Selection of a Topic for Thesis

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Selecting a good research topic/ question for your thesis is the first and one of the important steps towards thesis writing. For a PG student, who has joined the course only a few weeks back, it is an unfamiliar and onerous task. A large number of fields are available from which you can choose a topic relevant to your discipline. Awareness of the list (Box 1) would be of great help.

Box 1. Fields for research

- Basic research: intra-cellular and biological processes
- Distribution of diseases and/ or health related characteristics in the population
- Profile of cases of some disease
- Risk factors and their contribution to a condition
- Efficacy of treatment: drugs, procedure
- Efficacy of a diagnostic test
- Health economics, Cost effectiveness
- Quality of health care, Quality of life
- Reviews, Meta analysis

The success of your thesis project and the degree its contribution to your career development will depend on the goodness of your research topic/ question. Some

characteristics of a good thesis topic are shown in Box 2. Your must evaluate the tentative topics on goodness parameters before finalizing the topic.

Box 2. The characteristics of a good thesis topic

- Addresses to a defined gap in knowledge
- Original, and relevant
- Well defined, focused, and narrow
- Neither very ambitious nor very simple
- Acceptability to study population
- Ethically sound
- Interesting to student, supervisor, research community
- Well suited to caliber/ commitment
- Can be completed using available resources: time, subjects/ material, tools

Way to Formulate a Research Topic/ Question

It would be good strategy to first choose a broad topic and then narrow down the choice to a more specific topic. You must jot down what you already know and what you would like to know about the topic. You must further increase your knowledge about the subject by reading coursework, journals, and information on internet. Interviewing peers, adviser, and research workers interested in the topic may provide you useful information and advice. It is also useful to examine case records, existing data pertaining to the topic. A pilot study can provide you insight regarding feasibility of the proposed study and the difficulties likely to be faced. You should work on a few topics in this manner, and then select the most appropriate topic.

Finally, define a clear, achievable, worthwhile, and specific research question. In practice, well-built analytic research questions usually contain four elements, represented by PICO - an acronym which stands for:

- Patient or Problem
- Intervention
- Comparator
- Outcome

Suppose you want to find out *effect of specific operative procedure on the outcome of the treatment of anal fistula*, you may use the PICO structure to translate the clinical problem into a structured research question which identifies specific key concepts. (See Box 3)

Box 3: PICO Structure for translating clinical problem into a research question

	Patient/ Problem	Intervention: Cause, prognostic factor, treatment	Comparison intervention	Outcome
Tips for formulating	How to describe the study population?	Which main intervention is considered?	What is the main alternative for comparison with intervention?	What could this intervention really affect?
Example	In patients with simple anal fistula	Fistulotomy with marsupialization	When compared with fistulectomy	Results in less postoperative pain and faster wound healing.

Do not be afraid to change the topic if it is not working.

Research Design

Once you have made up your mind about the research topic/ question, you will have to choose an appropriate research design for your thesis. The research studies are broadly classified as descriptive and analytic studies.

Descriptive studies are conducted to ascertain current status of a problem or phenomenon: for example, *study of mortality and morbidity following typhoid fever, study of level of blood pressure in school children*.

Analytic studies are conducted to find out relationship among various factors associated with a condition/ phenomenon, difference between groups or effects of an intervention. The analytic studies include observational studies and experimental studies.

Observational studies are based on naturally occurring events; and do not involve any human intervention as a part of research protocol: for example, *study of effect of pre-existing maternal anemia on birth weight of the babies, study of the factors affecting mortality in diarrhea.*

Experimental studies ascertain the effects of an intervention undertaken as a part of research protocol: for example, *comparison of fistulotomy and fistulectomy in the treatment of simple anal fistula, comparison of Prostate Specific Antigen and Ultrasound for diagnosis of carcinoma prostate.*

Title for the Research Project

The next step would be to select an appropriate title for your thesis project. The title of the research project should be brief and informative; it should neither be too short nor too long. Important words should be placed towards the beginning of the title. Name of the institution or the number of cases to be studied should not be included. The title may include the following: hypothesis/ problem to be studied, study population, and research design.

In conclusion, you must exercise due diligence in selecting a good research topic/ question for your thesis. Reflection of all the currently available information on the proposed topic is vital. Consultation with peers, adviser, and experts is rewarding. You must examine the feasibility of the study from all possible angles. Your must frame clear-cut, realistic, reachable and worthwhile objectives.