



SPSS: CORRELATION



CORRELATION ANALYSIS

- Pearson Product Moment Correlation
- Exploring relationships between two (normally continuous) variables
- R coefficient allows us to describe the strength and direction of the relationship between our two variables, plus whether that relationship is statistically significant



THINGS TO REMEMBER

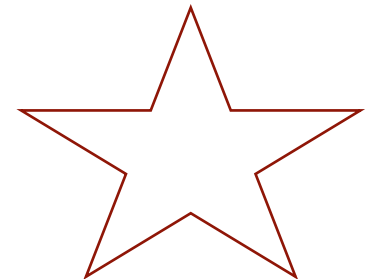
- Correlation does not explore a causal relationship
- Correlation coefficient range from -1 to +1 and provides a numerical summary of the direction and strength of the relationship
 - The sign attached indicates the direction and whether the relationship is positive (as one increases, the other increases) or negative (as one increases the other decreases).
 - The size of the value itself indicates the strength, with values closer to 1 denoting a stronger relationship between the two variables

ASSUMPTIONS AND REQUIREMENTS FOR DATA

1. Data for variables should be on a continuous scale – interval or ratio
 - a) some exceptions to this – e.g., using a dichotomous variable (gender) – but aim for all continuous
2. Each participant must provide a score for both variables
3. Normal distribution of scores for both variables
4. Linearity: relationship between variables should be linear (and not curved)
 - a) Can be checked using your scatterplot

STUDY EXAMPLE

- Exploring the relationship between levels of impulsivity and frequency of gambling behaviours
- NOTE:
 - Data for both variables = continuous
 - There are likely steps to be completed before you get to this point in your own data collection





RESULTS

$$r = ___, N = ___, p </> .05$$

$$r = .82, N = 10, p < .05$$

INTERPRETING RESULTS

- A Pearson Product Moment Correlation analysis was conducted to explore the relationship between the level of participants' impulsivity and the frequency of engagement in gambling behaviour (over a period of two weeks). There was a strong, positive correlation between the two variables, $r = .82$, $N = 10$, $p < .05$, with higher levels of impulsivity associated with more frequent gambling.