

# PSY 503: Foundations of Psychological Methods

## Introduction

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# Introductions

- Background

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- Statistical Methods
  - PSY 503
  - PSY 505
  - PSY 504

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- Background
- Statistical Methods
  - PSY 503
  - PSY 505
  - PSY 504
- Research
  - Humans
  - Methods

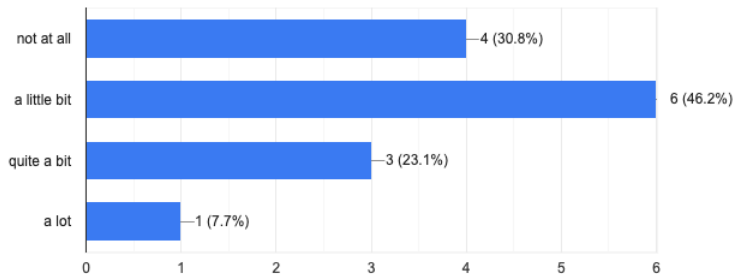
# Introductions

- Your turn
  - Background
  - Research interests, advisor
  - Fun fact?

# Background Survey

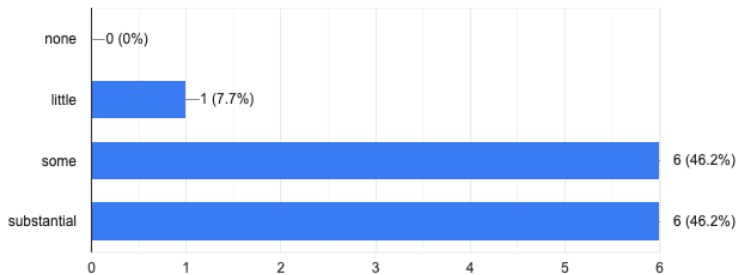
## How nervous do you feel about your upcoming statistical training?

13 responses



## How much experience do you have analyzing data?

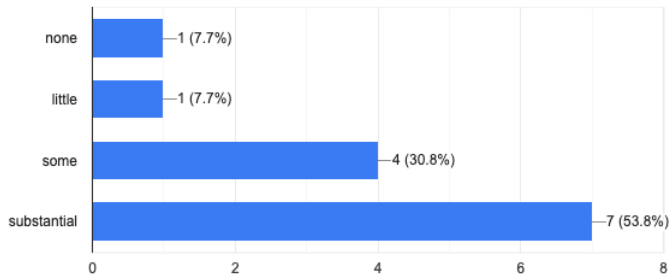
13 responses





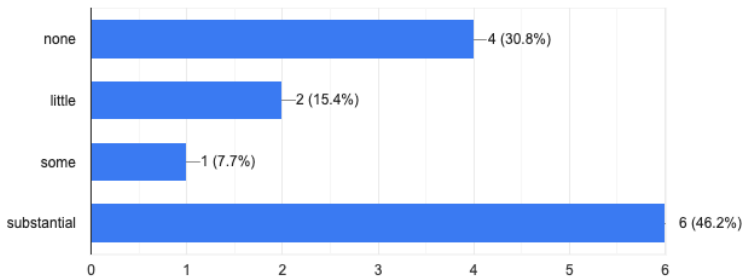
## How much experience do you have writing code?

13 responses



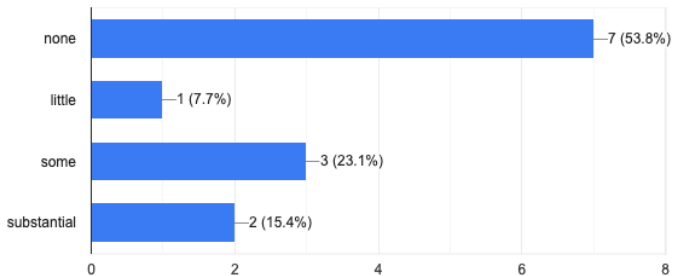
## How much experience do you have with R?

13 responses



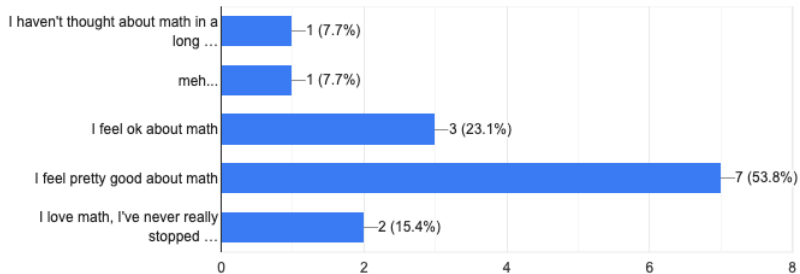
## How much experience do you have with RMarkdown?

13 responses



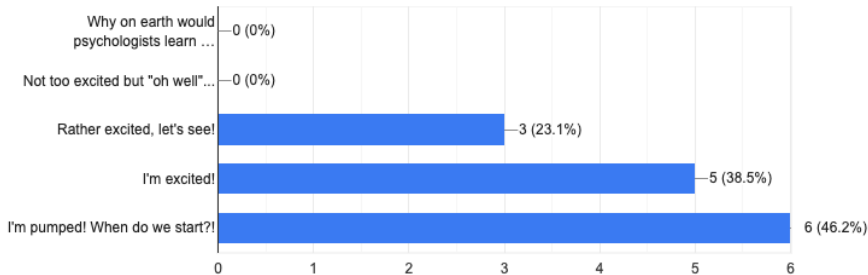
## How do you feel about math?

13 responses



## How do you feel about learning statistical methods?

13 responses



# What types of methods are you planning to use in your research? (PART I)

- linear regression
- t-test & ANOVAs
- multilevel / hierarchical models
- experiments
- quasi experiments

## What types of methods are you planning to use in your research? (PART II)

- text analysis
- network analysis
- computational modeling
- gaussian mixture modeling
- network analysis
- bayesian methods

**Questions? Comments?**



# Logistics

- Lectures
  - Mondays and Wednesdays 10-11.20 am

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- Office hours: Tuesday 9-10.30am (OK?) or by appointment
  - Please email me

# Objectives

# Build foundational knowledge, skills, and intuitions

- Statistical concepts
- Computational tools
- Mathematics

# Foundational knowledge

# Foundational knowledge

- Assignment 1:
  - In which domains of life have you acquired some foundational knowledge?
  - When is foundational knowledge useful? Why spend time learning the foundations of a discipline or activity?
  - When is it less relevant?

# Analyze data

- Experimental, quasi-experimental, (maybe) observational data
- Simple and Multiple Linear Regression
- Multilevel modeling



# A meaningful experience

- Diversity of backgrounds
- Diversity of interests
- Diversity of objectives

# Books

- Gomila, R. (2020). *Foundations of Psychological Methods*.
  - Working on it.
  - Link: <https://foundations-psychological-methods.netlify.app/>
  - Relevant chapter available every Wednesday after lecture
  
- Additional resources

# Assignments

- Problem Sets
  - Assigned on Wednesday
  - Due on the following Wednesday
- Pre-registration project
- Final exam
  - Take home

# Questions?

# Online platforms

- Course website
- Canvas

# Zoom features

- Raising hand
- Whiteboard

# Course outline

Let's take a look at the syllabus