Slide 1

SPHSC 569: Evaluating
Time-Series Data

Data Analysis
Examining and Interpreting
the Data

_____

_____

_____

_____

_____

_____

_____

Slide 2

Common Rules for
Evaluating Data
(Validity Revisited)

- The more replications of the
  effect, the better
- The more consistent the effect,
  the more believable
- The more the effect is based on
  contiguous comparisons, the
  more believable

_____

_____

_____

_____

_____

_____

_____

Slide 3

Common Rules for
Evaluating Data
(Validity Revisited)

- Evaluate effects relative to
  background variability in the
  dimension involved in the
  comparison (i.e., level, trend
  (slope and magnitude), or
  variability itself)
- The larger the effect (given
  background variability and
  previous knowledge about the
  behavior), the more believable

_____

_____

_____

_____

_____

_____

_____

Slide 4

Data Analysis
Quantitative Data

- Continuous graphing
  - Decisions about unfolding nature of designs
  - Functional relations
- Visual Inspection/Analysis
  - Why?
    - Logic of research paradigm
    - Inappropriateness of inferential statistics
  - Features of a graph

_____

_____

_____

_____

_____

_____

_____

_____

Slide 5

Data Analysis
Quantitative Data

- Visual Inspection/Analysis
  - Within phase patterns
    - Level (mean, median)
    - Trend (slope, magnitude) (linear regression, split half)
    - Variability
  - Between phase patterns
    - Immediacy
    - Overlap
    - Effect Size (Komfrey and Foster-Johnson, 1996)
  - Using visual inspection to learn about nature of change

_____

_____

_____

_____

_____

_____

_____