Correlation
Assumptions, issues and intercorrelation

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Outline: Aims and Objectives

How to:

… check assumptions variables, missing data, normality, linearity, homoscedasticity

… evaluate issues outliers, range restrictions

… conduct Spearman's Rho correlation analysis R

… conduct multiple correlations (intercorrelation) R

Correlation: Assumptions

1. Is the data at interval, ratio, or ordinal level?

2. Is there a data point for each participant on both variables?

3. Is the data normally distributed?

4. Does the relationship between variables appear linear?

5. Does the spread have homoscedasticity?

Correlation: Issues

- Is the correlation influenced by outliers?

- Is 'restriction of range' an issue?

Intercorrelation

- Construct a matrix of scatterplots to get an overview
- Conduct multiple correlations at once
  - Correct for multiple comparisons using the 'Bonferroni correction'.