



# Discriminant Function Analysis

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Statistical analysis that attempts to establish whether a set of variables can be used to distinguish between two or more groups

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## The Set-Up

- Continuous measure of a variable used as the independent variable
- Categorical outcome as the dependent

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### When to Use It

- Very good for \_\_\_\_\_
- Determine if the score on the measure can distinguish between people who fall into one categorical outcome or another
  - Diagnosis
  - Dropout / Quit
  - Change schools or jobs
  - Death

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### What You Report

- Effect sizes of the independent variable(s) on the categorical outcome
  - \_\_\_\_\_
    - proportion in outcome NOT affected by the independent variable (small is good)
  - F-statistic
  - Canonical correlation
    - Association between IV and outcome
- Examine plots to see if they are in the right direction

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## Logistic Regression Analysis

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Regression analysis that examines the association of one or more predictors on a categorical outcome

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**The Set-Up**

- Continuous OR categorical measures of a variable used as the independent variable
- Categorical outcome as the dependent
  - Can be more than 2 possibilities

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**When to Use It**

- Same basic set-up and function as discriminant analysis, EXCEPT...
- Logistic is \_\_\_\_\_
  - Can account for influence of several predictors simultaneously (i.e., their unique predictive ability)
  - Can use categorical predictors
  - Coefficients are easier to report and interpret
- Very useful for predictive validity analysis

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## What You Report

- \_\_\_\_\_ for each predictor
- Log likelihood coefficient for each predictor
  - Called \_\_\_\_\_ in SPSS
  - Def: How the odds change with each 1.0 unit increase in the predictor
  - If  $\text{Exp}(B) > 1$ , the odds of the outcome increase as the independent variable increases
  - If  $\text{Exp}(B) < 1$ , the odds decrease as the independent variable increases

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