

# Data Management and Reporting in SPSS

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Lecture 1  
*Navigating SPSS*



Lecture 2  
*Data Manipulation*



Lecture 3  
*Summarizing Data*



Lecture 4  
*Comparing Means/Proportions*

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# Lecture Outline

- Compare Means for numeric data
  - Parametric vs nonparametric data
  - Independent vs paired samples
  - 2 groups vs more than 2 groups
- Compare Proportions for categorical data
  - Small vs large cell counts
  - Independent vs paired samples



# Measures to Compare by Data Type

## *Categorical Variables*

- Proportion – ratio in which the numerator is a subset of the denominator

## *Numeric Variables*

- Mean (parametric) – average
- Median (nonparametric) – middle value when data is ranked in order



# Demo

- SPSS sample data file dietstudy.sav
- Each case represents a separate subject
- Pre-, interim-, and post-diet weights and triglyceride levels



# Compare Means

Parametric Numeric Data

- Independent samples (grouping variable)
  - Independent samples t-test – 2 groups
  - ANOVA – more than 2 groups
- Paired samples (pre/post within individual)
  - Paired samples t-test



# Compare Medians

Nonparametric Numeric Data

- Independent samples (grouping variable)
  - Wilcoxon rank sum (Mann-Whitney) test
- Paired samples (pre/post within individual)
  - Wilcoxon signed rank test



# Demo

- SPSS sample data file patient\_los.sav
- Treatment records of patients admitted to the hospital for suspected MI (“heart attack”)
- Each case represents a separate patient
- Variables related to hospital stay



# Compare Proportions

## Categorical Data

- Independent samples (grouping variable)
  - Chi-square test of independence
  - Fisher's exact test
- Paired samples (pre/post within individual)
  - McNemar's test





# Questions?

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