

University of Maryland, College Park

Department of Public and Community Health

HLTH 710 - Methods and Techniques in Health Education Research

<p>Instructor: Professor Kenneth H. Beck</p> <p>Office/Phone: HHP 2366 / 301-405-2527</p> <p>Email: Kbeck1@umd.edu</p> <p>Semester: Fall 2006</p> <p>Classroom/Time: HHP 0307 / T 4:00 – 6:45 PM</p>	<p><u>OFFICE HOURS</u></p> <p>Tuesday, 11:00 – 12:30</p> <p>Tuesday, 2:00 – 4:00</p> <p>Thursday, 11:00 – 12:30</p> <p>Other times by appointment</p>
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Required Textbook	Trochim, W.M.K. (2005). <u>Research methods: the concise knowledge base</u> . Atomic Dog Publishing: Cincinnati, OH. ISBN: 1-59260-146-4
Course Description	The course provides an overview of research design and methodologic issues in health education. Through lecture, reading, and several exercises, students will acquire an understanding of the research process. Issues include those of experimental and non-experimental designs, and both qualitative and quantitative data collection strategies. The course is designed as an examination of several research issues, particularly those related to reliability and validity of measurement and design, instrumentation and data collection methodology.
Course Objectives	<p><u>At the conclusion of this course, the student will be able to:</u></p> <ol style="list-style-type: none"> 1. become aware of and describe the uses of a variety of health education research methods and techniques; 2. define and use the language of research; 3. describe barriers to research in health education; 4. demonstrate an understanding of basic concepts underlying the research process in health education; 5. describe various research designs and their advantages and disadvantages; 6. describe various data collection procedures and their advantages and disadvantages; 7. demonstrate an understanding of concepts and methods related to design, sampling, data collection, statistical analysis, and hypothesis testing; 8. improve their ability to read, interpret, and critique evaluation and research reports; and 9. develop an awareness of the complexity and technical skills necessary for useful research in health education.

Course Policies

Late or incomplete work will be made up if a legitimate excuse (determined by University policy and the instructor) is documented at the next class period. No excuses will be accepted after December 12.

Special arrangements for making up missed work must be made in advance with the instructor. If you cannot make class or an exam due to illness or some other legitimate reason, you must contact the instructor in person or by phone before the missed class period.

There will be no extra credit assignments. Failure to do or turn in the in-class and/or take-home assignments on time can significantly lower one's final grade.

Students who enroll in the class at any time during the drop-add period are responsible for all in-class work to date.

Accommodations for students with disabilities:

If you have a documented disability and wish to discuss academic accommodations for test taking or other needs, please talk to me as soon as possible. You will need documentation from Disability Support Service (314-7682.) If you intend to take any or all exams at DSS it is your responsibility to notify me as soon as possible.

Academic Integrity:

The University's code of academic integrity is designed to ensure that the principle of academic honesty is upheld. Any of the following acts, when committed by a student, shall constitute academic dishonesty:

- ✓ CHEATING : intentionally using or attempting to use unauthorized materials, information, or study aids in an academic exercise.
- ✓ FABRICATION: intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
- ✓ FACILITATING ACADEMIC DISHONESTY: intentionally or knowingly helping or attempting to help another to violate any provision of this code.
- ✓ PLAGIARISM: intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise.
- ✓

For more information see:

<http://www.inform.umd.edu/CampusInfo/Departments/PRES/policies/iii100a.html>

Religious Observances:

The University System of Maryland policy provides that students *should not be penalized because of observances of their religious beliefs; students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances.* **It is the student's responsibility to inform the instructor in advance of any intended absences for religious observance.**

- S y l l a b u s -

Sept. 5	Foundations of Research
Sept. 12	Review, Retrieval and Synthesis of Research Findings & Ethical Considerations Chapter 1
Sept. 19	Sampling & Statistical Power Chapter 2 - [Completion of UMC Certification -Human Subjects Tutorial]
Sept. 26	Reliability of Measurement Chapter 3
Oct. 3	Validity of Measurement - In Class Exercise Chapter 5
Oct. 10	Survey Research & Scaling - [Critique of Instrument Development & Validation Article Due] Chapter 4
Oct. 17	Qualitative & Unobtrusive Measures Chapter 6
Oct. 24	EXAMINATION I (Covers chapters 1-6, plus class material)
Oct. 31	Internal Validity & Causal Inference– [Critique of Survey Article Due] Chapter 7
Nov. 7	Experiments & Experimental Design Chapter 8
Nov. 14	Quasi-Experimental Design Chapters 9 - [Critique of Experiment Article Due]
Nov. 21	Advanced Topics Chapter 10 – [Research proposals due]
Nov. 28	Data Analysis, Hypothesis Testing & Student Presentations Chapters 11 & 12
Dec. 5	Writing a Research Report & Student Presentations Chapter 13
Dec. 12	Student Presentations & Course Review [Critique of Research Proposals Due]
Dec. 19	FINAL EXAMINATION (Covers chapters 7 - 13, plus class material Place: 0307 HHP Time: 4:00 PM

Web Sites:

NIH Human Participant Protections Education for Research Teams tutorial
< <http://www.umresearch.umd.edu/IRB/IRBexam.html>>

IRB Human Subjects - Departmental Review Committee Application Form
< <http://www.umresearch.umd.edu/ORAA/forms/>>

NIH grant application form <<http://www.umresearch.umd.edu/ORAA/forms/NIH398.pdf>>

Power Calculator <<http://calculators.stat.ucla.edu/powercalc/>>

NCHS data <<http://www.cdc.gov/nchs/express.htm>>

Behavior Risk Factor Surveillance System < <http://www.cdc.gov/brfss/>>

Evaluation	Grading
Exam I: 25%	96 - 100% A+
Exam II: 25%	93 – 95 A
Research Proposal: 25%*	90 – 92 A-
Article & Proposal Critiques: 25%**	86 – 89.99 B+
	83 – 85 B
	80 – 82 B-
	76 – 79.99 C+
	73 – 75 C
	70 – 72 C-
	66 – 69.99 D+
	63 – 65 D
	60 – 62 D-
	≤ 59.99 F
<p>*A research proposal is due on Nov. 21. This will be presented to and evaluated by the class and the instructor. Details of this assignment will be presented in class.</p> <p>**Throughout the semester various assignments will be made requiring a critique of published articles pertaining to health surveys, experiments, and instrument development. Each student will also critique other students’ proposals. Details will be provided in class.</p>	

Graduate (CHES) Competencies Provided:

- I.A.1. Select valid sources of information about needs and interests
- I.A.2. Utilize computerized sources of health-related information
- I.A.3. Employ or develop appropriate data-gathering instruments
- I.A.4. Apply survey techniques to acquire health data
- IV.A.3. Develop an inventory of existing valid and reliable tests and survey instruments
- IV.A.6. Evaluate existing data gathering instruments and processes
- IV.A.7. Select appropriate quantitative and/or qualitative evaluation design
- IV.A.8. Develop reliable and valid instruments
- IVB.1. Facilitate administration of the tests and activities specified in the plan
- IV.B.2. Utilize data collecting methods appropriate to the objectives
- IV.B.3. Analyze resulting evaluation data
- IV.B.5. Implement appropriate qualitative and quantitative evaluation techniques
- IV.C. Interpret results of program evaluation
- IV.D.1. Explore possible explanations for important evaluation findings
- VI.A.2. Access principle on-line and other database health information resources
- VIII.A.1. Employ electronic technology for retrieving references
- VIII.A.2. Analyze references to identify those pertinent to selected health education issues or programs
- VIII.A.3. Select valid sources of information
- VIII.A.4. Synthesize key information from the literature
- VIII.A.5. Evaluate the research design, methodology and findings from the literature
- VIII.B.1. Assess the merits and limitations of qualitative and quantitative research methods
- VIII.B.2. Apply qualitative and/or quantitative research methods in research designs
- VIII.C.1. Utilize appropriate research methods and designs in assessing needs
- VIII.C.4. Employ research design methods in program evaluation
- VIII.C.5. Draw conclusions from the research results
- VIII.C.6. Use research results to inform health policy development
- VIII.C.7. Utilize protocol for dissemination of research findings

Recommended Readings:

- Babbie, E. (2004). *The practice of social research* (10th Ed.), Belmont, CA: Wadsworth/Thomson Learning.
- Campbell, D.T. & Stanley, J.C. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.
- Cook, T.D. & Campbell, D.T. (1979). *Quasi-experimentation*. Chicago: Rand McNally.
- Crosby R.A., DiClemente, R.J. & Salazar, L.F. (Eds.). (2006). *Research methods in health promotion*. San Francisco: Jossey Bass
- DeVellis, R.F. (2003). *Scale development - Theory and applications*. Applied Social Research Methods Series Volume 26. Sage Publications: Thousand Oaks, CA.
- Duryea, E.J. & Okwumabua, J.O. (2002). Use of cause-and-effect language in health behavior research literature. *American Journal of Health Behavior*, 26(3), 221-228.
- Hartman, T.J. et al. (1994). Focus group responses of potential participants in a nutrition education program for individuals with limited literacy skills. *Journal of the American Dietetic Association*, 94(7), 744-748.
- Hulley, S.B., et al. (2001). *Designing clinical research* (2nd Ed.), Philadelphia: Lippincott Williams & Wilkins.
- Institute of Medicine. (2003). *Responsible research: a systems approach to protecting research participants*. Washington DC: The National Academies Press.
- Jobe, J.B. & Mingay, D.J. (1989). Cognitive research improves questionnaires. *American Journal of Public Health*, 79(8), 1053-1055.
- Lonner, W.J. & Berry, J.W. (1986). *Field methods in cross-cultural research*. Beverly Hills, CA: Sage.
- Measurement Excellence and Training Resource and Information Center (METRIC) – Learning about measurement. Available online at: <http://www.measurementexperts.org>.
- National Center for Health Statistics. (1992). *Cognitive research on response error in survey questions on smoking*. Public Health Service. Hyattsville, MD. (PHS) 92-1080.
- Neutens, J.J., & Rubinson, L. (2002). *Research techniques for the health sciences*. (3rd Edition). Benjamin: San Francisco.
- Patrick, D.L. & Berry, W.L. (1991). Measurement issues: Reliability and validity. *American Journal of Health Promotion*, 5(4), 305-310.
- Patton. M.Q. (1990). *Qualitative evaluation and research methods*. (2nd Ed.). Newbury Park, CA: Sage.

- Publication Manual of the American Psychological Association (5th Ed.), (2002). Washington, D.C.: American Psychological Association.
- Robinson, J.P., Shaver, P.R. & Wrightsman, L.S. (Eds.), (1991). Measures of personality and social psychological attitudes. Vol. 1. San Diego: Academic Press.
- Rosenthal, R. (1991). Meta-analytic procedures for social research. Newbury Park, CA: Sage
- Steckler, A. et al. (1992). Integrating qualitative and quantitative methods. Health Education Quarterly. 19(1), 1 – 8.
- Ulin, P.R., Robinson, E.T., & Tolley, E.E. (2005). Qualitative methods in public health: a field guide for applied research. San Francisco: Jossey Bass.
- Vaughn, S., J.S., Sinagub, J. (1996). Focus group interviews in education and psychology. Thousand Oaks, CA: Sage.
- Webb, E.J., Campbell, D.T., Schwartz, .R.D., Sechrest, L. & Grove., J.B. (1981). Nonreactive measures in the social sciences (2nd Ed.), Boston: Houghton Mifflin.