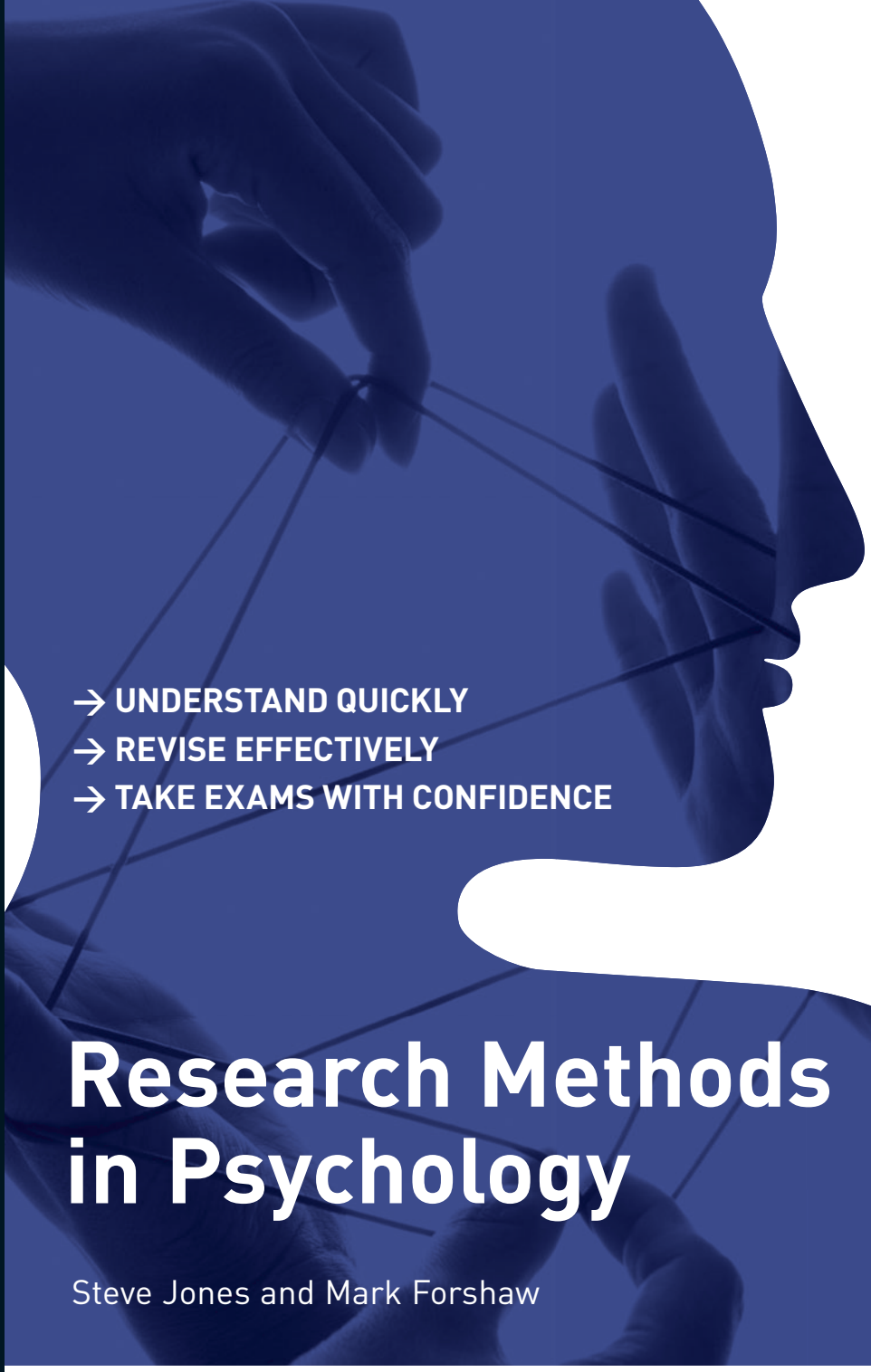


Psychology Express

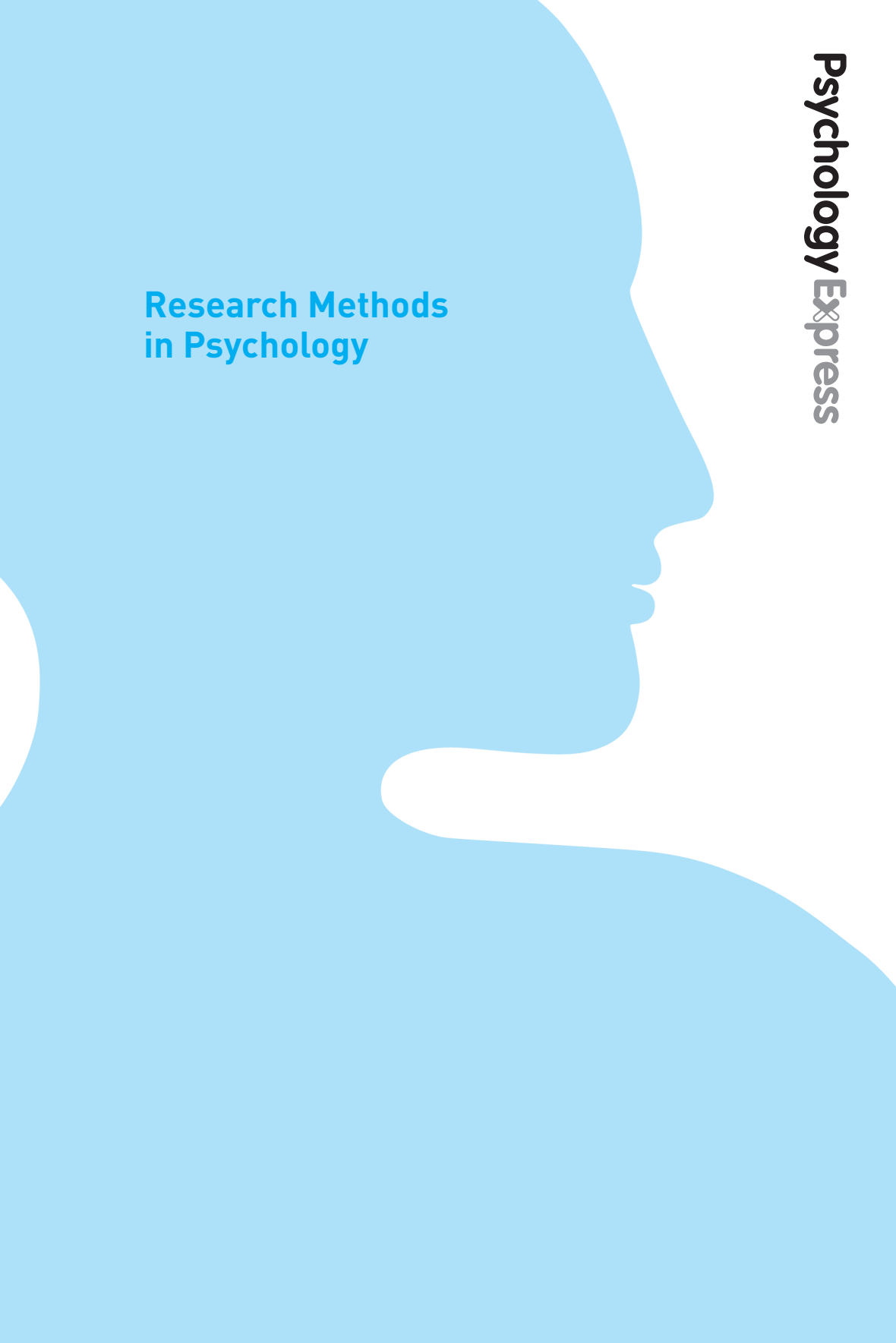
→ UNDERSTAND QUICKLY
→ REVISE EFFECTIVELY
→ TAKE EXAMS WITH CONFIDENCE

# Research Methods in Psychology

Steve Jones and Mark Forshaw

Psychology Express

# Research Methods in Psychology



much slower response times that reflect not just the participant's response to the stimulus, but also the time taken for them to make a decision about how slow or fast they need to be in responding.

### *Test your knowledge*

**3.5** What are demand characteristics, why are they problematic and what can be done to reduce them in an experiment?

An answer to this question can be found on the companion website at: **www.pearsoned.co.uk/psychologyexpress**

**Further reading** Demand characteristics

| *Topic* | *Key reading* |
|---|---|
| A reprint of Orne's classic paper on demand characteristics, first published in 1962 | Orne, M. (2002). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *Prevention & Treatment, 5*(1), 35–45. |
| Overcoming demand characteristics by using false cues about the purpose of the experiment | Laney, C., Kaasa, S., Morris, E., Berkowitz, S., Bernstein, D., & Loftus, E. (2008). The red herring technique: A methodological response to the problem of demand characteristics. *Psychological Research, 72*(4), 362–375. |
| Factors influencing when participants comply with demand characteristics | Navarick, D. (2007). Attenuation and enhancement of compliance with experimental demand characteristics. *Psychological Record*, *57*(4), 501–515. |

## Experimenter effects

The way in which the experimenter conducts the experiment can influence its outcomes. Experimenters make every effort to be objective and to avoid contributing to the demand characteristics of the experiment. All of the inadvertent influences that may be exerted by the experimenter are referred to as 'experimenter effects'.

### *Standardisation of procedures*

The standardisation of procedures, as well as being a central feature of experimental work, is a key element in reducing experimenter effects. One major aspect in ensuring the standardisation of procedures is the standardisation of the instructions to participants. Most commonly, instructions are standardised by writing them down. These can either be given to participants to read or can be read out to them by the experimenter. The former removes any possibility that the experimenter's tone of voice or inadvertent emphasis on a particular word can provide additional cues to the participant.

Standardised instructions ensure that:

- the instructions are the same for all participants in the same condition
- the experimenter does not forget anything
- the experimenter does not accidentally reveal the hypothesis of the experiment.

Ensuring everything that is said and done is the same from one participant to the next reduces experimenter effects and ensures the effect of the independent variable can be isolated.

### *Single-blind and double-blind*

In the types of experiment performed by psychologists, it is usually the case that participants are not provided with full details of the design of the experiment, the independent variables and the hypothesis before participating. In order to reduce demand characteristics, participants are not usually told which experimental condition they are in or anything about the other experimental conditions. This type of procedure is known as a 'single-blind'. The experimenter knows which condition the participant is in, but the participant does not.

In a double-blind procedure, neither the participant nor the experimenter knows to which experimental group the participant has been assigned. This is not widely used in most experimental research in psychology, partly because the measures used in psychological experiments tend not to be open to interpretation and partly because the standardisation of procedures will, in most cases, provide sufficient control of experimenter effects. In some research, however, such as medical research, the researcher may be assessing the behaviour of a patient after they have undergone either a drug treatment or treatment with a placebo drug. If the person doing the assessment has their own expectations about the effectiveness of the drug treatment, then this can influence their judgement. In such cases, neither the participant nor the person collecting the data will be told which experimental condition the participant has been assigned to. Because neither knows, this is 'double-blind'.

### *Test your knowledge*

**3.6** What are 'experimenter effects'? How can they be reduced?

An answer to this question can be found on the companion website at: **www.pearsoned.co.uk/psychologyexpress**

## Quasi-experiments

As already identified, a true experiment involves the manipulation of an independent variable and the random allocation of participants to experimental

conditions. There are other types of studies that are very similar to experiments but do not have all of the characteristics required of a true experiment. These are referred to as 'quasi-experiments'.

## Field experiments

A field experiment is one that is conducted outside the laboratory in a real-world setting. Note that 'outside the laboratory' does not just mean running a carefully controlled experiment in another room that is not a 'laboratory'; it refers to manipulating an independent variable in a situation that does not involve an artificial laboratory task in which the independent variable is isolated. Field experiments can be run in all types of settings, including a variety of workplaces, or simply out in the street.

A field experiment, then, involves the manipulation of an independent variable and the measuring of a dependent variable. The nature of the setting might not allow participants to be randomly allocated to conditions.

Field experiments have some advantages and disadvantages in comparison to laboratory-based 'true' experiments. These are summarised in Figure 3.2.

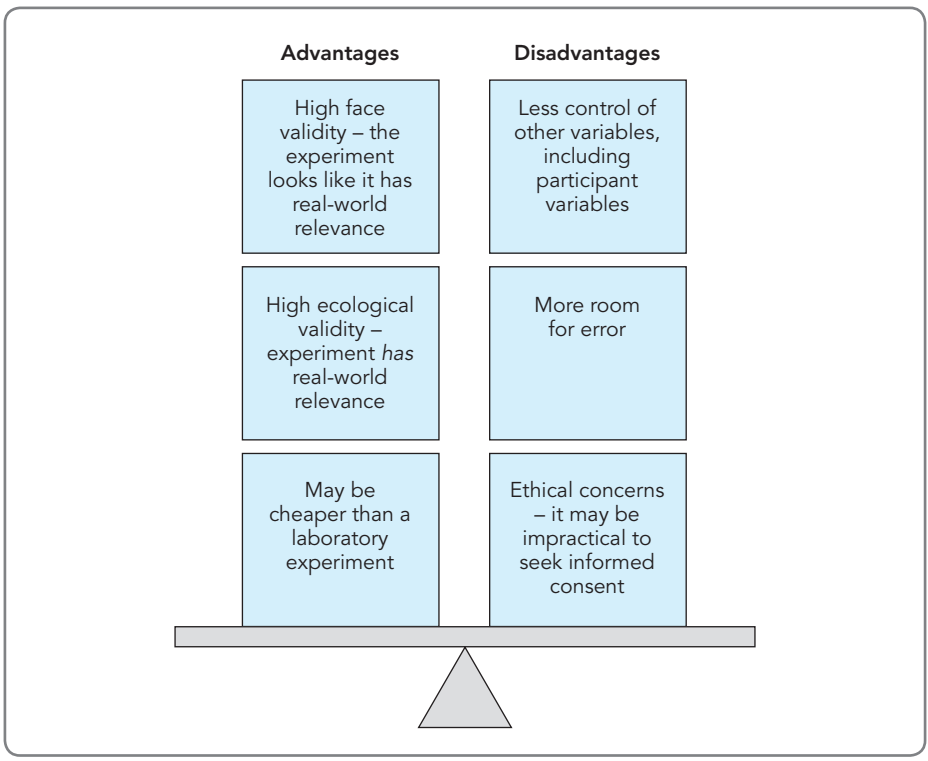



**Figure 3.2** **Advantages and disadvantages of field experiments**

**Sample question** *Assessment*

Read the following abstract and answer the questions that follow.

> This field study investigated the extent to which stereotypically French and German music could influence supermarket customers' selections of French and German wines. Music with strong national associations should activate related knowledge and be linked with customers buying wine from the respective country. Over a two-week period, French and German music was played on alternate days from an in-store display of French and German wines. French music led to French wines outselling German ones, whereas German music led to the opposite effect on sales of French wine. Responses to a questionnaire suggested that customers were unaware of these effects of music on their product choices. The results are discussed in terms of their theoretical implications for research on music and consumer behaviour and their ethical implications for the use of in-store music.
>
> Source: North, A. C., Hargreaves, D. J., & McKendrick, J. (1999). The influence of in-store music on wine selections. *Journal of Applied Psychology*, *84*(2), 271–276.

1 How does this differ from a laboratory experiment in terms of the recruitment of participants, their assignment to conditions?
2 What other factors might have influenced which wine customers chose to buy?
3 What advantages does this study have over a laboratory experiment?

**Further reading** Field experiments

| *Topic* | *Key reading* |
|---|---|
| Everyday helping and prejudice | Hendren, A., & Blank, H. (2009). Prejudiced behavior toward lesbians and gay men: A field experiment on everyday helping. *Social Psychology*, *40*(4), 234–238. |
| Influencing whether people will give directions to a stranger | Fischer-Lokou, J., Lamy, L., & Guéguen, N. (2009). Induced cognitions of love and helpfulness to lost persons. *Social Behavior & Personality: An International Journal, 37*(9), 1213–1220. |
| Racial discrimination in a retail setting | Schreer, G., Smith, S., & Thomas, K. (2009). 'Shopping while Black': Examining racial discrimination in a retail setting. *Journal of Applied Social Psychology*, *39*(6), 1432–1444. |
| A classic field study of aggression in response to supermarket queue-jumping | Harris, M. (1976). Instigators and inhibitors of aggression in a field experiment. *Journal of Social Psychology*, *98*(1), 27–38. |

## Natural experiments

A natural experiment is one that does not involve the direct manipulation of an independent variable by the experimenter. Rather, the researcher takes advantage of different 'conditions' that exist naturally in the real world. For example, Shapiro, Smith, Malone and Collaro (2010) compared the recidivism

rates of juvenile offenders who had been evaluated in residential settings (e.g. a young offenders institution) with those evaluated in community settings. They did not create the two different settings and neither did they randomly allocate participants to a setting. As the two different types of evaluation were already in existence within a particular US state, Shapiro et al. were able to make the comparison between the two conditions in this natural experiment (they found, incidentally, that recidivism rates amongst first-time offenders were higher when evaluation occurred in residential settings). This example shows how natural experiments can produce useful and informative findings when to actually conduct a true experiment would be impractical and/or unethical.

The advantages and disadvantages of natural experiments are summarised in Figure 3.3.

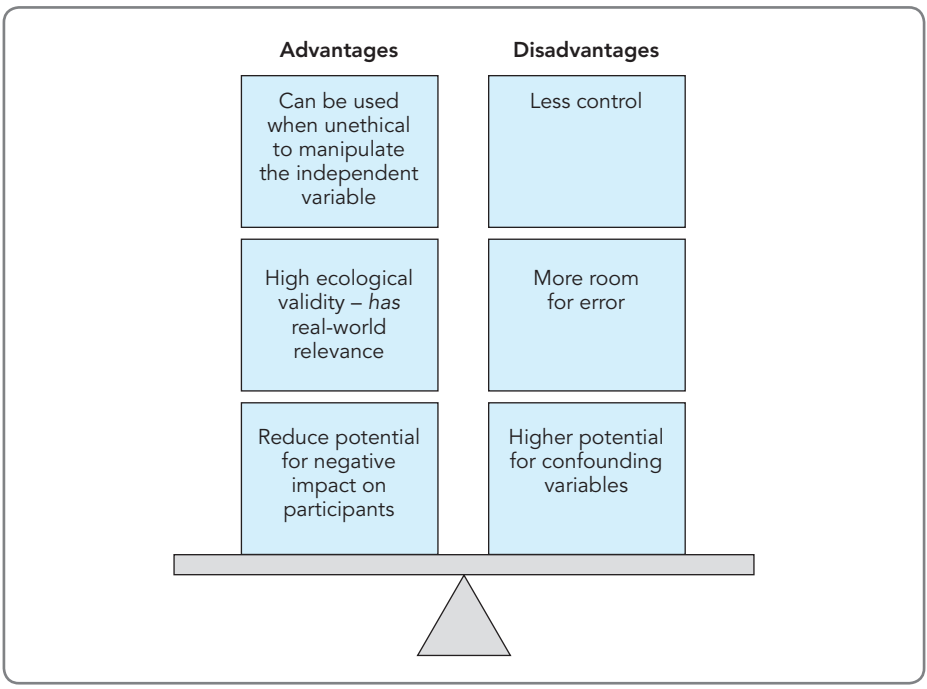



**Figure 3.3** **Advantages and disadvantages of natural experiments**

**Further reading** Natural experiments

| *Topic* | *Key reading* |
|---|---|
| Youth recidivism | Shapiro, C. J., Smith, B. H., Malone, P. S., & Collaro, A. L. (2010). Natural experiment in deviant peer exposure and youth recidivism. *Journal of Clinical Child & Adolescent Psychology*, *39*(2), 242–251. |
| Weight and eating | Wardle, J., & Watters, R. (2004). Sociocultural influences on attitudes to weight and eating: Results of a natural experiment. *International Journal of Eating Disorders*, *35*(4), 589–596. |

| *Topic* | *Key reading* |
|---|---|
| Religion, motivation and cheating | Rettinger, D. A., & Jordan, A. E. (2005). The relations among religion, motivation, and college cheating: A natural experiment. *Ethics & Behavior*, *15*(2), 107–129. |
| Pet ownership and health | Headey, B., Nu, F., & Zheng, R. (2008). Pet dogs benefit owners' health: A 'natural experiment' in China. *Social Indicators Research*, *87*(3), 481–493. |

CRITICAL FOCUS

### Natural experiments and group differences

A natural experiment involves making comparisons between 'experimental' conditions that have occurred 'naturally' in the real world, without the intervention of the experimenter. In psychology, there are many types of quasi-experimental study that are similar to this, but which are more laboratory based than the typical natural experiment. For example, psychology students are often interested in making comparisons between males and females in their performance on any number of different types of task or measure. Obviously, participants cannot be randomly allocated to being 'male' or 'female', and this cannot be manipulated directly by the experimenter. Therefore, rather than being a true between-groups experiment, any comparison based on the pre-existing characteristics of participants, such as gender, age, height, weight, political views, etc., is a quasi-experiment that lies somewhere between a true experiment and a natural experiment. Nothing is being manipulated and participants cannot be randomly allocated, but the study may involve a laboratory-based experimental task.

## Chapter summary – pulling it all together

- Can you tick all the points from the revision checklist at the beginning of this chapter?
- Attempt the sample question from the beginning of this chapter using the answer guidelines below.
- Go to the companion website at **www.pearsoned.co.uk/psychologyexpress** to access more revision support online, including interactive quizzes, flashcards, You be the marker exercises as well as answer guidance for the Test your knowledge and Sample questions from this chapter.

### Further reading for Chapter 3

| *Topic* | *Key reading* |
|---|---|
| Classic experiments in psychology | Slater, L. (2005). *Opening Skinner's box: Great psychological experiments of the twentieth century*. New York: W. W. Norton & Co. |