

Psych 2030  
Fundamentals of Psychology

Michael Joseph Ellis

8-22-24

# CONTENTS

## CHAPTER 1

### EXAM 1 CONTENT \_\_\_\_\_ PAGE 2

- 1.1 Problem 2

## CHAPTER 2

### EXAM 2 CONTENT \_\_\_\_\_ PAGE 3

- 2.1 Review Day 3
  - 2.1.1 Topics — 3

## CHAPTER 3

### EXAM 3 CONTENT \_\_\_\_\_ PAGE 6

- 3.1 10-24-24 6
  - 3.1.1 Topics — 6
- 3.2 10-29-24 7
  - 3.2.1 Progression through Undergraduate Degree — 7
- 3.3 10-31-24 7
  - 3.3.1 Working on Career Plans — 7
- 3.4 11-7-24 7
  - 3.4.1 Graduate School Presentation — 7
  - 3.4.2 Notes — 7
- 3.5 11-14-25 8
  - 3.5.1 Competencies From Extra Curriculars and What do you want to do at work? — 8

## CHAPTER 4

### FINAL EXAM \_\_\_\_\_ PAGE 10

- 4.1 Topics 10
  - 4.1.1 The Science Cycle — 10
- 4.2 More Topics 11

## CHAPTER 5

### REFERENCES \_\_\_\_\_ PAGE 12

# **Chapter 1**

## **Exam 1 Content**

### **1.1 Problem**

# Chapter 2

## Exam 2 Content

### 2.1 Review Day

#### 2.1.1 Topics

##### Reliability and Validity

(NOTE: Some more written notes in journal [at 9-19-24])

- Reliability = Repeatable measures.
  - Ex. Test-Retest Reliability (This only applies to things that should be stable; nothing that is fluctuating.)
  - Ex. Interrater Reliability (Reliability over people, not the measure of people but the people doing the measures.)
  - Ex. Internal Consistency (This happens when all the items are from the same category. Otherwise, It would be an unfair test.)
- Validity = Complex reality vs interpretation. (Is it what it says it is?)
  - Ex. Face Validity - Does it look right? Important when people need to accept your measures. (Flawed)
  - Ex. Content Validity (Asking experts how valuable the content is.)
  - Ex. Criterion Validity (How useful is the measure. How does it predict something that it should predict. i.e., how well does your SAT score predict how well you will do in college?)
  - Ex. Convergent and Discriminant Validity (Your measure correlates with things it should correlate with and does not correlate with things that it shouldn't.)
- Note: You can't measure everything → sample of items
- Note: Reliability is necessary, but not sufficient, for validity.
- Face validity and content validity are based on people's judgment.

##### Popular Press vs. Scholarly Writing

(NOTE - Some more written notes in journal [at 9-24-24])

- Goals -
  - Clicks Likes, readers vs. explain theory testing (what's going on)
  - News
  - Standards of evidence are different.
  - Quotes in the news vs. quotes in scholarly articles.
  - An angle or hook vs. theory evaluation.
  - Bad Science Reporting

- Key points vs. Complexity
- Editorial vs. Peer Review
- Reading and Evaluating Peer-Reviewed Empirical Articles
- The format/structure of both is almost the same.
  - \* Abstract - Tells what we did, why we did it, what we found and what it means.
  - \* (Introduction) Hypothesis - Merging the theory and constructs with how they're defined.
  - \* Methods - Participants, Materials (or measures). Finally, the procedure (very narrow section).
  - \* Results - The findings.
  - \* Discussion - In the first few paragraphs, the researcher will recap the results section and discuss how the findings support or don't support the theory. Finally, it gives a broader picture and limitations. Also, state how more research is needed or future work.

### **How to find these things?**

- PsycINFO - Advanced Search (KW = Keywords (Constructs that are in the paper); use check-boxes for "peer-reviewed" and "empirical study."
- Google Scholar (Do not pay for articles - find them from the CU library).

### **How to not write like a student**

- Don't organize by paper; organize by ideas!
- Find "citable bricks" in the description of hypothesis, study, and findings (direct observations reported)

### **Statistics (and research design)**

- Type of Data: Qualitative Data and Quantitative Data
- Quantitative Data
  - Write the definition here
- Qualitative Data
  - Write the definition here
- Types of Design: Correlational, Experimental, Quasi-Experimental.
- Correlational
  - Write the definition here
- Experimental
  - Write the definition here
- Quasi-Experimental
  - Write the definition here

### **Hypothesis Testing vs Research Questions**

- Null Hypothesis
- Effect Size
- Reliability (of studies): Replication (how repeatable findings are).
- Validity (of studies): Internal vs. External Validity.

### **Careers with a Bachelor's Degree in Psychology**

- Most Psych majors (over half) don't go on to graduate school.
- What careers can you have with a BA or BS?
  - Social Services
  - Human Resources
  - Data Analysis and Interpretation
  - Sales
  - Education
  - Writing

### **Other**

- Look at graduate school notes.

# Chapter 3

## Exam 3 Content

### 3.1 10-24-24

#### 3.1.1 Topics

##### Ed Diener

A happiness expert using framing.

- Know what kinds of things that made people happy

##### Can vs. Should

- Consideration 1: Time in major.
- Consideration 2: Enjoyment of the KSAs of the Major
  - End User Information
  - Major level KSAs
  - Empathy
  - Objectivity
  - Tolerance for Ambiguity
    - \* Error is everywhere for most people most of the time.
  - Comfort with Multiple Levels of Analysis
  - Liking to Learn
  - Precise Language
  - Statistics and Numbers
- Consideration 3a: Career Prospects
  - Graduate school?
  - Major +
- Consideration 3b: Day-to-Day Career Considerations
  - Pay (Individual question)
  - Hours. Also how are they arranged and how much freedom do you have over it?
  - Duties and Responsibilities
  - Other working conditions

## **Suggestions**

- Suggestion 1: Time Perspective
- Suggestion 2: Authenticity & Courageous
- Suggestion 3: Be Good to the Future You
- Suggestion 4: Be Open to Change
- Suggestion 5: Time-Related Biases.
  - Affective Forecasting
  - Hindsight Bias
- Suggestion 6: Keep Notes

## **Questions for Consideration**

### **Question 3.1.1: For Consideration 1**

Do you have the time to complete the major? (Do you want to take that long?)

### **Question 3.1.2: For Consideration 2**

Can you think like a psychology major? Do you enjoy thinking that way?

### **Question 3.1.3: For Consideration 3a**

Are you willing and able to do the work needed for a career as a psychology major? Would you enjoy it?

### **Question 3.1.4: For Consideration 3b**

Can you do the day-to-day work in that career? Would you want to?

## **3.2 10-29-24**

### **3.2.1 Progression through Undergraduate Degree**

## **3.3 10-31-24**

### **3.3.1 Working on Career Plans**

## **3.4 11-7-24**

### **3.4.1 Graduate School Presentation**

### **3.4.2 Notes**

All of the programs presented contain research methods. All of the other programs within psychology will contain research methods; they share a common feature: looking at analyzing behavior at the level of the individual.



## KSAs, Competencies, and You!

### KSA's:

- K = Knowledge. What body of information will help you do a particular kind of job or get you into a particular grad program? i.e., basic knowledge in statistics, psychology in health, or other areas of psychology.
- S = Skills. Ways you learn to handle or manipulate things, learnable things, or how to do things.
- A = Abilities. Some basic thing about you that makes something easier for you. i.e., good at thinking numerically.

### Competencies = Ks + Ss + As

Can you explain what you need to know for a job and how you need to know how to do that?

- Overt Competencies.
  - Particularly true when you are thinking about planning your coursework.
  - Course Objectives and learning outcomes.
- Covert Competencies.
  - Think about how you learn about how you've learned the overt competencies!
  - These are critical thinking and problem-solving, oral and written communication, teamwork and collaboration, digital technology, leadership, professional/work ethics, career management, and global and intercultural fluency.
- Titles of Courses? → What you are learning and what you want to learn.
- Places to look: Course Catalog, Syllabus Repository.

### Competencies for Psych majors

- Knowledge base in psychology.
- Scientific inquiry and critical thinking.
- Ethical and social responsibility in a diverse world.
- Communication.
- Professional Development

## 3.5 11-14-25

### 3.5.1 Competencies From Extra Curriculars and What do you want to do at work?

#### Definition 3.5.1: Extracurricular

Any activity that is not required for school and is not graded

#### Example 3.5.1 (Extracurriculars)

- Jobs
- Volunteer Work
- Clubs
- Anything at Tiger Prowl
- Community Groups
- Internships

- Study Abroad
- Other!

#### Question 3.5.1: Random

What do you want to do at work?

**Example 3.5.2** (O\*Net - Where to find what to do.)

- Tasks Tech Skills
- Work Activities
- Work Context

# Chapter 4

## Final Exam

### 4.1 Topics

Consilience is a stretched out Biopsychosocial model

Psychology: The scientific study of people and other animals (beings?) at the individual level.

History of Psychology: Not no final

fundamental processes : Why do these things happen? Is what we are interested in.

- Psych classes like sensation perception etc.

We are also interested in applications to various settings. How we can make peoples lives better or change something somehow. Or applying something to something specific.

- Abnormal psych
- IO psych
- Human factors psychology

#### 4.1.1 The Science Cycle

Theory which is the relationship between two constructs.

This then goes into operational definition of constructs. This includes making a hypothesis which is making a relationship with two or more operational definitions.

This then goes into making observations

Then this goes into results and then back into theory.

Exam will question theory, construct, and measure.

#### **Manipulation:**

How can we change the amount of ?

#### **Measurement:**

How do we know if there is more or less of ?

Note: both measures and manipulations of a construct are operational definitions.

Theory → Hypothesis (operational definition 1 and operational definition 2 ) → Observations → Results → data analysis (sees how the data relates to the theory) → theory

Note: the two primary ways we can analyze data are with null hypothesis testing and effect size.

Observed score = true score + error

How much of this scores operational definition reflects the construct. If a measures score is not good, then it must have a lot of error and its validity is not great.

Reliability and validity in measurement of individuals.

Reliability - can you do it over again and get the same answer? Over time, over observers, and over items (interested in)

Test - retest reliability

Interrater reliability (over observers i.e., if a teacher graded something and a TA graded it too and you get the same grade)

Internal consistency (over items are the items all corollary to one another)

Validity? = is it what it says it is? How much does the measure relate to the actual construct?

Face validity (not a good argument in actual validity)

Content validity = if experts agree that you have covered the major basis

Criterion validity = How much does a thing report how good it is via testing

Convergent and discriminant validity = how much it correlates how much it doesn't.

Reliability is necessary, but not sufficient for validity.

Construct validity = does the operational definition measure the construct?

Popular press vs scholarly writing differ by goals, evidence, use of quotes, type of review.

editorial review vs peer reviewer

Citable bricks

- Abstract
- Introduction
- Results
- Discussion
- types of data:
  - Life data
  - Observers - Interrater reliability. Two types of observers: People that are experts in the person, and people who are experts in whatever that construct is
  - Test data - super standardized and reliable
  - self report - survey data on what the person says they are
- types of design:
- Hypothesis testing
  - Null hypothesis
  - Effect size
  - Reliability of studies
  - validity of studies

## 4.2 More Topics

Note: Cumulative final exam: Wed, 12/11 8 - 10:30 am fifty multiple choice questions.

Correlational design - both operational definitions are just measured and not manipulated.

Experimental design - one operational definition is manipulated and the other is measured.

Theory and hypothesis are covered by the intro. Hypothesis then to observations are covered by the methods. Observations and then to data analyzing are covered by results. Data analyzing to theory are covered by the discussion.

## Chapter 5

# References

This is a reference to a source [?].

# Bibliography