**3 Research methods in psychology**

* There are a number of ways in which psychologists can go about gathering data. There are some strong views around on the ‘best’ methods, but we take the view that all methods discussed here have a place in psychology.

Case studies

* Case studies involve the detailed recording of information about a person, family, organization, or group in a particular circumstance. Case studies allow us to see behaviour in detail in real-life settings; however, they are not always generalizable.

Surveys

* Surveys involve asking people for information via interviews or questionnaires. They are the best way to find out opinions but are less useful for predicting behaviour. Responses are affected by many factors, from the wording of questions to the sample surveyed.

Observations

* Observation allows us to systematically note how people behave in a given situation. This often raises difficult ethical issues.

Correlation

* Correlational research looks at the mathematical relationships between measured variables. This allows us to predict the magnitude of one variable from another; however, it can be hard to establish cause-and-effect relationships from correlations.

Experiments

* Experimental research is designed to establish cause-and-effect relationships. An experimenter manipulates one or more variables in order to see their effect on other variables. Experimental research gives the best insights into cause and effect in psychology but, in practice, experimental design is complex and imperfect because a host of variables can confound results.

Quantitative and qualitative data

Quantitative data: the importance of statistics in psychology

* Most psychological research collects at least some data in the form of numbers which are subject to statistical analysis.
* Two statistical concepts are particularly key in psychological research. Significance tells us the probability that a given set of data would be expected by chance alone, in turn giving us an idea of how likely it is that we have found a real effect or correlation. Effect size tells us how meaningful this effect or correlation is.
* As a psychology student it is essential to acquire a degree of statistical literacy,

 the ability to make sense of statistical information.

Qualitative data, qualitative analysis, and qualitative research

* Qualitative data is information in non-numerical form. Qualitative data may be gathered as an adjunct to quantitative data or may be the sole output of qualitative research.
* There are two definitions of qualitative research. The literal definition is any research gathering non-numerical data, whether it is then analysed qualitatively or quantitatively. The evocative definition is of research that rejects numbers and adopts a more interpretive and less empirical view of the world.
* Qualitative data requires its own forms of analysis. The simplest of these is thematic analysis, whereby each line, sentence, or paragraph of text is marked up with a theme that runs throughout the text.

Ethical issues in psychology

* Psychological research is beset with ethical issues, and there are many examples of historical research that we would now agree to be unethical.

Contemporary ethical codes

* Following a series of ethically contentious studies in the 1960s, professional bodies put together ethical codes for researchers. The British Psychological Society, for example, has a detailed code based on the principles of respect, scientific integrity, social responsibility, and costs and benefits.

The ethics of animal research

* Animal research raises its own ethical issues, and psychologists have to confront the fact that historically very inhumane things have been done to animals because researchers could get away with it. There are powerful moral arguments against the use of animals in research.

Modern animal research in psychology is heavily regulated and pro-animal research psychologists also have powerful arguments in favour of using animals in some psychological research.