

BEHAVIORAL RESEARCH METHODS IN PUBLIC HEALTH

HB/HE 620

Marc A. Zimmerman

Fall 2008

COURSE DESCRIPTION

This is an introductory behavioral research methods course. Students will learn about the logic of scientific research, causal inference hypothesis formation, measurement theory, experimental design, sampling, data analysis applications and ethical issues. The course focuses on quantitative approaches and traditional scientific methods.

Students should note that lectures may include topics not covered in readings and that the tentative course outline means topics for a specific day may change depending on student interest and classroom discussion.

Texts: Singleton RA Jr, Straits BC: (2005). *Approaches to Social Research*, 4th Edition. New York: Oxford University Press.

Huff, (1993). *How to Lie with Statistics*, Norton.

COURSE GRADING AND REQUIREMENTS

A. Group Research Proposal

Students are required to form groups to develop a research proposal. Details about the project will be provided in class.

1) Class Presentation. Every group will present their research papers in class. Groups are required to distribute a 1-2 page description of their project to the class and instructor prior to their presentation. The presentation should include hypothesis and connection to prior research, definition of terms, and preliminary research design. You should use the presentation to generate class discussion so you can improve your proposal. (10%)

Assignment Due: To be announced

2) Final Report. The final report should include an Introduction, Methods section, and study limitations. Assignment I may be used as a starting point for the final paper. The Introduction should include hypotheses, a definition of the research problem and objectives, and significance of the study. The Methods section should describe the definition of independent and dependent variables (conceptual and operational), sampling strategy, and research design. Study limitations should be a discussion of the strengths and weaknesses of the proposed study. This should also include some discussion as to why the weaknesses are not fatal flaws. All papers should include, as an Appendix, the questions used to measure variables in the study. (50%)

Assignment Due: December 9

B. Quizzes.

Two take-home, short-answer type quizzes will cover class and textbook material. They will require both factual knowledge and an ability to apply material learned. (20% each)

Assignments Due: October 2; mid-November

C. Academic Conduct

To promote academic integrity, the faculty of the School of Public Health believes that the conduct of a student registered or taking courses in the School should be consistent with that of a professional person. Courtesy, honesty, and respect should be shown by students toward faculty members, guest lecturers, administrative support staff, and fellow students. Similarly, students should expect faculty to treat them fairly, showing respect for their ideas and opinions and striving to help them achieve maximum benefits from their experience in the School.

Student academic misconduct refers to behavior that may include plagiarism, cheating, fabrication, falsification of records or official documents, intentional misuse of equipment or materials (including library materials), and aiding and abetting the perpetration of such acts. The preparation of reports, papers, and examinations, assigned on an individual basis, must represent each student's own effort. Reference sources should be indicated clearly. The use of assistance from other students or aids of any kind during a written examination, except when the use of aids such as electronic devices, books or notes has been approved by an instructor, is a violation of the standard of academic conduct.

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TENTATIVE Course Outline and Readings - Fall 2008

Week 1 - September 2, 4

Introduction

Week 2 - September 9, 11*

What is Scientific Research? (Aim/objective and approach/method of science, scientific approach vs. other ways of acquiring knowledge, advantages and limitations of the scientific approach)

Texts: Singleton RA Jr, & Straits BC. (Chapter 1); Huff, (all)

- 1) Kerlinger FN. (1986). Science and the scientific approach. In *Foundations of Behavioral Research* (3rd ed, pp 3-14), New York: Holt, Rinehart, & Winston.
- 2) Selltiz C, Wrightsman LS, Cook SW. (1976). The functions of research. In *Research Methods in Social Relations* (3rd ed, pp 2-14), New York: Holt, Rinehart & Winston.

The Logic of Scientific Reasoning (Deduction, induction, hypothetico-deductive method)

Text: Singleton & Straits. (Chapter 2)

- 3) Selltiz C, Wrightsman LS, Cook SW. (1976). Introduction: The logic of analysis. In *Research Methods in Social Relations* (3rd ed, pp 16-48), New York: Holt, Rinehart & Winston.

Week 3 - September 16*, 18*

Elements of Research Design (Independent and dependent variables, causal inference, problem statement, hypotheses, steps in the research process)

Text: Singleton & Straits. (Chapters 3 & 17)

- 4) Rosenstock IM, Hochbaum GM. (1961). Some principles of research design in public

- health. *American Journal of Public Health*, 51:266-277.
- 5) Webb WB. (1972). The choice of the problem. In Kirk RE (ed) *Statistical Issues: A Reader for the Behavioral Sciences* (pp 35-40), Brooks/Cole Publishing Company.

Week 4 - September 23, 25*

Measurement (Conceptual and operational definition, levels of measurement, reliability and validity, sources of error)

Text: Singleton & Straits. (Chapter 4)

- 6) Riggio RE. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology*, 51(3):649-660.

Week 5 - September 30 (no class), October 2

Sampling (Purpose, probability vs. nonprobability approaches, sample size)

Text: Singleton & Straits. (Chapter 5)

- 7) Babbie E. (1989). The logic of sampling. In *The Practice of Social Research* (5th ed, pp 161-207), Belmont, CA: Wadsworth Publishing Co.

Weeks 6 to 8 - October 7 to 23* (10/9 - no class)

Experimentation (Logic, randomization, use of control groups, internal and external validity, biasing factors, threats to validity, types of designs: pre-experimental, true experimental, quasi-experimental)

Text: Singleton & Straits. (Chapters 6 & 7)

- 8) Campbell DT, Stanley JC. (1963). *Experimental and Quasi-Experimental Designs for Research* (pp 1-76), (Reprinted from *Handbook of Research on Teaching*) Chicago: Rand McNally College Publishing Company.

Week 9 - October 28*, 30

Questionnaire Development

Text: Singleton & Straits. (Chapters 8 & 9)

- 9) Babbie E. (1989). Operationalization: Guidelines for asking questions. In *The Practice of Social Research* (5th ed, pp 139-160), Belmont, CA: Wadsworth Publishing Co.
- 10) DeVellis RF. (1991). Guidelines in scale development. *In Scale Development: Theory and Applications* (pp 51-90), Newbury Park, CA: Sage Publications, Inc.

Week 10 - November 4, 6

Research Ethics (Harm, informed consent, deception, invasion of privacy, anonymity, confidentiality, Institutional Review Boards/Human Subjects Review Committees)

Text: Singleton & Straits. (Chapter 16)

Use of Multiple Methods (Triangulation, multiple measures, replication)

Text: Singleton & Straits. (Chapter 12: pp 381-401)

11) Webb ET, et al. (1981). Approximations to knowledge. In *Nonreactive Measures in the Social Sciences* (2nd ed, pp 34-77), Boston: Houghton Mifflin Co.

12) Webb ET, et al. (1981). Physical traces: Erosion and accretion. In *Nonreactive Measures in the Social Sciences* (2nd ed, pp 4-33), Boston: Houghton Mifflin Co.

Weeks 11 to 14 - November 11*, 13* to December 4 (Thanksgiving 11/27 - no class)

Class Presentations

Week 15 - December 9

Research Choices/Summary/Course Evaluation

13) McGrath JE. (1982). Dilemmatics: The study of research choices and dilemmas. In McGrath JE, Martin J, Kulka RA, *Judgment Calls in Research* (pp 69-102), Beverly Hills, CA: Sage Publications, Inc.

* out-of-town