Cramming Sam's Tips for Chapter 10: Moderation, mediation and more regression

Moderation

- Moderation occurs when the relationship between two variables changes as a function of a third variable. For example, the relationship between watching horror films and feeling scared at bedtime might increase as a function of how vivid an imagination a person has.

- Moderation is tested using a regression in which the outcome (fear at bedtime) is predicted from a predictor (how many horror films are watched), the moderator (imagination) and the interaction of these variables.

- Predictors should be centred before the analysis.

- The interaction of two variables is simply the scores on the two variables multiplied together.

- If the interaction is significant then moderation is present.

- If moderation is found, follow up the analysis with simple slopes analysis. This analysis looks at the relationship between the predictor and outcome at low, mean and high levels of the moderator.

Mediation

- Mediation is when the strength of the relationship between a predictor variable and outcome variable is reduced by including another variable as a predictor. Essentially, mediation equates to the relationship between two variables being 'explained' by a third. For example, the relationship between watching horror films and feeling scared at bedtime might be explained by scary images appearing in your head.

- Mediation is tested by assessing the size of the *indirect effect* and its confidence interval. If the confidence interval contains zero then we cannot be confident that a genuine mediation effect exists. If the confidence interval doesn't contain zero, then we can conclude that mediation has occurred.

- The size of the indirect effect can be expressed using kappa-squared (). Values of 0 mean that the indirect effect is very small relative to its maximum possible value, and values close to 1 mean that it is as large as it could possibly be given the research design. A small effect is .01, a medium effect would be around .09, and a large effect in the region of .25.