



THE BUILDING RURAL RESEARCH CAPACITY PROGRAM

What is Research?

Research and evaluation play an important role in helping us to do our job better in delivering appropriate health services to our patients and communities.

DEFINITIONS OF RESEARCH INCLUDE:

noun

- A seeking of knowledge, data, or the truth about something: [inquest](#), [inquiry](#), [inquisition](#), [investigation](#), [probe](#). See [investigate](#).
- : systematic investigation to establish facts
- : a search for knowledge
Synonyms: [inquiry](#), [enquiry](#)
- **Definition:** examination, study
Antonyms: ignorance

We use research to assist in setting priorities for service development and delivery.

We evaluate our work to determine whether what we do is provided effectively at an acceptable cost and in an efficient manner and whether the patient, client or community find the treatment or services we provide adequate to their needs.

Key stages in the research process include:

- ❖ Selection of a research problem
- ❖ Review of relevant literature
- ❖ Selection of an appropriate study design or strategy
- ❖ Gaining ethics approval where indicated
- ❖ Development of data collection tools
- ❖ Implementation of study
- ❖ Analysis of data
- ❖ Writing up findings

Research can be categorised different ways. One approach is to consider research as exploratory, descriptive or explanatory. Different research strategies are used to achieve different results, thus:

- ❖ Case studies based on the collection of detailed information from a relatively small number of individuals or groups are often used to explore an issue or concern such as finding out what a rural mental health worker does
- ❖ Surveys, which involve the collection of a smaller amount of information in a structured way on a larger number of individuals or groups, are generally conducted to describe how common or serious health concern might be for example a community survey of people with diabetes or
- ❖ Experiments and other analytic study types are used to explain what benefits or harm are associated with a new treatment or the effect of a possible risk factor on disease occurrence such as moderate physical activity on blood pressure and cardiovascular disease
- ❖

Researchers also talk about qualitative and quantitative methods. These distinctive, different approaches are often used in combination to investigate a specific research question.

Qualitative methods involve detailed collection of information from a small number of individuals and have the capacity to discover what is occurring but not to measure the frequency of an event or statistical associations.

Quantitative methods rely on collection of smaller amounts of data on larger numbers of study subjects who are generally passive providers of information rather than active participants in the research activity. Specific and quite different techniques are used to analyse these data

For those interested the following has been included for information.

Research is research. Right? Wrong! There are many types of research:

REFERENCE

These research definitions have been sourced from "**The Virtuous Cycle: Working together for health and medical research**", Health and Medical Research Strategic Review, 1999 (Glossary of Term, pA6.1).

The Final Report is available to download from the [Health and Medical Research Strategic Review homepage](#).

DATA

Qualitative Research

An approach advocated by the interpretive school as a means to understanding social phenomena. Generally viewed as any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification, and includes in-depth interviews, observations and participant observation.

Quantitative Research

An approach advocated by the Positivist School. This approach measures social phenomena and obtains numerical values which can be analyzed statistically. Surveys using structured questionnaires and IQ tests are both examples of quantitative research.

OTHER

DEFINITIONS

Basic research

Experimental and theoretical work undertaken primarily to acquire new knowledge without a specific application in view. It consists of pure basic research and strategic basic research. Pure basic research is carried out without looking for long-term benefits other than the advancement of knowledge. Strategic basic research is directed to specified broad areas in the expectation of useful discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems. (ABS definition). Basic research is conducted to address fundamental questions about the biological, behavioural and social mechanisms, which underlie wellness and disease.

Applied research

Original work undertaken in order to acquire new knowledge with a specific application in view. It is conducted either to determine possible uses for the findings of basic research or to determine new methods or ways of achieving some specific and predetermined objectives (ABS definition).

Development and evaluation research

Creates and assesses products (vaccines, drugs, diagnostics, prostheses or equipment), interventions (public or personal health services) and instruments of policy that improve on existing options (WHO definition).

Strategic research

Generates knowledge about specific health needs and problems. These may be conditions, risk factors or sources of inefficiency or inequality in health systems (WHO definition).

Investigator driven research

Also known as Researcher driven. Research that allows someone with a strong desire or bright idea to pursue it, whether it is perceived as a priority or not.

Priority driven research

Where there is a need to make a concerted medium to long term effort to address a specific question or issue

Clinical research

Research involving clinical patients or tissues samples

RESOURCES

ROAR

The Roadmap of Australian *primary health care* Research (ROAR) has information about Australian primary health care research projects, researchers and funding opportunities.



Research Bites

Factsheets about research compiled by the University of New South Wales as part of the NSW Primary Health Care Research Capacity Building Program, funded by the Australian Government Department of Health and Ageing.

from patients. It is undertaken to find better ways of identifying and caring for people in ill health. Has a more biological orientation than health services research.

Health policy and systems research

Research about health-related institutions and their role in shaping policy and improving implementation. Range of approaches includes: clarification of concepts and issues; data sets on systems performance; retrospective case studies; and prospective evaluations and experiments (WHO definition).

Health Services research

Research into health services to examine ways of improving delivery of health services, e.g. cost benefit studies of health programs. Has a more operational and economic orientation than clinical research.

Public health research

Research involving communities or populations, typically outside health care institutions. It is undertaken to identify the factors which contribute to ill-health in populations and ways of influencing these factors to prevent disease. It includes epidemiology, social and behavioural sciences, health services research on population - based health interventions.

Compiled by Belinda Lowcay

Developing a Research Question

The Introduction to Research Principles course hinges on the successful candidates arriving with a research question or topic in their minds. In fact, the research question plays a key role in the criteria for selection. The following is an example of information that is available on the web when you use "research question" as the key words for the search.

Derive research questions/problems from your topic

Turning your topic into a number of research questions will clarify the range of methods available to answer each of them, and give you some idea of what your data and findings will look like. It should also suggest ways of managing and interpreting your data. You can make use of these questions later too, when constructing your literature review and composing the rationale for your project. Thus, although what follows might seem like a lot of head-work, the effort you invest in it will definitely pay off.

There are four steps:

1. Express your research topic as a title; for example:

- Lower limb propulsion, balance and strength
- Patient cooperation in muscle strength testing
- Evaluation and organisation in a sample of written academic discourse
- Developing relationships: significant episodes in professional development

2. Next, ask preliminary questions about this title, starting from what you already know. (You'd do this sort of thing if you found the title on a publication, or on a seminar schedule.) For example:

Topic, expressed as a title	Preliminary questions
Patient cooperation in muscle strength testing	Which patients? With which diseases/conditions? When?
Evaluation and organisation in a sample of written academic discourse	What sort of written academic discourse? Written by whom? What will the sample be like? How many? Published or not? Why written (not spoken)? Are evaluation and organisation connected? If so, how?
Developing relationships: significant episodes in professional development?	What sorts of relationships? In which professions? At which stage(s) of development? Significant for what reason(s)?

N.B. Don't select or edit your questions at this stage. Your aim is to collect questions.

3. Then interrogate each of your preliminary questions, again starting from what you already know. For example, you could ask:

- What are the characteristics of this thing?
- What happens? And in what order do things happen?
- When does it happen? To whom?
- When does it NOT happen?
- For whom is it a problem?

- Why is it a problem for them?
- How can one tell it's a problem? etc., etc.

You will find you can answer some of these already. Keep these, and your answers to them, for use in your research proposal and thesis.

4. When you have a 'short list' of questions you can't answer, test each of them for feasibility by asking:

- What exactly IS the research problem here?
- Why is it important? Why does it need to be solved?
- How could I go about solving it? What exactly would I have to do, to solve it?
- If I did that, what would my data look like?
- What would my findings look like?

Answer the last three of these questions as precisely as you can.

When working out what you would have to do to solve a particular research problem, ask yourself:

- What or who will form my sample/textual corpus?
- Why those/that, rather than others?
- How will I select them?
- How will I gain access to them?
- What exactly will I use?
- Why that/those, rather than other equipment/instruments/analytical methods?
- What exactly will I have to do (e.g. month by month)?

In this connection, note that it is OK to have more than one research question or hypothesis, but you should plan to collect only one set of raw data. Will one set suffice, to answer the question(s) you're testing out?

Asking about the possible form(s) of your data will suggest ways of analysing and managing them. For example, will you end up with piles of medical records or of questionnaires? Will you have to analyse and code interview transcripts? You will have to reduce the size of your data, if you are to be able to notice and point out what is important. Ultimately, the form your data take will guide your estimate of the time needed to complete each stage of the research process.

Asking what your findings would look like will raise issues like sample size, and so help choose methods of collecting and analysing your data. It is especially useful, though, because it suggests ways in which you could interpret your findings - that is, in terms of generalisability, reliability and validity. This is important, both when you describe the significance of your project in your

research proposal and during your research, when you derive your own meaning from your data and compare that with the meanings put forward by other researchers. Would your findings be in a form which indicated your research method was appropriate for solving your research problem? Would they suggest your method is valid?

The two most common outcomes of all this questioning are:

- Researchers find they can't access certain essential data; and/or:
- They can't find a rationale for answering the research question they've chosen

by Dr. Andrea Chan, [Language and Learning Unit](#), 1998