

Research Methods in Public Health
E.33.2361- Spring 2008
Department of Nutrition, Food Studies and Public Health
Mondays 6:45 – 8:25

Professor: Diana Silver, Ph.D.

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Overview of the Course:

This course provides an introduction to the fundamentals of research study design and methods and data collection. It serves as an introduction to quantitative, qualitative, mixed method and participatory approaches to research, as well as ethical issues in conducting research. Through the mix of texts, articles from the public health literature, and course work, students will build skills for conducting research and evaluation.

Course Objectives:

At the end of the course, students should be able to:

1. Identify the types of research questions and designs appropriate for studies in public health.
2. Demonstrate knowledge of key concepts with sample selection and measurement.
3. Demonstrate competence in constructing and thinking through basic analysis of surveys and semi-structured interviews.
4. Demonstrate competence in conducting and analyzing focus groups.
5. Evaluate the strengths and weaknesses of methods used in various research studies.
6. Describe methods for designing research projects related to specific public health problems.

Course Format and Materials:

This course draws upon two types of reading material: texts that focus on the conduct of research and scientific articles that are examples of different kinds of research. For each of the aspects of research methodology presented during lectures, students will be assigned reading materials that make use of those methods. It is essential that you come to class having completed the readings, ready to discuss them.

For some of the topics I will be posting discussion questions on Blackboard. When discussion questions are posted, students are expected to provide their responses to the questions as well as review and respond to each other's responses. All responses should be completed by 5 pm, the Sunday before class. This format necessitates the completion of readings and assignments prior to each class as well as class preparation.

Work completed in this course prepares students for the work they must complete in next semester's course, Assessing Community Needs. The survey instrument and focus group

moderator's guide are tools you will use next semester (although you will probably modify them as you undertake that work). The topic you will be assessing in the communities in which you will work next semester is children's health, and thus your survey instrument and moderator's guide should focus on these (unless I give special permission). Students will complete these assignments in groups of four. When it is possible, time will be given for teams to meet in class.

Classroom Etiquette

- It is expected that everyone will attend class and show up on time. If you are not able to attend class, please advise me in advance. I will be circulating a sign in sheet to keep a record of class attendance.
- Cellphones will be turned off prior to class.
- It is expected that everyone will check their NYU email accounts and Blackboard regularly for course updates, new materials and announcements.

Required Readings

- Crosby, Richard A, RJ DiClemente and LF Salazar. (2006) *Research Methods in Health Promotion*, CA: Jossey Bass.
- David Stewart. (2006) *Focus Groups: Theory and Practice*, 2nd edition Thousand Oaks: Sage Publications.
- *Readings on Blackboard*. Readings, handouts, discussion questions and announcements will be available through the NYU blackboard system. For help using Blackboard go to <http://www.nyu.edu/its/faq/blackboard>

Assignments:

Students will be required to turn in the following assignments:

1. Literature Review and Article Critique. Each student will conduct a summary literature review of 5 public health articles and a critique of one of those articles, using the lit review template and critique guide that appear at the end of this syllabus. The literature you select should help you think about unanswered questions in the literature that you may wish to explore in the focus group and survey development assignments, and should be done before the article critique. Once you complete the literature review, select an article from the literature you have reviewed, and complete a critique of the article. Article critiques are your reflections on the research design of a public health article that relates to your semester's research topic. The article critique should not exceed 3 pages double-spaced. (individual assignment)

2. Survey Instrument First Draft and Pre-Test: Each team will draft a survey instrument on the semester's topic. Students will then each be responsible for administering the survey to 5 parents, and compile results from the pre-test to present to the team to use in revision of the instrument, and for description in the final project. (group assignment)

3. Focus Group Moderator's Guide. Each team will develop a moderators' guide for a 45 minute focus group investigating the issue of children's health. The issues explored in the

focus group may flow from the survey results, but can go further, as the group determines.(group assignment)

4. Final Project: Each team will prepare a 5-7 page single spaced paper, outlining a research design for investigating children's access to health care and insurance. The paper should identify a target population, the research question the study will investigate, the basic design it will employ, the sampling frame, the sampling plan and a brief discussion of the analytic plan for the data collected. The paper should include an appendix comprised of the moderator's guide, survey instrument and tables describing the pre-test of the survey. Format for the final paper will be discussed in class. (group assignment)

Grading:

Summary Literature Review and Article Critique:	15%
Midterm:	20%
Survey Instrument First Draft:	15%
Focus Group Moderator Guide:	10%
Final Group Project:	20%
Class Participation:	20%

Class Schedule

Date	Topic	Readings Due	Assignment Due
January 28	An Introduction to Research, sources of data, generating research questions, using the literature	a)Crosby, ch 1,2 b)Susser c)Giachello d)Millet e) Jones	
February 4	Introduction to Research Design, approaches to research and research paradigms, and ethics of research	a)Crosby, ch 3,4 b)NYU Principal Investigator's Guide to Human Subjects; c)Guidelines for the Conduct of Research Involving Human Subjects as the National Institutes for Health d)Marshall e)Malone	Blackboard Discussion Questions
February 11	Observational Research Designs	a) Crosby, ch 5 b)Two Feathers c) Liller d) Costello e) Burton f) Friedman	Blackboard discussion questions
February 18		NO CLASS – President's Day	
February 25	Experimental Research Designs	a) Crosby, ch 6 b)Rosen c)Patton d) Perry	Blackboard discussion questions
March 3	Measurement in Research Design	a)Crosby ch 9, 10 b) Deklyen c) Siegel d) Kenney e) Hallfors f) Dufrene g)Echeverria	Literature Review Due
March 10		IN-CLASS MIDTERM	
March 17		NO CLASS- Spring Break	

March 24	Survey Sampling and Survey Design	a)Crosby ch 11 b) Zakrison (to be distributed in class) c) Sugihantono	
March 31	Analytic Techniques in Health Promotion and Disease Prevention	a)Crosby 12, 13 b) Brodie c) Vlahov d) Ompad e) Galea	Survey Draft Due
April 7	Qualitative Methods of Inquiry and Ethics	a) Crosby ch 7 b) excerpt from Saks and Allsop c) Furst et al. d) Rubin and Rubin (ch 1-4 distributed the prior week in class) e) de Carvalho Mesquita Ayres	Blackboard Questions
April 14	Thinking through Focus Groups and Interviews	a)Feldman (to be distributed in class) b)Vaughn, Schumm and Sinagub (ch 10, distributed in class) c) Shelley	
April 21	Coding Focus Groups	a)Jackson b)Bigby c) focus group transcript to be handed out in previous week's class for use in class!	Moderator Guide Due
April 28	Administrative Data Analysis and Mixed methods	a)Krieger b)Robbins c)Wilcox d) VanLandingham e) Bader	
May 5	Program Evaluation	a)Crosby, ch 7 b)Mock c) Neuhauser d) Weitzman	Final Project Due

Additional Readings

For January 28:

Susser, M. (1991) "What is a Cause and how do we know one? A grammar for pragmatic epidemiology" *American Journal of Epidemiology*, 133 (7):635-48.

Giachello AL, Arrom JO, Davis M, Sayad J, Ramirez D, Nandi C, Ramos C. (2003) "Reducing Diabetes Health Disparities through Community-Based Participatory Action Research: The Chicago Southeast Diabetes Community Action Coalition" *Public Health Reports*, 118: 309-323.

Millett, G, Peterson JL, Wolitski RJ, Stall R (2006) "Greater Risk for HIV Infection of Black Men Who Have Sex with Men: A Critical Literature Review" *American Journal of Public Health*. 96 (6) 1007-1019.

***Jones, K. "Doing a Literature Review in Health" in Saks and Alsup eds. *Researching Health: Quantitative, Qualitative and Mixed Methods Approaches*. Sage Publications; 2007.

For February 4:

Malone R, Yerger V, McGruder C, Froelicher E (2006). "It's Like Tuskegee in Reverse": A Case Study of Ethical Tensions in Institutional Review Board Review of Community-Based Participatory Research" *American Journal of Public Health* 96(11) 1914-1919.

Marshall, P, Adebamowo C, Adeyemo A, Ogundiran T, Vekich M, Strenski T, Zhou J, Prewitt TE, Cooper RS, Rotimi C (2006). "Voluntary Participation and Informed Consent to International Genetic Research" *American Journal of Public Health* 96(11)1989-1994.

Guidelines for the conduct of Research Involving Human Subjects at the National Institutes of Health

<http://ohsr.od.nih.gov/guidelines/GrayBooklet82404.pdf>

NYU Principal Investigator's Guide to Human Subjects Research

<http://www.nyu.edu/ucaihhs/forms/guide.doc>

For February 11:

Two Feathers J, Kieffer E, Palmsano G, Anders M, Sinco B, Janz N, Heisler M, Spencer M, Guzman R, Thompson J, Wisdom K, James S. (2005). "Racial and Ethnic Approaches to Community Health (REACH) Detroit Partnership: Improving Diabetes-Related Outcomes Among African American and Latino Adults" *American Journal of Public Health* 95(9): 1552-1560.

Liller KD, Pintado I. (2005) "A Historical Comparison of Child and Parent Reports of Injury Prevention Behaviors: Findings from the Pinellas County Omnibus Study" *Journal of Public Health Management Practice* 11(5): 566-527.

Costello EJ, Compton SN, Keeler G, Angold A. (2003). "Relationships Between Poverty and Psychopathology: A Natural Experiment" *Journal of the American Medical Association*. 290 (15): 2023-2029.

Burton, S, Creyer EH, Kees J, Huggins K (2006) "Attacking the Obesity Epidemic: The Potential Health Benefits of Providing Nutrition Information in Restaurants" *American Journal of Public Health*. 96(6) 1669-1675.

Friedman LS et al (2007). "The Impact of OSHA record-keeping regulation changes on occupational injury and illness trends in the U.S.: a time series analysis". *Environmental Medicine*. 64(7): 454-460.

For February 25:

Rosen L, Manor O, Englehard D, Zucker D. "In Defense of the Randomized Controlled Trial for Health Promotion Research" (2006) *American Journal of Public Health*. 96: 1181-1186.

Patton GC, Bond L, Carlin JB, Thomas, L, Butler H, Glover S, Catalano R, Bowes G. (2006) "Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-Being" *American Journal of Public Health*. 96(9) 1582-1587.

Perry MJ, Layde PM. (2003). "Farm Pesticides: Outcomes of a Randomized Controlled Intervention to Reduce Risks" *American Journal of Preventive Medicine* 24(4) 310-315.

For March 3:

Kenney GM, McFeeters JR, Yee JY. (2005). "Preventive Dental Care and Unmet Dental Needs Among Low-Income Children" *American Journal of Public Health*, 95(8): 1360-1366.

Hallfors D, Khatapoush SK, Kadushin C, Watson K, Saxe L. (2000). "A comparison of paper vs computer-assisted self interview for school alcohol, tobacco, and other drug surveys" *Evaluation and Program Planning*, 23: 149-155.

Deklyen M, Brooks-Gunn J, McLanahan S, Knab J. (2006) "The Mental Health of Married, Cohabiting and Non-Coresident Parents with Infants" *American Journal of Public Health* 96(10): 1836-1841.

Siegel C, Laska E, Haugland G, O'Neill D, Cohen N, Lesser M. (2000) "The construction of community indexes of mental health and social and mental well-being and their application to New York City" *Evaluation and Program Planning*, 23: 315-327.

Dufrene, RL. (2000) "An Evaluation of a Patient Satisfaction Survey: Validity and Reliability" *Evaluation and Program Planning* . 23: 293-300

Echeverria, SE, Diez-Roux AV, Link B. ((2004). "Reliability of Self-Reported Neighborhood Characteristics" *Journal of Urban Health*. 81(4): 682-701.

For March 24:

Sugihantono A, Slidell M, Syafudin A, Pratjojo H, Utami IM, Sadjimin T, Mayer K. (2003). "Syphilis and HIV Prevalence among Commercial Sex Workers in Central Java, Indonesia: Risk-Taking Behavior and Attitudes that May Potentiate a Wider Epidemic" *AIDS Patient Care and STDS*. 17(11): 595-600

Zakrisson TL, Hamel PA, Hwang SW (2004) "Homeless People's Trust and Interactions with Police and Paramedics" *Journal of Urban Health*" 81(4) 596-605.

For March 31:

Brodie M, Weltzien E, Altman D, Blendon R, Benson J (2006) "Experiences of Hurricane Katrina Evacuees in Houston Shelters: Implications for Future Planning" *Journal of Health Policy and Management* 96 (5): 1402-1408

Galea S, Vlahov D, Resnick H et al. (2003). "Trends of Probable Post Traumatic Stress Disorder in New York City after the September 11 Terrorist Attacks" *American Journal of Epidemiology*. 158(6):514-524.

Ompad, DC, Galea S, Blaney S, et al. (2007). "Access to Influenza Vaccine in East Harlem and the Bronx During a National Vaccine Shortage". *Journal of Community Health*.

Vlahov D, Galea S, Resnick H et al. (2002). "Increased Use of Cigarettes, Alcohol and Marijuana among Manhattan, New York Residents after the September 11 Terrorist Attacks". *American Journal of Epidemiology*. 155(11):988-997.

For April 7:

DeCarvalho Mesquita Ayres JR, Paiva V, Franca I, Gravato N, Lacerda R, Della Negra M, De Sousa Marques H, Galano E, Lecussan P, Seguardo AC, Silva MH. (2006) "Vulnerability, Human Rights and Comprehensive Health Care Needs of Young People Living with HIV/AIDS" *American Journal of Public Health*. 96(6) 1001-1006.

Furst, RT, Herrmann C, Leung R, Galea J, Hunt K. (2004) "Heroin Diffusion in the mid-Hudson Region of New York State" *Addiction*, 99:431-441.

For April 14:

Feldman PH, Oberlink MR.(2003) "The AdvantAge Initiative: Developing Community Indicators to Promote the Health and Well-Being of Older People" *Family and Community Health*, 26(4):268-274. (TO BE DISTRIBUTED IN CLASS)

Shelley D et al. (2007). "The \$5 Man: The Underground Economic Response to a Large Cigarette Tax Increase in New York City" *American Journal of Public Health*. 97(8) 1483-1488.

For April 21:

Bigby J., Ko LK, Johnson N, David, M, Ferrer B. (2003) "A Community Approach to Addressing Excess Breast and Cervical Cancer Mortality among Women of African Descent in Boston" *Public Health Reports*, 118: 338-347.

Jackson SF, Clevely S, Poland B, Burman D, Edwards R, Robertson A. (2003) "Working with Toronto neighborhoods toward developing indicators of community capacity" *Health Promotion International*, 18(4) 339-350.

For April 28:

Krieger N, Chen JT, Waterman PD, Soobader MJ, Subramanian SV, Carson R (2003) "Choosing area based socioeconomic measures to monitor social inequalities in low birth weight and childhood lead poisoning: The Public Health Disparities Geocoding Project (US)" *Journal of Epidemiology and Community Health*. 57: 186-189

Robbins JM, Webb DA. (2006). "Hospital Admission Rates for a Racially Diverse Low-Income Cohort of Patients with Diabetes: The Urban Diabetes Study" *American Journal of Public Health*. 96(7)1260-1264.

Wilcox S, Dowda M, Griffin SF, et al. (2006). "Results of the First Year of Active for Life: Translation of 2 Evidence-Based Physical Activity Programs for Older Adults into Community Settings" *American Journal of Public Health*. 96(7): 1201-1209.

VanLandingham, MJ. (2007). "Murder Rates in New Orleans, La, 2004-2006" *American Journal of Public Health*. 97(9)1614-1615.

Bader, P et al. (2007). "Knowledge Synthesis of Smoking Cessation Among Employed and Unemployed Young Adults". *American Journal of Public Health*. 97(8) 1434-1443.

For May 5:

Mock J, et al. (2007). "Effective Lay Health Worker Outreach and Media-Based Education for Promoting Cervical Cancer Screening Among Vietnamese American Women". *American Journal of Public Health*. 97(9) 1693-1700.

Neuhauser L. (2007). "Promoting Prenatal and Early Childhood Health: Evaluation of a Statewide Materials-Based Intervention for Parents". *American Journal of Public Health*. 97(10). 1813-1819.

Weitzman B, Silver D, Dillman KN. (2002) "Integrating a Comparison Group Design into a Theory of Change Evaluation: The Case of the Urban Health Initiative" *American Journal of Evaluation* 2002.

Guide for Critiquing a Research Article

1. What is the research question?
2. What is the research design?
3. How are the key variables measured? How did they collect their data?
4. Who is the sample? How was the sample chosen?
5. What are the results?
6. What limitations do the authors identify, if any?
7. What are the key points in the discussion?
8. Given what else you have read regarding this topic, what is interesting about this article for your research project?

