

# Designing a psychological study

<b>You are learning about...</b>	<b>You are learning how to...</b>
Psychological research methods	Design and report psychological studies

Many exam boards can require you to design a psychological study as part of assessing research methods and statistics. This guide is based around the requirements of AQA Specification B (PSYB4). The specification you are studying may make different demands, so make sure you are clear on what these are.

## General principles:

- The study should be ethical and practically feasible
- Each decision should be reported in enough detail for a competent researcher to carry it out
- Decisions should be justified in the light of the research aim and likely constraints

Area	Issues	Choices/things to specify
<b>Design</b>	Are you looking for a difference between conditions or a relationship between variables? A cross-sectional comparison or a trend over time?	Experimental/quasi-experimental Correlational Longitudinal
<b>Method</b>	How & where are you going to obtain data?	Experiment (task performance) Observation/content analysis Self report (questionnaire; interview) NB. Setting
<b>Variables &amp; materials</b>	What are you trying to measure? How will you measure it (operational definitions)? What tasks will be necessary? What materials will you need?	Conceptual and operational definitions Experimental tasks Observation/CA schedule Questionnaire/interview schedule
<b>Controls</b>	What sorts of problem could obscure the outcome of your study? What will you do about it?	Standardisation Generic controls (e.g. random assignment; counterbalancing) Specific controls (i.e. for confounds)
<b>Procedure</b>	What will happen in the course of the study? In what order? How will conditions differ (if experimental).	Briefing of PPs Collection of data
<b>Sample</b>	From whom (or what) will the data be gathered? Where will you get them (it) from?	Target population Sampling method (e.g. opportunity; systematic; stratified; random) Sampling procedure
<b>Hypothesis &amp; analysis</b>	What would you predict as the outcome? What will you do with the data? How will the outcome be interpreted?	Alternative/experimental/null Data analysis (e.g. comparison of means; correlational analysis)
<b>Ethics</b>	How will you ensure that the PPs are treated in an ethically acceptable manner?	Informed consent; deception; risk of harm; privacy; confidentiality etc. Generic & specific issues

### **Example: a study to investigate gender differences in understanding of risks associated with playing in the road**

The study will have a quasi experimental design involving a comparison between girls and boys. Children will be interviewed in a familiar setting (e.g. school classroom). This will allow their understanding to be explored in an environment unlikely to distort their responses.

The comparison variable is gender. The DV is understanding of risk. This will be operationalised as responses to a series of scenarios involving children playing in the road. Each scenario will be illustrated using models of children/cars etc. on a diorama road scene to facilitate understanding. Scenarios would include e.g. heavy/light traffic, presence of parked cars/visibility of hazards etc. A semi-structured interview schedule will be used to explore children's understanding of the risks involved in each scenario. A semi structured format will allow sufficient flexibility to ensure understanding and to obtain clarification of children's responses. Responses will be coded according to how clearly they recognise different hazards (e.g. 0=no recognition, 1=limited recognition; 2=full recognition). Scores for each hazard will be summed to give an overall score.

For control purposes, procedure and materials will be standardised. Gender-consistent models will be used so children can identify with each scenario. To avoid bias, Interviewers will be blind to study aims and reliability of response coding will be checked.

Materials will be set up in advance in a school classroom. PPs will be taken out of classes individually to be interviewed. Briefing will explain that research is interested in where children play. Each child will be shown five scenarios and interviewed about each. Responses will be audio recorded. Recordings will be transcribed for scoring.

The target population is urban British children aged 10-11 years. An opportunity sample will be obtained from amongst Y6 students at primary schools in the local area as this is the most convenient method.

It is expected that boys will have a poorer understanding of risks than girls. This will be reflected in lower average scores when means are compared. Data will be analysed with a non-parametric test of difference (Mann-Whitney U) with a minimum acceptable P value of 0.05 (1 tailed).

To ensure that the study is ethical, informed consent will be obtained through letter to parents of prospective participants explaining the aims and procedures in plain English. Due care will be taken to ensure PPs are not distressed, procedure terminated if they are. Debriefing will aim to reassure PPs whilst also ensuring that any misconceptions of risk they have are corrected. All PPs will be anonymised. Parents and teachers of PPs will receive a plain English summary of the research findings.

### **Design some studies to investigate the following questions...**

- Does ageing affect problem solving ability?
- Does being a victim of crime change peoples' attitudes towards the criminal justice system?
- Are psychology students less prejudiced than others against people with mental illnesses?
- Are people less generous when they are in a bad mood?
- Does the size of primary classes affect how sociable children are?
- Is working night shifts bad for you?