

4

FORMULATING A RESEARCH PROBLEM

- step one -

FORMULATING A RESEARCH PROBLEM

Reviewing the literature	54
→ Formulating a research problem	76
Identifying variables	100
Constructing hypotheses	126



**CONFUSED?
UP FOR A
CHALLENGE?**

**OR
NEED HELP
WITH YOUR
ASSIGNMENT?**

VISIT

<https://study.sagepub.com/kumar5e> for resources specially designed to support you and all your research needs.

ESSENTIAL TERMS

You should be able to define these by the end of the chapter

- research objectives
- research problem
- operational definition (working definition)

BONUS TERMS

You will learn more about these by the end of the chapter

- qualitative research
- quantitative research
- validity
- Variable
- Study population

LEARNING OBJECTIVES

At the end of this chapter, you will be able to:

- Formulate a research problem in qualitative and quantitative research
- Identify sources of possible research problems
- Understand the considerations involved in formulating a research problem
- Form of research questions and objectives
- Establish operational definitions

The central aim of this chapter is to detail the process of formulating a research problem, even though the specific procedure that you are likely to adopt 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; and
- your own orientation to the research methodology – quantitative, qualitative or mixed.

If you are not very familiar with the research process and/or do not have a very specific idea about what is to be researched, you need to follow every step detailed in this chapter. However, more experienced researchers can take a number of shortcuts. The process outlined here assumes that you have neither the required knowledge of the process of formulating a research problem nor a specific idea about what is to be researched. If you have a specific idea for the basis of your enquiry, you do not need to go through this chapter. However, you should make sure that your idea is researchable as not all problems lend themselves to research methodologies.

Research problem: Any issue, problem or question that becomes the basis of your enquiry. It is what you want to find out about during your research endeavour.

Subject area: Any academic or practice field in which you are conducting your study is called the subject or study area. It could be health or other needs of a community, attitudes of people towards an issue, occupational mobility in a community, coping strategies, depression, domestic violence, etc.

THE RESEARCH PROBLEM

Broadly speaking, any question that you want answered and any assumption or assertion that you want to challenge or investigate can become a **research problem** or a research topic for your study. However, it is important to remember that not all questions can be transformed into research problems and some may prove to be extremely difficult to study. According to Powers et al. (1985: 38), 'Potential research questions may occur to us on a regular basis, but the process of formulating them in a meaningful way is not at all an easy task'. As a newcomer it might seem easy to formulate a problem but it requires considerable knowledge of both the **subject area** and research methodology. Once you examine a question more closely you will soon realise the complexity of formulating an idea into a problem which is researchable. 'First identifying and then specifying a research problem might seem like research tasks that ought to be easy and quickly accomplished. However, such is often not the case' (Yegidis & Weinback 1991: 35).

It is essential for the problem you formulate to be able to withstand scrutiny in terms of the procedures required to be undertaken. Hence you should spend considerable time in thinking it through.

THE IMPORTANCE OF FORMULATING A RESEARCH PROBLEM

The formulation of a research problem is the first and most important step of the research process. It is like the identification of a destination before undertaking a journey. In the absence of a destination, it is impossible to

STEP ONE FORMULATING A RESEARCH PROBLEM

identify the shortest – or indeed any – route. Similarly, in the absence of a clear research problem, a clear and economical plan is impossible. To use another analogy, a research problem is like the foundation of a building. The type and design of the building are dependent upon the foundation. If the foundation is well designed and strong you can expect the building to be also. The research problem serves as the foundation of a research study: if it is well formulated, you can expect a good study to follow. According to Kerlinger (1986: 17): 'If one wants to solve a problem, one must generally know what the problem is. It can be said that a large part of the problem lies in knowing what one is trying to do.' You must have a clear idea with regard to what it is that you want to find out about and not what you think you must find.

A research problem may take a number of forms, from the very simple to the very complex. 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.

Suppose your broad area of interest is depression. Further suppose you want to conduct a research study on the services available to patients with depression living in a community. If your focus is on finding out the types of service available to patients with depression, your study will be mainly descriptive and qualitative in nature. A study of this type will be carried out using qualitative research methodologies. On the other hand, if you want to find out the extent of use of these services, that is the number of people using them, it will use mainly quantitative methodologies even if it is otherwise descriptive in nature. If your focus is on determining the extent of use in relation to the personal attributes of the patients, the study will be classified as correlational (and quantitative). The methodology used will be different than the one used in the case of a descriptive study. Similarly, if your aim is to find out the effectiveness of these services, the study will again be classified as correlational and the study design, data collection methods and analysis will belong to the quantitative methodology. Hence, it is important for you to understand that the way you formulate a research problem determines all the subsequent steps that you will have to follow during your research journey.

The formulation of a problem is like the 'input' to a study, and the 'output' – the quality of the contents of the research report and the validity of the associations or causation established – is entirely dependent upon it. Hence the famous saying about computers, 'garbage in, garbage out', is equally applicable to research problems.

Initially, you may become more confused, but this is normal and a sign of progression. Remember that confusion is often but a first step towards clarity. Take time over formulating your problem, for the clearer you are about your research problem/question, the easier it will be for you later on. Remember, this is the most crucial step.

SOURCES OF RESEARCH PROBLEMS

This section is of particular relevance if you have not yet selected a research topic and do not know where to start. If you have already selected your topic or question, go on to the next section.

Most research in the humanities revolves around the four Ps: people, problems, programmes and phenomena. In fact, a closer look at any academic or occupational field will show that most research revolves around these four Ps. The emphasis on a particular 'P' may vary from study to study but generally, in practice, most research studies

CHECKPOINT
Choosing a
research topic

are based upon a combination of at least two Ps. You may select a group of individuals (a group of individuals, or a community as such – people) to examine the existence of certain issues or problems relating to their lives, to ascertain their attitude towards an issue (problem), to establish the existence of a regularity or occurrence (phenomenon) or to evaluate the effectiveness of an intervention (programme). Your focus may be on the study of an issue, an association or a phenomenon per se; for example, the relationship between unemployment and street crime, smoking and cancer, fertility and mortality, delinquency and street crime, or academic achievement and home environment, carried out on the basis of information collected from individuals, groups, communities or organisations. The emphasis in these studies is on exploring, discovering or establishing associations or causation. Similarly, you can study different aspects of a programme: its effectiveness, its structure, the need for it, consumers' satisfaction with it, and so on. In order to ascertain these you collect information from people.

Every research study has two aspects: people provide you with the 'study population', while the problem, programme or phenomenon furnishes the 'subject area' about which information is collected. This is outlined further in Table 4.1, which shows the aspects of a research problem.

Table 4.1 Aspects of a research problem

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.	

STEP ONE FORMULATING A RESEARCH PROBLEM

You can study a problem, a programme or a phenomenon in any academic field or from any professional perspective. For example, you can measure the effectiveness of a programme in the field of health, education, social work, industrial management, public health, nursing, health promotion or welfare, or you can look at a problem from a health, business or welfare perspective. Similarly, you can gauge consumers' opinions about any aspect of a programme in the above fields.

Examine your own academic discipline or professional field in the context of the four Ps in order to identify anything that looks interesting. For example, if you are a student in the health field there are an enormous number of issues, situations and associations within each subfield of health that you could examine. Issues relating to the spread of a disease, drug rehabilitation, an immunisation programme, the effectiveness of a treatment, the extent of consumers' satisfaction or issues concerning a particular health programme can all provide you with a range of research problems. Similarly, in education there are several issues: students' satisfaction with a teacher, attributes of a good teacher, the impact of the home environment on the educational achievement of students and the supervisory needs of postgraduate students in higher education. Any other academic or occupational field such as marketing research, social work, community psychology or tourism can similarly be dissected into subfields and examined for a potential research problem. Most fields lend themselves to the above categorisation even though specific problems and programmes vary markedly from field to field.

The concept of the four Ps is applicable to both quantitative and qualitative research though the main difference at this stage is the extent of their specificity, **dissection**, precision and focus. In qualitative research these attributes are deliberately kept very loose so that you can explore more as you go along, in case you find something of relevance. You do not bind yourself with constraints that would put limits on your ability to explore. There is a separate section on 'Formulating a research problem in qualitative research' later in the chapter, which provides further guidance on the process.

CHECKPOINT
Qualitative
research
problems

CONSIDERATIONS IN SELECTING A RESEARCH PROBLEM

When selecting a research problem or topic there are a number of considerations to keep in mind which will help to ensure that your study will be manageable and that you remain motivated:

- ➔ **Interest** - This should be the most important consideration in selecting a research problem. A research endeavour is usually time-consuming and involves hard work and possibly unforeseen problems. If you select a topic which does not greatly interest you, it could become extremely difficult to sustain the required motivation and put in enough time and energy to complete it.
- ➔ **Magnitude** - You should have sufficient knowledge about the research process to be able to visualise the work involved in completing the proposed study. Narrow the topic down to something manageable, specific and clear. It is extremely important to select a topic that you can manage within the time and with the resources at your disposal. Even if you are undertaking a descriptive study, you need to consider its magnitude carefully.

Concept: In defining a research problem or the study population you may use certain words that are difficult to measure as such and/or the understanding of which may vary from person to person. These words are called concepts. In order to measure them they need to be converted into indicators (not always) and then variables. Words like satisfaction, impact, young, old happy are concepts as their understanding would vary from person to person.

- **Measurement of concepts** - If you are using a **concept** in your study (in quantitative studies), make sure you are clear about its indicators and their measurement. For example, if you plan to measure the effectiveness of a health promotion programme or a programme to rehabilitate asylum seekers in a country or random breath testing programme, you must be clear as to what determines effectiveness and how it will be measured. Do not use concepts in your research problem that you are not sure how to measure. This does not mean you cannot develop a measurement procedure as the study progresses. While most of the developmental work will be done during your study, it is imperative that you are reasonably clear about the measurement of these concepts at this stage.
- **Level of expertise** - Make sure you have an adequate level of expertise for the task you are proposing. Allow for the fact that you will learn during the study and may receive help from your research supervisor and others, but remember that you need to do most of the work yourself.
- **Relevance** - Select a topic that is of relevance to you as a professional. Ensure that your study adds to the existing body of knowledge, bridges current gaps or is useful in policy formulation. This will help you to sustain interest in the study.
- **Availability of data** - If your topic entails collection of information from secondary sources (office records, client records, census or other already published reports, etc.) make sure that this data is available and in the format you want before finalising your topic.
- **Ethical issues** - Another important consideration in formulating a research problem is the ethical issues involved. In the course of conducting a research study, the study population may be adversely affected by some of the questions (directly or indirectly); deprived of an intervention; expected to share sensitive and private information; or expected to be simply experimental 'guinea pigs'. How ethical issues can affect the study population and how ethical problems can be overcome should be thoroughly examined at the problem formulation stage.

STEPS IN FORMULATING A RESEARCH PROBLEM

The formulation of a research problem is the most crucial part of the research journey as the quality and relevance of your research project entirely depend upon it. As mentioned earlier, every step that constitutes the *how* part of the research journey (Figure 2.1) depends upon the way you formulated your research problem. Despite the importance of this step, there is very little available by way of specific guidance in other books. This task is largely left either to the teachers of research methodology or to students to learn for themselves. One of the strengths of this book is that it offers the beginner a very specific set of step-by-step guidelines in one place, despite the fear of being labelled as prescriptive.

The process of formulating a research problem consists of a number of steps. Working through these steps presupposes a reasonable level of knowledge in the broad subject area within which the study is to be undertaken

STEP ONE FORMULATING A RESEARCH PROBLEM

and the research methodology itself. A brief review of the relevant literature helps enormously in broadening this knowledge base. Without such knowledge it is difficult to 'dissect' a subject area clearly and adequately.

If you do not know what specific research topic, idea, questions or issue you want to research (which is not uncommon among students), going through the following steps will prove to be of immense help in deciding what you want to find out about. They will help you to select and narrow down a subject area that could become the basis of a research problem for your study.

➔ **STEP ONE Identify a broad field or subject area of interest to you.** It is imperative to do this at the very beginning, before starting out on your research journey. Ask yourself, 'What is it that really interests me as a professional?' In the author's opinion, it is a good idea to think about the field in which you would like to work after graduation. This will help you to find an interesting topic, and one which may be of use to you in the future. For example, if you are a social work student, inclined to work in the area of youth welfare, refugees or domestic violence after graduation, you might take to research in one of these areas. Or if you are studying marketing you might be interested in researching consumer behaviour. Or, as a student of public health, intending to work with patients who have HIV/AIDS, you might like to conduct research on a subject area relating to HIV/AIDS. Or you might be interested in becoming a teacher.

➔ **STEP TWO Dissect the broad area into subareas.** At the outset, you will realise that all the broad areas mentioned above – youth welfare, refugees, domestic violence, consumer behaviour and HIV/AIDS – have many aspects. For example, there are many aspects and issues in the area of domestic violence, illustrated in Figure 4.1.

The more you think or read about an area the more subareas you will identify. For instance, you can go through the broad area of alcoholism (see Step 2 in Fig. 4.2). In preparing your list of subareas you should also consult others who have some knowledge of the area and the literature in your subject area. Once you have developed an exhaustive list of the subareas from various sources, you can proceed to the next stage where you select what will become the basis of your enquiry.

➔ **STEP THREE Select what is of most interest to you.** It is neither advisable nor feasible to study all subareas. From your list, select issues, questions or subareas about which you are passionate. Your interest should be the most important determinant for selection, even though there are other considerations as discussed in the previous section. One way to decide what interests you most is to start with a process of elimination. Go through your list and delete all those subareas, issues or questions in which you are not very interested. You will find that towards the end of this process, it will become very difficult for you to delete anything further. You need to continue until you are left with something that is *manageable*, considering the time available to you, your level of expertise and other resources needed to undertake the study. Once you are confident that you have selected something that you are passionate about and can manage, you are ready to go to the next step.

➔ **STEP FOUR Raise research questions.** At this step ask yourself, 'What is it that I want to find out about in this subarea?' Make a list of whatever questions come to mind relating to your chosen subarea and if you think there are too many to be manageable, go through the same process of elimination as in step 3.

- **STEP FIVE Formulate objectives.** Both your main objectives and your subobjectives now need to be formulated, based on your research questions. The main difference between objectives and research questions is the way in which they are written. Research questions are obviously that – questions. Objectives transform these questions into behavioural aims by using action-oriented phrases such as ‘to find out’, ‘to determine’, ‘to ascertain’ and ‘to examine’. Some researchers prefer to reverse the process; that is, they start from objectives and formulate research questions from them. Some researchers are satisfied only with research questions, and do not formulate objectives at all. If you prefer to have only research questions or only objectives, this is fine, but keep in mind the requirements of your institution for research proposals. For guidance on formulating objectives, see the next section.

Subject area

Subareas

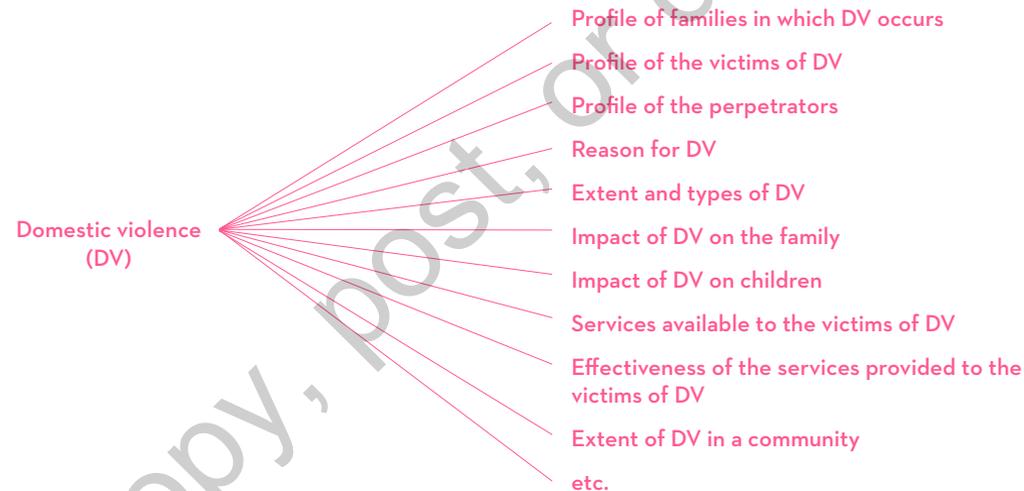


Figure 4.1 Dissecting the subject area of domestic violence into subareas

- **STEP SIX Assess your objectives.** Now examine your objectives to ascertain the feasibility of achieving them through your research endeavour. Consider them in the light of the time, resources (financial and human) and technical expertise at your disposal.
- **STEP SEVEN Double-check.** Go back and give final consideration to whether or not you are sufficiently interested in the study, and have adequate resources to undertake it. Ask yourself, ‘Am I really enthusiastic about this study?’ and ‘Do I really have enough resources to undertake it?’ Answer these questions thoughtfully and realistically. If your answer to one of them is ‘no’, reassess your objectives.

STEP ONE FORMULATING A RESEARCH PROBLEM

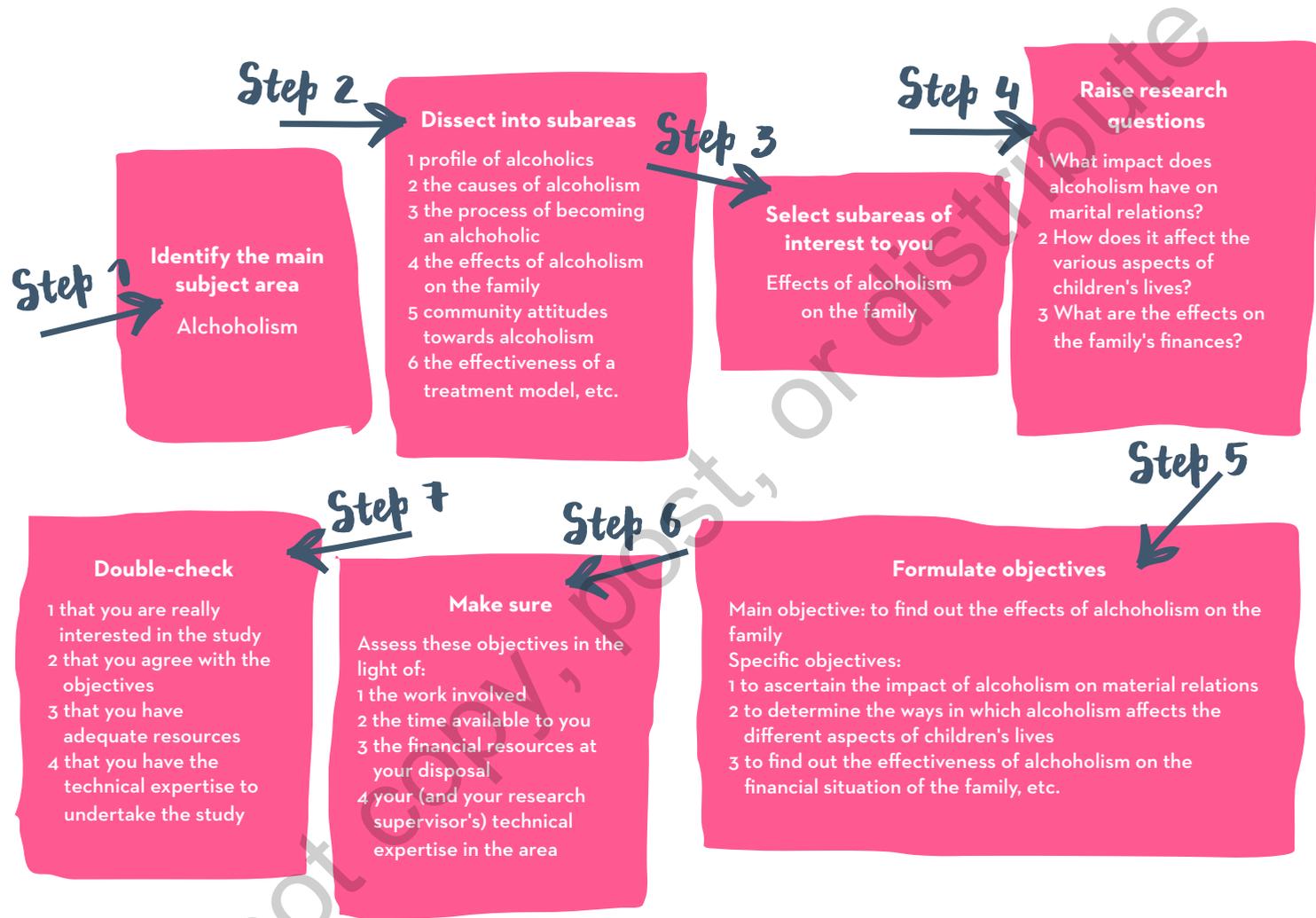


Figure 4.2 Steps in formulating a research problem - alcoholism



Figure 4.3 Formulating a research problem - the relationship between fertility and mortality



Figure 4.4 Narrowing down a research problem - health

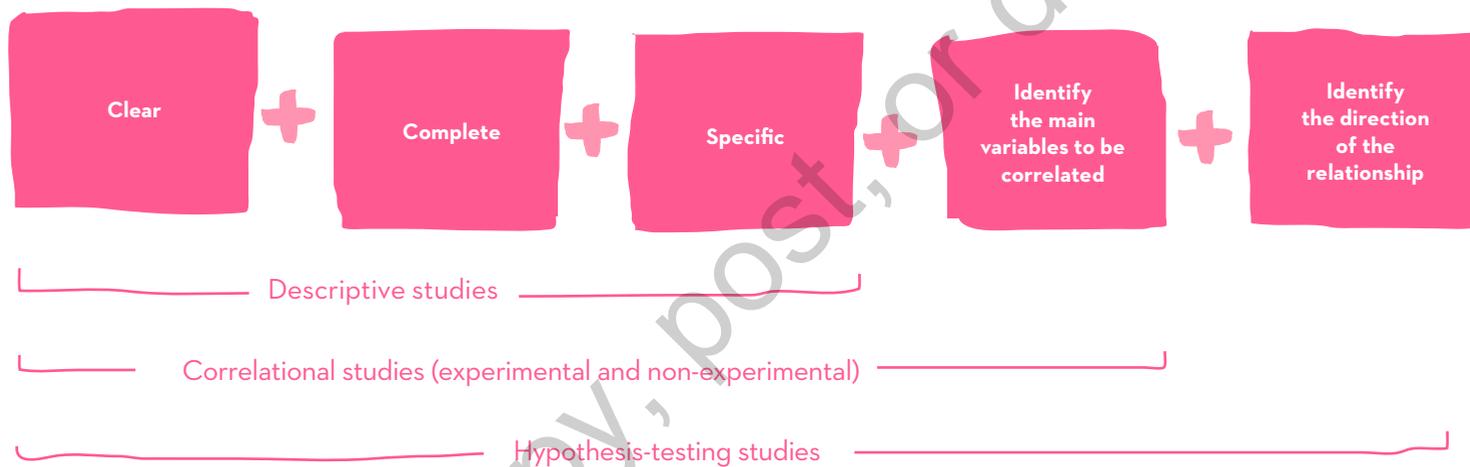


Figure 4.5 Characteristics of objectives

Figures 4.2–4.4 operationalise steps 1–7 with examples from different academic disciplines (health, social work/social sciences and community development).

THE FORMULATION OF RESEARCH OBJECTIVES

Objectives are the goals you set out to attain in your study. Since these objectives inform the reader of what you want to achieve in the study, it is extremely important to word them clearly and specifically.

It is important to distinguish between main objectives and subobjectives. The main objective relates to the overall thrust of your study. It is also concerned with the main associations and relationships that you seek to discover or establish. The subobjectives are the specific aspects of the topic that you want to investigate within the main framework of your study.

Subobjectives should be listed numerically. They should be worded clearly and unambiguously. Make sure that each subobjective contains only one aspect of the study. Use action-oriented words or verbs when writing your objectives. The objectives should start with words such as 'to determine', 'to find out', 'to ascertain', 'to measure' and 'to explore'.

The way the main objectives and subobjectives are worded determines how your research is classified (e.g. descriptive, correlational or experimental). In other words, the wording of your objectives determines the type of research design you need to adopt to achieve them. Hence, be careful about the way you word your objectives.

Irrespective of the type of research, the objectives should be expressed in such a way that the wording clearly, completely and specifically communicates your intention to your readers. There is no place for ambiguity, non-specificity or incompleteness, either in the wording of your objectives or in the ideas they communicate. Figure 4.5 displays the characteristics of the wording of objectives in relation to the type of research study.

If your study is primarily descriptive, your main objective should clearly describe the major focus of your study, even mentioning the organisation and its location unless these are to be kept confidential (e.g. to describe the types of treatment programme provided by [name of the organisation] to alcoholics in [name of the place] or to find out the opinion of the community about the health services provided by [name of the health centre/department] in [name of the place]). Identification of the organisation and its location is important as the services may be peculiar to the place and the organisation and may not represent the services provided by others to similar populations.

If your study is correlational in nature, in addition to the first three characteristics shown in Figure 4.5, the wording of the main objective should also include the main variables being correlated (e.g. to ascertain the *impact of migration on family roles* or to compare the effectiveness of *different teaching methods on the comprehension of students*).

If the overall thrust of your study is to test a hypothesis, the wording of the main objectives should also indicate the direction of the relationship being tested (e.g. to ascertain if an *increase in youth unemployment will increase the incidence of street crime*, or to demonstrate that the provision of maternal and child health services to Aboriginal people in rural Australia will *reduce infant mortality*).

CHECKPOINT
Researchable
questions

Study population: Every study in the social sciences has two aspects: study population and study area (subject area). The people you want to find out about are collectively known as the study population or simply population; the size of the population is usually denoted by the letter *N*. It could be a group of people living in an area, employees of an organisation, a community, a group of people with special issues, etc. The people from whom you gather information, known as the sample, are selected from the study population; the sample size is usually denoted by *n*.

CHAPTER 4 FORMULATING A RESEARCH PROBLEM

THE STUDY POPULATION

CHECKPOINT

Narrowing
your research
problem

So far we have focused on only one aspect of a study, the research problem. But every study in social sciences has a second aspect, the **study population**, from whom the information required to find answers to your research question is obtained. As you narrow the research problem, similarly you need to decide very specifically and clearly who constitutes your study population, in order to select the appropriate respondents.

Suppose you have designed a study to ascertain the needs of young people living in a community. In terms of the study population, one of the first questions you need to answer is 'Who do I consider to be a young person?' You need to decide, in measurable terms, which age group your respondents should come from. Is it those between 15 and 18, 15 and 20, or 15 and 25 years of age? Or you may be interested in some other age group. You need to decide this before undertaking your research journey. Having decided the age group that constitutes your 'young person', the next question you need to consider is whether you want to select young people of either gender or confine the study to one only. In addition, there is another dimension to consider: that is, what constitutes the community? Which geographical area(s) or ethnic background should you select your respondents from?

Let us take another example. Suppose you want to find out the settlement process of immigrants. As a part of identifying your study population, you need to decide who you would consider an immigrant. Is it a person who immigrated 5, 10, 15 or 20 years ago? You also need to consider the countries from where the immigrants come. Will you select your respondents irrespective of the country of origin or select only those who have come from a specific country or countries? You need to narrow your definition of the study population as you have done with your research problem. These issues are discussed in greater depth in the next section.

In quantitative research, you need to narrow both the research problem and the study population and make them as specific as possible so that you and your readers are clear about them. In qualitative research, reflecting the 'exploratory' philosophical base of the approach, both the study population and the research problem should remain loose and flexible to ensure the freedom necessary to obtain varied and rich data if a situation emerges.

Operational definition: When you define concepts used by you either in your research problem or in the study population in a measurable form, they are called working or operational definitions. It is important to understand that the operational definitions that you develop are only for the purpose of your study.

Working definition: see Operational definition

ESTABLISHING OPERATIONAL DEFINITIONS

In defining the problem you may use certain words or items that are as such difficult to measure and/or the understanding of which may vary from respondent to respondent. In a research study it is important to develop, define or establish a set of rules, indicators or yardsticks in order to establish clearly the meaning of such words/items. It is sometimes also important to define clearly the study population from which you need to obtain the required information. When you define concepts that you plan to use either in your research problem and/or in identifying the study population in a measurable form, they are called **operational definitions** or **working definitions**. You must understand that these operational definitions that you develop are only for the purpose of your study and could be quite different from legal definitions, or those used by others. The meanings you assign to the concepts are only for the purpose of your study and are designed to remove ambiguity

STEP ONE FORMULATING A RESEARCH PROBLEM

when selecting or communicating with your respondents. As the understanding of concepts can vary markedly from person to person, your operational definitions will inform your readers what exactly you mean by the concepts that you have used in your study.

Let us take an example from studies where the main objectives are:

- 1 to find out the number of *children* living below the *poverty* line in Australia;
- 2 to ascertain the impact of immigration on *family* roles among *immigrants*;
- 3 to measure the *effectiveness* of a retraining programme designed to help *young people*.

Although these objectives clearly state the main thrust of the studies, they are not specific in terms of either the main variables to be studied or the study populations. You cannot count the number of children living below the poverty line until you decide what constitutes the poverty line and how to determine it; you cannot find out the impact of immigration on family roles unless you identify which roles constitute family roles; and you cannot measure effectiveness until you define what effectiveness is. On the other hand, it is equally important to decide exactly what you mean by 'children,' 'immigrants' or 'young'. Up to what age will you consider a person to be a child? Who would you consider young? Who would you consider to be an immigrant? In addition, will you consider immigrants from every country or only a few? In many cases you need to develop operational definitions for the variables and concepts you are studying and for the population that becomes the source of the information for your study. Table 4.2 lists the concepts and the population groups to be operationalised for the above examples. Defining these clearly by developing operational definitions will avoid ambiguity and confusion.

Table 4.2 Operationalisation of concepts and study populations

Study	Concept to be studied		Population to be studied	
	Concepts	Issues	Study populations	Issues
1	Poverty line	What constitutes the 'poverty line'?	Children	Who would you consider a child?
2	Family roles	What constitutes 'family roles'?	Immigrants	Who would you consider an immigrant?
3	Effectiveness	What constitutes 'effectiveness'?	The young	Who would you consider a young person?
You must:	operationalise the concepts - define in practical, observable and measurable terms 'poverty line', 'family roles' and 'effectiveness'		operationalise the study population - define in identifiable terms 'children', 'immigrants' and 'young'	

Operational definitions may differ from day-to-day meanings as well as dictionary or legal definitions. These meanings may not be helpful in identifying either your study population or the concepts you are studying. Though in daily life you often use words such as 'children', 'youth' and 'immigrant' loosely, you need to be more specific when using them in a research study. You should work through your own definitions.

Operational definitions give an operational meaning to the study population and the concepts used. It is only through making your procedures explicit that you can validly describe, explain, verify and test. It is important to remember that there are no rules for deciding if an operational definition is valid. Your arguments must convince others about the appropriateness of your definitions.

FORMULATING A RESEARCH PROBLEM IN QUALITATIVE RESEARCH

The difference in qualitative and quantitative studies starts with the way you formulate your research problem. In quantitative research you strive to be as specific as possible, attempt to narrow the magnitude of your study and develop a framework within which you confine your search. On the other hand, in qualitative research, this specificity in scope, methods and framework is not required. You strive instead to maintain flexibility, openness and freedom to include any new ideas or exclude any aspect that you initially included but later consider not to be relevant. At the initial stage you may only identify the main thrust of your study and some specific aspects which you want to find out about. Qualitative research primarily employs inductive reasoning. In contrast to quantitative research, where a research problem is stated before data collection, in qualitative research the problem is reformulated several times after you have begun data collection. The research problem and the data collection strategies are reformulated as necessary throughout data collection either to acquire the 'totality' of a phenomenon or to select certain aspects for greater in-depth study.

This flexibility and freedom, though providing you with certain advantages, can also create problems in terms of comparability of the information gathered. It is possible that your areas of search may become markedly different during the preliminary and final stages of data gathering. During the initial developmental phase, many researchers produce a framework of 'reminders' (a conceptual framework of enquiry) to ensure that key issues/aspects are covered during discussions with the respondents. As the study progresses, if need be, issues or themes are added to this framework. This is not a list of questions but reminders that are only used if for some reason the interaction with respondents lacks discussion.

Look at the example above that details the process of formulating a research problem in qualitative research. In qualitative research you do not formulate a research problem as you do in quantitative research. However, it is of immense importance that you develop a conceptual framework that could serve as a basis for discussing issues with the respondents, especially in cases where respondents are not very forthcoming. In qualitative research you need to be open and flexible in terms of the framework of your enquiry so that you can bring depth and richness to the data.

STEP ONE FORMULATING A RESEARCH PROBLEM

Once I supervised a student who was interested in attention-deficit hyperactivity disorder (ADHD). She wanted to find out, as she put it, 'What does it mean to have a child with ADHD in the family?' Of course my first question to her was 'What do you mean by "what does it mean"?' She paused for a while and then said, 'it means what it means'. I asked her to treat me as one of her respondents and ask the question. She asked me, 'What does it mean to have a child with ADHD?' to which my answer was, 'I do not understand your question. Could you please explain to me the meaning of "what does it mean"?' She found it difficult to explain and immediately realised the problem with the question. What she thought was very clear to her became quite difficult to explain. It took her a while to explain to me what she had in mind. During the discussion that followed, though she could explain some of the things she had in mind, she realised that she could not go to a respondent with her initial question.

The student knew a family who had a child with ADHD from which her interest in the topic had probably stemmed. I suggested that she have a talk with the mother. She did, and, to her surprise, the mother asked her the same question that I had.

I advised her to read some literature on ADHD and also have informal talks with two families who have a child with ADHD. We decided to select one single-mother family and another where the father and the mother both take responsibility for the child. She was advised to record all the issues and aspects that reflected her understanding of 'what it means', relating to bringing up a child with ADHD in the family. After going through the above, she developed a list, three and a half pages long, of the aspects and issues that, according to her, reflected her understanding of 'what it means'. She did not construct any specific questions around these aspects or issues. They served as background for her to raise with potential respondents in case respondents did not come up with issues or aspects for discussion in terms of 'What does it mean to have a child with ADHD in the family?'

This list brought immense clarification to her thinking about 'what it means' and served as the basis of her interviews with the families. A number of times during the supervisory sessions she had mentioned that she would not have been able to do much without the conceptual framework. You should not confuse it with the interview guide. The list is a conceptual construction of the thoughts that serve as background and become the basis of discussions in case there is insufficient dialogue with your potential respondents.

SUMMARY

The formulation of a research problem is the most important step in the research process. It is the foundation, in terms of design, on which you build the whole study. Any defects in it will adversely affect the validity and reliability of your study.

There are no specific guidelines, but the model suggested in this chapter could serve as a useful framework for the beginner. The seven-step model helps you to narrow your broad area of interest to enable you to decide specifically

what you want to study. It is operational in nature and follows a logical sequence that takes the beginner through the complexities of formulating a research problem in a simple and easy-to-understand manner.

In quantitative research you need to determine the path of your research journey in advance. This navigational map becomes your guide. However, in qualitative research the journey is open, and free from strict adherence to any path.

In quantitative studies it is important to go through the process of narrowing down or zeroing in on the research problem. The path and the outcome are determined by a set of objectives that you formulate. It is therefore important that you articulate the objectives of your study clearly. Objectives - whether the main objective or the subobjectives - should be specific and free from ambiguity, and each one should relate to only one aspect of the study. Use action-oriented words when writing your objectives.

Formulation of a research problem in qualitative research follows a different path. You do not predetermine the exact nature and extent of the research problem you propose to find answers to. You continue to modify it as you start finding out more about it. However, it will help you if you develop a conceptual framework for the different aspects of the problem to serve as a backdrop for issues to be discussed with potential respondents.

Developing operational definitions for the concepts that you propose to study is extremely important. This enhances clarity about the issues you are trying to find out about and about the study population you plan to gather information from. It is important that you operationalise both the main variables you are proposing to study and the study population.

Now that you have read the full chapter...

CHECK YOUR UNDERSTANDING

- Do you understand the meaning and application of all of the keywords at the start of the chapter? If not, visit the online resources and use the glossary flashcards to get to grips with their definitions.
- What are some of the broad differences in formulating a research problem in quantitative and qualitative research?
- What considerations should you bear in mind in the wording of objectives?

APPLY IT TO YOUR OWN PROJECT

- Identify two or three potential research questions, related to your own academic field or professional area, that would fall under each of the four Ps (as outlined in Table 4.1): people, problems, programmes and phenomena.
- For each of the hypothetical research questions you created, identify which concepts and study populations would need to be operationally defined. Consider what problems might occur if this were not done.

STEP ONE FORMULATING A RESEARCH PROBLEM

CONFUSED?

THE ONLINE RESOURCES ARE HERE TO HELP YOU

→ <https://study.sagepub.com/kumar5e> ←

CHECKPOINT: How do you choose a research topic? Watch this [video](#).

CHECKPOINT: What is a qualitative research problem? Watch this [video](#).

CHECKPOINT: What is a researchable question? Visit this [website](#).

CHECKPOINT: How do you narrow your topic into a researchable problem? Watch this [video](#).

NEED MORE GENERAL SUPPORT?

Get up to speed on key terms with *glossary flashcards* and test yourself on important concepts with *multiple choice questions*.

UP FOR A CHALLENGE?

THE ONLINE RESOURCES ARE HERE TO INSPIRE YOU

→ <https://study.sagepub.com/kumar5e> ←

CHECKPOINT: How do you choose a relevant and interesting topic? Visit this website.

CHECKPOINT: What does a good qualitative research question look like? Visit this website.

CHECKPOINT: Is your question researchable? Review this checklist.

CHECKPOINT: What factors can you adjust if your research question is too broad?
Visit this website.

READY TO WORK ON YOUR OWN PROJECT?

Start building a portfolio of your ideas with the exercise workbook and get support tailored to your specific assignment with the assessment toolkit.