



Research Question

Professor Dr Abubakir M. Saleh

Basic Research Methods NUR 308

2nd week

7/2/2024



Outline

- What is research question.
- Importance of research question.
- Origin of research question.
- Criteria of good research question.



Objectives

- Understand the importance of a well-developed research question.
- Be aware of numerous methods for generating a research question.
- Develop a concise research question.
- Be able to evaluate the quality of a research question.



Research question

- It is uncertainty about some thing in the population that the investigator want to resolve by making measurement on his or her study subjects.
- The problem is not in finding a research question but it is the difficulty of finding an important one that can be transformed into a feasible and valid study plan.



The importance of research question

- The research question is the starting point of the study.
- Everything flows from the research question.
- It will determine the population to be studied, the setting for the study, the data to be collected, and the time for the study.
- A clear and concisely stated research question is the most important requirement for a successful study.



The importance of research question (Cont.)

- Help writers focus their research by providing a path through the research and writing process.
- The specificity of a well-developed research question helps writers avoid the “all-about” paper and work toward supporting a specific, arguable thesis.



How the research question emerges?

- For an established investigator, the research question usually emerges from his previous findings and observations, or from other workers in the field.
- Literature review in the field of study. E.g. meta analysis. These can also serve as background for grants proposals and research reports.



How the research question emerges?

- Careful observation of patients.
- Application of new technology : often generate new question.
- Scientific communications.



How the research question emerges?(Cont.)

- Literature review in the field of study.
 - Repeat studies in your field.
 - Do a study recommended by a journal article's authors.
 - Look for practical implications of the research.
- Attending conferences.



How the research question emerges?(Cont.)

- Teaching (during preparation of teaching material and discussion with students).
- Creativity : finding new answers to old questions.
- Question validity of commonly held beliefs:
 - If it is true ? Why?
 - If it is not true? Why



Characteristics of a good research question

FINER

1. Feasible
2. Interesting
3. Novel
4. Ethical
5. Relevant



1. Feasible

- I. Adequate number of subjects.
 - Estimate sample size, then estimate the number of subjects likely to be available.
 - Consider subjects whom would be excluded, or refuse to participate, also consider loss to follow up.



1. Feasible (Cont.)

II. Adequate technical expertise.

- Investigators must have skills, equipment, and experience needed for recruiting the subjects, measuring the variables, and managing and analyzing the data.
- The easiest strategy is to use familiar and established approaches.



1. Feasible (Cont.)

III. Cost in time and money

- Put in mind that the time & money needed usually exceed the projection.

- If high cost: Use less expensive design
Find other sources of funding.

IV. Measurement of variables: Is it possible to measure or manipulate the variables?.



1. Feasible (Cont.)

V. Scope :

If your topic is too broad , your research will be unfocused and superficial and if it is too narrow , you will not find the information you need to proceed.



2. Interesting

The investigator is interested in the research question because:

- Getting at the truth of the matter seems interesting.
- It is important for his or her career development.
- It will provide financial support.



3. Novel(New)

Good clinical research contributes new information.
The novelty of a study can be determined by:

- Thoroughly reviewing the literature.
- Consulting experts working in the same field.
- Searching list of funded projects in the region.



3. Novel (Cont.)

The research question need not be totally original.

- It may ask whether a previous observation can be applied to other communities.
- A confirmatory study is particularly useful if it avoids the weakness of previous studies.
- The novelty of a study may be in the topic or way of investigation.



4.Ethical :

Any research should not cause any harm to the participants and the society. If so, look for other methods to answer the research question.

- Potential harm to subjects?
- Potential breach of subject confidentiality?
- Potential harm to society ?



5.Relevant (to scientific knowledge)

Imagine the various outcomes that are likely to occur and consider how each possibility might:

- Innovation/Contribution to science: What will we learn that we don't already know? Will it make a difference?
- Influence clinical management .



5. Relevant (Cont.) :

- Will it be possible to apply the results in practice?
- To organizational, health or social management and policy?
- To individual welfare?



References

1. Bob Mathews & Liz Ross. *Research Methods*, a practical guide for the social sciences. Pearson Education limited 2010. England.
1. Jonathan Grix. *The Foundation of Research*. Palgrave Macmillan 2004. London.
2. Geoffrey Marczy k, David DeMatteo& David Festinger. *Essentials of Research Design & Methodology*. John Wiley & Sons, Inc 2005. New Jersey.
3. SK Gupta. *Basic principles of clinical research & methodology*. Jaypee brothers medical publishers (P) limited 2007. New Delhi.
4. RL Bijlani. *Medical Research*. Jaypee brothers medical publishers (P) limited 2008. New Delhi.
5. Mohit Bhandari &ParagSanchesti. *Clinical Research made easy, a guide to publishing in medical literature*. Jaypee brothers medical publishers (P) limited 2010. New Delhi.
6. Yugish Kumar Singh. *Fundamental of Research Methodology & Statistics*. New Age International Publishers 2006. New Delhi.
7. Catherin Dawson. *Practical Research Methods, A user-friendly guide to mastering research*. British Library Cataloguing in Publication Data 2002. UK.

•