

QUANTITATIVE RESEARCH METHODS

Course Syllabus Fall 2009

Professor: Deidre Anglin, PhD

Office Hours in My Office Room 8/125: By appointment

Course Description

This course is designed to introduce graduate students in clinical psychology to an overview of clinically relevant behavioral research methods in psychology. Research designs covered range in scope from experimental designs common in social psychology to individual N-of-1 case study designs. The benefits and limitations of each design will be discussed and real examples will be used to illustrate these benefits and limitations. Students will gain experience developing their own research ideas (possibly in preparation for the dissertation), learning how to empirically test these ideas, learning how to develop various research designs, and evaluating which research designs would be appropriate to test various areas of inquiry. The course will cover appropriate ways to operationalize constructs and reliability and validity of measurement, understanding confounding, and testing interactions through factorial research designs. Students' understanding of these topics will be demonstrated through their ability to critique and evaluate the methods of written empirical articles and orally presented research presentations.

The structure of most classes will consist of a didactic lecture that incorporates class discussion using real studies of interest recommended by the instructor and based on the interests of class members. Students also will have ample opportunity to explore their thoughts about various research interests through bi-weekly journal entries. These entries are designed to help students begin honing specific research questions or hypotheses and developing a written research proposal. Upon successful completion of this course, students will know how to construct a scientific research report in the style sanctioned by the publication manual of the American Psychological Association (APA) (5th edition).

Course Objectives

- (1) To progress from a general research area of interest to a well-defined research question or hypothesis.
- (2) To formulate questions and hypotheses about constructs and be able to operationalize these constructs.
- (3) To evaluate the appropriateness of various behavioral research designs for different areas of inquiry.
- (4) To evaluate and critique hypotheses, research designs, research findings, and the theoretical implications of such findings in empirical studies presented in both written format and oral presentation.
- (5) To synthesize theoretical and empirical literature into a well-written literature review for a research proposal.

- (6) To understand how to conduct research in an ethical manner.
- (7) To develop a research proposal from which to possibly build upon in the dissertation.

Required Books:

Kazdin, A. E. (Ed.). (2003). *Methodological issues and strategies in clinical research* (3rd ed.). Washington, D.C.: American Psychological Association.

Rosenthal, R. & Rosnow, R. L. (2008). *Essentials of Behavioral Research: Methods and data analysis*. (3rd Edition). McGraw-Hill Humanities/Social Sciences/Languages.

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: Author.

Recommended Books:

Pyrzczak, F. & Bruce, R. P. (2007). *Writing empirical research reports: A basic guide for students of the social and behavioral sciences* (6th Ed.) Publisher: Pyrczak Publishing. ISBN: 1-884585-75-2

Class Assignment and Assessment

Midterm.....20%

This will entail a short answer exam to demonstrate students understand the didactic content covered in the course.

Final.....30%

An in-class critique of a research article that will be read during the class time of the final.

Research Proposal (APA Format).....40%

This **25-page research** proposal will be based on a research idea developed during the course of this class. The proposal will include a detailed literature review, description of the proposed research methods, a discussion of the limitations of such methods, and references. Further details about the proposal will be discussed in class. ****Students are required to adhere to the latest APA Guidelines** for all written assignments.**

Journal Entries and Participation.....10%

Grading System

The grading scheme below will be used in assigning final grades. Class participation and attendance can be used to adjust final grades upward (for students who attend class regularly and participate frequently), or downward (for students who miss more than one class and/or do not participate).

A = 91+ (Exceptional work)

A- = 92- 90 (Great work, but not exceptional)

B+ = 89 - 87 (Good work, but not great)

B = 86 - 83 (Average work)

B- = 82-80 (Below expectation)

C+ or below = <80 (Significantly below expectation)

TENTATIVE CLASS SCHEDULE of topics and readings

The following is an outline of the order with which we will cover topics. THIS SCHEDULE IS SUBJECT TO CHANGE as a result of relevant current events or other factors. ANY CHANGES WILL BE ANNOUNCED AT THE BEGINNING OF CLASS. Some additional readings may be made available through the internet or through distribution in class.

Week 1 - Sept 2

Welcome and Course Introduction
Ascertainment of Research Interests

Week 2 - Sept 9

Why is Research Necessary?
How to Develop Ideas

Rosenthal Chap 1, 2

Kazdin Chap 1

Cohen, P. & Cohen, J. (1984). The Clinician's illusion. *Archives of General Psychiatry*, 41, 1178-1182

Week 3 - Sept 16

Operationalizing Constructs: Reliability and Validity of Measurement

Rosenthal Chap 4, 6

Kazdin Chap 11, 12

Week 4 – Sept 23

Experimental Research Designs and Internal Validity

Rosenthal Chap 7

Kazdin Chap 23

Anglin D. M., Link BG, Phelan JC (2006). Racial Differences in Stigmatizing Attitudes about People with Mental Illness: Extending the Literature. *Psychiatric Services*. 57, 857-862.

Week 5 - Sept 30

Quasi-Experimental Designs and Correlational Research

Rosenthal Chap 8

Anglin D. M., Wade JC: (2007). The Effects of Racial Socialization and Racial Identity on Black Students' Adjustment to College. *Cultural Diversity and Ethnic Minority Psychology*, 13, 207-215.

Week 6 - Oct 7

Single Participant and Repeated Measures Clinical Research

Kazdin 27, 28, 29

Rosenthal Chap 18

Week 7 - Oct 14

~~·EVEN THOUGH IT'S A MONDAY SCHEDULE~~

~~THERE WILL BE CLASS·~~

Psychotherapy Research Designs (RCT, Case Control Studies)

Kazdin Chap 22, 24

~~·MIDTERM REVIEW·~~

Week 8 - Oct 21

~~·MIDTERM·~~

Week 9 - Oct 28

Preparing and Evaluating Research Reports

Kazdin Chap 37

Pyrczak & Bruce, readings TBA

Week 10 - Nov 4

Sampling and Power

Kazdin Chap 18
Rosenthal Chap 9, 12
Week 11 - Nov 11
Interactions and Factorial Designs

Kazdin Chap 4
Rosenthal Chap 16, 17

Week 12 - Nov 18
Developing Research Questionnaires
Rosenthal Chap 6

Week 13 - Nov 25
~SWITCH THE MONDAY SCHEDULE FOR THIS CLASS~
~NO CLASS~

Week 14 - Dec 2
Feasibility and Choosing the Best Research Design

Lecture Discussion

Week 15 - Dec 9
~LAST DAY OF CLASS~
~FINAL EXAM REVIEW~
Research With Underrepresented and Vulnerable Populations

Kazdin Chap 9, 10, 14

Week 16 - Dec 16
~FINAL EXAM~