

CPSY 450: Research in Counseling
Fall, 2011

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Office Hours (e-mail for an appointment or stop by)
Mondays and Wednesdays 3:00 pm – 4:30 pm

COURSE DESCRIPTION

This is a doctoral-level course on research methods that is required of all students in the doctoral program in counseling psychology. It can also be taken by master's students in the community and school counseling programs to fulfill the research methods core requirement of those two programs. We will start by covering basic design and data analytic issues necessary to draw valid inferences from the findings of a study. We will then move on to somewhat more complex issues, including the meaning of moderation and mediation, how to test for each, and special issues involved in the design of outcome research on remedial and preventive interventions. We will finish by covering several contemporary and widely used multivariate strategies for data analysis and discuss for which types of research questions these are appropriate and inappropriate, keeping in mind that one should always opt for a minimally sufficient design for addressing a research question (see Wilkinson et al., 1999). Or as Cohen (1990) so eloquently put it—"simple is better." Students will also be exposed to both standard and alternative views of external validity, replication, and the relevance of research to practice and asked to consider how the alternate views may advance the science of counseling psychology and especially its application better than the received views. Finally, students will have an opportunity to apply what was learned in class to the design of two studies. One study will use a quasi-experimental design of the student's choice to address the causal effects of a counseling, educational, or preventive intervention (also of the student's choice). The other will be a study addressing a question of the student's choice using one of the more advanced methodologies presented in the second half of the course.

COURSE OBJECTIVES

1. To introduce students to the knowledge required to become a competent researcher in counseling psychology (doctoral students) or user of research findings (master's students), including generating ideas and developing research questions and hypotheses, designing research to yield valid inferences, the strengths and limitations of null hypothesis significance testing and the importance of reporting effect sizes and confidence intervals.

2. To develop students' ability to think critically about issues of importance to counseling psychology research.
3. To help students distinguish between mediation and moderation and learn strategies to test for both.
4. To familiarize students with important issues involved in conducting outcome research on treatment and preventive interventions and to the possible use of single case designs in practice.
5. To introduce students to several widely used multivariate methodologies

REQUIREMENTS

1. Midterm Exam (worth 30% of final grade).
2. Attendance and Participation. You are expected to participate actively in class discussions and demonstrate your knowledge of course materials. Assigned readings should be read in preparation for the class meeting for which they have been scheduled. Class participation obviously requires class attendance (10% of final grade).
3. Quasi-Experimental Design Paper (worth 30% of the final grade). Students should select one of the quasi-experimental designs presented in class and the readings and write a paper that (a) describes the design and how it can control for threats to internal validity, (b) illustrates how it has been used in the literature, and (c) presents a study using that design to test the causal effects of a educational, treatment, or preventive intervention of the student's choice. This part of the paper should also explain how the student's design ruled out major threats to internal validity and which remain as potential threats to causal inferences. Also, include in your paper any issues involved in outcome research that are relevant to your study. This paper must be written in APA style.
4. Research Proposal (worth 30% of the final grade). Students should prepare a research proposal on a question or questions of choice that can be addressed via mediator or moderator analyses, exploratory or confirmatory factor analysis, path analysis or structural equation modeling, or meta-analysis. The proposal should have an introduction and methods section. The introduction should make a case for the study and state the primary research question or questions, while the methods section should describe how the study will be conducted. The proposal should also be written in APA style.

READINGS

See **Reading Assignments** on the attached course schedule. All, except where otherwise noted, can be downloaded from the University Library electronic journals data base. Those that are unavailable electronically will be posted on BlackBoard.

SCHOOL OF EDUCATION CONCEPTUAL FRAMEWORK

Professionalism in the Service of Social Justice. As a counselor or counseling psychologist, you can be a vehicle of social justice in whatever setting you work and in whatever role you exercise in your career. This course will provide you with the knowledge that you need to assure that your professional efforts to alleviate suffering and promote self-development and self-determination are as empirically-based as possible.

ACADEMIC HONESTY

Academic honesty is an expression of interpersonal justice, responsibility, and care, applicable to Loyola University Chicago faculty, staff, and students, which demands that the pursuit of knowledge at the university community be carried out with sincerity and integrity. Academic dishonesty is one of several possible reasons why a student may be dismissed from the University. The School of Education's Policy on academic integrity can be found at: http://www.luc.edu/education/academics_policies_integrity.shtml. For additional academic policies and procedures refer to: http://www.luc.edu/education/academics_policies_main.shtml.

ACCESSIBILITY

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disability Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola University Chicago. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd/>.

HARASSMENT

It is unacceptable and a violation of University policy to harass, discriminate against, or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the

aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University—a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist the members of Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>.

TECHNOLOGY

You will use technology in this course in the preparation of your quasi-experimental design paper and research proposal.

DIVERSITY

Your program is committed to issues of diversity, including, but not limited to, race, gender, sexual orientation, social class, ethnicity, and ability status. Readings were selected not only for the research methodology that they illustrated but also for the research questions that they addressed.

COURSE SCHEDULE

F, September 2	Introduction, Course Overview, and Administrative Matters
F, September 9	Review of Research Methods, Understanding Variance, Developing Research Questions and Hypotheses.
F, September 16	No Class
F, September 23	Statistical Conclusion Validity, Statistical Significance, Effect Size, and Power.
F, September 30	Internal Validity
F, October 7	Construct Validity, External Validity, Replication, Implications of Research for Practice
F, October 14	Catch Up and Review
F, October 21	Midterm Exam
F, October 28	Moderators and Mediators
F, November 4	No Class
F, November 11	Outcome Research—Conceptual, Methodological, and Statistical Issues. Using Single Case Designs in Practice
F, November 18	Exploratory and Confirmatory Factor Analysis
F, November 25	No Class—Thanksgiving Break
F, December 2	Path Analysis and Structural Equation Modeling
F, December 9	Meta-Analysis <u>NOTE: QUASI-EXPERIMENTAL DESIGN PAPER DUE</u>
F, December 19	Research Proposal Due (by 3:00 pm).

READING ASSIGNMENTS: Unless otherwise noted, students are expected to access these readings through that University Library's electronic journal data bases.

Review of Research Methods, Understanding Variance, and Developing Research Questions and Hypotheses (9/9)

Wilkinson, L. & Task Force on Statistical Inference. (1999). Statistical methods in psychology journals: Guidelines and explanations. *American Psychologist*, 54, 594-604.

Statistical Conclusion Validity, Statistical Significance, Effect Size, and Power (9/23)

Schmidt, F. L. (1996). Statistical significance testing and cumulative knowledge in Psychology: Implications for training researchers. *Psychological Methods*, 1, 115-129.

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.

Henson, R. K. (2006). Effect sizes and meta-analytic thinking in counseling psychology. *The Counseling Psychologist*, 34, 601-630.

Rosenow, R. L. & Rosenthal, R. (1988). Focused tests of significance and effect size estimation in counseling psychology. *Journal of Counseling Psychology*, 35, 203-208.

Duffy, R. D. & Klingaman, E. A. (2009). Ethnic identity and career development among first year college students. *Journal of Career Assessment*, 17, 286-297. **Note: After reading this study, look closely at Table 2. See anything curious given how the authors interpreted the results?**

Internal Validity (9/30)

Fouad, N., Cotter, E. W., & Kantamneni, N. (2009). The effectiveness of a career decision-making course. *Journal of Career Assessment*, 17(3), 338-347.

Heppner, P. P., Wampold, B. E., & Kivlighan, D. M. (2008). *Research design in Counseling* (3rd ed.). Belmont, CA: Thompson. **Read Chapter 8: Quasi-Experimental and Time Series Designs—available on BlackBoard.**

Construct Validity, External Validity, Replication, Implications of Research for Practice (10/7)

Heppner et al. (2008). *Research design in counseling* (3rd ed.). Belmont, CA:

Thompson. **Read pp. 103-105 on external validity—available on BlackBoard.**

Mook, D. G. (1983). In defense of external invalidity. *American Psychologist*, 38, 379-387.

Anderson, C. A., Lindsay, J. J., & Bushman, B. J. (1999). Research in the psychological Laboratory: Truth or triviality? *Current Directions in Psychological Science*, 8, 3-9.

Moderators and Mediators (10/28)

Frasier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, 51, 115-134.

Bettendorf, S. K. & Fischer, A. R. (2009). Cultural strengths as moderators of the relationship between acculturation to the mainstream U.S. society and eating- and body-related concerns among Mexican American women. *Journal of Counseling Psychology*, 56(3), 430-440.

Ludwikowski, W. M. A., Vogel, D., & Armstrong, P. I. (2009). Attitudes toward career counseling: The role of public and self-stigma. *Journal of Counseling Psychology*, 56(3), 408-416.

Rees, T. & Freeman, P. (2009). Social support moderates the relationship between stressors and task performance through self-efficacy. *Journal of Social and Clinical Psychology*, 28, 244-263.

Outcome Research (11/11)

Heppner, P. P. et al. (2008). *Research design in counseling* (3rd. ed.). Belmont, CA: Thompson. **Read chapter 18: Outcome research: Strategies and methodological issues—available on Black Board.**

Jacobson, N. S. & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59, 12-19.

Ogles, B. M., Lambert, M. J., & Sawyer, J. D. (1995). Clinical significance of the National Institute of Mental Health Treatment of Depression Collaborative Research Program data. *Journal of Consulting and Clinical Psychology*, 63, 321-326.

Choi, K. H., Busky, W., & Johnson, B. (2010). Evaluation of counseling outcomes at a university counseling center: The impact of clinically significant change on problem resolution and academic functioning. *Journal of Counseling Psychology*,

57, 297-303.

Morgan, D. L. & Morgan, R. K. (2001). Single-participant research design: Bridging science to managed care. *American Psychologist*, 56, 119-127.

Exploratory and Confirmatory Factor Analysis (11/18)

Kahn, J. H. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications. *The Counseling Psychologist*, 34, 684-718.

Brown, S. D. et al. (2011). Validation of a four factor model of career indecision. *Journal of Career Assessment*.

Pinterits, E. J., Poteat, V. P., & Spanierman, L. B. (2009). The White Privilege Attitude Scale: Development and initial validation. *Journal of Counseling Psychology*, 56(3), 417-429.

Lent, R. W., Brown, S. D., & Gore, P. A., Jr. (1997). Discriminant and predictive validity of academic self-concept, academic self-efficacy, and mathematics-specific self-efficacy. *Journal of Counseling Psychology*, 44(3), 307-315.*

Path Analysis and Structural Equation Modeling (12/2)

Weston, R. & Gore, P. A., Jr. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34, 719-751.

Byars-Winston, A. M. & Fouad, N. A. (2008). Math and science social cognitive variables in college students: Contributions of contextual factors in predicting goals. *Journal of Career Assessment*, 16(4), 425-440.

Diemer, M. A. (2007). Parental and school influences upon the career development of poor youth of color. *Journal of Vocational Behavior*, 70, 502-524.

Meta-Analysis (12/9)

Quintana, S. M. & Minami, T. (2006). Guidelines for meta-analyses of counseling psychology research. *The Counseling Psychologist*, 34, 839-877.

Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2006). Evidence-based youth psychotherapies versus usual clinical care: A meta-analysis of direct comparisons. *American Psychologist*, 61, 671-689.

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Journal of Applied Psychology*, 135(2), 322-338.

Brown, S. D., Lent, R. W., Telander, K., & Tramayne, S. (2011). Social cognitive career theory, conscientiousness, and work performance. *Journal of Vocational Behavior*, 79, 81-90.

Brown, S. D. & Ryan Krane, N. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of Counseling Psychology* (3rd ed., pp. 740-766). New York: Wiley. **Read pages 740-748—available on BlackBoard**

Schmidt, F. (2010). Detecting and correcting lies that data tell. *Perspectives on Psychological Science*, 5, 233-242.