

Graduate Programs in Applied Health Behavior Research**M88-560-01 Survey Methods: Design and Evaluation**

Fall 2017, Tuesday 4:30-7pm

Taylor Avenue Bldg. (TAB) 1st floor Classroom A

600 South Taylor Ave., Suite 155 Division of General Medical Sciences

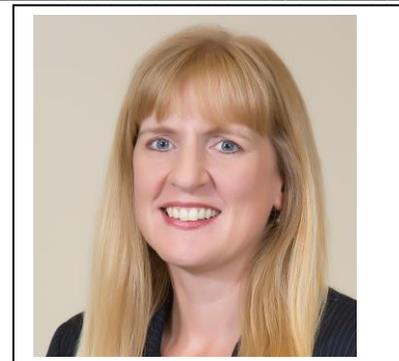
Course Instructor:**Amy McQueen, PhD**

Associate Professor, Division of General Medical Sciences

Phone 314-286-2016* (not on med campus everyday)

Email: amcqueen@wustl.edu (Preferred contact mode)

Office hours by appointment

**Course Description:**

This course will provide a comprehensive introduction to survey methods and psychometrics. It will cover theory as well as practical application. Class time and course assignments will involve many practical hands-on experiences in designing and evaluating survey measures, culminating in a proposal for validating a new scale of the student's own creation. Each student will develop a survey incorporating standard and new measures, which will be administered to others to practice recruitment, data collection, data entry, and codebook design.

Recommended prerequisites: linear regression and research methods

Course Materials:

Students will be expected to have purchased the SPSS grad pack software or have access to version 22 or higher during the course. Students will not be asked to buy a textbook for this course. Readings from book chapters and articles will be assigned to supplement the lecture each week. Electronic copies will be shared via a DropBox file. For students interested in owning useful reference textbooks, the following books are recommended:

- Nunnally JC, Bernstein IH. Psychometric Theory. New York: McGraw-Hill 1994.
- Aday LA, Cornelius LJ. Designing and conducting health surveys: A comprehensive guide. San Francisco, CA: Jossey-Bass 2006.
- Groves RM, Fowler FJ, Couper MP, et al. Survey Methodology. Hoboken, NJ: Wiley 2009.
- Dillman DA, Smyth JD, Christian LM. Internet, mail, and mixed-mode surveys: Tailored design method. Hoboken, NJ: John Wiley & Sons, Inc. 2009.

SPSS Licenses can be purchased for 6 or 12 months online from various retailers or from the same site Wash U staff can buy other software at a discount:

https://estore.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?cmi_mnuMain=2ff73789-74c7-e011-ae14-f04da23e67f6&pc=ddc848d8-b4fe-e111-bd05-f04da23e67f6

Learning Objectives:

Upon course completion, students will be able to:

- Recognize the complexity of survey research and measurement evaluation
- Identify and evaluate existing survey measures
- Describe factors involved in the organization and length of survey measures
- Select and justify the most appropriate survey mode, and develop procedures for survey administration
- Recognize the various sources that may contribute to total survey error and methods for reducing them
- Identify reasons and methods for creating and evaluating new survey measures
- Recognize the different reasons for, and potential problems with, using various response scale options
- Propose studies to evaluate the reliability and validity of a measure
- Create codebooks for variables created from quantitative survey measures and qualitative data coding

Grading:

5% Class participation; 30% Graded Exercises; 65% Written Assignments

Class participation. Students are responsible for reading prior to class and asking questions as needed in person or by email. Students are expected to contribute to in-class exercises and discussions including group work. The instructor should be notified of all absences in advance when possible. Students who miss more than 3 lectures may receive a deduction in their final grade. Individual assignments may benefit from group interaction, but must reflect the student's own mastery of the material. Thus, individuals in a group may receive different grades for their written work.

Grades/sub-grades	4-point scale
A+ (98% to 100%)	4.00
A (93% to 97%)	4.00
A- (90% to 92%)	3.7
B+ (88% to 89%)	3.3
B (83% to 87%)	3.00
B- (80% to 82%)	2.7
C+ (77% to 79%)	2.3
C (73% to 77%)	2.00
C- (70% to 72%)	1.7

Assignments. The goal of these assignments is to allow students some personalization of their experience with several key tasks in survey development and evaluation.

Writing Assignments (100 points each)	Due Date (by 5pm!)
Assignment 1: Format existing items for a survey and describe in written text	9/22
Assignment 2: Written critique of a validated PRO multi-item scale	10/13
Assignment 3: Turn in formatted survey, labeled SPSS database including data entered for <10 participants, and codebook with scoring instructions	11/17
Assignment 4: Propose a new scale and a validation study	12/12

Assignments are designed to build upon each other. **For Assignment 1**, students will each select and format ≤10 standard sociodemographic measures from public surveys, 1 multi-item scale from the published literature of a standard patient reported outcome (PRO) such as quality of life (QOL), and 1 additional multi-item scale from the published literature of their choice. **For Assignment 2**, each student will evaluate the reliability and validity of a standard PRO measure from the literature. **For Assignment 3**, students will administer a formatted survey to a convenience sample of people that includes sociodemographic measures, an existing multi-item scale from the literature that relates to a newly created multi-item scale developed in class regarding values of prevention. Additional measures may be included per the student's interests (optional). Students will enter the survey data they collect into a SPSS dataset and create a codebook including scoring information for each variable in the dataset. **For Assignment 4**, students will propose a new multi-item scale of their own definition and design, and propose methods for evaluating its reliability and validity.

Graded Exercises. The goal of these assignments is to allow students to practice skills learned in class and to (independently) demonstrate what they learned from group activities.

Graded Exercises (25 points each)	Due Date (by noon)
A. Written summary of group presentation on survey mode	10/20
B. Qualitative interview guide, protocol, & codebook for formative research	11/3
C. Reflection on keys to successful survey administration	11/10
C. Individual oral presentation on real-world survey methods example	TBD

Assignments and Exercises should be typed and submitted as word documents. Files should be saved with the student's last name and brief assignment name (e.g., Smith Survey Mode Exercise A). Files must be attached to an email sent to the instructor at amcqueen@wustl.edu by 5pm on the due date. Dr. McQueen will insert comments in track changes in word docs and email them back with their grade.

Individual presentation. Each student will present a real-world survey methods example to the class for discussion. Students should solicit approval and suggestions from the instructor for their selected topic in advance of their scheduled presentation date. Students are encouraged to draw on their own personal experiences or exposure to research.

Course Policies:

Plagiarism reflects unprofessional and unethical behavior and such use will result in an immediate failure for the course. Plagiarism, as defined for this course, results if you take 5 or more consecutive words from a written source (including web pages) without proper citation. You must place the phrase in quotation marks and cite the author, year of publication, and page (or web publication). **Keep in mind, rewording or rephrasing someone else's writing or ideas should also include a reference. Not only is proper referencing ethical, but a regular part of our professional practice.**

Deadlines. There are no alternate assignments that will be given in place of the required assignments described above. Penalties for late work include 10 points deducted from the final grade per day late. Students are advised to communicate with the instructor before an assignment is due to plead their case for an extension or temporary "incomplete" grade. *This syllabus is subject to change at the discretion of the professor to accommodate instructional and or student needs. It is the student's responsibility to keep abreast of such changes.*

Drop Dates. If the occasion should arise that you want or need to drop this class, please talk to the course instructor first. You can drop for any reason during the course of the semester, however you may only receive a partial or no tuition reimbursement after mid-September or depending upon how far into the semester you drop the course. Late withdrawals will appear on your transcript as a withdrawal. See the academic calendar for specific dates: https://crtc.wustl.edu/wp-content/uploads/AHBR_2017-18_Academic_Calendar.pdf

University Resources

Writing Assistance:

For additional help on your writing, consult the expert staff of the Writing Center in Olin Library on the Danforth campus (first floor): <https://writingcenter.wustl.edu>

Disability Resources:

Washington University is committed to providing accommodations and/or services to students with documented disabilities. Washington University's Center for Advanced Learning Disability Resources is the University's official resource for students with disabilities and students with suspected disabilities. DR assists students with disabilities by providing guidance and accommodations to ensure equal access to our campus, both physically and academically. To learn more about its services, initiate the process of formal documentation and/or to arrange for accommodations, please contact at the start of the course: <http://cornerstone.wustl.edu/disability-resources/>

Mental Health Resources:

Mental Health Services' professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression: <http://shs.wustl.edu/MentalHealth>.

Reporting Policies:

Please also review the CRTC website for policies regarding sexual assault reporting and reporting concerns about bias, prejudice or discrimination: <https://crtc.wustl.edu/courses/class-list/registration/academic-policies/reporting-policies/>

Class Schedule

Week	Topic	Description	Class Activity	Assignment	Reading for class
1 8/29	Introduction	Overview of class, field, conceptual models	Brainstorm to create conceptual model to identify important factors to survey	<i>Bring existing survey or scale to next class</i>	
2 9/5	Identify, Evaluate and Select existing items for a survey (standard items and scales); Scales of measurement	Non-scales; national surveys; databases of measures Fixed vs open ended; Response options; Reverse scored items	Discuss/Review existing measures	1. Create/format a brief survey using standard measures and describe in written form. (Due 9/22)	Read Totten article before class
3 9/12	Review basic statistics that are fundamental to evaluating latent measures	Distributions and Data Analyses	In class SPSS demonstrations with real scales		
4 9/19 (Late)	Introduce latent constructs Measurement reliability	Non-objective measures Reliability (models, methods, measures)	Split class into groups & select articles to review	2. Written evaluation of reliability and validity of a published <u>scale</u> (student's choice) (Due 10/13)	Aday Reliability p.54-62 Kimberlin article
5 9/26	Measurement validity	Validity (theory, methods, influences, measures) Cross-cultural equivalence			
6 10/3 (Late)	Measurement reliability and validity – continued (No formal lecture)	Solidify understanding of reliability and validity	Groups present articles - evaluate reliability & validity of a published measure		Read Aday & Kimberlin before class + group article
7 10/10	Survey Mode Survey Format	Mode of administration (pros/cons) -format, layout, instructions, cost -Missing data, non-response bias, error -Social desirability -Sensitive questions + optimum length, question order	Group prepare pros/cons of one mode each and present to class	<i>A. Individual summary of in-class group assignment in written form (Due 10/20)</i>	Read Groves Chp 5 Survey Mode before class Aday Chp 12 Survey Format
8 10/17 (Late)	Adapting existing measures; pre-testing; Developing items/measures	Item creation – content validity Multiple diverse methods for item generation and evaluation	Class brainstorm/focus group to develop a new measure; Class vote on final items for scale	3. Format and administer survey, create SPSS database and codebook (Due 11/17)	Moorman article-skim before class Blair Chp 10 Pretesting Smith article-focus on first 3 pages

Week	Topic	Description	Class Activity	Assignment	Reading for class
9 10/24	Qualitative research	Planning cognitive interviews, process evaluation; collecting and analyzing qualitative data		<i>B. Create an Interview guide, protocol, and codebook (Due 11/3)</i>	Blair Methodology Appendix 3
10 10/31 (No class)	Field procedures; Interviews	Field administration; interview dynamics; quality control methods	Practice administering class survey to others	<i>Reflection (Due 11/10)</i>	Aday Chp 13
11 11/7	Data management and quantitative analysis	Aggregate measures, scoring, dealing with missing data, implications for analyses Creating codebooks	Code surveys SPSS demonstration		Aday Chp 14
12 11/14	Longitudinal surveys Methods – diary, Ecological Momentary Assessment Attrition/Bias	Formatting measures to assess change over time, choosing time points, reliability, validity-response shift, Incentives, rapport, communication, Burden, recall, errors, satisficing			
13 11/21	NO CLASS – THANKSGIVING HOLIDAY				
14 11/28	Item Response Theory, classical test theory, generalizability theory, factor analysis	Introduce measurement theories and selected analytic methods; computer adaptive testing (PROMIS)	Exploratory Factor Analysis (EFA) demonstration; (students can bring laptops with SPSS to practice EFA)		Costello article
15 12/5	Ethics Sampling & weights; Response rates Observation/Abstraction forms; inter-rater reliability	Diagnostic measures, conceptual equivalence when comparing groups, sensitive data	Hypothetical cases/ vignettes Reporting (AAPOR) example	4. Propose new scale and evaluation plan (Due 12/12)	Aday Chp 6 Groves Chp 6, 11
12/12	Exam week - No class			Final assignment due	

Italicized assignments reflect graded exercises or class participation.

(Late) = Dr. McQueen will be in a leadership training workshop on four Tuesdays until 4:30 and will be late to class. Students can engage in group work from 4:30-5pm. Class will start at 5pm.