

University of Vermont
College of Education and Social Services
Department of Social Work

SWSS 7: Quantitative Methods in Social Work Research

Summer 2005
Tues., Thurs. 5:30 - 9:15 p.m.
Location: 426 Waterman

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3 credits

Office and hours: Waterman 540 & 4:30 -5:30 T&T.

It is a simple task to make things complex,
But a complex task to make them simple.
Chinese Proverb

1.0 COURSE DESCRIPTION

1.1 OVERVIEW OF THE COURSE

This course is designed as an introduction to statistics commonly found in social work practice, policy and research. The course will cover the range of statistical concepts from univariate to multivariate analysis as well as descriptive and inferential statistics. The course content will be discussed conceptually as well as from applied and intuitive perspectives. Each class will cover a specific set of statistical conventions (including mathematical derivations and formulations), the underlying assumptions of their construction, and their application in the social work literature. The course will also include the use of the Statistical Package for the Social Sciences (SPSS) for data analysis. The goals of the course are three fold: (1.) beginning competence in statistics; (2.) preparing students to use and critique statistical methods in practice and research; and (3.) helping students present statistics clearly and accurately. The course fulfills the statistics requirement for the MSW degree program (M.S.W. Program Bulletin 2004-05, p 21).

1.2 Course Objectives

Students who successfully complete this course should be able to demonstrate the following knowledge, values and skill objectives:

Knowledge:

1. Develop a conceptual framework for statistical thinking;
2. Understand the use of statistics in social work journal articles;
3. Understand the underlying assumptions of quantitative methodology and its implica-

tions for social work;

4. Understand the applicability as well as limitations of statistical testing and statistical significance for social work practice, research and policy;
5. Gain appreciation of the uses of statistical software for data analysis

Values:

1. Appreciate the sensitivities of diverse groups toward notions of generalizability, norms and representativeness in the use of statistics and social indicators;
2. Understand the ethical issues involved in the use of measurement based upon the normal distribution and use of standardized tests;
3. Develop sensitivity to use of group data and statistical averages and their effect on disadvantaged and oppressed groups

Skills:

1. Recognize and accurately interpret statistical symbols;
2. Understand mathematical foundations of statistical tests;
3. Be able to ask critical questions about the presentation of data\ statistics in reports, presentations, journal articles and in the media;
4. Ability to use SPSS software for basic statistical operations;
5. Ability to select and apply basic statistical tests to collected data;
6. Prepare and present statistical data in clear and concise ways to promote understanding and reasonable, supportable interpretations.

1.3 Assignments/Grading:

- A) 2 Quizzes (25 points of total grade)
 - a. Quizzes cover course material in preceding classes prior to the date of the quiz
 - b. Students are allowed to use notes and a calculator.
- B) Article Assignment (25 points of the total grade)
 - a. Each group will review and lead a class discussion on an assigned article (20 minutes)
 - b. Everyone will write a 2 page reaction paper describing the choice of statistical test, the results, and your understanding of how the results were used to support

the discussion.

- C) 2 SPSS Assignments covering the statistics discussed in class (25 points of total grade)
 - a. Each student will enter and analyze data
 - b. Each student will turn in the output generated from each assignment
 - c. Each student will write a one page result section based on the findings from the analysis
- D) Group Presentations 25 points of total grade
 - a. The presentation will involve displaying data in a clear and concise format.
 - b. Exact topics will be discussed in class and guidelines on the display of data provided.

*****Lab assignments may be completed in the Academic Computing Center (ACC) in the basement of the Waterman Building and in the Bailey Howe library (Cyber Café). Please see summer hours posted on the UVM website for the hours of the ACC and the Bailey- Howe library. Students will need to use computers loaded with current SPSS software. Please make sure you have a current UVM e mail account so you can log in successfully to the on campus computers (Note: UVM creates an e mail account for all summer enrolled students. Go to www.uvm.edu/account to activate. This is the only email address UVM uses to communicate important information about course changes, cancellations, or other information regarding courses). Some class time will be allotted for lab work. Specific instructions will be given early in the course for completion of the lab assignments.

1.4 Code of Conduct

All students will be expected to come to class prepared which includes reading assigned articles and text readings. Class participation is also graded (+, -) and can make a difference when a student is on the cusp of two grades (e.g., B+ or A-).

Students are expected to conduct themselves in a manner that serves to maintain, promote, and enhance the high quality academic environment befitting the University of Vermont. Faculty and students will treat all members of the learning community with respect. Toward this end, they will promote academic discourse and the free exchange of ideas by listening with civil attention to comments made by all individuals. Students and faculty will maintain an appropriate academic climate by refraining from all actions which will disrupt the learning environment (UVM Faculty Senate, 1999).

2.0 COURSE METHODS

2.1 Required Readings

The required texts are available from the UVM bookstore and other locations. Journal articles will be made available through the Bailey Howe electronic reserve list which can be retrieved on line (another reason to get a UVM Web account). Course overheads will also be made available

by the instructor on the first day of class at no cost to students.

Montcalm, D. & Royse, D. (2002). Data Analysis for Social Workers. Allyn & Bacon: Boston, MA.

Pavkov, T. & Pierce, K. (2003). Ready, Set, Go! : A Student Guide to SPSS 11.0 for Windows. McGraw-Hill: New York.

Supplement Text:

Publication Manual of the American Psychological Association (5th ed) (2001). APA, Washington, DC.

3.0 COURSE SCHEDULE AND OUTLINE

Tues., 7/5	Introduction to course/ Course business Statistics – Why do I need to learn this? Telling the Truth with Statistics Questionnaire
Readings	M & R Chaps. 1-2
Thurs., 7/7	Defining Data Levels of Measurement Frequencies
Readings	M & R chaps. 3-5 Pavkov, 1
Tues., 7/12	Preparing Graphical Representation of data Normal Distribution Measures of central tendency Article Assignment 1: Disclosure of student status to clients: Where do MSW Programs Stand, Mason, Beckerman, Auerbach
Readings:	M & R, Chaps. 6-8 Pavkov, 2
Thurs., 7/14	Measures of central tendency Measures of Dispersion SPSS Assignments 1 Article Assignment 2: The Median isn't the Message, Steven Jay Gould
Readings	M & R text, Chaps. 9 & 10

Tues., 7/19	<p>Quiz 1 Sampling and Probability The meaning of statistical significance Hypothesis Testing Article Assignment 3: Multicultural Content and class participation: Do students self-censor, Hyde and Ruth</p>
Readings	<p>M & R, Chap.11, 12 Pavkov, Assignment 8, 10</p>
Thurs., 7/21	<p>Statistics you will encounter <i>Chi square and cross tabs</i> <i>Correlation</i> Article Assignment 4: The process of burnout among mental health providers, Ackers, Jean-Baptist, Lawrence</p>
Readings	<p>M & R, Chapter 13 Pavkov, Assignment 4, 5, 6</p>
Tues., 7/26	<p>Statistics you will encounter <i>Correlation</i> <i>T-Test</i> <i>ANOVA</i> Article Assignment 5: Solution focused brief therapy and the treatment of depression: A pilot study, Lee et al</p>
Readings	<p>M & R text, Chap. 14, 15 Pavkov Assignment 65</p>
Thurs., 7/28	<p>Statistics you will Encounter <i>ANOVA</i> Choosing a Statistical Test Wrapping up with SPSS SPSS Assignment 2 Article Assignment 5: Reference list accuracy in social work journals: Spivey and Wilks</p>
Tues., 8/2	<p><i>Regression</i> Guest Lecturer Article Assignment 6: Post Secondary education and the woman and the well being of women in retirement, Zhan and Pandey Group Presentations</p>
Thurs., 8/4	<p>Quiz 2</p>

Group Presentations
Course wrap-up
Course Evaluation

Please refer to the Cat's Tale in regard to policies for academic honesty

Note: Syllabus is subject to change with notice.

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