Syllabus and Class Policies

Vanessa LoBue

Jamil Bhanji

with a little help from Andy Field

Statistical Methods, Fall 2022

- Psych 596
- Thursdays, 10am – 1pm
- Multi-purpose room

Instructors

- Vanessa LoBue
- Office Hours: Thurs 1-2
- Office: Smith 341

Instructors

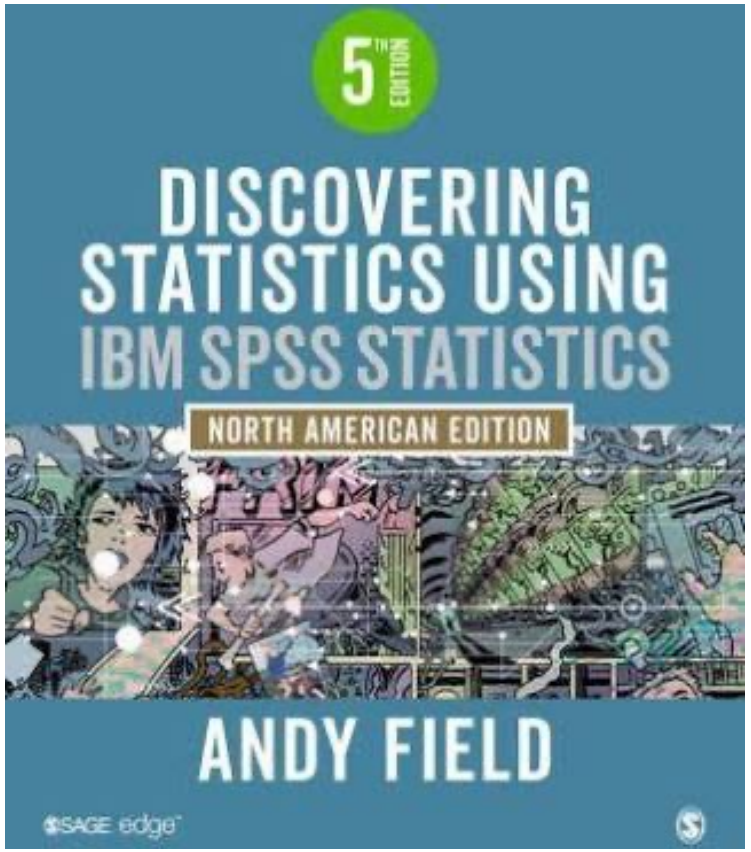
- Jamil Bhanji
- Office Hours: Wed 2-3
- Office: Smith 4-114

Class Format

- Conceptual overview (30-40 min)
- Overview of lab, in both SPSS and R (10-20 min)
- Independent work on lab, in both SPSS and R (1-2 hours)
- Discussion of lab (5-10 min)
- Data Days!

Textbook

- Discovering Statistics Using IBM SPSS
- PDF available on Canvas
- Additional readings also available on Canvas
- Links to assigned videos



Other Materials

- Bring laptop to class (if you don’t have one, talk to us!) - connect to RUWireless or other wifi
- A dataset
- SPSS
- R, R-Studio
- G-power

Attendance

- Mandatory

- If you have to miss class (excused absence), you will have to make up the lab on your own time within one week of the absence

Learning Goals

- Choose an appropriate statistical test for a variety of data types and empirical questions.
- Calculate statistical power and decide on an appropriately powered sample size to answer your empirical questions.
- Use data visualization to present your data clearly, and to explore your data for extreme cases and normality.
- Choose from and execute a variety of statistical tests to examine differences between groups.
- Choose from and execute a variety of statistical tests to examine associations between variables.
- Write APA style narratives reporting your data analyses, complete with confidence intervals and effect sizes.
- Practice responsible and rigorous habits for your statistical analyses that promote transparency and reproducibility.

Class Participation (40%)

- Come to class!

- Collaborative Dataset Activity (Jamil) – note that this is different from the dataset you will use for your protocol/paper

Dataset (10%)

- You must contribute one dataset for our data days
- If you don’t have access to one, see us and we’ll help you!
- Due: October 13 (but talk to us asap if you’re not sure what to use)

Protocol Description (25%)

- Detailed protocol for analyzing their submitted dataset
- Template will be provided and discussed in class
- Due: November 3

Final Paper (25%)

- APA style report on your fully executed analyses (as proposed in Protocol Description)
- Results section must have detailed analysis plan
- Due: December 8 (last day of class)

Course Overview

- Part 1: Preparing Data
- Reading data into SPSS and R
- Choosing a Statistical Test
- Calculating means, medians, confidence intervals
- Comparison means to chance
- Power Analysis and Sample Size
- Protocol Preparation
- Effect Sizes
- Visualizing Data

Course Overview

- Part 2: Associations Between Variables
- Correlations
- Regression
- Logistic Regression
- Longitudinal Designs
- Mediation and Moderation

Course Overview

- Part 3: Comparing Groups
- T-tests
- ANOVA
- Repeated Measures
- Mixed Models
- Chi-Square
- Non-parametric Tests

Protocol Template

Download the template file from the Week 1 Canvas Module

Protocol for NAME OF STUDY

NAME OF STUDY

Created: DATE, INITALS

Pre-registered (AsPredicted.org): DATE, INITALS

Last Updated: DATE, INITALS

SET-UP BEFORE PARTICIPANT ARRIVES

Paperwork

In the tall filing cabinet there is a hanging file folder labeled "NAME OF STUDY," retrieve from the folder consent form 1 (for participants to sign), consent form 2 (participant's copy) demographics form, cover sheet, databrary consent, LIST ADDITIONAL FORMS/QUESTIONNAIRES.

Place the retrieved paperwork in the following order on a Clipboard 1:

→ Consent Form 1
→ Databrary Consent
→ Demographic Form
→ Consent Form 2 - For Participant
→ Cover Sheet 1 (A)
→ Pencil, Pen
→ LIST ADDITIONAL FORMS/QUESTIONNAIRES

On Cover Sheet 1A, fill in:

1. Test Date - Write in today's date next to Test Date.
2. Time - Write in the scheduled experiment time next to Time.
3. Gender – Circle an M for male targets or F for female targets
4. LIST OTHER VARIABLES, INCLUDING ANY COUNTERBALANCING VARIABLES

Procedure Study Setup

1. LIST ANY STEPS REQUIRED TO SET UP THE STUDY BEFORE THE PARTICIPANT'S ARRIVAL

PROCEDURE

Study Design and Rationale