

FM Research Bites Series(1): *The Research Question*

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INTRODUCTION

Primary care research is essential for the progress of healthcare and is the missing link in the development of high quality, evidence-based health care for populations. As family medicine practitioners, we have a critical role to get ourselves involved in research either as users, researchers or motivators of primary care research. Using research evidence based on population sampled from our specialist colleagues' practices for our practices and for the development of clinical practice guidelines for primary care is not ideal. Family medicine deals with a different population with different circumstances and concerns. Primary care research at present occupies a very low priority and is partly contributed by lack of awareness, motivation and knowledge.

Hence our new Research Bites Series. Our first of a series is on Formulation of the Research Question.

(Adapted with permission from the lecture notes of the AP WONCA Research Network Conference)

THE ORIGIN OF THE RESEARCH QUESTION

Research originates with an idea about some general problem or question. This problem or question is narrowed down to a more specific research question, which then represents the central issue being addressed. Is it an answerable question?

FIRST STEPS IN FORMULATING YOUR QUESTION

The best ideas for research come from everyday clinical problems. When an idea comes up, write it down. Let it lie for a day or two and see if it is worth pursuing. Once you can describe your idea clearly and explain why it is important and how it could be done, you have the beginnings of a research proposal. Let your idea/proposal mature for a few weeks. Talk it through with a colleague.

FOUR ELEMENTS OF WELL-BUILT CLINICAL QUESTIONS

Well-built clinical questions usually contain four elements (Centre for EBM, 2002):

- Patient or problem. Starting with your patient, ask, "How would I describe a group of patients similar to mine?"
- Intervention or exposure. Ask, "Which main intervention am I considering?"
- Comparison intervention. Ask, "What is the main alternative to compare with the intervention?"
- Outcomes. Ask "What can I hope to accomplish?" or "What could this intervention really affect?"

An example. Using CEBM's four elements for focusing clinical questions on the problem of chronic backache, the research question can be framed around the four elements of PICO (1):

- Patient or problem- "In patients with chronic back pain"
- Intervention- "would providing a flexibility class as well as the standard back care education class"
- Comparison intervention- "when compared with the standard back care education class alone"
- Outcomes- "lead to less pain and improved function?"

Once your question is defined, it is important to think about how it might be answered.

- Is the question specific enough?
- Does it suggest factors or items that can be measured?
- Are these reasonable and acceptable measures?
- The question itself may have to be modified according to the constraints of time, money and effort to undertake the project.

THE FINER CRITERIA FOR A GOOD RESEARCH QUESTION

A good research question is described by the acronym FINER (Hulley & Cummings, 1998, p14):

- Feasible (adequate subjects, technical expertise, time and money, and scope)
- Interesting to the investigator
- Novel (confirms or refutes previous findings, provides new findings)
- Ethical

- Relevant (to scientific knowledge, clinical and health policy, future research directions)

PITFALLS TO AVOID IN DEVELOPING THE RESEARCH QUESTION

The most common pitfalls to avoid in developing the research are (2):

- Don't make a simple study difficult
- Have sufficient commitment
- Assess practicalities.

Don't make a simple study difficult. Don't add to the study design unwanted questions leading to the collection of unnecessary data. Avoid unfocused questions, which will lead you to collect large amounts of data. The solution is to clarify in detail the purposes of the study, the patient group to be studied or the measurements to be made and prune the less important questions.

Have sufficient commitment. It is only when the researcher is genuinely interested in the answer to the question posed, that the study may be completed to a high standard.

Assess practicalities. Thinking through the possible methods and likely difficulties, which might be encountered often leads to modifications to the research question. And it begins by considering what can be learned from others through reviewing the published literature.

THE REWARD

If your research question is well written, it will suggest to you the most appropriate study that you could undertake to answer the question.

FINALLY OUR CHALLENGE

We invite you to apply above principles to formulate a research question and send it to Editor of The College Mirror(CM), (collegemirror@cfps.org.sg). Your idea may challenge us to take up the idea to develop it into a full-scale research project. Depending on enthusiasm level, we might even be able to start a database of ideas & answers to family medicine truths. Best ideas shall be published in subsequent issues of CM & participants will receive a token from the College. Next issue we shall deal with 'Literature Search'.