NUTR 803
Nutrition Intervention and Policy Research
Advanced Seminar
Fall 2014

Instructors:
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Course Meetings:
Thursdays, 2:00 to 4:00 PM
2304 McGavran-Greenberg Hall

Office Hours:
By appointment

Course website:
www.unc.edu/sakai

Course description:

This course will focus on advanced topics in nutrition intervention and policy research, including conceptualization of research questions, hypothesis writing, and designs of nutrition clinical and community trials. Students will gain familiarity with historical and innovative nutrition trials' design and implementation.

Prerequisites: Advanced Nutrition Intervention and Research Methods I and II.

Course objectives:

1. Demonstrate the ability to teach nutrition intervention and policy research material by refining and delivering two lecture sessions.
2. Demonstrate the ability to lead small group (journal club) discussions that critically evaluate intervention and policy research.
3. Design strategies to enhance the understanding of the fundamentals of intervention research design in group settings.
4. Evaluate journal articles based on qualities of research design and implementation, and also evaluate them with respect to impact. That is, what is the evidence for, and in what ways, have these been 'impactful' studies?
5. Evaluate existing interventions providing suggestions for improvements where needed.Demonstrate knowledge of traditional and emerging criteria for defining 'impactful' intervention research, as well as the complexities of defining.

Assignments

Assignments include:

1. Two lecture sessions (30%)
2. Two journal club sessions (30%)
3. Semester project (20%)
4. General class participation (20%)

Students will be assigned to lead two lecture sessions during the semester. For each of these lectures, students will be responsible for reading assigned lecture materials and preparing lecture slides for use during class. Students are free to incorporate previous semesters' slides into their presentation but are

expected to create new or additional slides that best represent their leadership of this topic and have the slides posted Monday before class.

Also, students will be assigned to lead two journal club discussions during the semester. As part of this assignment, the discussion leader will be expected to read the paper assigned for the discussion as well as published papers on the intervention's design, rationale, and intervention descriptions, if available. These papers, as well as other relevant papers, will be added to a bibliography of paper related to the intervention. This bibliography will be shared with all students in the course.

Students are expected to submit weekly critiques of the assigned journal club articles that specifically speak to the 'impact' of these particular studies. These are not mandatory, but if they are completed, they will count towards the general class participation grade. Additionally, students will review the prior week's critiques (submitted from students in 801) and provide feedback. Specifically, students will "call out" at least one strength of the critique, as well as one alternative perspective that might not have been considered.

Semester Project: 'Striving for Impact' – Defining, operationalizing, and taking aim for impactful intervention and policy research

Public health researchers strive to conduct intervention/policy science that will have 'impact.' That is, research and policy strives to make important contributions to understanding and ultimately improving health of the nation. It is also important in nutrition education, to be able to draw upon impactful research to demonstrate its methodologies for students and how it has (or has the capacity to) touch many lives. That is, illustrating impactful research (e.g., in journal clubs) can help students and faculty to "take aim." There is little debate that 'having impact' is a something to strive for. Yet, what are the criteria for defining the impact of a study (or line of studies)? What are traditional metrics, as well as new criteria in the modern scientific world where open access journals and social media are at the forefront of access? How can this information be summarized into a meaningful lecture/slide set for NUTRITION intervention and policy graduate students? These question are the crux of the semester project.

The objective of this project is to create a stand-alone, introductory Taking Aim on Impact" lecture and Powerpoint slide set. The intended audience is graduate student IP nutrition students, but it might be useful for graduate students in other departments (e.g., Health Behavior) or even advanced undergraduates (e.g., BSPH honors students). The end product for this semester will be a with a lecture outline and accompanying powerpoint slide set.

The content will be based on readings that we provide, discussions that we have, and your write-up/commentaries on the journal club articles that we have planned for this semester. The instructors will guide you in this process, provide providing feedback at milestone dates. You may also draw upon information from other literature reviews that you conduct on this topic.

Your project should include a reference list. Finally, we will ask you to look into potential 'teaching' journals (e.g., *Pedogogy in Health Promotion' - http://www.sagepub.com/journals/Journal202311)* that could be an outline in which to publish your summary and slides. More details about project will be given in class.

Grading

Students will be evaluated on their ability to:

- Evaluate research papers based on the components of excellence in nutrition intervention and policy research (Written review critiques)
- Lead large and small group discussions (rating by course instructors)
- Lead journal article discussions (ratings by course instructors)
- Execute a lecture class and applied learning experience (observation scale)
- Provide an evaluation document that summarizes the strengths and weaknesses of the content and activities, and suggestions for future approaches

Grading for the class will be determined as follows:

H Student reads and critically engages with all of the assigned material. Leadership of and participation in discussion and written assignments exhibit the ability not only to apply the material, but also to extrapolate ideas, expand into new areas, and contribute to the body of scholarship in the area. Reserved for truly extraordinary work (i.e., ≥90%).
P Student usually reads and engages critically with the assigned material. Able to apply material and extrapolate ideas. Consistently good work done on time (i.e., 76%-89%).
L Student reads and engages critically with only some of the assigned material. Able to apply the material and extrapolate ideas in only some instances (i.e., 65%-75%).
F Student occasionally misses class, does not always read the material, fails to critically engage with it, and is unable or unwilling to apply the material (i.e., below <65).

Honor Code

Students must observe the Honor Code in all course assignments. You are expected to produce your own work, except where group work is specifically allowed. In all written assignments, you must not plagiarize the work of others. The instrument defining the Honor Code defines plagiarism as "deliberate or reckless representation of another's words, thoughts, or ideas as one's own without attribution in connection with submission of academic work, whether graded or otherwise." If you have questions about your responsibility under the honor code, please bring them to one of the instructors or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system.

Please include the following pledge on all written assignments: “On my honor, I have neither given nor received unauthorized aid on this assignment.”

Course Readings
Required Text:
Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D. G., & Newman, T. B. (2007). Designing Clinical Research (3rd edition). Philadelphia: Lippincott Williams & Wilkins. Available for purchase online and in the UNC Student Store.

Suggested Texts:
Friedman, L. M., Furber, C. D., & DeMets, D. L. (2010). Fundamentals of Clinical Trials. New York: Springer. Full text available through UNC libraries as an electronic resource.

Shadish, W.R., Cook, T.D., and Campbell, D.T. (2002). Experimental and Quasi-Experimental Designs for Causal Inference. Boston: Houghton Mifflin Co.

Other readings are available electronically on the Sakai website.

Course Schedule

Date	Topic	Section	Leader(s)	Readings
21-Aug	Introduction of course and intervention and policy research	Lecture	Myles & Kyle	-*Designing Clinical Research* Ch. 1
		Group discussion		
28-Aug	General research questions & writing hypotheses	Lecture	Myles	-*Designing Clinical Research* Chs. 2, 5 -Kerlinger, F. N. & Lee, H. B. (2000). Problems and hypotheses. In *Foundations of Behavioral Research,* 4th ed. (pp. 23-37). Fort Worth: Harcourt College Publishers.
		Journal Club	803 Lottery	Fitzgibbon, M. L., Stolley, M. R., Schiffer, L., Van Horn, L., KauferChristoffel, K., & Dyer, A. (2004). Two-year follow-up results for Hip-Hop to Health Jr.: A randomized controlled trial for overweight prevention in preschool minority children. *Journal of Pediatrics 146*, 618-625.
4-Sep	Choosing a study population	Lecture	Myles	-*Designing Clinical Research* Ch. 3 -Rose, G. (2001). Sick individuals and sick populations. *International Journal of Epidemiology, 30*, 427-432.
		Journal Club	803 Lottery	-Gortmaker, S. L., Peterson, K., Wiecha, J., Sobol, A. M., Dixit, S., Fox, M. K., & Laird, N. (1999). Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatrics and Adolescent Medicine, 153*(4), 409-418.
18-Sep	Choosing the primary outcome	Lecture	Myles	-*Designing Clinical Research* Ch. 4 -Cole, T. J., Faith, M. S., Pietrobelli, A., & Heo, M. (2005). What is the best measure of adiposity change in growing children: BMI, BMI%, BMI z-score or BMI centile? *European Journal of Clinical Nutrition, 59*, 419-425.
		Journal Club	803 Lottery	-The Look AHEAD Research Group. (2010). Long-term effects of a lifestyle intervention on weight and cardiovascular risk factors in individuals with type 2 diabetes mellitus: four-year results of the Look AHEAD trial. *Archives of Internal Medicine, 170*(17), 1566-1575. doi: 10.1001/archinternmed.2010.334

25-Sep	Internal validity	Lecture	Myles	-Shadish, Cook, & Campbell, 2002. Chapter 2 -Schultz, K. F., Altman, D. G., Moher, D., & The CONSORT Group. (2010). CONSORT 2010 Statement: Updated guidelines for reporting parallel group randomized trials. *Annals of Internal Medicine, 6152*, 1-8.
		Journal Club	803 Lottery	-The HEALTHY Study Group. (2010). A school-based intervention for diabetes risk reduction. *New England Journal of Medicine, 363*(18), 1769-1770.
2-Oct	External validity	Lecture	Myles	-Shadish, Cook, & Campbell, 2002. Chapter 3 -Klesges, L. M., Estabrooks, P. A., Dzewaltowski, D. A., Bull, S. S., & Glasgow, R. E. (2005). Beginning with the application in mind: Designing and planning health behavior change interventions to enhance dissemination. *Annals of Behavioral Medicine, 29*, 66-75.
		Journal Club	803 Lottery	-Caballero, B., Clay, T., Davis, S. M., Ethelbah, B., Rock, B. H., Lohman, T., . . . Stevens, J. (2003). Pathways: A school-based, randomized controlled trial for the prevention of obesity in American Indian schoolchildren. *American Journal of Clinical Nutrition, 78*(5), 1030-1038.
9-Oct	**MIDTERM**			
17-Oct	Fall Break			
30-Oct	Basic research designs	Lecture	Kyle	-*Designing Clinical Research* Chs. 7, 8
		Journal Club	Kyle	-Economos, C. D., Hyatt, R. R., Goldberg, J. P., Must, A., Naumova, E. N., Collins, J. J., & Nelson, M. E. (2007). A community intervention reduces BMI z-score in children: Shape Up Somerville first year results. *Obesity, 15*(5), 1325-1336.
7-Nov	RCT & factorial designs	Lecture	Kyle	-*Designing Clinical Research* Chs. 10, 11 -Smith, R. A., & Davis, S. F. (2004). Designing, conducting, analyzing, and interpreting experiments with multiple independent variables. In *The Psychologist as a Detective,* 3rd ed. (pp. 258-285). Upper Saddle River, NJ: Pearson Education, Inc.
		Journal Club	803 Lottery	-Ambrosini GL, Oddy WH, Huang RC, Mori TA, Beilin LJ, Jebb SA. (2013). Prospective associations between sugar-sweetened beverage intakes and cardiometabolic risk factors in adolescents. *American Journal of Clinical Nutrition,* 98(2), 327-334.

13-Nov	Group randomized trials	Lecture	Kyle	-Murray, D. M. (1998). Introduction *Design and Analysis of group-randomized trials* (pp. 3-18). New York: Oxford University Press. -Campbell, M. K., Elbourne, D. R., & Altman, D. G. (2004). CONSORT statement: Extension to cluster randomised trials. *BMJ, 328*, 702-708. -Donner, A., & Klar, N. (2004). Pitfalls of and controversies in cluster randomization trials. *American Journal of Public Health, 94*(3),416-422.
		Journal Club	801 Lottery	-Lowe MR, Butryn ML, Thomas JG, Coletta M. (2013). Meal replacements, reduced energy density eating and weight loss maintenance in primary care patients: A randomized controlled trial. *Obesity*. [Epub ahead of print].
4-Sep	Mediation, Moderation Causality	Lecture	Kyle	-Bauman, A. E., Sallis, J. F., Dzewaltowski, D. A., & Owen, N. (2002). Toward a better understanding of the influences on physical activity: The role of determinants, correlates, causal variables, mediators, moderators, and confounders. *American Journal of Preventive Medicine, 23*, 5-14.
		Journal Club	801 Lottery	-Epstein, L. H., Paluch, R. A., Beecher, M. D., & Roemmich, J. (2008). Increasing healthy eating vs. reducing high energy-dense foods to treat pediatric obesity. *Obesity, 16*(2), 318-326.
20-Nov	Special topics & review		Myles & Kyle	-Webber, L. S., Catellier, D. J., Lytle, L. A., Murray, D. M., Pratt, C. A., Young, D. R., . . . Pate, R. R. (2008). Promoting physical activity in middle school girls: Trial of Activity for Adolescent Girls. *American Journal of Preventive Medicine, 34*(3), 173-184.
27-Nov	Thanksgiving			
10-Dec	FINAL PROJECT DUE			