

PSYCHOLOGY 6670: RESEARCH DESIGN IN CLINICAL PSYCHOLOGY

Spring 2007
Tuesday/Thursday, 8:00-9:15am
Room 507A, Psychology Building

Instructor: Josh Miller, Ph.D.
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Office Hours by Appointment

Course Description

The purpose of this course is to provide an in-depth introduction to the fundamentals of research methods and design. Readings and in-class discussions will focus on theoretical and practical issues involved in the conception, implementation, and evaluation of empirical research in psychology. A secondary goal of the course is to facilitate exchange of methods, interests, and theories between students. The final goal is the development of a sound, research proposal that will serve as the foundation for the master's thesis.

The content of the course ranges widely. The course begins with a discussion of the scientific approach and its applicability to the science of psychology. From there, the course moves into a discussion of the philosophy of science, the role of theory, and hypothesis testing. Only after these philosophical and theoretical fundamentals are firmly in hand will the course move to methodological issues. The course will cover issues in sampling (e.g., randomization and size), measurement (e.g., reliability and validity), and design (e.g., control). The course will examine correlational (nonexperimental) research as well as experimental and quasi-experimental approaches. Because design and analysis are closely connected, the course will also cover several analytic techniques (e.g., structural equation modeling).

The process of the course will be one of mediated discussion. The instructor will occasionally lecture for some (relatively short) portion of the class, preferring to answer questions and provide clarification as the need arises. The primary vehicle of learning, however, is expected to be student reading, discussion, and interaction. Students will learn more from the readings than they will from any lecture. This process requires active participation and adequate preparation of each and every member of the class. To help ensure this participation, students will be assigned responsibility for articles; this responsibility involves generating discussion points and questions on the assigned topics.

Course Requirements

The requirements for the class are straightforward: regular attendance and participation in class (notice that participation requires preparation), the submission of one reaction paper per week, good performance on two exams, and completion of a research proposal. Student's performance on each will determine their grade for the course.

1. Participation (20%): Attendance at all class meetings is required. Regular and significant contributions to class discussion are expected (and should be based on the readings). This responsibility involves preparation and generation of discussion points and questions of clarification.

2. Research Critiques (10%): Students will be responsible for finding two empirical articles in clinical psychology and writing detailed critiques that include the strengths and weaknesses of the manuscript. Students will be provided with several examples of these critiques written by UGA faculty members. Students will present these articles and their critiques twice in class.

3. Research proposal – I (20%): You will turn in a polished, “publication ready” draft of your first year research project; this means a Title page, Abstract, Introduction and Method section.

4. Research proposal – II (30%): The primary product of this course will be a research proposal that will, for most students, serve as an incomplete draft of the thesis proposal. The minimally acceptable proposal will include an introduction (6-8 double-spaced pages), a detailed methods section, and a well-conceived plan for data analysis (including a power analysis). All sections must conform to APA standards. A preliminary draft of the proposal is due no later than

5. Research presentation (20%): The research proposal will be presented to the class in a formal manner, using a Power Point presentation, during the last week of the semester. Presentations (10-15 minutes) should coherently and succinctly provide the theoretical rationale for your project, a detailed description of your design and methodology, and your anticipated findings.

Academic Honesty: All academic work must meet the standards contained in “A Culture of Honesty.” Students are responsible for informing themselves about those standards before performing any academic work. More detailed information about academic honesty can be found at <http://www.uga.edu/ovpi/honesty/acadhon.htm>.

REQUIRED TEXT:

Kazdin, A. E. (2003). *Research design in clinical psychology*. Boston, MA: Allyn & Bacon.
Kazdin, A.E. (2003). *Methodological Issues and Strategies in Clinical Psychology*, 3rd ed. Washington D.C.: American Psychological Association

January 8

Introduction

January 10

Thinking about psychology

Sternberg, R.J. & Grigorenko, E.L. (2001). Unified psychology. *American Psychologist*, 56, 1069-1079.
(Kazdin, edited: 2)

Pedhazur, E. J. & Schmelkin, L. P. (1991). Ch. 9. *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum Associates.

Kazdin, Ch.1: Introduction

January 15

Philosophy of Science and Science of Psychology

Meehl, P.E. (1978). Theoretical risks and tabular asterisks: Sir Karl, Sir Ronald, and the slow progress of soft psychology. *Journal of Consulting and Clinical Psychology*, 46, 806-834.

Serlin, R.C., & Lapsley, D.K. (1985). Rationality in psychological research: The good-enough principle. *American Psychologist*, 40, 73-83.

Dar, R. (1987). Another look at Meehl, Lakatos, and the scientific practices of psychologists. *American Psychologist*, 42, 145-151.

January 17

Philosophy of Science and Science of Psychology

Kerr, N. (1998). HARKing: Hypothesizing after the results are known. *Personality and Social Psychology Review*, 2, 196-217.

Wampold, B.E., Davis, B., & Good, R.H. (1990). Hypothesis validity of clinical research. *Journal of Consulting and Clinical Psychology*, 58, 360-367.

Greenwald, A. (1975). Consequences of prejudice against the null hypothesis. *Psychological Bulletin*, 82, 1-20.

January 22

Developing ideas

- Wicker, A.W. (1985). Getting out of our conceptual ruts: Strategies for expanding conceptual frameworks. *American Psychologist*, 40, 1094-1103.
(Kazdin, edited: 3)
- Kazdin, Ch. 5: Selection of the research problem and design.
- McGuire, W.J. (1997). Creative hypothesis generating in psychology: Some useful heuristics. *Annual Review of Psychology*, 48, 1-30.

January 24

Writing

- Kazdin, Ch. 18: Publication and communication of research findings.
- Roediger, H.L. (2005, June). The greatest literature never published. *APS Observer*.
- Bem, D. J. (2004). Writing the empirical journal article. In & J.M. Darley, M.P. Zanna & Roediger, H.L (Eds.), *The Compleat Academic: A Career Guide* (2nd ed.). Washington D.C.: APA

January 29

Writing

- Steinberg, J. (2004). Obtaining a research grant: The granting agency's view. In & J.M. Darley, M.P. Zanna & Roediger, H.L (Eds.), *The Compleat Academic: A Career Guide* (2nd ed.). Washington D.C.: APA
- Sternberg, R. J. (2004). Obtaining a research grant: The applicant's view. In & J.M. Darley, M.P. Zanna & Roediger, H.L (Eds.), *The Compleat Academic: A Career Guide* (2nd ed.). Washington D.C.: APA
- Bem, D.J. (2003). Writing a review article for *Psychological Bulletin*. In A. E. Kazdin (Ed.), *Methodological Issues and Strategies in Clinical Research* (3rd ed.). Washington D.C.: APA
(Kazdin, edited: 38)

January 31

Reviewing

Read faculty manuscript reviews

February 5

Ethics

- Fine, M.A. & Kurdek. L.A. (1993). Reflections on determining authorship credit and authorship order on faculty-student collaborations. *American Psychologist*, 48, 1141-1147. (Kazdin, edited: 35)
- Bersoff, D. M., & Bersoff, D. N (1999). Ethical perspectives in clinical research. In P.C. Kendall, J. N. Butcher, & Grayson H. Holmbeck (Eds.), *Handbook of research methods in clinical psychology* (2nd ed.). Wiley & Sons.
- APA 2002 ethical code: <http://www.apa.org/ethics/homepage.html>
- Read the General Principles and section 8 about research and publication ethics.

February 7

Introduction to Methods

- Kazdin, A. E. (1999). Overview of research design issues in clinical psychology. In P.C. Kendall, J. N. Butcher, & Grayson H. Holmbeck (Eds.), *Handbook of research methods in clinical psychology* (2nd ed.). Wiley & Sons.
- Pedhazur, E. J. & Schmelkin, L. P. (1991). Chapter 10. *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum Associates.

February 12

Validity

- Kazdin, Ch. 2: Drawing valid inferences I: Internal and external validity.

March 11 Spring Break

March 13 Spring Break

March 18 Measurement

Pedhazur, E. J. & Schmelkin, L. P. (1991). Chapter 6. *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum Associates.

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54, 93-105.

March 20 Reviewing critiques and presentations #2

March 25 Power (1st draft of thesis proposal due)

Bloom, H.S. (1995). Minimum detectable effects: A simple way to report the statistical power of experimental designs. *Evaluation Review*, 10, 547-556.

Cohen, J. (1983). The cost of dichotomization. *Applied Psychological Measurement*, 7, 249-253.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159. (Kazdin, edited: 18)

Prentice, D.A., & Miller, D.T. (1992). When small effects are impressive. *Psychological Bulletin*, 112, 160-164. (Kazdin, edited: 6)

March 27 Experimental methods and design

Hsu, L.M. (1989). Random sampling, randomization, and equivalence of contrasted groups in psychotherapy outcome research. *Journal of Consulting and Clinical Psychology*, 57, 131-137. (Kazdin, edited: 7)

Kazdin, Ch. 6: Experimental research: Group designs.

April 1 Experimental methods and design

Kazdin, Ch. 7: Control and comparison groups.

Kazdin, Ch. 8: Assessing the impact of the experimental manipulation

Whitley, B. E. (2002). Chapter 7. *Principles of research in behavioral science* (2nd ed.). Boston, MA: McGraw Hill

April 3 Quasi-experimental/Nonexperimental

Leary, Ch. 12: Quasi-experimental designs

Kazdin, Ch. 10: The case study and single-case research designs.

Correlational

April 8

Pedhazur, E. J. & Schmelkin, L. P. (1991). Chapter 14. *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum Associates.

Whitley, B. E. (2002). Chapter 8. *Principles of research in behavioral science* (2nd ed.). Boston, MA: McGraw Hill

April 10 Approaches to data analysis

Allison, P. D. (1999). Chapters 1- 3. *Multiple Regression: A primer*. Thousand Oaks, CA: Pine Forge Press.

- Rosnow, R.L., & Rosenthal, R. (1989). Statistical procedures and the justification of knowledge in psychological science. *American Psychologist*, *44*, 1276-1284.
- Hendrick, C. (1990). Replications, strict replications, and conceptual replications: Are they important? *Journal Social Behavior and Personality*, *5*, 41-49.

April 15 Mediation/moderation

- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *5*, 1173-1182.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, *65*, 599-610. (Kazdin, edited: 4)
- MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding, and suppression effect. *Prevention Science*, *1*, 173-181.

April 17 Meta-analysis/CFA

- Rosenthal, R. (1995). Writing meta-analytic reviews. *Psychological Bulletin*, *118*, 183-192.
- Rosenthal, R., & DiMatteo, M. R. (2001). Meta-analysis: Recent developments in quantitative methods for literature review. *Annual Review of Psychology*, *52*, 59-82.
- Hoyle, R. H. & Smith, G. T. (1994). Formulating clinical research hypotheses as structural equation models: A conceptual overview. *Journal of Consulting and Clinical Psychology*, *62*, 429-440.
- Cole, D. A. (2004). Taxometrics in psychopathology research: An introduction to some of the procedures and related methodological issues. *Journal of Abnormal Psychology*, *113*, 3-9.

April 22 Public Perceptions

- Readings from June 2006 *APS Observer*, How the golden fleece tarnished psychological science.
- Stanovich, K. (2004). The Rodney Dangerfield of the sciences. In *How to Think Straight About Psychology*.
- Lilienfeld, S. O. (2002). When worlds collide. Social science, politics and the Rind et al. (1998) child sexual abuse meta-analysis. *American Psychologist*, *57*, 176-188.
- Lilienfeld, S. O. (2002). A funny thing happened on the way to my *American Psychologist* publication. *American Psychologist*, *57*, 225-227.
- Whitley, B. E. (2002). Chapter 18. Principles of research in behavioral science (2nd ed.). Boston, MA: McGraw Hill

April 24 Presentations (**Proposals due**)