Title: Health Status Assessment: Measurement and Inference

Instructor:
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Description: This course will be an introduction to health status assessment focused on measurement and survey design. We will address two central questions: 1) How do we measure health status? and 2) How do we relate the data to possible inferential populations? Topics will include the fundamentals of study design and theory in health status assessment, internal and external validity, measurement validity, questionnaire construction, scaling and scoring, sampling methodology, uses and limitations of outcomes data, and survey implementation. By the end of the course, students should be able to critique and evaluate existing health status measures and to weigh the costs and benefits of using an “off-the-shelf” measure as compared to designing a new instrument. Throughout the course, students will learn about current data collection efforts at the University of Chicago.

Course time and location:
Tues/Thurs 1:30-2:50; The Population Research Center

Course Prerequisites:
Required: Descriptive and bivariate statistics
Recommended: Multivariate statistics

Required Text:

Additional Resources:


Evaluation:
Class participation: 30%
Midterm: 20%
Presentation: 10%
Final project: 40%

Midterm exam – short answer, take-home exam
Final Project – Students will design and administer a survey, using the SF-8 as the foundation (e.g., adding disease-specific or social support questions to the pre-existing instrument). The final project will entail the following steps: 1) developing the sampling plan; 2) developing the survey questionnaire; 3) pilot testing the survey questionnaire; 4) assessing the reliability and validity of the survey questionnaire; 5) administering the survey questionnaire; 6) analyzing the survey results; and 7) writing up the survey results. Students will present their findings during the last class session. Students may work in teams.

Sessions and Readings:

JAN 6 OVERVIEW


JAN 8 FUNDAMENTALS OF STUDY DESIGN

Aday LA. Designing and Conducting Health Surveys. 
  Chapter 1. “Thinking about topics for health surveys”
  Chapter 2. “Matching the survey design to survey objectives”


Patrick DL, Erickson P. Health Status and Health Policy: Allocating Resources to Health Care. 
  Chapter 4. “Concepts of health-related quality of life”

JAN 13 GENERIC MEASURES

Spilker B (ed). Quality of Life and Pharmacoeconomics in Clinical Trials. 
  Chapter 34. Ware JE. “The SF-36 Health Survey”


McDowell I and Newell C. Measuring Health: A Guide to Rating Scales and Questionnaires 
  Chapter 9. “General Health Status and Quality of Life”
JAN 15    DISEASE SPECIFIC MEASURES


JAN 20    INTERNAL AND EXTERNAL VALIDITY

Cook, TD, and DT Campbell. *Quasi-Experimentation: Design & Analysis Issues in Field Settings*  Chapter 1 “Causal inference and the language of experimentation”  Chapter 2 “Validity”

JAN 22    MEASUREMENT VALIDITY—RELIABILITY, VALIDITY, RESPONSIVENESS I

Patrick DL, Erickson P. *Health Status and Health Policy: Allocating Resources to Health Care*  Chapter 3 - “Theoretical foundations for health-related quality of life”

Aday LA. *Designing and Conducting Health Surveys.*  Chapter 3. “Defining and clarifying the survey variables.”


JAN 27    MEASUREMENT VALIDITY—RELIABILITY, VALIDITY, RESPONSIVENESS II


**JAN 29  **  QUESTIONNAIRE CONSTRUCTION

Aday LA. *Designing and Conducting Health Surveys.*
- Chapter 8. “General principles for formulating questions”
- Chapter 9. “Formulating questions about health”
- Chapter 10. “Formulating questions about demographics and behavior”
- Chapter 11. “Formulating questions about knowledge and attitudes”

**FEB 03  **  SCALING AND SCORING


Aday LA. *Designing and Conducting Health Surveys.*
- Chapter 12. “Guidelines for formatting the questionnaire”
- Chapter 13. “Monitoring and carrying out the survey”

**FEB 05  **  EX: STUDY DESIGN OF THE HOSPITALIST PROJECT

David Meltzer, MD, PhD
Associate Professor
Medicine, Economics, Harris School of Public Policy


**FEB 10  **  EX: QUESTIONNAIRE CONSTRUCTION IN THE HUTTERITE POPULATION

Lianne Kurina
Assistant Professor
Department of Health Studies

Harkness JA, Van de Vijver FJR, Mohler PP. *Cross-Cultural Survey Methods*
- Chapter 6. “Culture-sensitive context effects: A challenge for cross-cultural surveys”
- Chapter 13. “Social desirability in cross-cultural research”
Finch CE, Vaupel JW, Kinsella K (eds). Cells and Surveys: Should Biological Measures be Included in Social Science Research?
Chapter 3. Biological material in household surveys: the interface between epidemiology and genetics.
Chapter 11. Weinstein M, Willis RJ. “Stretching social surveys to include bioindicators: possibilities for the Health and Retirement Study, Experience from the Taiwan Study of the Elderly.”

FEB 12 EX: SCALING AND SCORING – The NSHAP Study

Journals of Gerontology Special Issue (to be handed out before class)

FEB 17 SAMPLING

Colm O'Muircheartaigh
Professor, Harris School of Public Policy
Vice President for Statistics and Methodology, the National Opinion Research Center

Aday LA. Designing and Conducting Health Surveys.
Chapter 6. “Deciding who will be in the sample” – pp. 112-142.
Chapter 7. “Deciding how many will be in the sample” – pp. 143-176.

Lohr SL. Sampling: Design and Analysis.
Chapter 1. “Introduction”
Chapter 7. “Complex Surveys”


FEB 19 PLANNING FOR DATA ANALYSIS

Aday LA. Designing and Conducting Health Surveys.
Chapter 4. “Planning the analysis of the survey data”
Chapter 5. “Choosing the method of data collection”
Chapter 14. “Preparing the data for analysis”
Chapter 15. “Planning and implementing the analysis of the data”

FEB 24 MEASUREMENT CHALLENGES IN HEALTH DISPARITIES RESEARCH


LaVeist, TA. Beyond dummy variables and sample selection: what health services researchers ought to know about race as a variable. *Health Services Research.* April 1994; 29:1-16.


**FEB 26  THE ROLE OF AGE IN DATA COLLECTION**


Park D. *Cognition, Aging, and Self-Reports*  
Chapter 3. “Cognition, Aging, and Self-Reports”


**MAR 03  EX: THE ROLE OF AGE AND THE NOAH PROJECT**


Martin LG and Soldo BJ (eds.). *Racial and Ethnic Differences in the Health of Older Americans.*  
Chapter 4. Smith JP and Kington RS. “Race, socioeconomic status, and health in later life”

**MAR 05  LIFE COURSE APPROACHES TO HEALTH STATUS ASSESSMENT**

Giele J, Elder G. *Methods of Life Course Research.*  
Chap. 9. Laub JH, Sampson RJ, “Integrating quantitative and qualitative data”

Korn EL, Graubard BI. *Analysis of Health Surveys*
Chap 7. “Analysis of Longitudinal Surveys”


**MAR 10** NEW APPROACHES IN LARGE-SCALE SURVEY DESIGN

*The National Children’s Study*

**MAR 12** STUDENT PRESENTATIONS