



Moderation Effects and Analysis

Definition

An effect that identifies a qualitative or quantitative variable that affects the direction and/or strength of the relation between two variables

Answers "Who" and "When"

- Begin with two variables and their association
 - Ex. Incentives and motivation are positively correlated
- Although the association is well-established, we might not know FOR WHOM or WHEN this is more likely to be the case (i.e., an "it depends" question)
- Moderation answers this question

Moderation =

- Just like a 2 X 2 experimental design involves interaction effects, advanced correlational designs can examine how two independent variables interact to influence the outcome
- In the previous example, we would be looking at an Incentive X Disinterest effect on Motivation

of Analysis

- Exactly the same as a Factorial ANOVA
 - Main effects
 - Interaction effect
- Factorial ANOVAs are actually specialized versions of regression analyses using categorical IVs
- Difference: You need to create an "interaction term"

Steps in Creating the _____ Term

- Identify which variables are the IV and moderator
- The variables in the interaction term must include 0 in possible scores, so you will usually have to revise the original scores
- Categorical
 - Keep it simple: only use two groups
 - Recode as 0 and 1
- Continuous
 - Create a centered variable
 - Centered score = Score - Mean (deviation score)
- Using these new scores, multiply the two new variables together for each person (using Compute function). The product of these two variables is the Interaction Term

Issues in Analysis

- Remember that in a Factorial ANOVA, you have main effects and an interaction effect
- SPSS will automatically calculate these effects for you for a Factorial ANOVA, but not for a moderation effect
- So, you have to use hierarchical regression and enter variables in a specific order to conduct the analysis

in Moderation Analysis

- Enter the outcome variable into the Dependent Variable box
- Enter the independent variable and moderator into Block One
 - Make sure you use the revised scores you created for these
- Enter the interaction term into Block Two
- Ask for Descriptives and R² change

What to Look for

- Your main interest is in the standardized beta for the interaction term
 - You also want to show that the interaction term contributes a significant % of variance to the outcome (i.e., R² change for Block Two is significant)
- In a Factorial ANOVA, you complete follow-up analyses to find the simple main effects
- If the interaction term is significant in your regression analysis, you will then complete simple slopes analyses

Analysis (Categorical Moderator)

- If your moderator is categorical, it's very easy:
 - Select cases → If moderator = 0
 - Obtain correlation between IV and DV
 - Select cases → If moderator = 1
 - Obtain correlation between IV and DV

Analysis (Continuous Moderator)

- If your moderator is continuous, you will need to:
 - Create new terms (people who score high vs. low on the moderating variable)
 - Run new regression analyses examining the magnitude of the slopes
 - See me if this is the case

Reporting Results

- Because most moderation analyses involve the slopes of two lines, it's best to represent the results in a figure like this:


