Posing the research question

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Sept 9th, 2020

SPPH 504/007

Ref

- Reference for reading

[PDF] Posing the research question: not so simple

L Thabane, T Thomas, C Ye, J Paul - Canadian Journal of Anesthesia …, 2009 - Springer

Purpose The success of any research process relies, in part, on how well investigators are able to translate a clinical problem into a research question—a task that is not so simple for novice investigators. The PICOT approach requires that the framing of the research question specify the target P opulation, the I ntervention of interest, the C omparator intervention, key O utcomes, and the T ime frame over which the outcomes are assessed. This paper describes the use of the PICOT structure in framing research questions and examines …

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How to get an idea about a Research Question?

- Your clinical / public health experience with a disease area
- Talk with your collaborator, supervisor
- Look at the 'Future research' part of a manuscript

Why the question need to be good?

- Without a good objective of a study, the research can be aimless
- Creates confusion for readers / reviewers
- Interpretation could be difficult / pointless
- Could waste a lot of time

A framework for defining a research question

Letter	Letter stands for	Description and Example
P	Population	Target population and study sample (think about data source) E.g., Canadian adult population (18+)
I	Intervention or treatment or exposure	What is the primary experimental condition that you want to test E.g., osteoarthritis patients
C	Comparator	Standard care, control, no exposure E.g., patients without osteoarthritis
O	Outcome	Effect, consequence by which the comparison will be made E.g., cardiovascular disease
T	Time frame	Mostly about followup (time/year), when measurements are taken
(S)	(Setting)	Mostly about identification of study sample, to solidify generalization and interpretation: inclusion/exclusion criteria E.g., no other arthritis patients should be included

Think hard about the 'Outcome'

This is the variable that will help us distinguish between two conditions in comparative effectiveness studies:

- Objective? Less subjective?
- Quantifiable? Measurable?
- Validated? Measures what is it supposed to measure?
  - Derived variable? Handle with caution.
- Reproducible? How precise?
- Available?
- Timeline establishable (avoid reverse causality)?

Is this research doable?

- (F) Feasible?
  - Feasible? Rare exposure or outcome? Do a pilot.
- (I) interesting?
  - To whom this is interesting? Researchers? Patient?
- (N) Novel?
  - Original enough? Already answered in the literature?
- (E) Ethical?
  - Personal data from friends?
- (R) Relevant?
  - Contributing to the literature? Addresses current need?

Overall Roadmap

1. Get some idea about what is the research context
2. Try a number of different combinations of PICOT
3. Identify a PICOT that you like
4. Apply FINER

Other Reference (optional)

[HTML] What is your research question? An introduction to the PICOT format for clinicians

JJ Riva, KMP Malik, SJ Burnie… - The Journal of the …, 2012 - ncbi.nlm.nih.gov

Introduction Clinicians often witness impressive treatment results in practice and may wish to pursue research to formally explore their anecdotal experiences. The potential to further new knowledge both within the profession and to the greater healthcare system is compelling. An obvious next step for a practitioner considering research is to connect with experienced researchers to convey their idea for a study, who may in turn ask,"What is your research question?" With limited understanding of how to respond, this interaction may result in the …

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Thanks!

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