FORMULATING A RESEARCH PROBLEM

Introduction

- Problem formulation process depends upon
  - Your expertise in research methodology
  - Your knowledge of the subject area
  - Your understanding of the issues to be examined
  - The extent to which the focus of your study is predetermined.

Research Problem

- Make sure the questions can be transformed into research problems
- Not too extremely difficult to study or investigate
- Able to withstand scrutiny in terms of the procedures required to be undertaken
- Spend considerable time in thinking it through

The Importance of formulating a research problem

- The first and most important step of the research process. For example, identify the destination before undertaking a journey.
- To have a clear idea what to find out about and not what you think you must find.
- The forms vary, can be very simple to the very complex.
- You may become more confused but this is normal and a sign of progression.
- Take time over formulating your problem.

The Importance of formulating a research problem (cont'd)

- The way you formulate a problem determines almost every step that follows:
  - the type of study design that can be used;
  - the type of sampling strategy that can be employed;
  - the research instrument that can be used or developed; and
  - the type of analysis that can be undertaken.

The Importance of formulating a research problem (cont'd)

- The formulation of a problem is like the 'input' into a study
- The 'output' is
  - the quality of the contents of the research report
  - the validity of the associations or causation established.

  GARBAGE IN, GARBAGE OUT

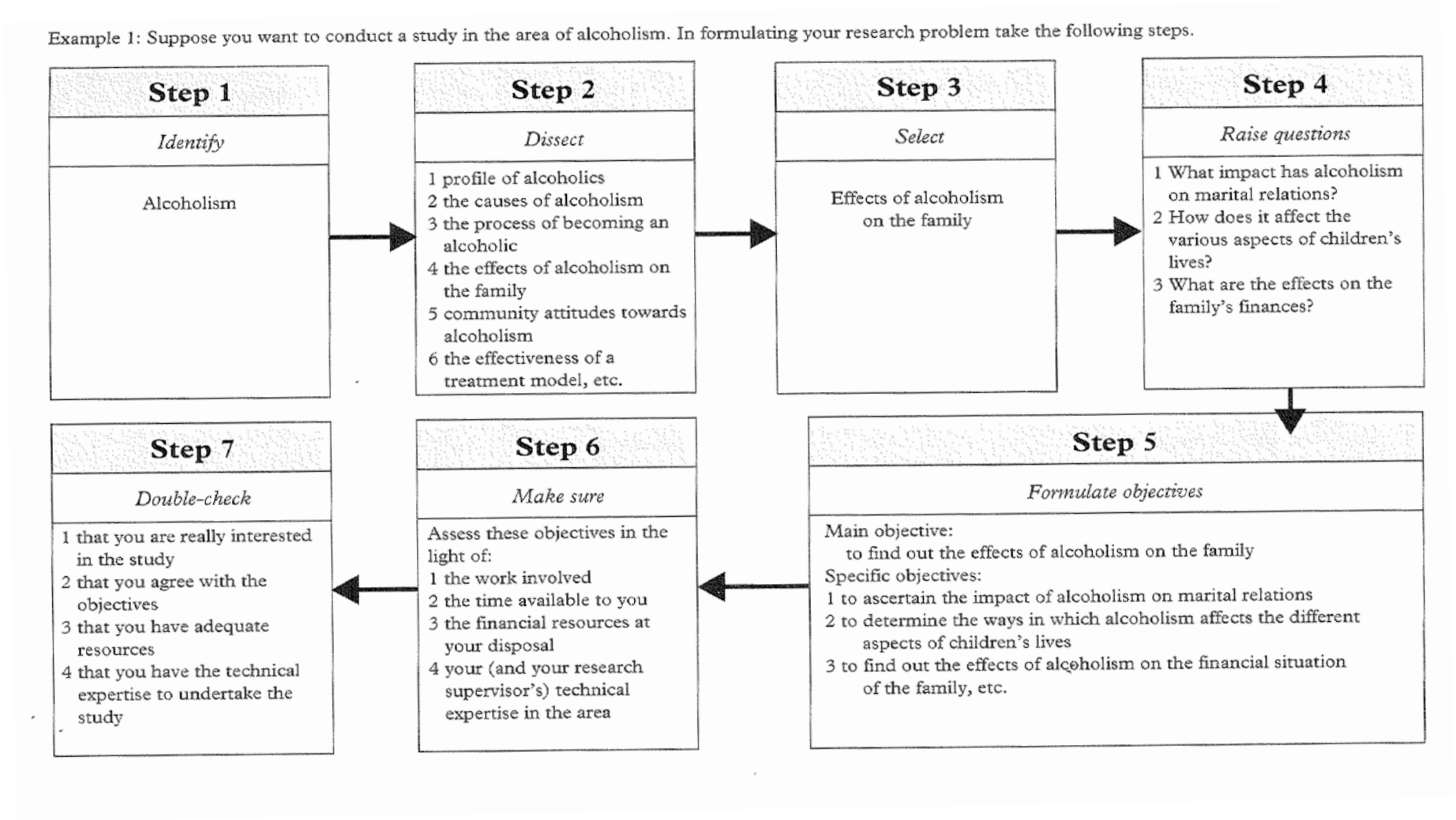
Considerations in selecting a research problem

- Interest.
- Magnitude.
- Measurement of concepts.
- Level of expertise.
- Relevance.
- Availability of data.
- Ethical issues.

Steps in the formulation of a research problem

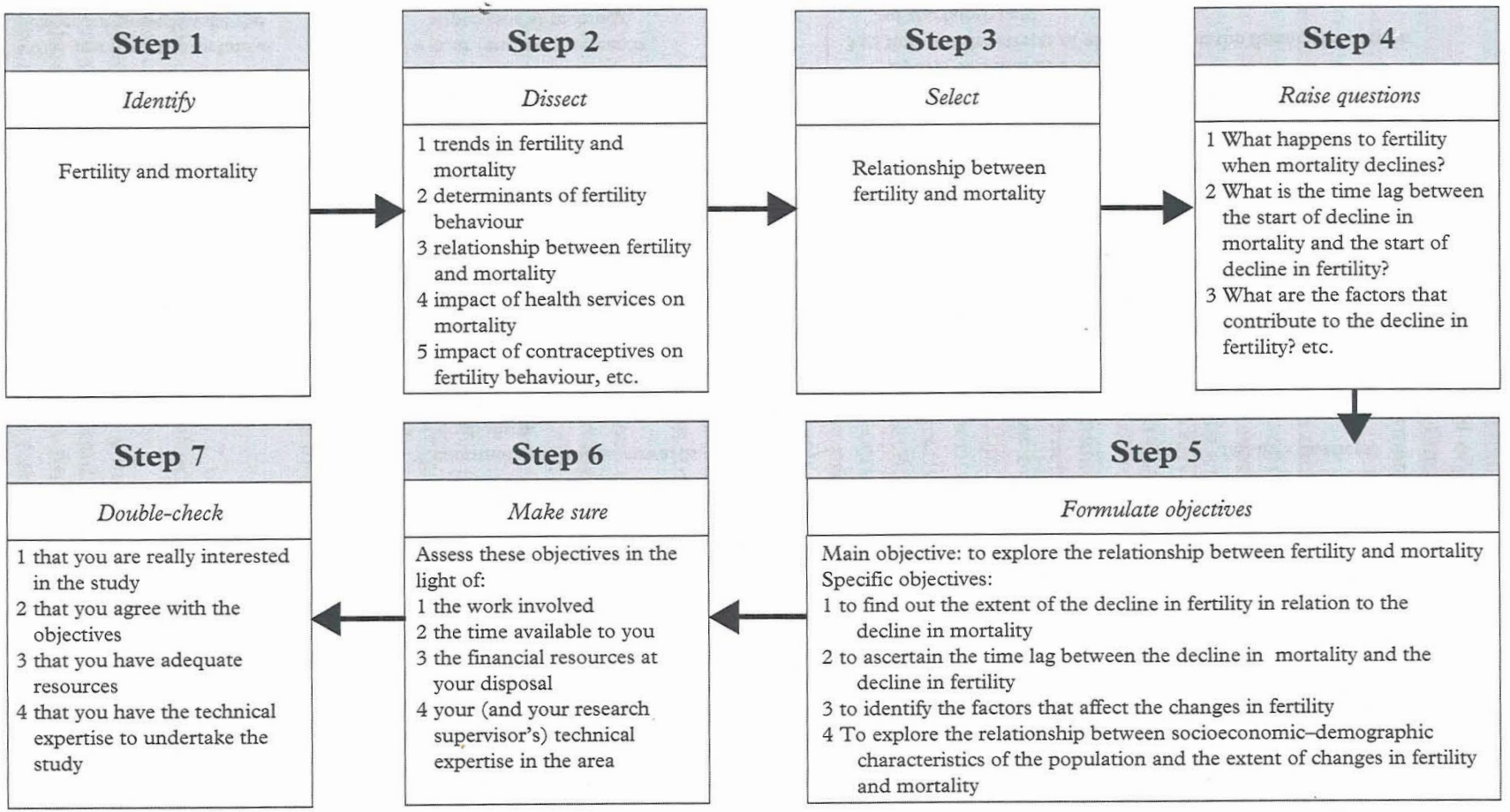
1. Indentify a broad field or subject of interest.
2. Dissect the broad area into subareas.
3. Select what is of most interest.
4. Raise research questions.
5. Formulate Objectives.
6. Assess the objectives.
7. Double Check.

Example 1:


Example 1: Suppose you want to conduct a study in the area of alcoholism. In formulating your research problem take the following steps.
Step 1
Identify
Alcoholism
Step 2
Dissect
1 profile of alcoholics
2 the causes of alcoholism
3 the process of becoming an alcoholic
4 the effects of alcoholism on the family
5 community attitudes towards alcoholism
6 the effectiveness of a treatment model, etc.
Step 3
Select
Effects of alcoholism on the family
Step 4
Raise questions
1 What impact has alcoholism on marital relations?
2 How does it affect the various aspects of children's lives?
3 What are the effects on the family's finances?
Step 5
Formulate objectives
Main objective:
to find out the effects of alcoholism on the family
Specific objectives:
1 to ascertain the impact of alcoholism on marital relations
2 to determine the ways in which alcoholism affects the different aspects of children's lives
3 to find out the effects of alcoholism on the financial situation of the family, etc.
Step 6
Make sure
Assess these objectives in the light of:
1 the work involved
2 the time available to you
3 the financial resources at your disposal
4 your (and your research supervisor's) technical expertise in the area
Step 7
Double-check
1 that you are really interested in the study
2 that you agree with the objectives
3 that you have adequate resources
4 that you have the technical expertise to undertake the study

Example 2:

Example 2: Suppose you want to study the relationship between fertility and mortality. Follow these steps.



The formulation of objectives

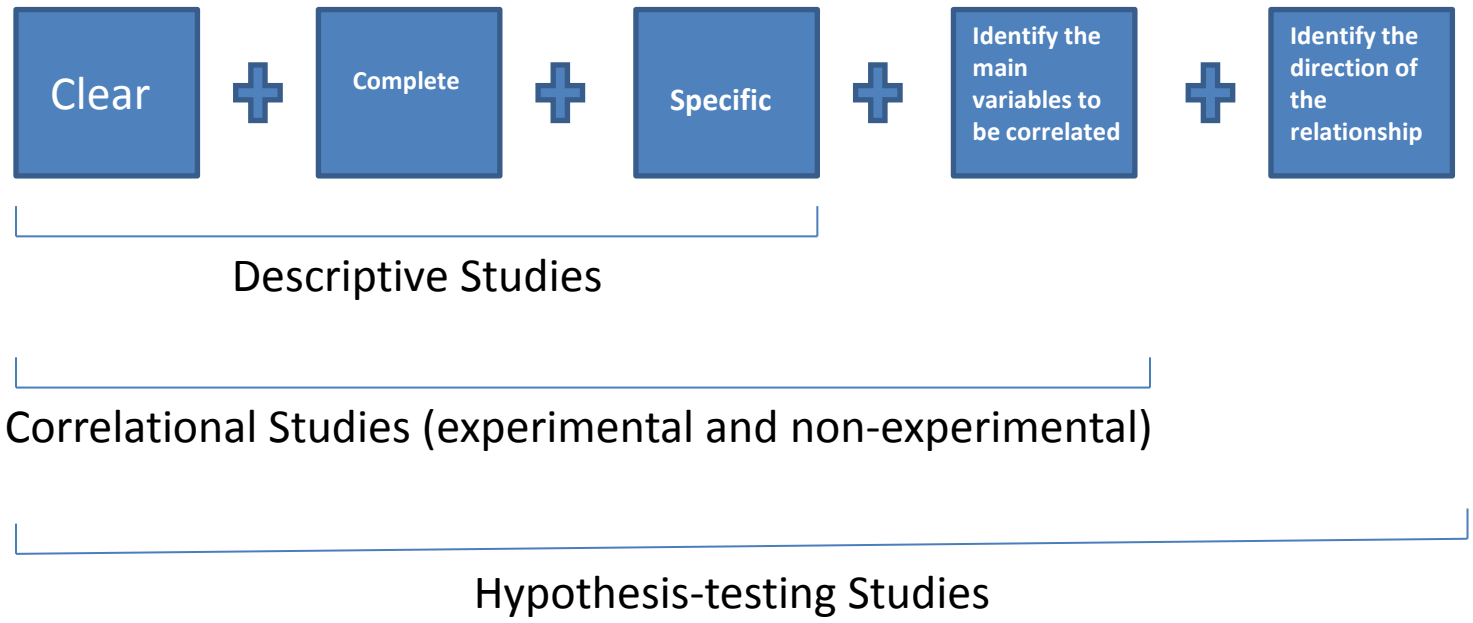
Objectives are the goals you set out to attain in your study.

- Main objective –
  - an overall statement of the thrust of the study.
  - Associations and relationships that you seek to discover or establish
- Sub objective -.
  - Contains one aspect of the study.

Note: irrespective of the type of research, the objectives should be expressed clearly, completely and no ambiguity

The formulation of objectives (cont'd)

Characteristics of objectives



Establishing Operational Definitions

- In a research study it is important to develop, define or establish a set of rules, indicators or yardsticks in order to clearly establish the meaning of such words/items.
- Operational definitions may differ from dictionary definitions as well as day to day meanings
- There are no rules for deciding if an operational definition is valid
- Your arguments must convince others about the appropriateness of your definitions

Summary

- The formulation of a research problem is the most important step in the research process
- It is the foundation, any defects in it will adversely affect the validity and reliability of the study.
- There are no specific guidelines.
- The 7 steps model is operational in nature.
- It is very important to articulate the objectives of the study clearly.