Lecture 2

Correlational

Are the variables related?
For when you can’t design a good/quasi-experiment
- Co-vary
  - If scores for one variable change, the scores for the other variable also change in a predictable way
    - So variables aren’t independent

Measuring correlation – pearson’s r and spearman’s rho

Pearson’s r

It is concerned with continuous variables - scores

Parametric test, to see whether there’s a real relationship between variables
- Negative correlation = big negative number
- Positive correlation = big positive number

- DevX, and DevY - subtract scores from that categories mean
- DevX*DevY - then multiply each column
- Total covariance - Add the multiplied columns out
- Covariance = TC/(N-1)
- r = covariance/stdX*stdY
  - r varies between -1 and 1
- Look up p-value in the table
  - Higher than value in table = significant

- Pearson’s r - strength and direction of the relationship
  - Large Pearson’s r, doesn’t necessarily tell you there’s a correlation
- P – value - probability that this correlation coefficient could arise assuming the null is true
  - Doesn’t tell you how strongly correlated the variables are
Lecture 4

Non-parametric Statistics

- Less powerful than parametric data
  - Less powerful because some info is thrown away
    - Due to ranking. – 1, 3, 4, 5, 15 → 1, 2, 3, 4, 5
- May not meet parametric assumptions
  - Small data set
  - Data may be non-normal (bimodal/skewed)
  - May have extreme scores

- Spearman’s rho
  - Alternative to Pearson’s r
- Mann-Whitney & Wilcoxon
  - Alternative to t-test

Ordering and Ranking Data

1, 3, 4, 4, 5, 5, 5, 6 - ordered
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 - ranking position
1, 2, 4, 4, 4, 7.5, 7.5, 7.5, 7.5, 10

Spearman’s rho

Used for when assumptions for Pearson’s r haven’t been met

- Convert score to ranks
- Calculate difference in ranks
- Square the difference
- Calculate using

$$\rho = 1 - \frac{6 \times \sum D_i^2}{n(n^2 - 1)}$$
Lecture 10

Interviews

Why Interview?
- Collect data about individuals
  - Views, opinions beliefs
  - Personal experiences and perspectives
- To gain insight and understand the phenomenon
- Facilitates exploration of topic

Types of Interview

Structured
Semi-structured
Unstructured

Structured
- Standardisation important
- Ensuring consistency
  - Asked same questions, in same order and setting
- Questions generally produce easy answers
  - Yes/no

Semi-structured
- Guided conversation
- Open-ended questions
- Order of questions less important
- Interviewer able to deviate from schedule

Unstructured
- Interviewer develops and adapts questions to situation and P
  - Follow-up
- Ps focus on what’s important to them
- As close to a conversation as possible
- Open-ended questions

Focus Groups

Like a group discussion
Group dynamics are integral to the process
- Group members can challenge/extend statements
- Higher ecological validity than individual individuals

Ps interact with each other as well as moderator