

**Clinical Research Methods
Spring 2008 (PSYC 6/71685)**

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Course Description

This course will provide a review of issues in measurement, design, and analysis pertinent to research in clinical psychology. The primary goals of the course are 1) to improve your critical acumen in consuming research performed by others and 2) to assist you in formulating, developing, and bringing to fruition your own research ideas. Topics will include methodological issues in 1) measurement and psychological assessment, 2) evaluation of psychological intervention, and 3) testing models of psychological dysfunction.

Readings

Required:

P.C. Kendall, J.N. Butcher, and G.H. Holmbeck (Eds.). (1999). *Handbook of Research Methods in Clinical Psychology* (2nd edition). New York: Wiley. [KBH]

Suggested:

Cohen, P, Cohen, J., West, S. G., & Aiken, L. S. (2002). *Applied Multiple Regression: Correlation Analysis for the Behavioral Science* (4th Edition). Mahwah, NJ: Lawrence Erlbaum Associates, ISBN: 0805822232.

R. Rosenthal & R. L. Rosnow (2007). *Essentials of Behavioral Research: Methods & Data Analysis* (3rd edition) New York: McGraw-Hill, ISBN: 0073531960 [EBR]

Course Format

The course will be taught in three segments. The first segment will consist of presentations describing basic issues in clinical research (e.g., philosophy of science, forms of clinical inquiry, sampling and measurement, threats to methodological rigor, ethics). The format for this segment of class will consist of lectures as well as class exercises, and student participation is strongly encouraged.

Meta-analysis Assignments

In the February 27th class period, students will be given a lecture and discussion on the theory and implementation of meta-analysis. Readings will be assigned to complement the material presented in class. There will be two graded assignments based on meta-analysis. The first assignment will consist of material provided by me and your job will be to derive an effect size for that study. Thus the nature of the assignment will be mostly computational and all students will receive the same problems to solve. Please complete this assignment on your own. The second assignment will be to sketch out a small-scale meta-analysis on a literature that is relevant to your thesis. This assignment is not meant to be a full manuscript. Rather, I envision the assignment being 2-3 pages of text (at most) and perhaps 1-2 tables. I want you to briefly describe some variability in your literature and propose 2-3 potential moderators for that effect. I hope the assignment might inspire you to pursue the topic as a publishable writing assignment.

Master's Thesis Topic Presentation

Students will give brief individual presentations of their research proposals, followed by a class discussion period. Ideally, these proposals will integrate your thesis research. Feel free to exchange ideas with classmates before presenting the proposal. The in-class presentations will provide opportunities for presenters to obtain assistance on methodological, logistical, and statistical questions, and for classmates to develop skills in the constructive evaluation of research. Presenters should be open about their concerns, hesitations, and the possible limitations of their research, and classmates should be forward (but sensitive) in providing constructive criticism and suggestions. The discussions should be viewed as opportunities to benefit from the disparate viewpoints, strengths, and experiences that your classmates can share.

Study Section Critique

The goals of this assignment are threefold. First, it is intended to give students more exposure to the way of getting external funding for one's research and general immersion into the workings of the NIMH. Second, it represents an

opportunity for students to hone their presentation skills. Third, the assignment is an opportunity to hone one's writing skills. Each student will submit in writing, a draft of his or her thesis prospectus to me. I will then assign each thesis prospectus to two students (primary and secondary reviewers) who will then lead a NIMH study section style review of the prospectus. The author of the prospectus will be excused from class while her or his prospectus is discussed. The primary reviewer will have responsibility for introducing the prospectus to the class. The secondary reviewer will complement the review given by the primary and will also be responsible for taking any notes that are generated by the discussion. The primary reviewer will then be responsible for writing a NIMH style critique that will eventually be returned to the author of the prospectus. Each student will serve as a primary on one prospectus and a secondary on one prospectus. (Further details will be provided).

1. Four or five prospectus will be discussed each time.
2. I will do my best to make assignments of the primary and secondary reviewers so that they are fair. I would like us to keep review assignments blind.
3. The primary and secondary reviewers should have a rough draft of the written critique/summary statement done in advance of their turn to lead the discussion.
4. The final summary statement is due to me by the Friday of the week that a particular prospectus is discussed.
5. I will then distribute the final summary statement to the author of the prospectus so that the feedback can be considered

Master's Thesis Prospectus Papers

The final product of this course segment will be a written, 10-15 page proposal (double-spaced, typed, APA format), which will include a review of the background literature, methodological issues, proposed design, proposed analyses, and power analyses of the original research project. The proposal will be evaluated according to the feasibility, planning detail, choice of measures, anticipation of obstacles and findings, motivation by well-articulated theory, integration of relevant prior research, and appropriateness of the proposed analyses. The goal is to complete a proposal that will serve as the groundwork for masters thesis. In addition to the final proposal, students will be required to complete several practical assignments relevant to the proposal. These assignments will not be graded, but will be designed to facilitate progress on your proposals.

Computer/Internet

1. Many of the readings I assign outside of our text as well as copies of lecture notes are saved as Adobe Acrobat *.pdf files. The Adobe Acrobat reader is a free program that is pre-installed on most computers, but can be downloaded at the Adobe webpage.
2. Please *do not* submit any paper copies of assignments. Rather, when turning in written assignments, please send them in MS Word or .rtf format. I cannot easily read Word Perfect files. I cannot easily read MS Word for Vista (*.docx). Do not give me a floppy disk. I do not have any computers with floppy drives. Internet attachments are best. Finally, when we are working on a document together, I use the MS Word tracking and comment features to provide feedback.

Grading

Meta-analysis Quiz:	10 points
Meta-analysis Assignment based on your literature review	10 points
Written Summary Statement:	20 points
Final proposal:	40 points
*Class participation	25 points

Final grades will be assigned according to the following scale:

- A:** 87-100
- B:** 75-86
- C:** 65-74

*You're 25 participation points will be earned as follows. Thesis Prospectus Presentation (10 points), Study section presentation (10 points), General Participation (5 points).

Please note that except in the case of an emergency, no extensions will be granted for any assignments.

Course Schedule

1-16 (Wed.) Introductions

Philosophy of Science and the Scientific Method

KBH, Chapter 1

Faust, D., & Meehl, P.E. (1992). Using scientific methods to resolve questions in the history and philosophy of science: Some illustrations. *Behavior Therapy*, 23, 195-211.

1-23 (Wed.) **Validity in Inference**

Kazdin, A.E. (1999). Research Design in Clinical Psychology, Chapters 2 & 3, Needham Heights, MA: Allyn & Bacon.

Class Exercise: Identifying threats to internal validity.

Statistical methods in clinical research

KBH, Chapter 4

Cohen, J. (1990). Things I have learned (So far). *American Psychologist*, 45, 1304-1312.

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

Proposal Assignment: Review web-page exercise concerning completing a research paper. Narrow your proposal topic. Follow the link to The Research Room.

Optional Readings on Moderators & Mediators

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*, 51, 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.

Kraemer, H. C., Stice, E., Kazdin, A., Offord, D., & Kupfer, D. (2001). How Do Risk Factors Work Together? Mediators, Moderators, and Independent, Overlapping, and Proxy Risk Factors. *American Journal of Psychiatry*, 158, 848-856.

Kraemer, H. C., Wilson, T., Fairburn, C. G., & Agras, W. S. (2002). How Do Risk Factors Work Together? Mediators and Moderators of Treatment Effects in Randomized Clinical Trials. *Archives of General Psychiatry*, 59, 877-883.

1-30 (Wed.) **Measurement and psychometrics**

KBH, Chapter 6

Clark, L.A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7, 309-319.

Recommended: Haynes, S.N., Richard, D.C.S., & Kubany, E.S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment*, 7, 238-247.

Assessment

KBH, Chapters 7 & 8

Class exercise: Designing an assessment protocol.

2-6 (Wed.) Psychotherapy research I: Overview of conceptual issues, methodology and design

KBH, Chapters 14, 15, 17

Kazdin, A.E. (1999). The meanings and measurement of clinical significance. *Journal of Consulting and Clinical Psychology, 67*, 332-339.

Rounsaville, B.J., Carroll, K.M., & Onken, L.S. (2001). A stage model of behavioral therapies: Getting started and moving on from Stage 1. *Clinical Psychology: Science and Practice, 8*, 133-142.

Kazdin, A. E. (2001). Progression of therapy research and clinical application of treatment require better understanding of the change process. *Clinical Psychology: Science and Practice, 8*, 143-151.

Rounsaville, B.J., Carroll, K.M., & Onken, L.S. (2001). Methodological diversity and theory in the stage model: Reply to Kazdin. *Clinical Psychology: Science and Practice, 8*, 152-154.

Optional Readings on Empirically Supported Treatments

1) Kendall, P.C., & Chambless, D.L. (Eds.) (1998). Special issue on empirically supported psychological therapies, *Journal of Consulting and Clinical Psychology, 66*. (Kendall, pp. 3-6, Chambless & Hollon, pp. 7-18, DeRubeis & Crits-Christoph, pp. 37-52, Beutler, pp. 113-120, Persons & Silberschatz, pp. 126-135, Goldfried & Wolfe, pp. 143-150).

Ethnicity, gender, and cross-cultural issues in research

KBH, Chapter 3

Alvidrez, J., Azocar, F., & Miranda, J. (1996) Demystifying the concept of ethnicity for psychotherapy researchers, *Journal of Consulting and Clinical Psychology, 64*, 903-908.

Beutler, L. E., Brown, M. T., Crothers, L., Booker, K., & Seabrook, M. K. (1996). The dilemma of factitious demographic distinctions in psychological research, *Journal of Consulting and Clinical Psychology, 64*, 892-902.

Hohmann, A.A., & Parron, D.L. (1996). How the new NIH guidelines on inclusion of women and minorities apply: efficacy trials, effectiveness trials, and validity. *Journal of Consulting and Clinical Psychology, 64*, 851-855.

Miranda, J., Azocar, F., Organista, K.C., Muñoz, R.F., & Lieberman, A. (1996). Recruiting and retaining low-income latinos in psychotherapy research. *Journal of Consulting and Clinical Psychology, 64*, 868-874.

Thompson, E. E., Neighbors, H. W., Munday, C., & Jackson, J. S. (1996). Recruitment and retention of African-American patients for clinical research: An exploration of response rates in an urban psychiatric hospital. *Journal of Consulting and Clinical Psychology, 64*, 861-867.

Class activity: discussion regarding issues and strategies for conducting research with diverse samples.

2-13 (Wed.) Psychopathology research: Overview of conceptual issues, methodology, and design

KBH, Chapters 18 & 19

Class Exercise: Study design.

Ethical issues in clinical research

1) KBH, Chapter 2

Homework Assignment: Visit NIH website and complete online human subjects certificate class. Bring certificate to class next week. This certificate is required of any personnel on a NIH grant application.

Class exercise: Discussion of ethical dilemmas.

Proposal Assignment: Skim three recent KSU theses. Turn in reference list next Wednesday.

2-20 (Wed.) Publication and the peer review process

KBH, Chapter 5

Kazdin, A.E. (1995). Preparing and evaluating research reports. *Psychological Assessment, 7*, 228-237.

Seals, D., & Tanaka, H. (2000). Manuscript peer review: a helpful checklist for students and novice referees. *Advances in Physiology Education*, 23, 52-58.
Wilkinson, L., and the Task Force on Statistical Inference. (1999). Statistical methods in psychology journals: Guidelines and explanations. *American Psychologist*, 54, 594-604.

Choose date to present thesis research study, sign-up sheet passed out in class.

Proposal Assignment: Literature review for proposal topic. Turn in tentative bibliography (APA format)

2-27 (Wed.) Meta-analysis Class
Readings will follow

Proposal Assignment: Complete outline for background and introductory sections of proposal. Include bulleted list of tentative research question(s)/hypotheses.

3-6 (Wed.) Introduction to NIMH Grant applications

I will distribute via email a grant application that I have submitted along with the summary statement I received. We will discuss the format of the research plan, the process of submitting a NIMH grant application, what happens to the application when it is reviewed at a study section, and what one does upon receipt of the summary statement.

Proposal Assignment: Complete outline for method section. Include bulleted description of participants, measures, procedure, time-line, and analytic plan.

3-13 (Wed.) Student Presentations 1 through 3

3-20 (Wed.) No class - have a great spring break!

3-27 (Wed.) Student Presentations 4 through 7

Written article review distributed.

4-2 (Wed.) Student Presentations 8 through 11

4-9 (Wed.) Student Presentations 12 through 14

Rough drafts of prospectus due for study section assignment today.

4-16 (Wed.) Study Section Critiques 1 through 5

4-23 (Wed.) Study Section Critiques 6 through 10

4-30 (Wed.) Study Section Critiques 11 through 14

Final Papers due Friday, May 2, 5 p.m.