## Exercise 7.1 Study selection

Now, revisit your inclusion and exclusion criteria from Chapter 5 and write them down in the grid provided. Keep this grid to hand whilst you go through your study selection process.

|  |
| --- |
| *Tool for focusing your question – PICO, SPICE, etc.* |
| **Inclusion Criteria**  Population =  Intervention/exposure =  Comparator =  Outcome (s) =  Context = |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **P**opulation |  |  |  |
| **I**ntervention OR Exposure |  |  |  |
| **C**omparison |  |  |  |
| **O**utcome(s) |  |  |  |
| **C**ontext |  |  |  |
| **S**tudy types |  |  |  |

Now, consider your own review, and use Exercise 7.2 to decide the level of quality assessment required.

## Exercise 7.2 Assessing the evidence base for your review

Consider the types of review in Table 7.1 and think about the questions you might want to ask when assessing the evidence base for your review.

|  |
| --- |
| **Insert your response:** |
|  |
| Your review question: |
| * Which key questions do you need to ask for your review? |
| * What is the practical application of your questions? |

## Exercise 7.3 When is an article worth reading?

Before introducing quality assessment in more detail, when you come across a research study in a journal, consider the following:

1. How do you decide whether an article is worth reading?

2. What makes an article believable?

## Exercise 7.4 Study scenario

**Can an ICT intervention improve primary schoolchildren’s performance in solving maths problems?**

A group of 20 primary schoolchildren are selected by their teacher to take part in this study as a reward for good behaviour. At the start of the study, each child completes a maths problems test consisting of 10 questions. Each child then completes a one-hour online workbook on the class computer, in which they complete a series of maths problems in the form of fun games and exercises. The children then complete another maths problems test of 10 questions, and the number answered correctly is recorded. The teacher asks each child to recall how many they got correct in the maths test before the study started.

1. *What sources of bias can you see?*

Hint 1: Might the children selected to take part in the study differ in any way from those who did not take part?

Hint 2: Do you think the children could accurately (and truthfully!) recall their score for the test they took at the beginning of the study?

2. *Aside from the sources of bias in this study, what other factors might limit the credibility of the study findings?*

## Exercise 7.5 Quality assessment

In Table 7.9, three articles from the *British Medical Journal* (*BMJ*) are presented for you to test out your quality assessment skills. Each of the three articles is accompanied by a commentary from the *Student BMJ*, which summarises the key issues relating to quality.

Although these examples are from the *BMJ*, the selected articles are of different study designs and are not exclusively health-focused. The skills that you acquire from undertaking this exercise are transferable when appraising studies from other disciplines.

First, read the full article (freely available online at the *BMJ* website). Then try undertaking a quality assessment using an appropriate checklist (suggested checklists are provided in Table 7.9). Then take a look at the accompanying reference provided for each of the three articles at the *Student BMJ*, which provides a critical appraisal summary of the article, drawing out the key issues. Try the quality assessment yourself (do not look at the corresponding *Student BMJ* article until you have completed it) and then take a look to see if you’ve identified the key points.