Research Methodology
Chapter 4

Formulating a Research Problem

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Topics covered

Formulating a research problem in quantitative research

- Importance of formulating a research problem
- Sources of formulating a research problem
- Considerations in selecting a research problem
- Steps in formulating a research problem
- How to formulate research objectives
- The study population
- Operational definitions

Formulating a research problem in qualitative research

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Importance of formulating a research problem

- First and most important step
- Quality and relevance of the research relies on it
- Key to formulating the idea of what needs to be investigated
- Determines the methodology and design of the project:
  - Descriptive and qualitative
  - Correlational and quantitative
- The clearer the research question, the easier the next steps

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Sources of research problems

- Look closely in your academic field or discipline
- Use four Ps:
  - People
  - Problems
  - Programmes
  - Phenomena
- Apply to qualitative and quantitative research

Table 4.1 Aspects of the research problem

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Aspects of a study	Information about	Study of	Importance to the study
Study population	People	Individuals, organisations, groups, communities	They provide you with the required information or you collect information from or about them
Subject area	Problem	Issues and problems facing a group of people; description of situations, associations, needs, attitudes; population profiles; service delivery process etc.	Information that you need to collect to find answers to your service research questions
	Programme	Contents, services provided, administrative structure, services outcomes, consumer satisfaction, profile of consumers, profile of service providers, effectiveness, cost benefit, etc.	
	Phenomenon	Cause and effect, relationships, the study of a phenomenon itself, etc.	

Considerations in selecting a research problem

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

Steps in formulating a research problem

Step 1: Identify the main subject area

Step 2: Dissect into sub-areas

Step 3: Select sub-areas of most interest

Step 4: Raise research questions

Step 5: Formulate objectives

Step 6: Assess objectives

Step 7: Double-check

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Figure 4.1 Dissecting the subject area of domestic violence into sub- areas

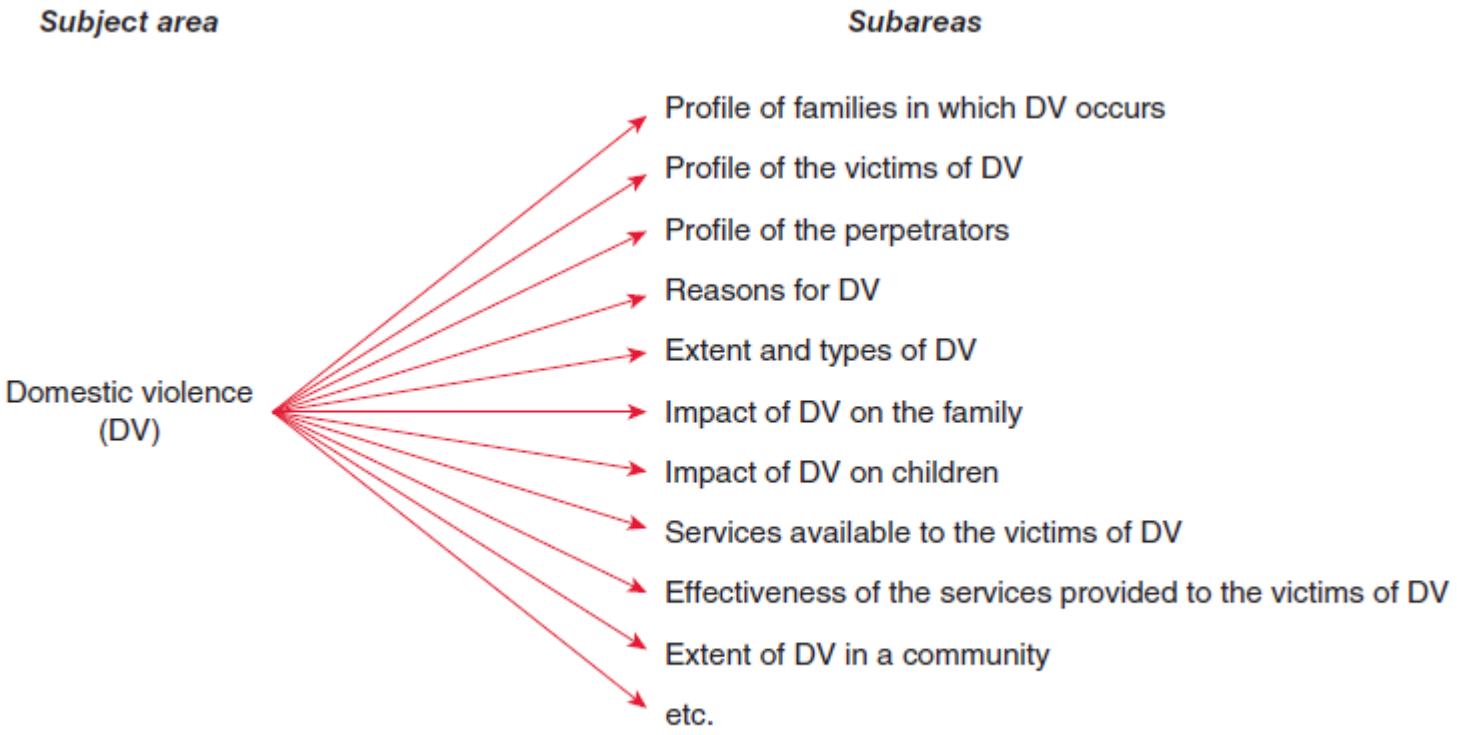

Figure 4.1 Dissecting the subject area of domestic violence into subareas

How to formulate research objectives

- Goals that inform what will be achieved
- Main objective – overall statement
  - Describing the main focus
- Sub-objectives – specific aspects
  - Clear and unambiguous wording
  - Numerically listed
  - Each contains one aspect
  - Starts with action word: ‘to find out’, ‘to explore’

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Figure 4.5 Characteristics of objectives

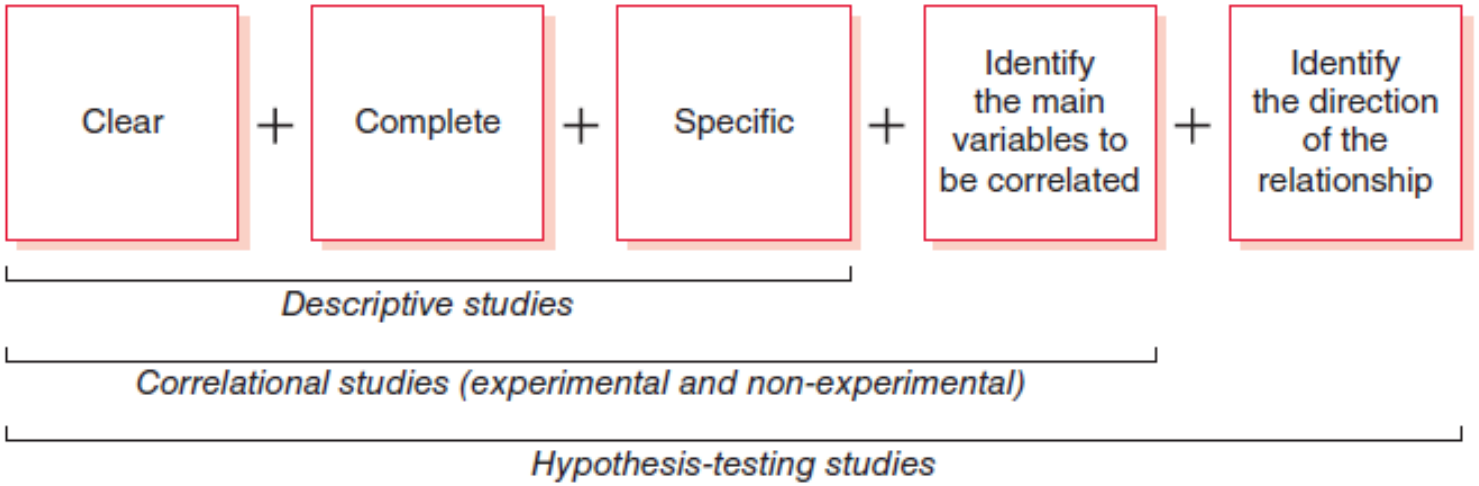

Figure 4.5 Characteristics of objectives

Figure 4.2 Steps in formulating a research problem - alcoholism

Example 1: Suppose you want to conduct a study in the area of alcoholism. In formulating your research problem take the following steps.

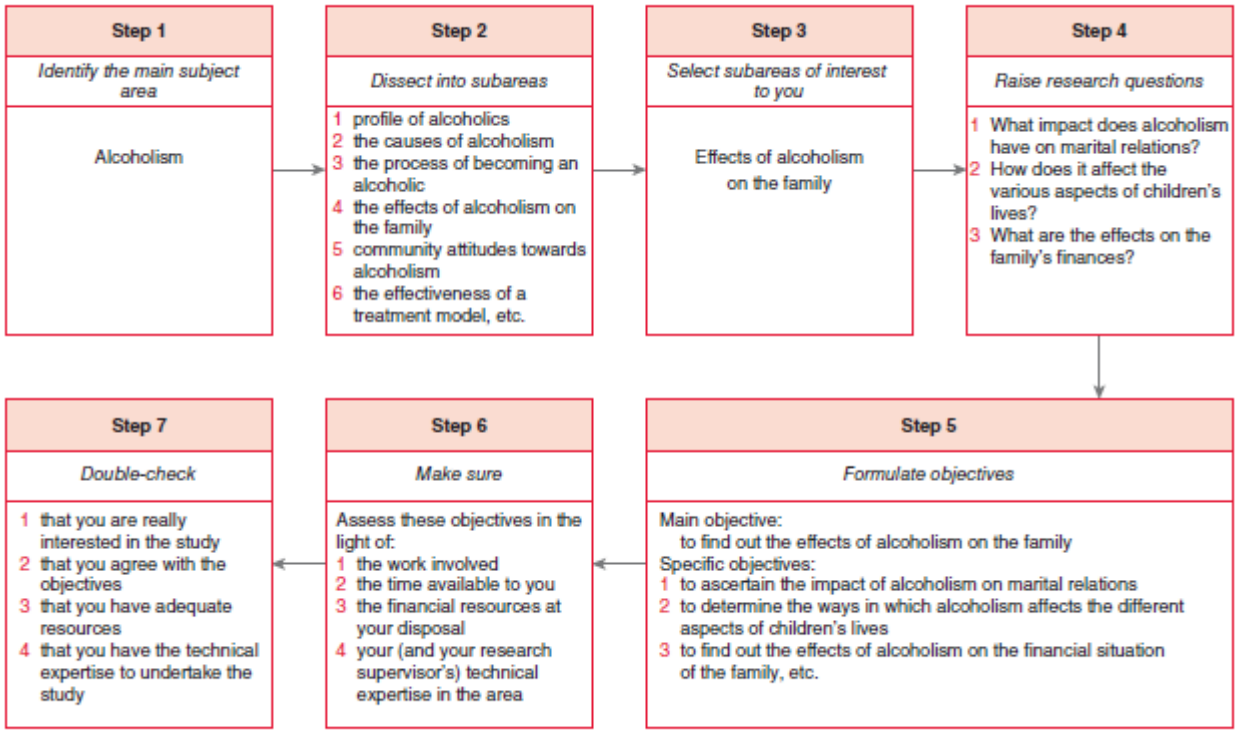

Figure 4.2 Steps in formulating a research problem – alcoholism

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The study population

- Second important aspect to the research
- Who constitutes the study population?
- Select appropriate participants from the study population
- Definition may need to be narrowed down
- Be as specific as possible

Establishing operational definitions

- Explain working definitions specific to study
- Define specific terms, meanings to concepts used
- These may differ to dictionary or legal definitions
- Avoids ambiguity and confusion
- Develops a framework for the study

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Formulating a research problem in qualitative research

Different to quantitative research which is specific, narrow and the framework confines the research (tests hypotheses)

Qualitative research is flexible, open, freedom to include new ideas at a later stage:

- Research problem can be reformulated
- Inductive reasoning
- Flexible conceptual framework to increase depth and richness of data

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