist within a clinical, consumer, or policy-making context that is amenable to evidence-based change.

Systematic (S)

- Research is structured with specified steps to be taken in a specified sequence in accordance with the well-defined set of rules though it does not rule out creative thinking.

How to develop a research question

1. Begin by identifying a broader subject of interest that lends itself to investigate
2. Do preliminary research on the general topic to find out what research has already been done and what literature already exists.
3. What do you still need to know?
4. What are the implied questions
5. Narrow the scope and focus of research

Doody, O., & Bailey, M. E. (2016). Setting a research question, aim and objective. *Nurse researcher*, *23*(4).

6. Once question has been framed, one should evaluate it
7. Is RQ clear?
8. Is the RQ focused?
9. Is the RQ complex?
10. Is the RQ one that is of interest to the researcher and potentially useful to others?
11. Is the RQ researchable?
12. Is the RQ measurable and will the process produce data that can be supported or contradicted?
13. Is the RQ too broad or too narrow?

FORMULATING RESEARCH QUESTION:

- First, identify what types of studies have been done in the past?
- Is there a unique area that is yet to be investigated or is there a particular question that may be worth replicating?
- Begin to narrow the topic by asking open-ended "how" and "why" questions
- Evaluate the question
- Develop a Hypothesis (Hs)
- Write down the RQ.

Writing the Research Question:

- State the question in your own word
- Write down the RQ as completely as possible
- Divide your question into concepts.
- Narrow to two or three concepts
- Specify the population to be studied
- Refer to the exposure or intervention to be investigated, if any
- Reflect the outcome of interest (hormonal profile).

THANK YOU