Psychology Research – “fundamentals of quantitative methodological approach”

Today’s objectives:
1. Introduction
   – Why do we do research?
   – When is research scientific?
   – Qualitative and quantitative research
   – Basic concepts in quantitative research
   – Steps in quantitative research studies
2. Quantitative research methods
   – Observational/Naturalistic Studies
   – Experimental Studies
   – Correlational Studies
   – Quasi-experimental Studies
   – Important things to remember

- **Why do we do research?** – Understand what people think, feel, perceive – and why, when and how they behave the way they do
- **Use a scientific method**; standardized way to do research so our conclusions can be as objective as possible when formulating theories and hypotheses – objective measure can be repeated by another scientist – get the same data
- Research has a widespread of application, has impact on our lives – extends to many different fields e.g. education, marketing, criminal, clinical etc.

**WHEN IS RESEARCH SCIENTIFIC?**
- **Replicable** – very fundamental! If findings are really interesting and appear to be significant, they do not have scientific credibility and are not a ‘real’ finding unless we can repeat it. Must report all the information needed for other researchers to replicate studies when work is published.
- **Falsifiable** – a good theory must be on that can be falsifiable; if a theory cannot be tested and possibly disproven then it is not scientific.
- **Precise** – state the hypothesis clearly – what EXACTLY are you studying – also allows other people to test it as well. Use specific definitions; not vague/general.
- **Parsimonious** – use simpler explanations rather than complex ones

**QUALITATIVE AND QUANTITATIVE RESEARCH**
- **Qualitative research** – methods such as interviews/group discussions – often used to gather initial info and formulate theories/hypotheses
- **Quantitative research** – used to objectively quantify behaviour, perception, thoughts etc – support or form theories and hypotheses by analysing data and generalising the results from a sample to the population of interest