

2 Asking an answerable and focused review question

Overview

- Selecting a topic area for your systematic review
- Narrowing the topic area to a specific answerable review question
- Using background or foreground questions: what is the difference?
- Factors to consider when asking answerable and focused review questions
- Developing your review question further
- Relating your question to the research design: what types of study designs should you look for to answer your research question?

Selecting a topic area for your systematic review

Selecting a topic area for your systematic review is the first step towards undertaking the review. The specific topic you select may arise from a number of different triggers. If you are a nursing student, your interest in a topic may result from a lecture or module on a medical condition that was covered in your undergraduate classes or a medical problem that you or a relative have experienced. The topic area may also arise from a contemporary issue highlighted in the media, such as reports on the latest research studies conducted on breast cancer or swine flu, or the measles, mumps and rubella (MMR) vaccine. If you are a practising nurse, it is likely that the topic area you choose is related to your professional practice or a Nursing and Midwifery Council issue or national initiative. Whatever your role, it is important that when selecting a research topic you bear in mind a number of key points (Box 2.1).

Box 2.1 Key points to remember when choosing a research topic

When choosing a research topic, you will need to identify:

- an area you are interested in related to your practice
- a question that you would like to know the answer to
- why the question is interesting and worth investigating
- issues relating to the question
- what you will gain by investigating the question
- what your profession and other professions will gain
- the rationale for asking the question
- the use of having the answer, i.e. ask 'So what?'
- the lack of knowledge in the area.

Narrowing the topic area to a specific answerable review question

Once you have selected your research topic or area, the next step is to narrow this down to a review question. This process is similar to a funnel or an inverted triangle (see Figure 2.1), where the wide base of the funnel represents the research topic and the narrow peak represents the specific research question. To illustrate this, a student nurse who is interested in the area of spinal deformities might select spinal deformities as the topic area, and one specific question arising from this specific topic could be 'the effectiveness of braces for treating patients with scoliosis'. Here the nurse has narrowed the topic area by specifying the particular treatment and also specifying the type of spinal deformity. Another nurse working in the accident and emergency (A&E) department may be very interested in the area of witnessed resuscitation (where family members are present during resuscitation attempts) as she has participated in a number of these procedures during her routine practice. 'Witnessed resuscitation' would then be the general topic area and a possible research (or review) question arising from this area could be 'What are the views of nurses regarding witnessed resuscitation in the A&E

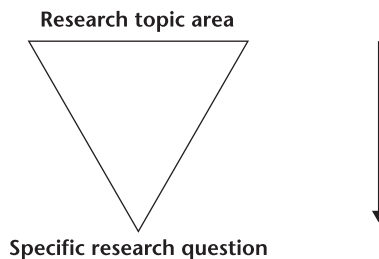


Figure 2.1 Deriving the research question from the topic area.

department?' Here the nurse has narrowed the topic area to a research question by specifying that she will be looking at nurses' views on this topic and will be restricting the study to the A&E department.

You may be asking how you actually derive the question from the topic. The way to do this is to ask a series of questions to narrow the topic down. To illustrate how this is done, we will use a hypothetical case study of a spinal nurse, Cheryl. Once you have read the case study you can try to narrow down your own topic area to a review question using the template provided in Box 2.2.

Case study: spinal nurse Cheryl

Cheryl is a spinal nurse working in a new spinal unit. As part of her role in the spinal deformity department, she takes care of many teenagers who suddenly develop a spinal deformity when they reach their teens, a condition known as adolescent idiopathic scoliosis (AIS). Before developing this deformity, when they were children, their spine was normal. The cause for this problem is not yet known so the treatment is concentrated on the symptoms. One of the treatments that Cheryl is involved in is bracing of the spinal curvatures to try to reduce these curvatures and rib hump. Many of these patients also have a number of psychological problems such as low self-esteem and self-image and occasionally pain. Cheryl would like to conduct a systematic review to find the evidence to underpin her practice.

Ten steps to help Cheryl develop the review question from her review topic

Cheryl starts developing her question by responding to the following ten steps.

- 1 Write down questions that have been in your mind from your area of practice. Choose questions about which you are very curious and to which you would love to know the answer.
 - What are the effects of braces on the spinal curvature and rib hump?
 - What are patients' experiences of wearing a brace?
 - What are the positive effects of braces?
 - What are the negative effects of braces?
 - Are exercises for scoliosis effective?
 - Is surgery for treating scoliosis effective?
 - Is the practice of only observing and monitoring patients until they require surgery the best clinical practice?
- 2 Select one question that you would like to know the answer to.
 - What are the effects of spinal braces on patients with adolescent idiopathic (no known cause) scoliosis?
- 3 Identify why it is interesting and worth investigating.
 - If the brace is not effective at reducing the spinal curvature and rib hump, it may not be worth advising patients to use braces. It may also not be worth the sacrifices that adolescents have to make to wear them.
- 4 Identify issues related to the question.

16 ASKING AN ANSWERABLE AND FOCUSED REVIEW QUESTION

Wearing a brace for 24 hours a day is not easy for teenagers. There are physical as well as psychological problems which need to be considered.

- 5 What will you gain by investigating the question?
When the patients come for treatment I can be assured that they are not making the sacrifice of wearing a brace for nothing, but that the brace is really effective in treating the spine and rib hump.
- 6 What will your profession or other professions and service users gain?
Both professionals and service users would be assured as to whether or not the treatment is an effective one. This would increase compliance and also has cost implications for health professionals.
- 7 What is the rationale for asking the question?
I would like to be sure the treatment we are providing to these children is actually working and that there is an evidence base for its effectiveness.
- 8 Why does it excite you?
It excites me because if the evidence is found to support the treatment effectiveness of bracing, then this may save a lot of young girls and boys the trauma of having spinal surgery in the future.
- 9 Is it a simple question or does it have several parts? If several parts, what are they?
This question has three parts. The treatment has both physical effects and psychological effects. The patients' and families' views are also very important.
- 10 In your opinion does the question address a significant problem? If so, answer the question 'So what?' here.
Yes, it would address a significant problem, as identified earlier on; there is a lack of evidence supporting the use of bracing. It would provide the evidence to support the judicious use of the brace in clinical practice.

Template to help you develop your review question from your review topic

Box 2.2 contains a template adapted from Bailey (1997) which you can use to help focus your own research question.

Once you have decided on a specific problem area and research question, the next step is to refine and break down the research question and make it as comprehensive and specific as possible. To do this you will need to consider the different categories of research questions: not only are there background and foreground questions, but also there are different types of foreground questions. Your review will differ based on whether you are investigating the effectiveness of a treatment programme, seeking to prevent a condition occurring, diagnosing a medical problem, looking at the cause or prognosis of a specific condition or disease, or exploring patients', users' or nurses' perceptions and experiences.

Box 2.2 Focusing the research question from the topic area

- 1 Write down three questions that have been in your mind from your area of practice. Choose questions about which you are very curious and to which you would love to know the answer.
- 2 Select one question that you would like to know the answer to.
- 3 Identify why it is interesting and worth investigating.
- 4 Identify issues related to the question.
- 5 What will you gain by investigating the question?
- 6 What will your profession or other professions and service users gain?
- 7 What is the rationale for asking the question?
- 8 Why does it excite you?
- 9 Is it a simple question or does it have several parts? If several parts, what are they?
- 10 In your opinion does the question address a significant problem? If so, answer the question 'So what?' here.

Using background or foreground questions: what is the difference?

Background questions refer to general nursing questions about a patient. These can be research questions about their medical condition such as: what causes the condition or how is it treated? The answers to these questions can be found in background sources such as textbooks or narrative reviews, which give an *overview* of the topic area.

Foreground questions answer a *specific* question about a specific topic. Foreground sources can be divided into primary sources such as original research articles published in peer-reviewed journals and secondary sources such as systematic reviews of the topic, and synopses and reviews of individual studies. Secondary sources are one step removed from the original research. Table 2.1 gives some examples of primary and secondary sources. The various concepts listed in the table will all be explained in this chapter.

Table 2.1 Types of studies in foreground sources

<i>Primary sources – original research</i>	<i>Secondary sources – reviews of original research</i>
<ul style="list-style-type: none"> • Experimental studies (an intervention is made) <ul style="list-style-type: none"> ◦ RCT ◦ Controlled trials • Observational studies (no intervention or variables are manipulated) <ul style="list-style-type: none"> ◦ Cohort studies ◦ Case-control studies ◦ Case reports • Qualitative research studies <ul style="list-style-type: none"> ◦ Phenomenological, ethnographic or grounded theory studies 	<ul style="list-style-type: none"> • Systematic reviews • Systematic reviews with a meta-analysis • Practice guidelines • Decision analysis • Consensus reports • Editorial, commentary

Factors to consider when asking answerable and focused review questions

Blaikie (2007) suggests that the use of research or review questions is a neglected aspect in the design and conduct of research. He suggests that formulating a ‘research question is the most critical and perhaps the most difficult part of any research design’ (Blaikie 2007: 6). The formulation of the review question is crucial because the review question underpins all the aspects of the review methodology: every single step of the review is determined by the focused review question. The function of a review question can be summed up as follows:

- defines the nature and scope of the review
- identifies the keywords (together with the scoping search)

- determines the search strategy and the search to be undertaken
- provides guidance for selecting the primary research papers needed
- guides the data extraction and synthesis of the results.

When formulating a review question, it is important to ensure that you *ask an open question and not make a statement*. For example, rather than saying 'Braces improve the spinal curvatures of patients with scoliosis', as a novice student might, it would be preferable to ask, 'What effect do spinal braces have on patients with spinal curvatures?' In the first example you are making an assumption that braces will actually improve the back when they might not and they may even make the back worse. In this example you are making a statement and not asking a question. The first example is similar to a closed question and could introduce some bias (or errors). The second example is an open question and less biased. Asking this type of question will allow you to find research papers that discuss all the different effects of braces, both positive and negative.

Another issue to consider is the way you word a question: it is best to *avoid questions that can be answered with a simple yes or no*. For example, asking, 'Do braces have an effect on the spinal curvatures of patients with spinal deformities?' This can easily be answered with a yes or a no, whereas asking 'What effect do spinal braces have on patients with spinal curvatures?' encourages more discussion as well as being more open and unbiased. Table 2.2 lists some review questions to help you determine what sort of evidence you are looking for within the primary research papers that you will select to answer your review question. One way to facilitate the development of your review question is to determine what kind of question you are asking (Flemming 1998). From there you can work out what kind of evidence you are looking for.

Table 2.2 Main types of research questions

Type	Description	Illustration
1 Treatment or therapy	Which treatment is most effective? Does it do more good than harm?	Is the use of dressing A better than dressing B in the treatment of venous leg ulcers?
2 Prevention	How to reduce the risk of disease	Do increasing levels of obesity increase the risk of developing diabetes?
3 Diagnosis	How to select and interpret diagnostic tests	Is having an X-ray as effective as having a computerized tomography (CT) scan for diagnosing a brain tumour?
4 Prognosis	How to anticipate the likely course of the disease	Are babies who are bottle fed more likely to be obese once they reach adulthood, compared to babies who are breastfed?
5 Causation	What are the risk factors for developing a certain condition?	Does exposure to parental alcohol during pregnancy increase the risk of foetal alcohol syndrome in newborn babies?
6 Patients' experiences and attitudes	How do people feel about this treatment or disease?	How do patients experience life with a venous leg ulcer?

Examples of the main types of research questions

Some examples from practice can be found below:

- 1 Examples of treatment or therapy questions
 - What are the effects of braces on patients with spinal deformities?
 - How effective are antidepressive medications on anxiety and depression?
- 2 Examples of prevention questions
 - For patients of 70 years and older, how effective is the use of the influenza vaccine at preventing flu as compared to patients who have not received the vaccine?
 - How effective is school screening for scoliosis at reducing the risk of future surgery in patients with scoliosis?
- 3 Examples of diagnosis questions
 - In patients with suspected anorexia nervosa, what is the accuracy of a new scale compared with the 'gold standard' previously validated instrument?
 - In patients with suspected scoliosis (spinal curvature), what is the accuracy of a new non-invasive surface tomography scanning device as compared to X-rays?
- 4 Examples of prognosis questions
 - How much more likely are babies who are bottle fed to catch colds than babies who are breastfed?
 - How much more likely are workers with musculoskeletal disorders to take sick leave as compared to workers diagnosed with stress?
 - How much more likely are children who are screened for scoliosis to have surgery than children who are not screened?
- 5 Examples of causation questions
 - For healthy post-menopausal patients on hormone replacement therapy (HRT), what are the increased risks for developing breast cancer?
 - In women taking oral contraceptives, is there an association between their use and breast cancer?
 - Does having a parent with a spinal deformity increase the risk of the child developing a scoliosis once they reach puberty?
- 6 Examples of patients' experiences and attitudes questions
 - What are teenagers' experiences of living with a spinal brace?
 - How do older patients experience life with cancer?
 - What are student nurses' experiences of life as a first-year university student?

Developing your review question further

If you have followed all of the steps above, you should by now have a tentative review question. In order to search for all the relevant papers on the topic, it is important that your question is both comprehensive and specific. It should include only one question and not two or three questions. A well-framed research question will have three or four elements (Flemming 1998). Once you have formulated your question the next step is to

separate it into parts, as will be demonstrated in this section. The question formation usually includes identifying all the component parts, the population, the intervention, the comparative intervention (if any) and the outcomes that are measured. The acronym for this is PICO, which stands for population, intervention, comparative intervention and outcome. PICO is designed mainly for questions of therapeutic interventions (Khan et al. 2003). Another useful acronym is PEO, which stands for patient, exposure and outcome. PEO is used most frequently for qualitative questions (Khan et al. 2003).

A good way to identify the different parts of your question for PICO formats is to make a table containing four rows, one for each letter of the acronym. Table 2.3 shows what type of information to include in each of the sections. Table 2.4 shows some completed examples. For qualitative questions that use the PEO format you will need to create a table containing three rows. Table 2.5 shows you what to include in each of the sections.

In Tables 2.4 and 2.5 you can find some examples of using both the PICO and the PEO acronyms to formulate your own questions. The PICO questions are usually quantitative questions and the PEO ones are usually qualitative questions.

Regarding Cheryl's question from the case study, the structured question can be broken down into the component parts as defined by the PICO framework as follows:

- In patients with adolescent idiopathic scoliosis (P)
- how effective is bracing (I)
- as compared to observation (C)
- at reducing spinal curvature, rib hump and psychological problems (O)?

Table 2.6 shows how to separate the component parts of Cheryl's question using the PICO method.

Table 2.3 Component parts to consider when asking clear focused review questions

P Population and their problem	Here you need to state the clinical diagnosis or disease, the age, gender and any other relevant factors related to the population you would like to include. The population group needs to be specified whatever type of question you are considering.
I Intervention or exposure	If you are planning to evaluate a specific intervention you will need to state the type of intervention that you are seeking to evaluate, such as the type of drug and any specifics related to it like dosage and other relevant factors. If you are <i>not</i> looking at an intervention but are considering a specific 'exposure' (this term is used loosely) such as 'witnessed resuscitation' or 'domestic violence', you should use the E as in the PEO acronym instead of the PICO acronym.
C Comparative intervention	In a therapeutic question you will usually have a comparator (even if it is standard care). It is also possible to look at interventions without including a comparative intervention. For qualitative review questions or those involving a specific exposure or issue, this component is usually left out.
O Outcomes or themes	When writing down your outcomes, you need to consider the factors or issues you are looking for or measuring. For example, are you looking for any improvements in pain or mobility, or any other outcomes? With qualitative studies these will usually be the patients' experiences.

22 ASKING AN ANSWERABLE AND FOCUSED REVIEW QUESTION

Table 2.4 Examples of using PICO to ask clear quantitative questions

	<i>Example 1</i>	<i>Example 2</i>	<i>Example 3</i>	<i>Example 4</i>
P Population and their problem	In patients with acute asthma	In children with a spinal deformity	In children with a fever	Among family members of patients with mental health problems
I Intervention or issue	how effective are antibiotics	how effective is bracing	how effective is paracetamol as compared to	how effective is listening to tranquil music, or audiotaped comedy routines
C Comparative intervention	as compared to standard care	as compared to observation	ibuprofen	as compared to standard care (none)
O Outcomes or themes	at reducing sputum production and coughing?	at reducing the scoliosis curvature?	at reducing fever and infection?	in reducing reported anxiety?

Table 2.5 Examples of using PEO to ask clear qualitative questions

	<i>Example 1</i>	<i>Example 2</i>	<i>Example 3</i>	<i>Example 4</i>
P Population and their problem	In teenagers with a spinal deformity	Older patients with cancer	Student nurses in their first year at university	Family members of patients with mental health problems
E Exposure	the development of a spinal deformity	cancer	studying to be a nurse at university and in their first year	having a family member with mental health problem
O Outcomes or themes	the patients' views	the patients' views	the students' views	the patients' views

Table 2.6 Cheryl's question broken down using the PICO method

P	I	C	O
Patients with adolescent idiopathic scoliosis	how effective is bracing	as compared to observation	at reducing spinal curvature, rib hump and psychological problems?

Cheryl's nursing colleague Kirsty, who works in the same spinal unit, is more interested in the patients' views. Kirsty's question is 'What are the lived experiences of patients with adolescent idiopathic scoliosis of having scoliosis and wearing a brace?' Table 2.7 shows how Kirsty's question would be separated into its component parts using the PEO method.

Table 2.7 Kirsty’s question broken down using the PEO method

P	E	O
Patients with adolescent idiopathic scoliosis	having scoliosis and wearing a brace	lived experiences of having scoliosis and wearing a brace

Practice session 2.1

Now we have seen how to split different types of questions into their component parts, why don’t you try to split your own question? Use the templates provided to divide your intervention or exposure question into PICO or PEO. If your question has more than one population group, please adapt the template as appropriate.

Box 2.3 Template for splitting a quantitative intervention question into PICO component parts

P	I	C	O

Box 2.4 Template for splitting a qualitative experience question into PEO component parts

P	E	O

Relating your question to the research design: what types of study designs should you look for to answer your research question?

Now that you have split your question into its component parts, the next step is to think about how your question relates to the research design of the studies that you plan to include within your review and which will form the basis for answering your review question. Why do we need this? Once you have formulated your question you will need to search for papers that answer your question. Khan et al. (2003) recommend the inclusion of the study designs of the proposed studies while still in the process of formulating your review question. So rather than using PICO or PEO you could adapt this to use PICOT or PEOT, where the T stands for the *type* of study or research design.

The type of research design can be thought of as the structure of the research study. It is a whole plan of how all the parts of the project fit together, including who the subjects are, what instruments were used if any, how the study was conducted and analysed and finally discussed.

Types of quantitative research designs

Some of the common quantitative research designs are described below.

Case reports and case series

A case report is a report of a treatment of an individual patient. Case reports are generally undertaken and reported when a patient of particular interest or with special or complex characteristics is treated by a nurse. For example, you may come across a patient who has a condition that you have never seen or heard of before and you are uncertain what to do. A search for case series or case reports may reveal information that will help you treat your patient. When the first case of Creutzfeldt-Jakob disease (CJD) was treated, it would have been reported as a case study. When a few cases are reported, this becomes a case series. Figure 2.2 illustrates the design of a case report study, with the schematic for a case report and case series research design.

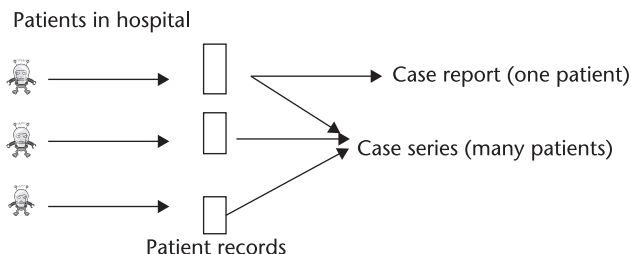


Figure 2.2 A schematic for a case report and case series.

Case control studies

Case control studies are research studies in which patients who already have a specific condition are compared with people who do not. They rely on medical records and patient recall for data collection. In other words they are retrospective studies (looking back) which can be done fairly quickly by taking the patients' histories. A good example of this can be seen by considering the time during the acquired immune deficiency syndrome (AIDS) epidemic when case control studies identified not only risk groups such as homosexual men, intravenous drug users and blood transfusion recipients but also risk factors, such as having multiple sex partners and not using condoms. Based on such studies, blood banks restricted high-risk individuals from donating blood, and educational programmes began to promote safer behaviours. As a result of these precautions, the speed of transmission of the human immunodeficiency virus (HIV) was greatly reduced, even before the virus had been identified (Schulz and Grimes 2002: 431). The schematic for a case control research design can be seen in Figure 2.3.

Cohort studies

Cohort studies are usually made up of a large population. The cohort study design follows patients who have a specific condition or who receive a particular treatment over time. These patients are compared with another group that has not been affected by the condition or treatment. For example, you may be interested in the long-term effects on nurses who smoke. In a cohort study you would follow up a group of nurses who smoke and a group who do not smoke and then compare their outcomes over time. One of the main problems with this design is that they can take a very long time to conduct. If you started following both groups of nurses when they were in their twenties and measured the outcomes every 10 years until they retired, this would mean the study would take over 40 years to complete. The schematic for a cohort research design can be seen in Figure 2.4.

Randomized controlled trials

Randomized controlled trials study the effect of treatments such as therapy, medication or programmes on real patients. The methods they include try to reduce the potential

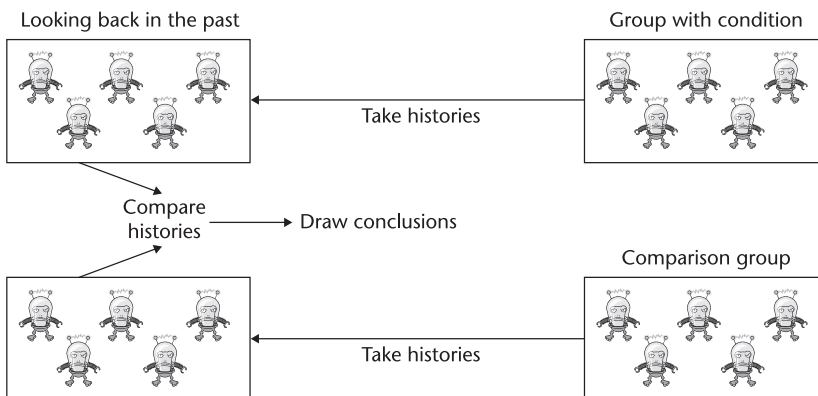


Figure 2.3 A schematic for a case control research design.

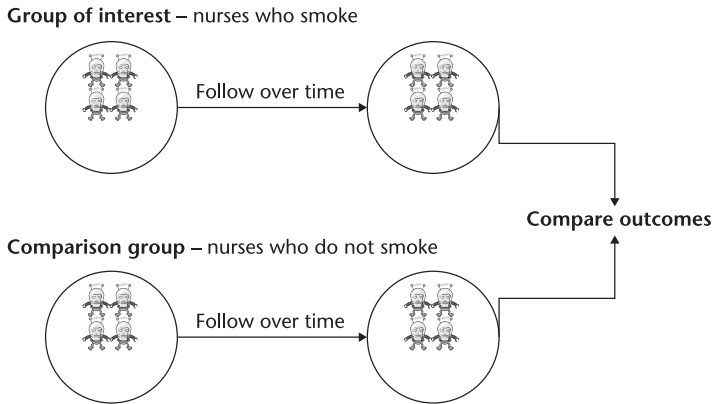


Figure 2.4 A schematic for a cohort research design.

for bias and the patients may be randomly assigned into a treated group and a control group. The inclusion of the control group, who have exactly the same conditions as the treated group with the exception of the treatment itself, allows us to ensure that it was the treatment itself that had an effect on the patients and not anything else. A schematic for an RCT research design can be seen in Figure 2.5.

Systematic reviews

As discussed in Chapter 1, an extensive literature search is conducted which uses only studies with sound methodology. The studies are collected, reviewed and assessed, data are extracted and the results summarized according to predetermined criteria of the review question (Figure 2.6).

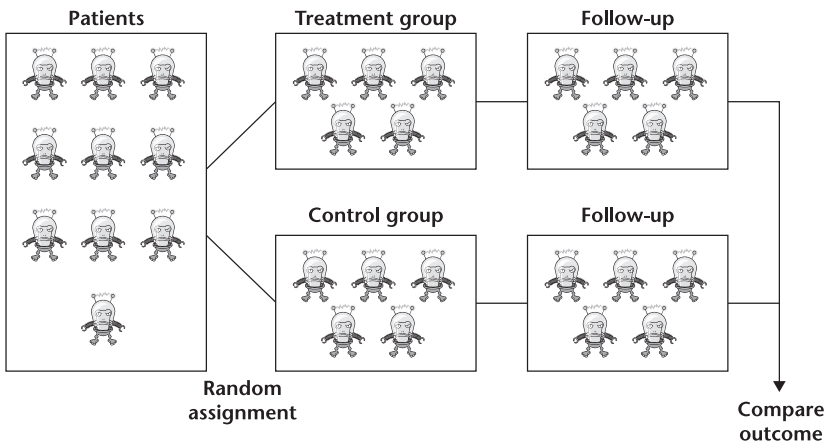


Figure 2.5 A schematic for an RCT research design.

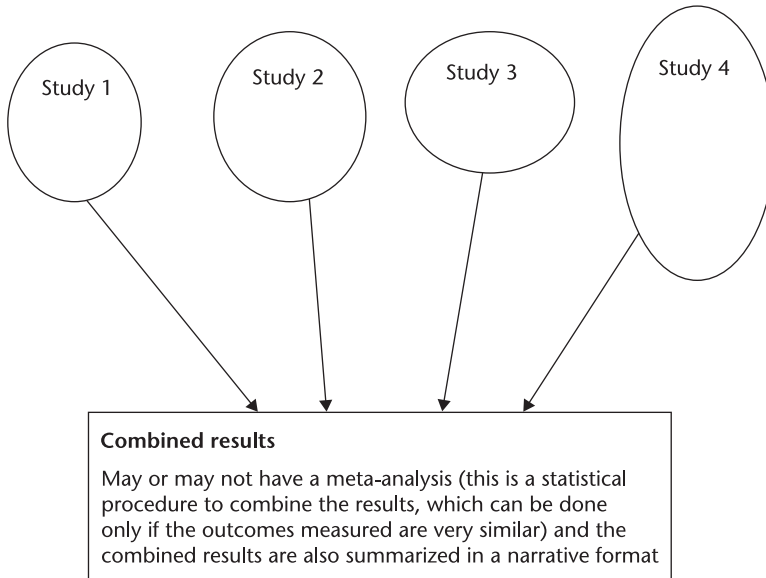


Figure 2.6 An illustration of how several studies can be combined to produce a definitive result.

Meta-analysis

A meta-analysis is a statistical procedure that is used in some systematic reviews. A meta-analysis examines a group of valid quantitative studies on a topic and combines the results using accepted statistical methodology to reach a consensus on the overall results. A meta-analysis can be used only on studies where the research papers included are very similar and where the outcome measures of the included research papers are the same. Only a small proportion of systematic reviews include a meta-analysis.

Types of qualitative research designs

The three most common types of qualitative research designs are described below.

Phenomenological research design

When nurses apply a phenomenological research design, they are concerned with the lived experiences of people (Greene 1997). This could be the lived experiences of patients with a particular condition, the experiences of older nurses, or the experiences of nursing students while training in hospitals.

Ethnographic research design

An ethnographic research design was originally used by anthropologists who went to live with native people in remote places in order to understand how they lived. According to Spradley (1979), ethnography is 'the work of describing a culture' and the goal of ethnographic research is 'to understand another way of life from the native point of view'

(Spradley 1979: 3). Within nursing practice, the term 'native' is used loosely and can refer to different nursing cultures that can be found within mental health nursing as compared to general and paediatric nursing. Spradley (1979: iv) suggests that ethnography is a useful tool for 'understanding how other people see their experience'. He emphasizes, however, that 'rather than *studying people*, ethnography means *learning from people*' (Spradley 1979: 3, my emphases). If we apply this in a nursing context, we may be interested in learning from nurses who work in a specific culture or area such as mental health nurses who work in prisons, nurses who work in an intensive care unit or nurses who work in palliative care.

Grounded theory research design

The grounded theory research design was developed by Glaser and Strauss (1967). This method is used as both a qualitative research method and a method of data analysis. In grounded theory the researcher aims to develop a theory that can explain events and behaviour, giving predictions and control over a situation. Grounded theory is a research method that operates almost in a reverse fashion from traditional research and at first may appear to be in contradiction to the scientific method. Rather than beginning with a hypothesis, the first step is data collection, through a variety of methods. From the data collected, the key points are marked with a series of themes or codes, which are extracted from the text. The codes or themes are grouped into similar *concepts* in order to make them more workable. From these concepts, *categories* are formed, which are the basis for the creation of a *theory*, or a reverse engineered hypothesis. This contradicts the traditional model of research, where the researcher chooses a theoretical framework, and only then applies this model to the phenomenon to be studied (Glaser and Strauss 1967).

Relating a specific research question to an appropriate research design

Having discussed the main types of quantitative and qualitative research designs, how does the specific type of research question relate to the appropriate research design? A summary of the types of research designs best suited to the different types of review questions can be found in Table 2.8.

Table 2.8 Summary of the types of research designs best suited to the different types of review questions

<i>Type of question</i>	<i>Suggested best type of study</i>			
	<i>Least biased</i>	-----		<i>Most biased</i>
Treatment or therapy	RCT >	cohort >	case control >	case series
Diagnosis	Retrospective, blind comparison to gold standard			
Aetiology or harm	RCT >	cohort >	case control >	case series
Prognosis		cohort >	case control >	case series
Prevention	RCT >	cohort >	case control >	case series
Experiences or perceptions	Qualitative studies: most common are phenomenological, ethnographic and grounded theory			

Questions of therapy, causes and prevention which can best be answered by RCT can also be answered by meta-analysis and systematic reviews.

Qualitative questions where a significant amount of research on the same research question has been conducted can also be answered by systematic reviews.

Key points

- Selecting a topic area for your systematic review is the first step towards undertaking the review.
- The specific topic you select may arise from a number of different triggers.
- Once you have selected your research topic, the next step is to narrow this down to a specific research question.
- There are two main types of questions: background questions which are general nursing questions and foreground questions which answer a specific question about a specific topic.
- Foreground questions and sources can be divided into primary sources such as original research and secondary sources such as systematic reviews.
- Formulating research questions is the most critical and perhaps the most difficult part of any research design.
- The research question underpins all the components of the review methods.
- It is important to ensure that you ask an open question.
- It is best to avoid closed questions that can be answered with a simple yes or no.
- The main types of research questions relate to treatment or therapy, prevention, diagnosis, prognosis, causation and experiences.
- It is important that your question is both comprehensive and specific.
- A well-framed research question will have three or four elements.
- The question formation usually includes identifying all the component parts: the population, the intervention or exposure, the comparative intervention (if any) and the outcomes that are measured. The acronym for these are PICO or PEO.
- It is important to match your question to the appropriate research design.
- The research design can be thought of as the structure of the research study.

Summary

This chapter discussed the different ways of finding topic areas for your review and described the meaning and functions of an answerable and focused review question. The chapter presented the main types of focused research questions together with some examples from nursing practice provided. The chapter discussed the different types of research questions and the importance of selecting the appropriate research design for the type of research question you have selected. A number of templates were provided to help you formulate your own answerable and focused systematic review question.