



# Research Methods in Psychology

## Lab 1. “Are You A Graduate Student?” Coming Up With Research Ideas

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# Who am I?

## Background/Interests in

- Methodology and Statistics
- Psychology
- Bayesian Inference



## Trivia

- Traveled to 26 countries
- Served in the Air Force
- Fan of musicals & Marvel Studios
- Pineapples do not go on pizza





# What are we going to do?

Intro to lab sessions

Coming up with research ideas (Assignment 1)



# Intro to lab sessions

## Purpose

To give you tools to complete weekly assignments

These piecewise all work together to create your final proposal

## What can you expect?

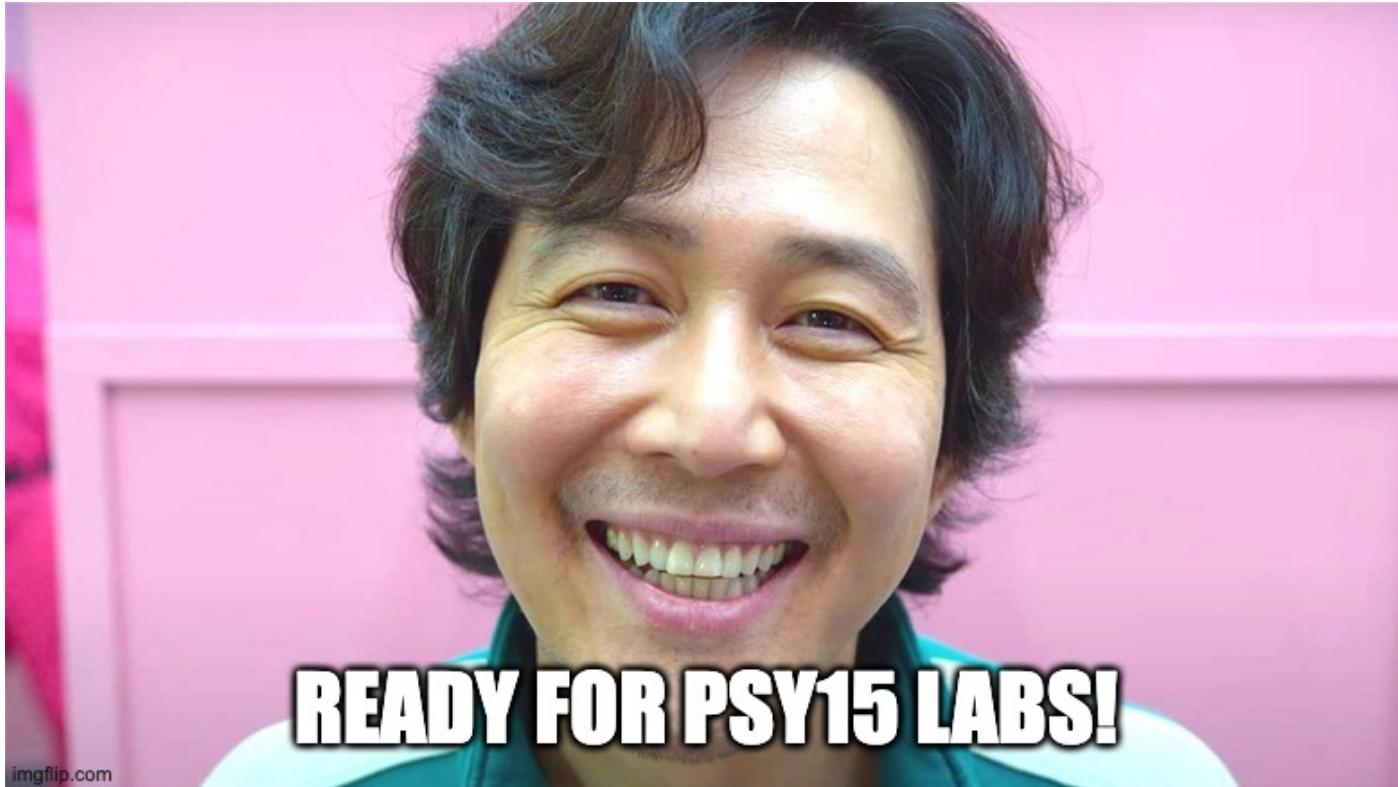
Short lab sessions (about 20 minutes or less)

Advice on successfully completing the weekly assignments



# Intro to lab sessions

Are you ready?





# Coming up with research ideas

## A big picture about psychology and research question

What is psychology? (PSY001)

- Scientific study on how people think, feel, and behave
- Research questions across various subdisciplines

How do we study research questions in psychology? (PSY010 and PSY015)

- Statistical methods
- Variables and relationships between them



# Coming up with research ideas

## Example 1

Are you a graduate student?

Is this a strong and workable psychological research question?

Not about how people think, feel, and behave

Not concerned with relationships between variables

A better version would be "Is being a state of graduate students associated with psychological well-being?"



# Coming up with research ideas

## Example 2

Do therapies work?

Is this a strong and workable psychological research question?

Too broad... Which therapies? What do you mean by 'work'?

A better version would be "Does going through cognitive-behavioral therapy sessions increase self-esteem?"



# Coming up with research ideas

## Example 3

What is the impact of extreme temperatures and material density on the room-temperature superconductor?

Is this a strong and workable psychological research question?

Is not psychological in nature...

Is not workable with methods and statistics that psychologists typically use



# Coming up with research ideas

## Tips on coming up with research ideas

Start from psychological phenomena you are interested in  
(social, cognitive, health, educational, developmental, cultural, clinical, quantitative, etc.)

Which specific thoughts, behaviors, or feelings do you want to focus on?

Identify specific and measurable (either directly or indirectly) variables and think about relationships between them

What are the independent variable (IV) and the dependent variable (DV)?

IV (aka. predictor): A variable researchers manipulate/change; assumed to affect the DV

DV (aka. outcome): A variable being tested and measured; dependent on the IV



# Coming up with research ideas

## An example from Steinmetz et al. (2016)

Start from psychological phenomena you are interested in  
I am interested in human behavior within the social context (i.e., social psychology)

Which specific thoughts, behaviors, or feelings do you want to focus on?  
social cognition, presence of others, self-perception

Identify specific and measurable variables and think about relationships between them  
Being observed or not, eating behavior, and maybe the relationship between these two?

What are the independent variable and the dependent variable?  
IV: being observed or not; DV: eating behavior



# Coming up with research ideas

## Other examples?

Does taking daily nature walks improve high school students' academic achievement?  
IV: exposure group (those who talk in nature vs. control); DV: academic performance

Can exposure to bright colors affect blood pressure in healthy adults?  
IV: exposure to bright colors or not; DV: blood pressure

Are K-pop tastes related to introversion or extroversion in young adults?  
IV: favorite type of K-pop; DV: level of introversion or extroversion



# Coming up with research ideas

## Assignment 1 rubrics

Should be something academically interesting (i.e., new contribution, different perspective)

Should be psychological, clear, workable, and something about relationships between variables

Should identify the independent variable and the dependent variable

Should be **three research ideas** and **choose one out of three you want to work with!**



# Coming up with research ideas

## Assignment 1 formats

Type this assignment and include your name and student ID

PDF format only

## Assignment 1 deadline

Due at 9 am on September 6

No late work will be accepted except for extreme or emergent circumstances



# Before you go home...

Give instructions!

Any questions or comments?



# Thanks! Have a good one!





# References

Steinmetz, J., Xu, Q., Fishbach, A., & Zhang, Y. (2016). Being observed magnifies action. *Journal of Personality and Social Psychology*, 111(6), 852–865. <https://doi.org/10.1037/pspi0000065>