

**Research Methods in Public Health**  
**PUHE-GE 2361 - Spring 2013**  
**Department of Nutrition, Food Studies and Public Health**  
**Mondays 4:55 – 6:35**

**Professor:** Virginia W. Chang, MD, PhD

**Office Hours:** TBA

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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 the course website. 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 6 pm, the Sunday before 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 NYU Classes 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.
- *Articles from Peer Reviewed Journals*. Unless noted, all the articles cited in the syllabus as required readings are available through the NYU libraries. = You will need to retrieve these articles through the ejournal system (under the Research tab of NYU Home), or use the edatabase. Personally, I find it easiest to use the databases PubMed or Web of Knowledge to retrieve articles, by entering the author's name and a key word in the title, but do what you find easiest to do. If you have trouble finding an article, please let me know and I will do my best to email that article to you. If you have difficulty locating an article, please email me.

## **Optional Readings**

I have a number of books and other materials about the structure and use of focus groups that I will make available to the class. In addition, for the literature review, you may want to consult:

Hart, C. *Doing a Literature Review: Releasing the Social Science Research Imagination* (free on Google books)

## **Assignments:**

Students are required to complete the following assignments:

1. Online discussion questions: There are several discussion questions noted on the syllabus. Each student is responsible for posting a response by 6pm Sunday evening before class.

2. Literature Review. Each student will conduct a summary literature review of 10 public health articles. Resources for the literature review may include PubMed, PsychInfo, bibliographies from key papers, etc. You may want to investigate individual, social and environmental factors related to your topic, or you may choose to focus on specific interventions for your topic. The literature you select to review should help you think about questions you may wish to explore in the focus group and survey development assignments. (individual assignment)

3. Survey Instrument First Draft and Pre-Test: Each team will draft a survey instrument on a public health topic. Students will then each be responsible for administering the survey to 8 people and compile results from the pre-test. Each group will present their results and reflections to the class. The team will use feedback from their pretest to revise the instrument, and for description in the final project. (group assignment)

4. Focus Group Moderator's Guide. Each team will develop a moderators' guide for a 45 minute focus group investigating your topic. The issues explored in the focus group may flow from the survey results, but can go further, as the group determines. (group assignment)

5. Final Project: Each team will prepare a 10-14 page double spaced paper, outlining a research design using a survey and focus groups. 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. You will be asked, confidentially, to rate the participation of your group members (group assignment)

**Email policy with regard to assignments:** In general, I will not accept emailed assignments without prior approval.

**Grading:**

Summary Literature Review	:	15%
Midterm:		20%
Survey Instrument First Draft:		15%
Focus Group Moderator Guide:		10%
Final Group Project:		25%
Class Participation and blackboard assignments:		15%

### Class Schedule

<b>Date</b>	<b>Topic</b>	<b>Readings Due</b>	<b>Assignment Due</b>
January 28	An Introduction to Research, sources of data, generating research questions, using the literature	a) Crosby, ch 1,2 b) Millet c) Jones	Post research interests and photo online
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) Belmont Report e) Buchanan f) Malone g) Onwujekwe h) Blustein	Online Discussion Questions
February 11	Observational Research Designs	a) Crosby, ch 5 b) Melchior c) Costello d) Burton e) Houston f) Dreyer	Online Discussion Questions
February 18		NO CLASS – President's Day	
February 25	Experimental Research Designs	a) Crosby, ch 6 b) Rosen c) Patton d) Gray	Online Discussion Questions
March 4	Measurement in Research Design	a) Crosby ch 9, 10 b) Deklyen c) Kenney d) Echeverria e) Krieger f) Sherbourne g) Li	Literature Review Due
		IN-CLASS	

March 11		MIDTERM	
March 18		NO CLASS- Spring Break	
March 25	Survey Sampling and Survey Design	a) Crosby ch 11 b) Zakrison c) Sugihantono d. Weir	Online Discussion Questions
April 1	Analytic Techniques in Health Promotion and Disease Prevention	a) Crosby 12, 13 b) Brodie c) Vlahov d) Ompad e) Galea	Online Discussion Questions
April 8	In class presentations		Survey Draft and Results/Reflection Due
April 15	Qualitative Methods of Inquiry and Ethics	a) Crosby ch 7 b) excerpt from Saks and Allsop c) Furst et al. d) Rubin and Rubin e) de Carvalho Mesquita Ayres	Online Discussion Questions
April 22	Thinking through Focus Groups and Interviews	a) Feldman b) Vaughn, Schumm and Sinagub c) Shelley d. Hirsch	Online Discussion Questions
April 29	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
May 6	Program Evaluation I	a) Crosby, ch 8 b)Weitzman c) Curran	
May 13	Program Evaluation II	a) Mock b) Neuhauser c) Brown	Final Project Due

## **PEER-REVIEWED ARTICLES AND ADDITIONAL READINGS**

### **For January 28:**

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. (posted)

Jones, K. “Doing a Literature Review in Health” in Saks and Alsop eds. *Researching Health: Quantitative, Qualitative and Mixed Methods Approaches*. Sage Publications; 2007. (posted)

### **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.

Onuwujekwe O, Hanson K, Fox-Rushy J. (2004). “Inequalities in purchase of mosquito nets and willingness to pay for insecticide treated nets in Nigeria: challenges for malaria control interventions”. *Malaria Journal* pp1-8.

Blustein, J. (2005). Toward a More Public Discussion of the Ethics of Federal Social Program Evaluation. *Journal of Policy Analysis and Management*. 24(4): 823-852.

Buchanan DR, Miller FJ. “Justice and fairness in the Kennedy Krieger Institute lead paint study: the ethics of public health research on less expensive, less effective interventions”. *American Journal of Public Health*. 2006;96:781–787.

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

The Belmont Report (link posted)

NYU Principal Investigator’s Guide to Human Subjects (link posted)

### **For February 11:**

Melchior M, Berkman LF, Kawachi I, Krieger N et al.(2006). “Lifelong socioeconomic trajectory and premature mortality (35-65 years) in France: findings from the GAZEL cohort study” *Journal of Epidemiology and Community Health*. 60(937-944).

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.

Houston D, Richardson LE. (2006). Safety Belt Use and the Switch to Primary Enforcement 1991-2003. American Journal of Public Health. 96(11): 1949-1954.

Dreyer NA, Tunis SR, Berer M, et al. (2010) Why observational studies should be among the tools used in comparative effectiveness research. Health Aff 29:1818–1825.

**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.

Gray, RH, Kigozi, G, et al (2007). "Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial." Lancet, 369, (9562): 657-666.

**For March 4:**

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.

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.

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

Krieger N, Fee E. (1996). "Measuring Social Inequities in Health in the United States: A Historical Review, 1900-1950" International Journal of Health Services.26: 391-418.

Sherbourne, C, & Stewart, AL (1991). "The MOS social support survey." Social Science & Medicine, 32(6), 705-714, 10.1016/0277-9536(91)90150-B.

Li, L., Lee, S., Thammawijaya, P., Jiraphongsa, C., & Rotheram-Borus, M. (2009). Stigma, social support, and depression among people living with HIV in Thailand. AIDS Care, 21(8), 1007-1013. doi:10.1080/09540120802614358

**For March 25:**

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

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

Weir, SS, Merli, MG, et al (2012). "A comparison of respondent-driven and venue-based sampling of female sex workers in Liuzhou, China." *Sex Transm Infect*, 88(Suppl 2), i95-i101.

**For April 1:**

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 15:**

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.

Green, J. (2007). "The Use of Focus Groups in Research into Health" in A. Saks & J. Allsop (Eds.), *Researching Health, Qualitative, Quantitative, and Mixed Methods*. (posted)



Rubin, H, & Rubain I. (2005). "Listening Hearing and Sharing Social Experiences" in Qualitative interviewing: the art of hearing data. (posted)

**For April 22:**

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.

Vaughn, S., Schumm, J., & Sinagub, J. (1996). Potential abuses of focus group interviews. In Focus group interviews in education and psychology. (pp. 144-156). Thousand Oaks, CA: SAGE Publications, Inc. (posted)

Hirsch, J., Meneses, S., Thompson, B., Negroni, M., Pelcastre, B., & del Rio, C. (2007). "The inevitability of infidelity: sexual reputation, social geographies, and marital HIV risk in rural Mexico." American Journal of Public Health, 97(6), 986-996.

**For April 29:**

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 May 6:**

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.

Curran S, Gittelsohn J, Anliker J, et al (2005). "Process evaluation of a store-based environmental obesity intervention on two American Indian reservations". Health Education Research. 20 (6): 710-729.

**For May 13:**

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.

Brown, R, Dale S. (2007). "The Research Design and Methodological Issues for the Cash and Counseling Evaluation." Health Services Research. 42 (1) 414-445

**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?