

RESEARCH PROPOSAL DEVELOPMENT

Health Behavior and Health Education 860

School of Public Health

University of North Carolina at Chapel Hill

Spring 2008: Friday, 9:00 to 11:50

Room 2302 McGavran-Greenberg Hall

Instructor:

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4115B McGavran-Greenberg Hall

966-6616

OFFICE HOURS

By appointment.

TEACHING OBJECTIVES

HBHE 860 is a required course for HBHE doctoral students. The primary teaching objectives of HBHE 860 are to increase the student's 1) ability to integrate and apply detailed components of research methods (e.g. research questions and hypotheses; constructs, variables, and relations; measurement reliability and validity; sampling; study design; and statistical analyses) to the development of a research study and to the preparation and of a research grant proposal, 2) skills for developing and writing a research grant proposal, and 3) awareness of the proposal submission and review process for NIH and other funding agencies.

The course is strongly oriented toward the development of each student's individual research proposal. The course is also strongly oriented toward the development of proposals for quantitative studies, but studies may also include a qualitative component. Proposed studies must be explanatory (tests of associations) or evaluation studies and cannot be descriptive studies. Proposed studies cannot be secondary data analysis studies. Upon completion of the course, students will have gained experience in the most difficult phases of research, namely: transforming a research interest into a testable research question and developing a sound and feasible study design to address that question. This experience is intended to enhance student's readiness to undergo the dissertation research process and exposes them to a typical expectation of most doctoral level jobs, that being the preparation of research grant proposals.

COURSE OVERVIEW

Students will develop a R01 research proposal using a 398 form (or the electronic S 424 form), which is required for most proposals submitted to the National Institutes of Health

(NIH) and the Centers for Disease Control and Prevention (CDC). Students will develop individual proposals but will receive feedback throughout the process from the instructor and classmates. Students will submit drafts of sections of the grant throughout the course and will make interim presentations to the class on their progress. Course content and structure is intended to facilitate the development and writing of the proposal.

GRADING

Distribution of points by assignment:

30% Graded Assignment # 1 Study Defense Presentation (See description below)

50% Graded Assignment # 2 Final Complete Proposal (See description below)

20% Timely submission of Non-Graded Assignments #1-4 (The quality for this course depends substantially on student's preparation for and participation in class. Students will receive an H for this aspect of grading if all four Non-Graded Assignments are turned in on time; a P if only 3 Non-Graded Assignments are turned in on time; and an L if 2 or fewer Non-Graded Assignments are turned in on time).

ASSIGNED READINGS

Course readings will be emailed to students as attachments.

ASSIGNMENTS

NON-GRADED ASSIGNMENTS

Non-Graded Assignment #1: Interest Area: Write a two paragraph description of the public health issue you want to focus on in your study. Briefly describe the health issue, its prevalence, and the populations affected. More importantly, write a set of research questions you might address with your study. For each question, the independent and dependent variables of interest should be clear. Be as specific as possible for each question. If you are still trying to choose between several different ideas, feel free to write two paragraphs for up to three different study ideas. Deliver copies of your assignment on **Tuesday, January 22 (by 4:00)** to members of your group (see below) and to the instructor. **Be prepared to discuss your ideas with your group members on January 25th.** On January 25th, you will meet with your small group and discuss the research idea of each student in your group. Specifically, you will be addressing the following questions: Is the RQ an explanatory or evaluation question (and not an exploratory or descriptive question)? What kinds of specific aims might emanate from the research ideas? Is the RQ researchable? What kind of research design(s) could be used to address the research question(s)?

Group #1
Zulfiya Chariyeva
Susan Haws
Noel Kulik

Group # 2
Janelle Armstrong-Brown
Lisa Parker
Sarah Wyckoff

Non-Graded Assignment #2: Specific Aims, Research Questions and Hypotheses. Narrow and refine the focus of your study. On 1 to 1 ½ pages (single –spaced), write these elements of your proposal: (1) a few sentences about the public health issue/focus of study, (2) your specific aims, 3) your actual research questions, (4) your hypotheses, (5) a statement or two about why your study is important (and how it will extend existing knowledge), and (6) a statement about how your study is innovative in light of existing studies. **Deliver copies of Non-Graded Assignment #2 to all class members and the instructor the Tuesday before your scheduled discussion date.** Prepare a 5 minute synopsis to lead a 30 minute discussion of your research topic on the following date:

Feb 8 (deliver Non-Graded Assignment # 2 to all students and instructor on Tuesday Feb 5 by 4:00)

Feb 15 (deliver Non-Graded Assignment # 2 to all students and the instructor on Tuesday Feb 12 by 4:00)

Group # 1

Zulfiya Chariyeva
Janelle Armstrong-Brown
Sarah Wyckoff

Group # 2

Susan Haws
Lisa Parker
Noel Kulik

Non-Graded Assignment #3: Completed Background and Significance Section (5-9 double-spaced pages). The draft should present the rationale, supported by the scientific literature, for your specific aims, research questions, and hypotheses, and it should present a compelling argument for the importance and innovation of your study. **Non-Graded Assignment #3 is due to the instructor on March 20 by 5:00 p.m.**

Non-Graded Assignment #4: Design, Sampling, and Data Collection Procedures. Write the following components of Section D: Study design (e.g. case control, trend, panel, pre-test post-test control group design), sampling strategy (e.g. study locale, the population from which subjects will be chosen, screening/eligibility criteria, sample characteristics, sampling design, expected response/attrition rates, recruitment/consent/assent procedures), and data collection procedures (e.g. methods of data collection and the rationale for choosing the method, data collection procedural details, characteristics of data collectors, description of data collector training, and a time-line). **Deliver copies of Non-Graded Assignment # 4 on Tuesday April 1 (no April Fools jokes!) (by 4:00)** to members of your group (see below) and to the instructor. **Be prepared to discuss your ideas with your group members on April 4.** On April 4, you will meet with your small group (see below) and discuss the research

plan of each student in your group. Specifically, you will be addressing the following questions: Is the description of the methodology clear? Is the study methodology and time-line feasible? What are the methodological limitations and how could these be addressed? Are there better ways of doing the study?

Group #1	Group # 2
Janelle Armstrong-Brown	Zulfiya Chariyeva
Lisa Parker	Susan Haws
Sarah Wyckoff	Noel Kulik

GRADED ASSIGNMENTS

Graded Assignment #1: Study Defense Presentation. Prepare a 15 minute presentation of your proposed study. The floor will then be open for 15 additional minutes while the course instructor, 1-2 other faculty members, and class members ask questions.

Group # 1	Group # 2
Study Defense Presentation on April 18	Study Defense Presentation on April 25
Noel Kulik Lisa Parker Susan Haws	Zulfiya Chariyeva Sarah Wyckoff Janelle Armstrong-Brown

Graded Assignment #2: Final Complete Proposal. Final complete proposals are due to the instructor by **May 4 at 8:00 P.M.** The approximate length of the proposal should be 12 to 15 single-spaced pages not including references (12pt.font size, Arial or Helvetica type face). The proposal should include the following sections:

- An Abstract (to fit into the 398 abstract page)
- Section A Specific Aims: 1 page
- Section B Background and Significance: 4 pages
- Section C Preliminary Studies (for this section list in bullets the type of information that would be good to include in a preliminary studies section for your specific study)
- Section D Research Design and Methods: 10 pages
- Section G References (as needed).

Section D should include: Study design (e.g. case control, trend, panel, pre-test post-test control group design), logistics of intervention delivery (if it is an evaluation study), sampling strategy (study locale, the population from which subjects will be chosen, screening/eligibility criteria, sample characteristics, sampling design, expected response/attrition rates, procedures for decreasing attrition (if relevant),

recruitment/consent/assent procedures), a section justifying sample size, data collection procedures (e.g. methods of data collection and the rationale for choosing the method, data collection procedural details, characteristics of data collectors, description of data collector training, and a time-line), statistical analyses, and a description of proposed measures and psychometric properties.

CLASS SCHEDULE AND READINGS

Date	Topic	Readings
1/11	<p>Introduction to the course</p> <p>Review sections of the 398 form and the content of each section</p> <p>Reminder of research question and hypothesis characteristics (to prepare for Non-Graded Assignment #1)</p> <p>Sign-up for mini-presentations for next class</p>	<p>McGrath, J. E. (1982). Introduction. In J. E. McGrath, J. Martin, & R. A. Kulka, <i>Judgment calls in research</i>. Beverly Hills: Sage Publications, 13 – 16.</p>
1/18	<p>The NIH submission and review process</p>	<p>Watch the NIH mock review session video found at: http://www.csr.nih.gov/video/video.asp</p> <p>Students present answers to questions about the NIH submission and review process. Sign-up for specific questions to be answered by each student will occur on the first day of class. http://grants1.nih.gov/grants/grant_tips.htm</p>
1/25	<p>Discuss funded and unfunded proposals and the pink sheets</p>	<p>Lewis, M. Spousal communication and cancer prevention behavior. (R21)</p> <p>Hallfors, D. Research to practice: An indicated prevention program. (R01)</p> <p>Ayala, S. Computer-tailored feedback for Latinos with Asthma (RO3)</p>

Date	Topic	Readings
	<p>Meet in groups to give feedback on Non-Graded Assignment #1 (which was due on Tuesday January 22).</p>	<p>Select two proposals to read. In class, be prepared to discuss strong/weak methods; strong/weak grant writing; your questions about various approaches to proposal development evident in these proposals; your questions about proposal content, structure, and strategy; a summary of lessons you take from the reviews of these proposals (e.g. what to do; what to avoid.)</p> <p>Read the topic area papers given to you by your group members. In class, for each topic area, discuss the following questions: Is the RQ an explanatory or evaluation question (and not an exploratory or descriptive question)? What kinds of specific aims might emanate from the research ideas? Is the RQ researchable? What kind of research design(s) could be used to address the research question?</p>
2-1	<p>Review content of the Specific Aims and the Background and Significance sections</p> <p>Study design</p> <p>Sampling and recruitment strategies</p>	<p>Foshee, V. Violence against peers, dates, and self, a developmental focus</p> <p>Golin, C. promoting Safer Sex among Viremic HIV + patients</p> <p>Foshee, V. Piloting a family-based program for preventing adolescent dating violence.</p>
2/8	<p>Presentations of research questions and hypotheses (Non-Graded Assignment #2 for group 1 is due February 5)</p> <ol style="list-style-type: none"> 1. Zulfiya Chariyeva 2. Susan Haws 3. Noel Kulik <p>Sample size and power considerations (Dr. Michael Bowling)</p>	<p>Read each student's Non-Graded Assignment #2</p>

Date	Topic	Readings
2/15	<p>Presentations of research questions and hypotheses (Non-Graded Assignment #2 for group 2 is due February 12)</p> <ol style="list-style-type: none"> 1. Janelle Armstrong-Brown 2. Lisa Parker 3. Sarah Wyckoff <p>Continue discussing sample size considerations here</p> <p>Discuss budget justification and time-line</p>	<p>Read each student's Non-Graded Assignment #2</p> <p>Sample size sections of proposals Foshee budget justification</p>
2/22	<p>Content for the section on data collection procedures</p> <p>Preliminary Studies Section</p>	
2/29	<p>Meet in groups to discuss potential study design, sampling, recruitment, and data collection protocol issues specific to each study.</p>	
3/7	<p>NRSA Workshop, Dr. Susan Ennett</p> <p>Continue to work on the Background and Significance section.</p>	<p>Read two of the four NRSA proposals (Jessica Cance, Luz McNaughton, Cynthia Lakon, or Renee Johnson)</p>
3/14	<p>NO CLASS- SPRING BREAK</p> <p>Non-Graded Assignment #3 Background and Significance is due March 20 by 5:00 p.m.</p>	
3/21	<p>NO CLASS- GOOD FRIDAY</p>	

Date	Topic	Readings
3/28	The Measures Section Statistical Analysis Section Human Subjects	Read web-based material found on: http://grants1.nih.gov/grants/grant_tips.htm How to write a human subjects application
4/4	Discuss in groups Non-Graded Assignment #4 (which is due on April 1) Sign up for individual meeting times with Vangie on April 7 – April 11	Read Non-Graded Assignment #4 for each student in your group. For each person in your group, you will be addressing the following questions: Is the description of the methodology clear? Is the study methodology and time-line feasible? What are the methodological limitations and how could these be addressed? Are there better ways of doing the study?
4/11	NO CLASS	
4/18	Graded Assignment #1 Study Defense Presentation for group #1 1. Noel Kulik 2. Lisa Parker 3. Susan Haws	
4/25	Graded Assignment #1 Study Defense Presentations for group #2 1. Zulfiya Chariyeva 2. Sarah Wyckoff 3. Janelle Armstrong-Brown Course Evaluations	
5/4	Graded Assignment #2 due by 8:00 p.m. (Final Proposals)	

The NIH Office of Extramural Research (OER) has set up a new Website dedicated to new investigators. It provides links to all sorts of valuable information, including tips on preparing applications. While it is aimed at new investigators, much of these resources are clearly of interest to even seasoned investigators.

See http://grants.nih.gov/grants/new_investigators/index.htm.

For links to NIH, foundation sources, and other funding sites, go to UNC's grantsource library at <http://research.unc.edu/grantsource/fundopps.html>

Also go to <http://research.unc.edu/rs/>