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## Practical and Ethical Issues in Planning Research

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## AIMS

This chapter aims to introduce the reader to many of the practical and ethical issues which need to be considered when planning psychological research. The chapter discusses how to formulate suitable research questions, how to access the relevant background research literature, and how to assess the practical and ethical feasibility of a research study. We look at issues concerning the role of pilot work, participant availability and recruitment, the availability of equipment and materials, the assessment of the financial costs which are associated with conducting research, and how to apply for research funding. We also examine how ethical principles should always form an integral part of the planning process and, in particular, how the welfare of participants should always be protected through confidentiality, anonymity and the principle of informed consent. The chapter concludes with a checklist of all of the key issues which should be considered during the course of planning a psychological research study.

### Key terms

anonymity	participant availability
confidentiality	participant non-compliance
debriefing	pilot work
deception	research costs
ethical principles	research dissemination
gatekeeper	research funding
invasion of privacy	research questions
informed consent	right to withdraw
operational definitions	timetable
participant attrition	welfare of participants

## 2.1 INTRODUCTION

### invasion of privacy

This chapter is concerned with the practical and ethical issues which need to be considered when planning psychological research systematically. There are many different issues which need to be taken into account if a piece of psychological research is to achieve its intended goal, and each of these issues requires careful decisions to be made during the course of the planning process. Of necessity, this chapter will have to discuss these issues and decisions in a particular sequence. However, it is important to bear in mind that these decisions are not independent of one another, and that making one decision can have important implications for other decisions (e.g. choosing to use a particular statistical procedure will have implications for the minimum size of sample which ought to be used, or an ethical decision concerning the **invasion of privacy** might lead one to choose interviewing rather than naturalistic observation for collecting data). This complex interdependence means that the process of planning psychological research does not consist of a simple linear sequence of decisions. Instead, as we seek operational definitions of the theoretical concepts that are contained in the hypotheses which we wish to test by means of our research, we are of necessity having to think simultaneously about possible ways of measuring these concepts in particular types of settings with various types of participants; this means that we also have to think, at the same time, about whether we have access to those participants, and whether it is feasible to collect the data on an appropriate timescale with the resources which are available to us in such a way that those data can then be analysed by the types of statistics which are pertinent to testing the hypotheses from which we started out. This complex interdependence of the various decisions which together comprise the planning process should be borne in mind throughout this chapter.

To a certain extent, many of the issues which will be discussed in this chapter might appear to be a matter of simple common sense. However, if this is the case, it is surprising how often such common sense fails researchers, particularly those early in their careers. There are all sorts of pitfalls which can bedevil psychological research and can prevent that research from achieving its intended goals. The hope is that this chapter will at least help to sensitize the beginning researcher to some of the major pitfalls.

## 2.2 FORMULATING RESEARCH QUESTIONS

### 2.2.1 Selecting a topic to study

When planning a piece of psychological research, there is of course one particular step which needs to be taken first, and that is to identify and select a topic to

study. There are all sorts of reasons why psychologists choose to study particular topics. They might do so because of a personal interest in the topic or because they make a value judgement about the importance of that topic. Or they may choose a topic for a theoretical reason, perhaps because they have spotted an assumption or a prediction made by a particular theory which has never been tested empirically. Alternatively, they may have a concern with a particular social problem and want to contribute towards the resolution of that problem, or wish to help improve the quality of life for a particular group of individuals. All of these reasons are equally valid. Essentially, they all boil down to an assessment that the topic which has been chosen is either interesting, important or useful.

However, from a practical point of view, it is crucial also to take into account a further criterion when selecting a particular topic to investigate: is it realistic and feasible to conduct research into this topic, given the practical and ethical restrictions on what the researcher is able to do? In order to derive an answer to this question, it is essential to move on from the general topic to the formulation of the specific questions concerning that topic which will be addressed by means of the research, so that the researcher can work out precisely what is required in practice in order to answer those questions, and can then work out whether or not these requirements can be met.

### **2.2.2 The need to formulate specific research questions**

To take an example, the researcher might believe that aggression in children is an important topic to study. However, selecting this general topic for research is not sufficient to enable us to say whether the intended research is or is not feasible. Firstly, it is necessary to state exactly what it is that the researcher wants to find out about this topic. For example, does the researcher want to discover how aggressive behaviour in children varies as a function of age, or the factors which cause children to be aggressive to others, or the responses which children's aggressive behaviour elicits from other people, or what? Notice that in all cases, if the researcher's goal is to discover something about the topic which has been selected, then it is always possible to state that research goal in the form of a question. How does children's aggressive behaviour vary as a function of age? What are the factors which cause children to be aggressive to others? What are the responses which children's aggressive behaviour elicits from other people? If the intended goal of the research cannot be formulated as an explicit question, or as a series of such questions, then that research does not have a coherent goal.

Let us pursue our hypothetical example a little further. Let us assume that the researcher decides that the question to be addressed by means of the research is the relatively mundane one of: how does children's aggressive behaviour vary as a function of age? Notice that it is clearly impossible for any researcher to study children's aggressive behaviour in all contexts at all ages. Consequently, in order

to assess the feasibility of the research, the researcher now needs to qualify the research question further by stipulating the appropriate contexts which are of interest. For example: how does children's aggressive behaviour in the school playground, in the home, in the streets (say) vary as a function of age? The feasibility of the study can now begin to be assessed against the criterion of whether the researcher can obtain access to children in the contexts which are of interest. The researcher also needs to specify the ages of the children who would be studied. Would the study cover children of all ages (is this feasible?) or just children of particular ages? (If so, of what ages, and does the researcher have access to children of those ages?) In addition, notice that the term 'aggressive behaviour' must also be defined in order to assess the feasibility of the research. For example, does 'aggressive behaviour' include inflicting psychological injury on others, as well as physical injury? If so, is it feasible to assess whether or not psychological injury has been inflicted? Also, must aggressive acts be intentional? If so, is it feasible to assess intentionality in children of the ages which would be studied?

Ethical considerations must also play a role in assessing the feasibility of studying this topic. For example, most people today would consider it unethical for a psychologist to deliberately elicit aggressive behaviour from children so that the characteristics of that behaviour can be studied. This would not be feasible on ethical rather than practical grounds. However, in the past, different ethical standards have applied. For example, Albert Bandura's classic studies into aggressive behaviour in children (Bandura, Ross & Ross, 1961, 1963; Bandura & Walters, 1963), which were conducted in the late 1950s and early 1960s, entailed the provision of role models of aggressive behaviour for children to imitate (see Box 2.1). In other words, the ethical considerations which are used to evaluate the feasibility of a piece of research change over time, and past practices should not be used as an automatic guide to what is ethically acceptable today. It should be clear from the example given here that, in order to decide whether or not a particular topic which has been selected for investigation passes the criterion of feasibility, it is essential to formulate not just research questions, but highly specific research questions.

**Box 2.1 The study by Bandura *et al.* (1961)**

This study was designed to investigate whether aggressive behaviour can be transmitted to children by exposing them to a display of aggressive behaviour by an adult. A total of 72 children, aged between 3 years 1 month and 5 years 9 months, who were enrolled in a nursery school, were divided into three groups containing 24 children each. The children in one of the groups were exposed to an

*(Continued)*

**Box 2.1 (Continued)**

adult who behaved aggressively towards a 5-foot inflated Bobo doll; the adult punched the doll, sat on it and punched it repeatedly on the nose, hit it with a mallet, threw it up in the air, kicked it around the room, and uttered aggressive remarks such as 'Sock him on the nose', 'Kick him', 'Pow', as well as non-aggressive remarks such as 'He keeps coming back for more', and 'He sure is a tough fellow'. At the time of their exposure to these behaviours, each child was occupied on a diverting task sitting in the same room, and was not given any explicit instructions to either observe or learn the behaviours in question. The exposure session lasted for 10 minutes. The children who were in a second experimental group were exposed to the adult for the same length of time, but here the adult simply sat at a second table in the same room as the child assembling some toys in a quiet subdued manner and totally ignoring the Bobo doll. The children in the third control group had no exposure to the adult. For half of the children in the first two groups, the adult was male, while for the other half the adult was female.

The children were then taken to another room which contained a variety of toys, including a 3-foot Bobo doll, a mallet, dart guns, and various other more neutral toys such as a tea set, bears, and crayons and colouring paper. The child was observed for 20 minutes through a one-way mirror. The frequency with which the child produced physically aggressive behaviours, verbally aggressive remarks, and non-aggressive verbal remarks was recorded. It was found that the children in the aggression condition produced high levels of physically and verbally aggressive behaviour, and of non-aggressive remarks, which were very similar to the behaviours and remarks of the adult model to which they had been exposed. By contrast, the children in the other two groups displayed very low levels of aggression. Interestingly, the children's imitation of the adult model in the exposure condition varied according to gender. Boys displayed more aggression than girls when they had been exposed to the male model, whereas girls exposed to the female model produced more verbal aggression and more non-imitative aggression (e.g. using the dart guns) than boys.

The research paper does not report details of how the children were recruited to the study, nor any details about the treatment or **debriefing** of the children (or their parents) after the study had taken place. Do you think that this study is ethically acceptable? What are the reasons for your judgement?

**debriefing**

However, there is an additional reason why it is necessary to formulate specific research questions at the outset of the planning process. This is so that the researcher can ensure, during the course of planning, that the data which are collected will actually address the research questions which are of interest. There is very little point in jumping directly from the identification of a general topic to the collection of data, and then trying to articulate specific questions about that general topic afterwards. Such a procedure is extremely unlikely to result in

any of the data which are collected being appropriate for addressing the particular questions which the researcher will really want to ask about that topic. Instead, in order to ensure that the data which are collected are relevant to answering the specific questions which are of interest to the researcher, it is vital to use the specific research questions themselves to inform the design of the research from the outset, so that the researcher can be certain that the data which are collected will actually answer those questions.

### 2.2.3 Strategies to adopt when formulating specific research questions

When thinking about specific research questions, several strategies may be used to ensure that the questions which are formulated are suitable for the further planning purposes for which they are required. First of all, it is always helpful to formally articulate research questions in words. If you cannot articulate these questions in words, they are unlikely to lead to any productive research. Secondly, the articulated questions should contain specifications of the particular situations or conditions in which the phenomena of interest would be studied, as well as specifications of the precise type of participants who would be used in the research.

Thirdly, it is important to articulate these questions in such a way that they can be addressed by means of a specified type of empirical evidence. This is achieved by providing **operational definitions** of the concepts which are included in the research question. An operational definition of a concept is a statement of the activities or operations which are needed to measure that concept in practice (or, in the case of an independent variable, a statement of the activities or operations which are needed to manipulate that variable in practice). For example, if the research question is 'How does children's aggressive behaviour vary as a function of age?', we need an operational definition of the concept of 'aggressive behaviour', that is, a statement of how it would be measured in practice. For example, it might be defined operationally as 'any behaviour which two or more independent adult observers classify as having aggressive intent' or as 'any behaviour which, when a video recording of it is played back to the child and the child is questioned about it, the child admits was intended to hurt another person'. Similarly, if a research question contains references to participants' personalities or intelligence, the concepts of 'personality' and 'intelligence' could be operationally defined as the measures which are obtained by using a particular personality test (such as the EPQ) or intelligence test (such as the WISC-R), respectively.

A fourth point to bear in mind when formulating specific research questions is that all such questions must be empirically testable. For example, 'Do different people have the same subjective experience of the colour red?' and 'If a child

operational definitions

believes in God, is that a true or a false belief?' are both empirically untestable questions. This is because at least one of the concepts which each question contains cannot be given a satisfactory operational definition (i.e. the concepts of 'subjective experience' and 'God', respectively). Thus, the testability of research questions is very closely linked to whether or not it is possible to provide adequate operational definitions of their constituent concepts.

#### **2.2.4 Choice of possible research methods**

Having identified the specific research questions, and having established adequate operational definitions of the concepts, the researcher is then in a position to be able to select possible research designs and methods of data collection which could be used to obtain the data to address these questions. For example, let us suppose that our hypothetical researcher has decided to investigate aggression in children by trying to answer the specific research question 'Do 7-year-old children produce more aggressive acts than 5-year-old children in the school playground?', and has operationally defined 'aggressive act' as 'any act which two or more independent adult observers classify as having aggressive intent'. In that case, the researcher is now in a position to choose either a cross-sectional or a longitudinal research design for studying the children at the two different ages, and is able to choose naturalistic observation as an appropriate method for collecting the data.

The specific considerations which should motivate the choice of any particular research design and any particular method of data collection at this point in the planning process are beyond the scope of the present chapter. The reader is therefore referred to the contents of the other chapters in this book in order to find out how particular research questions and particular operational definitions should feed into the decision to use or not to use any particular research design or method.

For present purposes, however, let us assume that the bridge has now been made from the specific research question to the possible research designs and possible methods of data collection.

#### **2.2.5 The literature review**

So far in this chapter, no mention has been made of the role which the literature review ought to play in planning a piece of psychological research. Obviously, though, a thorough review of the literature is an essential component of planning research into any topic. The literature contains accounts of all the existing psychological theories and concepts which can be used to generate or to structure research ideas; of the findings which have been obtained by previous researchers and which can therefore be either assumed and built upon, or questioned, when planning further research into that topic; of the arguments and lines of thinking

which have proved profitable to previous researchers and which may therefore prove profitable to pursue further; and of the blind alleys down which previous researchers have gone and which therefore ought to be avoided.

Furthermore, the existing literature is an enormously rich repository which contains a massive amount of information about the topics which have been investigated in the past, about the specific research questions which have been asked by previous researchers, about the operational definitions which have been adopted in previous studies, and about the research designs and methods which have been used by previous researchers. Thus, the existing literature can be used as a invaluable source from which to mine all sorts of research topics, research questions, operational definitions, research designs and methods, all of which can be used to inform the process of planning research.

### **2.2.6 Accessing the relevant literature**

There are two principal ways in which to access the literature relevant to any given topic. The first is to use a standard abstracting source. The most useful such source for the research psychologist is the PsycINFO database. This is an online database which contains the abstracts of psychology journal articles and of psychology books and book chapters, which can be searched systematically by typing into the computer the key words which define the topic in which you are interested. PsycINFO then displays the abstracts of the articles, books and chapters which have been located, and by reading these abstracts, it is usually possible to work out whether or not any given item is of sufficient relevance to merit reading in full (if your own library does not subscribe to the journal in which an article appeared, it may be possible for them to obtain it for you through their inter-library loans system).

An alternative way of searching the literature is to begin from the reference lists of the central textbooks that have been written on the topic in which you are interested. It is often useful to begin by picking out from these reference lists the most recent major review articles which have been written on the topic in which you are interested, as well as any recent empirical articles which seem to be particularly important. The reference lists of both types of articles can then be used to locate other relevant empirical articles, and the reference lists of these empirical articles can be used to locate further empirical articles. If you use this method of accessing the literature, however, you should bear in mind that there is usually, at the very least, a two-year lag between the publication of a journal article, chapter or book and these publications being picked up by and referred to in textbooks. Consequently, this method of searching the literature must always be accompanied by a systematic search through the most recent issues of all the major journals which publish articles on the topic in which you are interested, to ensure that you do pick up on any article which has not yet penetrated the textbooks.

Whichever method is used to locate the relevant literature, that literature should then be used to inform the entire planning process, from the selection of an appropriate topic, through the formulation of specific research questions and operational definitions, to the identification of the possible research designs and methods which could be used to address those research questions.

## 2.3 ASSESSING THE PRACTICAL FEASIBILITY OF THE RESEARCH

Having reached this point, the research is now sufficiently well articulated to enable the researcher to assess the practical feasibility of conducting the research. This assessment may well lead the researcher to reject some possible designs or methods, or even to revise some of the operational definitions or research questions, if these now prove not to be feasible on purely practical grounds. It is therefore essential that, at this point, the researcher systematically thinks through all of the following issues.

### 2.3.1 Participants required for the research

First of all, the researcher must think through the issue of participant availability. What type of participants, with what particular characteristics, will the research require? Will these participants need to be in any particular location, situation or context for the research to take place? How many participants are needed? In answering this last question, account should be taken of the power of the statistical methods which are to be used to analyse the data, and power tables, which are sometimes included in statistics textbooks, should be consulted in order to help determine an appropriate sample size (see Chapter 19). Finally, are such participants in this number available to the researcher?

If the answers to all of these initial questions are satisfactory, further questions then need to be asked. Are the participants themselves willing to participate in the research? If payment is required in order to entice the participants into taking part in the research, is the necessary budget available?

In thinking about this issue of participant availability, there are many factors which need to be borne in mind. For example, there are the problems of uncontrolled **participant attrition** (i.e. participants dropping out of the study while it is in progress) and **participant non-compliance** (i.e. participants not complying with the research procedure). Participant attrition and non-compliance are not always a consequence of participants being bloody-minded. In large-scale longitudinal studies, for example, which take place over a period of many years, it is perhaps inevitable that at least some participants in the study will move home, fall ill, or even die during the course of the study. Of course, if there are high levels of participant attrition or non-compliance, this leads to the sample of participants

**participant attrition**  
**participant non-compliance**

becoming systematically biased, either for lack of mobility, or for staying power, or for willingness to co-operate with the research procedure. Furthermore, it is always possible that such characteristics are related in a systematic manner to the psychological phenomena which are being studied. The problem of non-compliance can be particularly serious in research which involves questionnaires about a sensitive topic being mailed to participants for completion and return. Such questionnaires may only have a return rate somewhere in the region of 10–40%. This rate of self-selection from a sample which was originally constructed on systematic principles represents a very serious biasing of the sample which will inevitably affect the generalizability of the findings which are obtained.

There are, however, some general precautions which can be taken by the researcher concerning participant attrition and non-compliance. Firstly, the sample which is planned should always be large enough to allow for possible attrition and non-compliance. Secondly, when recruiting participants, the researcher should always try to make participation in the study sound as interesting as possible; it is important to emphasize any parts of the study that might be especially interesting to participants themselves. Avoid saying that participating in the study is a way of 'doing your bit for science'; this is not a formula which wins over hesitant participants. Thirdly, you should always assure potential participants of complete **confidentiality** and anonymity of their results. Fourthly, you can offer to inform the participants of the eventual outcome of the research; this may be done by producing a simple written summary of the research findings at the end of the study in jargon-free language, which can be sent to the participants who took part in the research.

In some cases, the recruitment of participants for the study can depend upon certain key individuals, or '**gatekeepers**', who have to give their permission and co-operation in order for the participants who are the target of the research to be used. Perhaps the two most common types of gatekeepers are the head teachers of schools, who control access to the children in their schools, and doctors, who can provide access to patients. Obviously, the feasibility of the research will then depend upon winning over the co-operation of these gatekeepers. Gatekeepers can have both disadvantages and advantages. For example, it may be difficult to win a head teacher over to the idea of a study of playground aggression if that head teacher maintains that no aggressive behaviour occurs in the playground of his or her school. However, once a head teacher has been won over, the researcher will then have open access to the very large numbers of children who attend that school.

Because the feasibility of such studies depends crucially upon the co-operation of the gatekeeper, it is always extremely important to ensure that gatekeepers are treated with courtesy. It is important that gatekeepers are only approached after the researcher has fully thought through all the precise details of what needs to be done in the study, so that the researcher is able to answer any questions concerning the study which may arise when discussing the research with the

gatekeeper. This presents a professional image which helps to inspire the gatekeeper's confidence in the researcher. Again, during such discussions, the purpose of the study should be made to sound interesting, and the researcher can offer to send the gatekeeper a written summary of the findings of the research when the study has been completed.

One problem which can be unintentionally caused by gatekeepers is that they take it upon themselves to select which particular participants are used in the research. For example, if the research requires schoolchildren to be tested individually outside their classroom, teachers may select only their brightest children to send to the researcher, hoping to impress the researcher with their abilities. However, such a process obviously results in a biased sample being used for the research. Thus, it is always sensible for the researcher to plan a systematic method for selecting which particular participants should participate in the research (e.g. picking every other child from the class register irrespective of their ability), and to agree this plan with the gatekeeper at the outset.

### **2.3.2 Equipment and materials required for the research**

In assessing the practical feasibility of the research, the researcher must also consider very carefully all the equipment and materials which are needed for the study to take place. If any special materials or equipment are needed, does the researcher already have them or not? If not, and if they have to be specially purchased or constructed, are the necessary funds available for these purposes? If the funds are not available, could the materials or equipment be borrowed from or used at another institution or department of psychology? If materials have to be specially designed, or if equipment has to be specially constructed, can this be done on an appropriate timescale? Can such purpose-built equipment be properly tested to eliminate any possible teething and technical problems which it might have so that it will be fully functional by the time that it is needed?

Finally, under this heading, the researcher should consider whether he or she needs time to learn how to use the relevant materials and/or equipment. For example, it can take a lot of time for a novice to learn how to customize computer software (e.g. for presenting visual stimuli to participants, or for recording participants' reaction times) or to learn how to administer and score a standardized psychometric test. If time is required for mastering the materials or the equipment, it is important that the timetable for the research is drawn up in such a way that it allows an adequate amount of time for these purposes.

### **2.3.3 Consumable items required for the research**

The researcher also needs to think through, at the planning stage, all the consumable items which will be needed for the research (i.e. items which will be completely

used up during the course of conducting the research). It is important that all consumables are properly costed to ensure that the funds which are required in order to conduct the research do not exceed the total budget available for the research. For example, any photocopying (of, for example, interview schedules or questionnaires), postage (for mailing out postal questionnaires), video or audio recording tapes, computer disks, computer printing, etc. should all be properly costed out in order to ascertain whether the budget is sufficient for conducting the research.

### **2.3.4 Other costs which may be incurred by the research**

Finally, there may be other costs involved in conducting the research. For example, will the researcher be able to conduct all the work on his or her own? If it is necessary for the researcher to have assistance from others in conducting the research, and if the people who provide this assistance need to be paid for their time, are the funds available to pay these people at the appropriate rate? For example, if the researcher needs help to collect the data (e.g. to help interview participants, to make independent observations of participants, or to act as stooges in an experiment), or if assistance is needed in coding the data (e.g. for running checks on the reliability of the coding), it may be necessary to pay the people who provide this help. If so, the total number of hours of assistance which will be needed must be properly costed in advance, in order to see whether the research can be conducted within the budget which is available.

Also, if the researcher and/or any person assisting them needs to travel from their normal place of work to another location in order to test participants (e.g. to a school or to a hospital), this will require funds to cover the costs of the travel and of any subsistence which might be needed by the researchers (such as food or overnight accommodation). Once again, the costs involved need to be worked out in advance, taking into account the location of the participants, the size of the sample, and the length of time that it will take to collect the data from each participant. Once again, the research will only be feasible if the total budget available to the researcher is able to cover these costs.

### **2.3.5 Pilot work**

Let us assume that the researcher has run through all the preceding checks on participant availability and access, the availability of materials and equipment, and the availability of the funds which are needed to cover consumable costs, research assistance costs, and travel and subsistence costs. If all of these considerations indicate that the research is feasible, it is often extremely useful to then conduct pilot work, in order to try out the methods, materials, equipment, etc. in advance of running the full-scale study itself.

Such pilot work should be conducted using a smaller group of participants who have similar characteristics to those of the participants who will be used in the

main study itself. Pilot work can be used to test out the various operational definitions and research methods which are still under active consideration, and to see if some of these methods and definitions are more useful or are simpler to administer than others. Pilot work can also be used to establish whether participants understand instructions, to ascertain how much time it takes to test each participant, to obtain practice in administering all the tasks and in making all the necessary measurements (ideally, the researcher should be trained to saturation before the main study commences, so that any training effects do not contaminate the main study itself), to find out whether tasks are sufficiently sensitive to discriminate amongst participants, to examine whether the measures which are being made have stable measurement properties (i.e. are reliable), etc.

It is often the case that, if a variety of different possible research methods and operational definitions have still been under active consideration up to this point in the planning process, the pilot work helps to sort out the more useful and reliable methods and definitions, thereby facilitating the final selection by the researcher of those particular methods and definitions which will be used in the main study itself.

### **2.3.6 Identifying the statistical analyses needed and rechecking the sample size**

Once the research design, operational definitions, and methods of data collection have been selected for use in the study, it is then essential for the researcher to identify in advance the types of data which will be collected, and the types of statistical analyses which will be performed on those data in order to answer appropriately the research questions which have been posed. The choice of statistical analyses will be determined by the research design, by the type of data which will be collected, and by the research questions which are being asked (see Chapters 19 and 20). Having selected appropriate methods of analysing the data, it is then necessary, at the planning stage, to check back to the sample size which is being planned, and to the availability of the participants who are required for the study. It is vital to do this, in order to ensure that sufficient data will be collected from a large enough sample to enable the proposed statistical analyses to detect the relationships and effects which are being sought, assuming they are present in the data.

### **2.3.7 Formulating a timetable**

Another important aspect of planning research systematically is the formulation of an explicit timetable for the research. This timetable needs to contain all the intermediate staging posts, and their deadlines, which will punctuate the research (e.g. when the data collection will begin and end, when data coding will begin and end, when the statistical analyses will be conducted, when the research will be written

up, etc.). In producing this timetable, it is essential to adopt a realistic stance, and to allow sufficient time for all the component activities which are involved, including any final piloting that may be required, the time that may be required for training additional researchers, the time needed for recruiting participants, the time needed for testing all participants or for collecting all data (Does this involve testing all participants simultaneously, or in sequence? Will you have to wait for participants to make their returns of a mailed questionnaire through the post? Is it necessary to build in time for the replacement of participants who fail to attend for testing or fail to reply? etc.), the time which is needed for debriefing participants, transcribing any data from audio or video recordings, coding the data, running reliability checks upon the data coding, entering the data into the computer, analysing the data, interpreting the results of the analyses, and writing the report.

Having produced an explicit timetable with a realistic estimate of the amounts of time needed for all the component activities, it is then necessary to go back yet again and recheck the availability of participants, equipment and all other resources which will be used for the research. In particular, it is essential to check that participants, equipment and resources will be available at the times which are required according to the timetable that has been worked out. After all, if the participants, for example, are not available for testing when the timetable stipulates (e.g. if schoolchildren are required for testing during a school's summer vacation), then, quite simply, it will not be feasible to conduct the research on that timetable. If there are any problems concerning participant, equipment or resource availability, then it is necessary for the researcher to revise either the timetable or the content or structure of the study itself so that it fits into a feasible timetable.

### **2.3.8 Conclusions**

Assessing the practical feasibility of a piece of research is clearly a complex activity. Not only are there many different aspects of the research that need very careful checking in order to ensure that the research is feasible in practice; in addition, if the research proves unfeasible on just one count, it may be necessary to revise the entire study. Nevertheless, having planned a piece of research through to this level of detail, if it turns out not to be feasible to run the study as planned, it is always worth considering the possible modifications which could be made to it before abandoning it entirely and starting from scratch once again (e.g. other possible sources of participants could be tried, extravagant but unnecessary costs could be cut back, or the timetable for the study could be extended).

## **2.4 ASSESSING THE ETHICAL FEASIBILITY OF THE RESEARCH**

In the preceding section, we considered issues concerning the practical feasibility of a piece of research. The present section considers issues which are to do with

the ethical feasibility of a piece of research. It is quite possible that a research study is feasible on practical grounds, but is unfeasible because it would be judged to be unethical to conduct that study. The criteria which ought to be used by psychologists in order to assess whether a particular study is or is not ethically acceptable have been formalized in statements issued by the British Psychological Society (BPS, 2004) and by the American Psychological Association (APA, 1992) – see Section 2.8. Any person who is intending to conduct psychological research should obtain a copy of, and should study in full, one or other of these two statements (or an equivalent statement which has been issued by a corresponding professional body). The postal addresses and websites from which the BPS and the APA statements may be obtained are given at the end of this chapter. The following account draws heavily upon the principal criteria which are contained in the current BPS statement.

### 2.4.1 The protection and welfare of participants

A fundamental principle which underpins all ethical codes relating to psychological research is that psychologists must always consider the welfare of the participants who take part in their research, and must protect them from being either physically or mentally harmed by the research process. In practice, this means that the risk of harm to someone who participates in a psychological study should normally never be greater than the risks which that person would encounter during the course of their normal lifestyle. If there are any aspects of the study which might result in any harm or undesirable consequences for the participants, the researcher has a responsibility to identify and remove or correct these consequences. If this is not possible, and if there is a risk that the participants in the research will suffer in any way, either physically or psychologically, as a result of the research, then that research would normally be considered to be ethically unacceptable.

Of course, there are certain types of psychological research where the risk of harm, unusual discomfort, or other negative consequences for the participant's future life might occur or might be greater than in everyday life (e.g. in certain types of psychopharmacological studies, there may be unanticipated side-effects of the drugs which are administered to participants). In such cases, the researcher must always obtain the disinterested approval of independent advisers before the research takes place (usually this advice is obtained from an independent ethics committee, either of the university or of the hospital in which the research is based). In addition, in such cases, the participants must be fully informed of the possible risks to them, and real informed consent must be given by each participant individually.

### 2.4.2 The principle of informed consent

More broadly, the BPS **ethical principles** stipulate that, wherever it is possible, researchers should inform participants in psychological research of all aspects of

**ethical principles**

that research which might reasonably be expected to influence their willingness to participate in that research; in addition, researchers should usually explain any aspect of the research about which a participant inquires. Thus, when a participant agrees to participate in a study, that person's consent should normally be informed by knowledge about the research. This is the principle of informed consent.

In some cases, of course, participants may be unable to give informed consent. This is the case whenever the research involves either young children or adults with impairments in understanding or communication. In all such cases, informed consent should instead be given either by parents or by those *in loco parentis*. In addition, it may be necessary in such cases (depending upon the potential risks to the participants) also to obtain advice and approval from an independent ethics committee. If such permission or approval cannot be obtained, then the study would be considered to be ethically unacceptable and ought to be either revised or abandoned.

It is important to bear in mind, when considering the application of the principle of informed consent, that a researcher is often in a position of authority or influence over the participants. This position should never be used to pressurize the participants to take part in, or to remain in, an investigation. Similarly, the payment which may be offered to participants should not be used to induce them to accept risks which they would not normally accept in their everyday life without payment.

### 2.4.3 The use of deception

In the case of some psychological studies, however, it is simply not possible to tell the participants everything which they could be told about the study because, if they had knowledge about the actual purpose of the investigation, they might alter those critical aspects of their behaviour which are of interest to the investigator, thereby undermining the purpose of the study. Alternatively, it is sometimes simply impossible to study a particular psychological process without deliberately misleading the participants. According to section 4, paragraph 1 the BPS ethical principles (BPS, 2004), the basic guidelines which should be followed in all such situations are the following:

The withholding of information or the misleading of participants is unacceptable if the participants are typically likely to object or show unease once debriefed. Where this is in any doubt, appropriate consultation must precede the investigation. Consultation is best carried out with individuals who share the social and cultural background of the participants in the research, but the advice of ethics committees or experienced and disinterested colleagues may be sufficient.

**deception** However, the BPS principles also add that the intentional **deception** of participants ought to be avoided wherever this is possible. Consequently, the researcher

should always first consider whether there are alternative procedures available which do not require deception. If no such alternatives are available, and if it is judged that the intended deception is an ethically permissible procedure, then the participants should be debriefed at the earliest opportunity.

#### **2.4.4 The debriefing of participants**

In all studies where participants are aware that they have taken part in an investigation, after the data have been collected, the participants should be given any information which they might need or request concerning the nature of the study. The researcher should also discuss with the participants their experience of the research process, so that if there are any unintended or unanticipated effects of the research, these can be monitored. Researchers also have a responsibility to ensure that, if any active intervention is required to negate the effects of an investigation upon a participant, such intervention is provided before the participants leave the research setting. Consequently, when drawing up the timetable for the research for the purposes of assessing whether or not the research will be feasible on practical grounds, sufficient time must be built into that timetable to allow for the debriefing of participants after testing, wherever this may be necessary.

#### **2.4.5 Participants' right to withdraw from an investigation**

Researchers should also make it clear to participants at the outset of the study that they have a right to withdraw from the research at any time, irrespective of whether or not payment or any other inducement has been offered. In the case of children, their avoidance of the testing situation ought to be taken as evidence of a failure to consent to the research procedure, and should be acknowledged.

Furthermore, the BPS ethical principles state that participants should always have the right to withdraw any consent which they may have given previously to participate in the study, either in the light of their experience of the investigation, or as a result of their debriefing. In such cases, participants also have a right to require that any data pertaining to themselves, including any recordings, be destroyed. Obviously, if a large proportion of the participants exercise this right in any individual study, a sampling bias will be introduced to the study which could limit the generalizability of the results. However, this is a limitation which the researcher must accept, as the retention and use of the data which were provided by a participant who has subsequently withdrawn his or her consent is an ethically unacceptable practice.

#### **2.4.6 The invasion of privacy in observational research**

Research which is based upon the naturalistic observation of participants in their everyday settings raises particular ethical concerns, because in such studies

informed consent may not be given by the participants. Such studies must, therefore, respect the privacy and psychological well-being of the participants who are studied. Furthermore, if consent is not obtained in advance, observational research is only acceptable in places and situations where those observed would expect to be observed by strangers. Particular account should always be taken of local cultural values, and of the possibility that the participants might consider it to be an invasion of their privacy to be observed whilst believing themselves to be unobserved, even though they are in a normally public place.

#### **2.4.7 Confidentiality and the anonymity of data**

The BPS ethical principles stipulate that all information which is obtained about a participant during an investigation must be confidential unless it has been agreed otherwise in advance. All participants in psychological research have a right to expect that the information which they provide will be treated confidentially and, if published, will not be identifiable as theirs. If such confidentiality or anonymity cannot be guaranteed, then the participant must be warned of this before he or she agrees to participate in the study.

In addition, it should be noted that, in the UK, when data about an individual person are stored on a computer in such a form that the individual is personally identifiable, then the researcher storing those data must comply with the provisions of the Data Protection Act 1998. This Act is designed to ensure that those who use computerized information (and some paper records) about identifiable individuals are always open and honest about their use of that information and follow sound and proper practices. This involves notifying key details about their use of the information to the Information Commissioner, who makes these details publicly available in a register. For researchers who work within an institution, such as a university, there is usually an institutional administrator who handles these matters.

#### **2.4.8 Conclusions**

From the preceding account, it should be clear that there are not only many practical considerations which need to be borne in mind while planning psychological research; there are also many different ethical considerations which have to be accommodated if the planned research is to be ethically feasible. If the research which is being planned requires any of the preceding ethical principles to be violated in an unacceptable manner, then that research must be assessed as being ethically unfeasible. However, should a study be judged to be unacceptable on ethical grounds, having reached this point in the planning process, it is always worth reconsidering those specific aspects of the study which have been found to be problematic in order to see whether there are any alternative procedures which may be adopted which would be ethically acceptable. But if no such

alternative procedures are available (and remember that any such alternative procedures would also have to be assessed as being feasible on practical as well as ethical grounds), then the researcher is obliged to abandon the research which has been planned.

Having read the contents of this section on how to assess the ethical feasibility of a piece of research, go back to Box 2.1, in which the study by Bandura *et al.* (1961) was described. As a practical exercise, try to apply all of the ethical principles which have been described in this section to the study, and evaluate the ethical status of the study once again from the perspective of our current codes of research ethics.

## **2.5 CONSIDERING THE POSSIBLE OUTCOMES OF THE RESEARCH IN ADVANCE**

Finally, it can help to focus the mind while planning a piece of research to consider the possible outcomes of the research in advance. To this end, it is useful to break down possible outcomes into those things which will be delivered immediately upon the completion of the research, and the longer-term outcomes which might emerge eventually from the work.

Things which are immediately deliverable upon completion of the research would include: the answers to the specific research questions which the research was designed to provide; and the immediate research report (whether this is in the form of a final-year undergraduate research project report, an MSc thesis, or an end-of-project report for a funding agency).

Longer-term products of the research could include: any further studies which might be required to clarify or to extend the results which will be obtained (focusing upon further studies which might be required for clarification purposes can be an extremely useful process for thinking through the limitations of the planned study); any applied policy recommendations which might be able to be made on the basis of the research to relevant authorities; and the publication of the findings of the research. Publication should, under normal circumstances, always be regarded as the proper endpoint of research. This is because it is only when research is published that it enters the public domain, becomes available to the scientific community, and can be properly regarded as contributing to the general scientific understanding of the issues which it has been designed to study.

## **2.6 APPLYING FOR RESEARCH FUNDING**

As noted earlier, an important part of the process of planning research is working out the costs which will be incurred in carrying out the planned research

(e.g. the costs of your equipment and materials, of your consumable items, of any research assistance, and of your travel expenses). If you do not have sufficient funds yourself in order to be able to cover all of these costs, you will need to apply for the money from a research funding source in order to be able to carry out the research. In some departments of psychology, students are able to apply for funds from a specific budget to cover the costs of conducting their research; alternatively, you may be thinking about applying for funding to an external organization such as a research council or a charity in order to obtain a more substantial sum of money than an internal source will allow. Or, if you are a student who wishes to conduct the planned research for your PhD, you may need to apply to a research council or some other body to cover not only your research costs but also your university registration fees and your maintenance.

If you are intending to apply for funding, there are a few useful rules which you should always try to follow. Firstly, you should always read very carefully the detailed notes which accompany any application form, in order to see whether the terms of reference of the funding body or funding scheme apply to the particular piece of research which you wish to conduct. Sometimes, funding bodies specify that they will only fund research on certain specific topics; sometimes they specify that, while they are willing in principle to fund research in any number of areas, priority will nevertheless be given to projects on particular topics. Obviously, if you wish to maximize your chances of being awarded the funding, you should always make sure that your project or area of research closely matches the topics or priority areas specified by the funding body to which you are applying. The reality is that applying for external research funding is a fiercely competitive process these days, and if you ignore the funding priorities of the bodies to which you are applying, your application is very unlikely to be successful.

Secondly, when reading the guidance notes which accompany the application form, look to see if there are any particular features of proposals which are encouraged by or are of special interest to the funding body (e.g. involving a partner from another discipline). Here, if it is at all possible to build these favourable features into your own proposal (but without compromising the scientific and methodological integrity of your research, of course!), you should always try to do so. Such a strategy can only enhance the prospects of a successful outcome.

Thirdly, if you have planned your research properly, you should be able to give very precise details in the application about exactly what it is you are going to be doing. Under most circumstances, these details should minimally include: an indication of the existing body of research which you have drawn upon in developing the proposed research; the specific research questions which the research will address, and why these are interesting or important; the research methods

which are going to be used and the motivation for using these particular methods; exact details of the sample characteristics and sample size (and if there are any possible questions about your access to the sample, copies of letters of support from potential gatekeepers might usefully be included); the type of equipment and materials which will be used; the role and content of any pilot work in the research; the methods of statistical analysis that will be used to analyse the data; any ethical issues that may be involved in conducting the research and how you will ensure that your research complies with an established set of ethical guidelines (and if there are any major ethical issues entailed by your research, a copy of a letter from an ethical committee granting you permission to conduct the research might also be usefully included); the timetable on which the various phases of the research will be conducted; the outputs and deliverables of the research, including your plans for disseminating the findings of the research through conference presentations and publications; and how your research will be useful, and to whom (e.g. whether your research will be useful to other researchers; to particular groups of people such as social workers, teachers, or clinical psychologists; or to organizations such as a particular government department or a local authority).

Fourthly, in writing the proposal, be open about any obvious problems which the research might encounter, and explain how you will tackle these problems if they do occur. Your application and proposal will almost certainly be read by someone who has a good understanding of the realities of the research process, and they will know only too well that research does not always proceed as planned. So they will be looking to see if you are being realistic in your plans, and whether you give any evidence in your application that you will be able to respond appropriately to problems if these do occur.

Fifthly, always make sure that you fill in the application form exactly as required and to the letter. If you cannot even follow the simple instructions for filling in an application form, the funding body will have very little confidence in your ability to execute a piece of original research, and they may even reject your application without considering it properly if you fail to provide information which they regard as crucial for evaluating the application.

Sixthly, always type or word-process your application: it is a nightmare for an evaluator to try to read and assess a handwritten proposal. The presentation and appearance of an application are extremely important, and poor presentation is highly likely to affect the judgement which an evaluator forms of your proposal. Correct spelling and use of grammar are important too.

Finally, if you are posting your application close to a specified deadline, it is always sensible to obtain proof of posting, just in case there are any unexpected postal delays which might lead to your application arriving after the specified deadline. It should go without saying that the application should arrive before the stated deadline. Many bodies will simply ignore applications that arrive late.

Box 2.2 contains a checklist of all the things which research funding agencies usually look for in a research proposal when making a decision about whether or not to make the funding available for a proposed study. A funding agency is only likely to agree to fund the proposed research if the answers to most, if not all, of these questions are affirmative. This checklist also provides a useful summary of the various practical and ethical issues which have been discussed in the course of this chapter.

**Box 2.2 A checklist of all the practical and ethical matters which should be taken into account when planning a piece of research systematically**

- Is the research based upon an adequate review of the existing literature?
- Is the research based upon coherent research questions?
- Have the various concepts which are included in the research questions been given suitable operational definitions?
- Are the proposed research design and methods appropriate for answering the research questions?
- Are the proposed research design and methods clearly defined and feasible?
- Are the intended participants for the research likely to be available to the researcher?
- Has sufficient attention been paid to the potential problems of participant attrition and participant non-compliance, and are suitable procedures in place to deal with these problems?
- Does the researcher have access to all of the equipment and materials which are required for the research, if the costs for these are not being requested from a funding agency?
- Has appropriate pilot work been conducted in order to test the feasibility of the research methods which are going to be used?
- Are appropriate methods of analysing the data being proposed?
- Is the sample large enough for all of the statistical analyses which are being proposed?
- Is the proposed timetable for all the different stages of the research appropriate, feasible and realistic, and will the participants, equipment and other resources be available to the researcher at the time when they are required according to this timetable?
- Have the welfare and the protection of the participants, and any foreseeable risks to either the participants or the researcher, been considered in an appropriate manner?
- Will the principle of informed consent be implemented in an appropriate manner?
- Has the potential deception of the participants been kept to a minimum, given the goals of the research?

*(Continued)*

**Box 2.2 (Continued)**

- Will the participants be debriefed after the research in an appropriate manner?
- Will the participants be given the right to withdraw from the study?
- Will the data from the study be treated confidentially and anonymously?
- Will the research take due notice of locally existing legal requirements (such as the Data Protection Act in the UK)?
- Have the possible deliverables and outcomes of the research been considered in an appropriate manner?

In the case of research proposals which are submitted to external funding bodies, the following additional questions also come into play:

- Is the research likely to make a significant, original and distinctive contribution to our knowledge of the topic, or to advance research methods or theory in a significant way?
- Does the proposal show that the applicant is aware of the full range of previous research which has been conducted on the topic?
- Are the costs which are being requested from a funding agency necessary and appropriate, and does the research represent good value for money?
- Have appropriate plans been made for the dissemination of the findings of the research?
- Have appropriate plans been made to engage potential users of the research findings (e.g. government departments, social policy makers, commercial users) in the design and the dissemination of the research?

## 2.7 A FINAL TIP: THE INEXORABLE RULE OF SOD'S LAW

Sod's Law, expressed metaphorically, is: if you drop a piece of buttered toast, it will always land on the floor buttered side down. Expressed more directly, Sod's Law is: if anything can possibly go wrong, it will go wrong.

As any experienced researcher will be able to tell you, in scientific research the rule of Sod's Law is inexorable. There is very little that can be done to thwart it, except to form an appropriate mental set at the very outset of the planning process, to think through every single aspect of the research in advance in minute detail, and then to double-check and triple-check everything before the research is ready to roll. While these activities in themselves may not necessarily thwart Sod's Law, they will at least enable you to congratulate yourself on those rare occasions that you do manage to evade its worst consequences.

## 2.8 BPS AND APA ADDRESSES AND WEBSITES

A copy of the British Psychological Society's *Ethical Principles for Conducting Research with Human Participants* may be obtained from: The British Psychological Society, St Andrews House, 48 Princess Road East, Leicester LE1 7DR, UK. It can also be downloaded over the web as part of a larger document entitled 'Code of Conduct, Ethical Principles and Guidelines' from: [http://www.bps.org.uk/the-society/ethics-rules-charter-code-of-conduct/ethics-rules-charter-code-of-conduct\\_home.cfm](http://www.bps.org.uk/the-society/ethics-rules-charter-code-of-conduct/ethics-rules-charter-code-of-conduct_home.cfm). At the time of writing (2005), the British Psychological Society is in the process of developing a new *Code of Ethics and Conduct*, which it is anticipated the Society will adopt in 2006. Interested readers should monitor the BPS web site (<http://www.bps.org.uk>) for future developments.

A copy of the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* may be obtained from: Ethics Office, American Psychological Association, 750 First Street, NE Washington DC 20002-4242, USA. It can also be downloaded over the web from <http://www.apa.org/ethics/code2002.html>.

## 2.9 FURTHER READING

Detailed discussions of the various issues which are involved in selecting research topics, formulating specific research questions, and formulating operational definitions of concepts, are contained in Kerlinger and Lee (2000). In addition, Shaughnessy, Zechmeister and Zechmeister's (2006) contains excellent discussions of ethical issues in the conduct of psychological research, and of many of the practical issues which are involved in assessing the feasibility of such research.

