

# **Course: Learning Social Work Research Methods for Evidence-based Policy & Practice©**

## ***General Course Information***

SOCW T6501: Social Work Research Methods

## ***Instructor Information:***

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## ***Course Description***

Research is a crucial venue for social workers to develop, test, and refine professional knowledge and skills to enhance human well-being, alleviate poverty and oppression, and promote social and economic justice. This course is designed to help students understand and use a scientific, analytic approach to building knowledge for practice and for evaluating service delivery in all areas of practice. Different theoretical bases and methodological procedures for social work research will be addressed, as will basic statistical procedures and technological advances in both quantitative and qualitative designs. Ethical standards of scientific inquiry will be emphasized, with attention to protecting and promoting the well-being of vulnerable and oppressed populations. Contemporary emphases in social work research will be outlined. Ultimately, students are expected to be able to access, critically evaluate, and appropriately utilize empirical research to inform and evaluate their practice with individuals, families, groups, organizations, and communities.

The instructor adheres to University and school policies regarding accommodations for students with disabilities, religious holidays, incompletes, plagiarism, and student evaluation of the course and its instruction.

## ***Course Objectives:***

Upon completion of the course, students should demonstrate a working knowledge of:

- Historic and contemporary issues of research in the social work profession.

- The scientific/analytic approach to knowledge building for practice, including problem formulation, development of intervention strategies, and evaluation of service delivery.
- Ethical standards of scientific inquiry, particularly with regard for protecting and promoting the well-being of vulnerable and oppressed populations, and organizational and sociopolitical issues in agency-based research.
- The logic and process of scientific inquiry
- Several quantitative and qualitative designs for generating diverse types of knowledge and evaluating various aspects of practice
- Data analytic strategies, including basic statistical tests and technological supports for data management and analysis
- Translation of findings into practice and to oral and written reports in a way which maximizes benefit and avoids misuse.

Students should be able to: access, critically evaluate, and utilize existing research to formulate and conceptualize practice-related research questions; operationalize relevant variables and select appropriate measures in hypothesis-testing studies, plan appropriate sampling and data collection strategies, and formulate a data analysis plan.

Students should be able to assess divergent world views related to sources of diversity and position in the social structure, e.g. race, class, and gender, and to understand how these varying stances influence the formulation of research questions, methodological issues, and interpretation of findings.

### ***Course Format: Assignments and Evaluation***

The course format will involve:

- Didactic presentation of course material;
- Applying concepts in the lectures and readings through discussions, written assignments, experiential exercises and group discussions.

Student evaluation will be based on the following assignments:

- Brief written examinations following each class. These examinations will be based on required readings and class discussion for the respective class. These examinations can be completed on-line at the course web site at any time prior to the following class. These examinations will be composed primarily of multiple choice and true/false questions. The examinations will comprise 75% of the course grade.
- Periodic in-class group assignments which may count as "bonus" points added to the examination score for the respective class. The group bonus points will be added to each participating group member's examination score.
- A written evidence-based policy, administration or practice (EBP) assignment. This assignment will be carried out by small groups of students and all students in the respective group will be assigned the same grade. Students may form groups of 4-6 students based on common interest and type of field work setting shared in common. For example

those students working with elderly clients with health care needs may wish to form a group. This assignment will require students in each group to:

- Select an EBP question of relevance to their type of field work setting to work on during the semester
  - To search for and retrieve evidence relevant to that question
  - To evaluate the evidence
  - To develop an application plan appropriate to their field work setting
  - To evaluate their experience with the EBP process for purposes of future improvement.
- The EBP question and search plan is due mid-semester. The final assignment is due at the last class. This final assignment will comprise 25% of the course grade.

Papers should follow the style guidelines set forth in: American Psychological Association. (2001). Publication manual (5th ed. ed.). Washington D.C.: Author.

## ***Readings***

### **Required**

Rubin, A., & Babbie, E. (2007). *Research methods for social work* (6th Ed). Pacific Grove, CA: Brooks/Cole-Thomson Learning. Forthcoming in 2007.

This text has an accompanying study guide: Rubin, A. (2007). *Practice-oriented Study Guide for Rubin and Babbie's Research Methods for Social Work*: Thomson Brooks/Cole which students can elect to purchase.

The text has a companion web site accessible at:

<http://socialwork.wadsworth.com/>

### **Recommended**

Gibbs, L. E. (2003). *Evidence-based practice for the helping professions: A practical guide with integrated multimedia*. Pacific Grove, CA: Brooks/Cole-Thomson Learning.

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practice guide*. Malden, MA: Blackwell Publishing.

Straus, S. E., Richardson, W. S., Glasziou, P., & Haynes, R. B. (2005). *Evidence-based medicine: How to practice and teach EBM* (3rd ed.). Edinburgh: Churchill Livingstone.

**Additional readings and web resources are available at the instructor's web site:**

<http://www.columbia.edu/cu/musher/evidence-based%20practice%20reference%20list.htm>

This web site includes specialized readings pertaining to:

- Intervention Research Methods Readings

- Other Research Methods Readings
- Outcome Measurement Readings
- Systematic Reviews and Meta-Analyses
- EBP Readings
- EBP Internet Resources
- Search Engines
- Measurement Internet Links
- Research Methods Software

## **Class Session Outline**

**Note:** PowerPoint presentations for each of the assigned chapters in the Rubbin and Babbie text are accessible at the text's website at: [http://www.wadsworth.com/cgi-wadsworth/course\\_products\\_wp.pl?fid=M20b&product\\_isbn\\_issn=0534621090&discipline\\_number=4](http://www.wadsworth.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&product_isbn_issn=0534621090&discipline_number=4) . These PowerPoints will be adapted for use in class presentations. In addition these PowerPoints as well as other study materials should be reviewed by students outside of class. Session quizzes are available for on-line administration at the course website. In addition chapter quizzes are available at the text website at the link above.

### ***Session 1***

#### **Topic:**

Introduction to the Course & Social Work Research

#### **Class Plan:**

- Introduction to course, syllabus, bibliography, assignments, course web site.
- Exploratory formation of evidence-based policy and practice (EBP) groups.

#### **Assignments Due:**

Complete test 1 covering chapter 1 from course text. The test should be completed after class 1 and before class 2.

#### **Required Readings:**

Rubin & Babbie, chapter 1: Why Study Research?

### ***Session 2***

#### **Topic:**

Introduction to Evidence-based Policy & Practice in Social Work

#### **Class Plan:**

- This class will provide an introduction to the process and key concepts of evidence-based policy and practice as applied in social work. This content will provide a basis for the required course EBP group paper.
- During the class:
  - Instructors will provide an overview of evidence-based policy and practice

- Students will break into evidence-based practice project groups (comprising 4-6 students per group).
  - Each group will identify some of the more important emphases in social work practice for their topic area (i.e., by population such as children, adolescents, young & middle-aged adults, or older adults; by problem area such as substance abuse, trauma, domestic violence; by field of practice; etc.) gleaned from the readings for this and other courses, prior experiences and experiences in field work. Group members should attempt to form initial evidence-based practice questions to be worked on during the remainder of the semester. These can be clinical practice questions, policy practice questions, administration practice questions or generalist practice questions pertaining to the group's common focus.

### **Assignments Due:**

- Complete Test 2 covering the required readings for class 2. The test will be available at the class web site immediately following class 2 and must be completed prior to the next class.
- Each group should hand in one or more one-sentence evidence based practice questions at the end of class or by email prior to the next class (a rough, working question which undoubtedly will change as the group deliberates).
  - Social workers typically select their professional jobs related to their interests such as working with refugees, children and families, older adults, etc. These professional positions reflect social conditions that individual social workers care about and want to influence. Typically in these positions social workers run into issues-questions when working with their clients that they do not have the answers to. In such cases an evidence-based social worker would know how to work with their clients-stakeholders to look for the evidence about viable options and make decisions about what actions to take based on the evidence, client values and preferences and circumstances.
  - In the class project we are attempting to simulate this situation to help you learn how to do EBP. We have started by asking you to self select into topical interest groups. This is what you have started to do and we expect this will continue as a process for another two weeks. Now we are asking that you examine your field work case assignments and see if there are case situations that fit your topical area so that you have a real case or cases to anchor your question. The Gibbs' text refers to these questions as client oriented, evidence search questions (COPES). The Rubbin and Babbie text calls these CIAO questions. Since each group needs to work on only one COPES/CIAO question it would be sufficient if just one student had a relevant case.
  - If after examining the field work opportunities no cases are found that fit the topic then you are free to form a group COPES/CIAO question based on what you would anticipate you might find in your future practice in the group topic area. You can explore these possibilities by examining the

practice literature in your topic area to see what types of interventions social workers actually do and what options social workers in this topic area of practice actually consider. This would be a good way to get to your specific COPES/CIAO question. We do not want you to give up your topic if there is no field work cases available. Stick with the topic which drives your interest.

### **Required Readings:**

Rubin & Babbie, chapter 2: Evidence-based Practice

Mullen, E. J., Bellamy, J. L., & Bledsoe, S. E. (2007). Evidence-based social work practice. In R. M. Grinnell & Y. A. Unrau (Eds.), *Social Work Research and Evaluation: Quantitative and Qualitative Approaches* (8 ed.). New York: Oxford University Press.

### **Recommended Readings:**

Greenhalgh, T. (2001). How to read a paper (2 ed.): BMJ Books.

This is an easy to read book laying out the basics of evidence based medicine. While written for medicine the text is a simple, easy to read presentation of ideas about how to locate, assess and use research articles. This text is available on-line.

Petticrew, M., & Roberts, H. (2005). *Systematic reviews in the social sciences: A practical guide*. Oxford: Blackwell.

This is a comprehensive text about conducting systematic reviews of the research literature. It is easy to read and very practical. It is intended for those in the social sciences including social work who are conducting research literature reviews. Chapters 1-3 deal with question formulation (this class) and chapter 4 gives good advice on how to search the literature and find studies relevant to the review question (next class).

Gibbs, L. E. (2003). *Evidence-based practice for the helping professions: A practical guide with integrated multimedia*. Pacific Grove, CA: Brooks/Cole-Thompson Learning.

Check out the web site for a widely used social work text for evidence-based practice at: <http://www.evidence.brookscole.com/> .

Straus, S. E., Richardson, W. S., Glasziou, P., & Haynes, R. B. (2005). *Evidence-based Medicine: How to Practice and Teach EBM* (3rd ed.). Edinburgh: Churchill Livingstone.

The movement toward evidence-based practice started in medicine and is most fully developed in health and medicine. This approach is presented in this book and at the book's web site which is worth a visit at: <http://www.cebm.utoronto.ca/> .

## **Session 3**

### **Topic:**

Searching the Literature for Evidence

## **Class Plan:**

This class reviews knowledge and tools necessary for locating and evaluating existing evidence.

Begin to consider how to convert group topics into answerable EBP questions. Start to narrow down the list of possible topics based on common interests in the group, initial searches of the literature, and discussions with field work staff regarding research questions of interest. Remember that this process is often the most difficult step involved in evidence-based social work practice and may involve several brainstorming discussions and reviews of the literature before reaching an agreed upon topic. Your topics may change or need refining over the next couple of weeks and this is OK! This is all part of the process of formulating an answerable EBP question.

During the class the reference librarian will provide an overview of library and internet resources which students can use to search for evidence regarding their group project questions. Students may volunteer their group project questions to use as examples of how to conduct evidence searches.

## **Assignments Due**

Complete test 3.

## **Required Readings:**

Fang, L., Manuel, J., Bledsoe, S. E., & Bellamy, J. L. (2007). Finding Existing Knowledge. In R. M. Grinnell & Y. A. Unrau (Eds.), *Social work research and evaluation: Quantitative and qualitative approaches* (8 ed.). New York: Oxford University Press.

Manuel, J., Fang, L., Bellamy, J. L., & Bledsoe, S. E. (2007). Evaluating Existing Evidence. In R. M. Grinnell & Y. A. Unrau (Eds.), *Social work research and evaluation: Quantitative and qualitative approaches* (8 ed.). New York: Oxford University Press.

Rubin & Babbie. Appendix A: Using the Library

## **Recommended Readings:**

Greenhalgh, T. (2001). *How to read a paper* (2 ed.): BMJ Books. (chapter 2)

This is a very easy to read book laying out the basics of evidence based medicine. While written for medicine the text is a simple, easy to read presentation of ideas about how to locate, assess and use research articles. This text is available on-line.

Petticrew, M., & Roberts, H. (2005). *Systematic reviews in the social sciences: A practical guide*. Oxford: Blackwell.

This is a comprehensive text about conducting systematic reviews of the research literature. It is easy to read and very practical. It is intended for those in the social sciences including social work who are conducting research literature reviews. Chapters 1-3 deal with question formulation (last class) and chapter 4 gives good advice on how to search the literature and find studies relevant to the review question.

## *Session 4*

### **Topic:**

Philosophy & Theory in Social Work Research

### **Class Plan:**

This class reviews ideological and philosophical views which influence how research is conducted, the components of theory, the utility of theory in guiding research and social work practice, and approaches to scientific inquiry.

### **Assignments Due:**

Complete test 4.

### **Required Readings:**

Rubin & Babbie. chapter 3: Philosophy and Theory in Social Work Research

## *Session 5*

### **Topic:**

The Ethical, Political, & Cultural Context of Social Work Research & Culturally Competent Research

### **Class Plan:**

Instructors will present an overview of the topic. Students will be introduced to the ethical principles of scientific research, protection of human subjects, and the importance of cultural when designing, interpreting and applying research.

### **Assignments Due:**

Complete test 5.

Prior to the end of the semester complete the two-hour online computer-based training module on human subjects research located at the web site of the American Cancer Society. Access this course at <http://cme.cancer.gov/clinicaltrials/learning/humanparticipant-protections.asp> .

Upon completion be sure to print the certificate of completion and keep it in your file. Submit a copy prior to the last class at the end of the spring semester.

### **Required Readings:**

Rubin & Babbie. chapter 4: The Ethics and Politics of Social Work Research and chapter 5: Culturally Competent Research

### **Recommended Readings:**

An interesting example of how scientists can differ regarding the ethics of proposed research is illustrated in research conducted in Africa and Thailand to determine effective methods for preventing the transmission of the HIV virus from mothers to infants. This

case material can be accessed at the Columbia University Musher Program web site:  
[http://www.columbia.edu/cu/musher/AIDS\\_case/toc.htm](http://www.columbia.edu/cu/musher/AIDS_case/toc.htm) .

## **Session 6**

### **Topic:**

Problem Formulation & Measurement

### **Class Plan:**

- The instructor will provide an overview of class material.
- Following the overview we will access the on-line university library portal to *Social Work Abstracts*. The class will analyze studies found in the database *Social Work Abstracts* using the search term "research problem\*" in the abstract section. As many abstracts as time permits will be analyzed. The class will work together to identify the research questions asked, the purpose of the study, the unit of analysis, and the extent to which time was examined as a variable in the study. This exercise is intended to give students practical experience in applying the key concepts described in chapter 6 of the text.

### **Assignments Due:**

Complete test 6.

### **Required Readings:**

Rubin & Babbie. chapter 6: Problem Formulation

## **Session 7**

### **Topic:**

Conceptualization & Operationalization

### **Class Plan:**

By the end of this class students should have developed knowledge and skill in identifying how researchers have formulated research questions and hypotheses as well as how they have conceptualized and operationalized key variables in their studies.

The class will be conducted as follows:

- Instructors will provide an overview of the key concepts discussed in chapter 7 of the text. There will be time for questions to permit students to ask for clarification of key concepts in the reading.
- Two research articles that illustrate key concepts in chapters 6 & 7 readings have been assigned (see references below for Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., et al. and for Mann & Reynolds). Students are required to read the assigned article prior to class. Since students will be analyzing these two articles during class please bring a copy to class. These two articles can be accessed through ProQuest.

- Students will be asked to work in their respective EBP groups to answer the questions below regarding each of the two articles.
- Each group will report back to the class the results of their group's analysis of the assigned articles and submit a group report to the instructors prior to the next class. "Bonus" points (0, 1, 2) will be assigned to the group report. The group bonus points will be added to the examination score received for this class's examination for each participating student.

The questions to be answered are:

- In each article identify:
  - At least one research question
  - Purpose of the research
  - Time dimension used
  - Unit of analysis
  - Whether or not a hypothesis was examined
    - If so identify at least one key hypothesis examined
  - Key concepts in the primary question studied or hypothesis tested
  - Attributes for those concepts
  - Nominal definitions used for those concepts
  - operational definitions for these concepts
  - Types of variables in the question or hypothesis (e.g., independent, dependent, extraneous, control, moderating, mediating)
  - Type of relationship examined in the question or predicted in the hypothesis.

### **Assignments Due:**

Each group will hand in a written report of their analysis of the two assigned articles.

### **Required Readings:**

Rubin & Babbie . chapter 7: Conceptualization and Operationalization

Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., & et al. (2006). The Content and Process of Mother-Adolescent Communication about Sex in Latino Families. *Social Work Research, 30*(3), 169-181. (Full text available for download from ProQuest)

Mann, E. A., & Reynolds, A. J. (2006). Early Intervention and Juvenile Delinquency Prevention: Evidence from the Chicago Longitudinal Study. *Social Work Research, 30*(3), 153-167. (Full text available for download from CU ProQuest)

## **Session 8**

### **Topic:**

Measurement

## Class Plan:

By the end of this class students should have developed knowledge and skill in identifying how researchers have dealt with measurement of key variables in their studies.

The class will be structured as follows:

- Instructors will provide a brief overview of the key concepts discussed in chapters 8 & 9 of the text. There will be time for questions to permit students to ask for clarification of key concepts in the readings
- Two research articles that illustrate key concepts in chapters 8 & 9 readings have been assigned.
  - Mann, E. A., & Reynolds, A. J. (2006). Early Intervention and Juvenile Delinquency Prevention: Evidence from the Chicago Longitudinal Study. *Social Work Research*, 30(3), 153-167.
  - Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., & et al. (2006). The Content and Process of Mother-Adolescent Communication about Sex in Latino Families. *Social Work Research*, 30(3), 169-181.
- Students are required to read the assigned articles prior to class. Since students will be analyzing these two articles during class please bring a copy to class. These two articles can be accessed through ProQuest.
- Students will be asked to work in their respective EBP groups to answer questions regarding each of the two articles.
- Each group will report back to the class the results of their group's analysis of the assigned articles and submit a group report to the instructors prior to class 9. "Bonus" points (0, 1, 2) will be assigned to the group report. The group bonus points will be added to the examination score received for this class's examination for each participating student.

The questions to be answered are:

- As an evidence-based practitioner you will need to assess the quality of the measures used in each research study that you use in your evidence-base. Drawing from the discussion of measurement in the Rubin & Babbie text and the two articles below answer the following questions.
  - Did the article discuss measurement error for any of the measures used in the study?
  - What steps, if any, were taken by the researchers to avoid or minimize measurement error (e.g., triangulation, assessing reliability, assessing validity)?
  - What measures, if any, were examined to determine reliability and/or validity? What results were reported?
  - Did the researchers construct any measurement instruments?
    - If so, describe one of those instruments and describe how it was constructed?
  - As an evidence-based practitioner you need to assess the quality of each research article that you read before you use the findings in your practice.

- On balance, how much confidence do you have that measurement error was adequately managed in each of these studies?
- Considering only today's topic, measurement and measurement error, would you conclude that the reported findings of each of these studies are sufficiently reliable and valid for you to base your practice decisions on what is reported?
- What could the researchers have done differently to strengthen your confidence in how measurement error was managed?

### **Required Readings:**

Rubin & Babbie. chapter 8: Measurement & chapter 9: Constructing Measurement Instruments

### ***Session 9***

#### **Topic:**

Designs for Evaluating Policies, Programs & Practices

#### **Class Plan:**

The previous readings have presented the foundation of social work research by introducing key concepts including the formation of research questions/hypotheses and measurement. The remaining readings for this semester will introduce you to a wide range of technical methods that researchers have developed to answer research questions and test hypotheses. Because there is a vast array of technical methods available to modern EBP social work researchers the remaining classes are designed to open "doors" and "windows" for you to look into this vast array of methods. In your second year of study and beyond you will want to examine some of these methods in greater depth.

This class will be used to review key concepts in Part 4 of the Rubbin & Babbie text. The focus will on helping students gain a beginning understanding of research designs used to evaluate social work programs and practices. Please note that only 38 pages are assigned as required reading from the four chapters assigned. This is being done to minimize the amount of new material that students are being asked to examine. Motivated students may wish to read beyond the required pages in each chapter but the assignments and quiz will draw from only these 38 pages. In your EBP group projects depending on the studies that you identify and decide to review you may wish to read non-assigned pages in these chapters as relevant to the studies you are examining. Indeed the entire text can be used as a reference to help you understand the studies that you locate in you EBP group project.

The class will be structured as follows:

- Instructors will provide an overview of key concepts in the readings and provide time for questions and discussion.

- Students will work in their respective EBP groups to answer the following questions which must be submitted prior to the beginning of the next class:
  - Critically examine the article:
    - Mann, E. A., & Reynolds, A. J. (2006). Early Intervention and Juvenile Delinquency Prevention: Evidence from the Chicago Longitudinal Study. *Social Work Research*, 30(3), 153-167.
    - Based on the readings in chapters 10, 11, 12, & 13 describe the design that was used in the study reported in this article. Remember that researchers can combine elements of more than one design type so as to better address the researcher's research problem and hypothesis.
    - Which of the common threats to internal and external validity discussed in the readings for today do you think were adequately controlled for in the Mann & Reynolds study pertaining to the primary research question addressed?
    - Which of the common threats to internal and external validity discussed in the readings for today do you think remain as plausible and relevant threats to the validity of conclusions drawn pertaining to the primary research question?
    - What design modifications could have been made to control for the threats that you have identified?

### **Assignments Due:**

- EBP Group report for today's in-class assignment is due prior to next class.
- Quizzes for chapters 10, 11, 12, and 13 must be completed prior to next class.

### **Required Readings:**

Rubin & Babbie : part 4

- Chapter 10: Causal Inference and Correlational Designs (only pages 230-240 required)
- Chapter 11: Experimental Designs (only pages 251- 259 required)
- Chapter 12: Single Case Evaluation Designs (only pages 281-285 required)
- Chapter 13: Program Evaluation (only pages 306 - 309 & 315 - 328 required)

## ***Session 10***

### **Topic:**

Sampling

## **Class Plan:**

As evidence-based social workers you should be prepared to critically assess the sampling designs used in the studies you read and studies that you conduct. Some questions to ask:

- What population was studied and how similar is this population to those populations of relevance to my evidence-based practice question?
- What time frame was sampled and how relevant is this time frame to the practice questions that I currently am addressing?
- Was the sampling design appropriate relative to the question asked (for example, if the researchers wanted to estimate a population parameter did they use an appropriate probability sampling design?)
- Was the sample large enough to provide a reasonably precise estimate of the parameter?
- If the study aimed to test a hypothesis was the sample size sufficient to achieve necessary power to falsify (reject) the null hypothesis?

During the last class we examined research design. We noted that the research design includes the plan for sampling the units of study. In this class we will examine common methods for sampling including probability methods, non-probability methods and methods used in qualitative research.

The class will be structured as follows:

- Key concepts pertaining to sampling discussed in today's readings will be discussed.
- SPSS will be used to draw a series of random samples from a data set of a population of subjects. This SPSS sampling exercise will illustrate how random sampling works and sampling error.
- The SPSS program called SamplePower (SPSS) (developed by Michael Bornstein and associates and now available from SPSS, Inc under a registered trademark as SamplePower) will be used to demonstrate how sample size can affect power and precision. We will illustrate Power analysis using the example mentioned under the recommended readings section below, the COURAGE study which examined alternative treatments for stable coronary artery disease (Appendix A of the NEJM article).
- Students will be invited to describe the sampling designs used in:
  - Mann, E. A., & Reynolds, A. J. (2006). Early Intervention and Juvenile Delinquency Prevention: Evidence from the Chicago Longitudinal Study. *Social Work Research*, 30(3), 153-167.
  - Guilamo-Ramos, V., Dittus, P., Jaccard, J., Goldberg, V., & et al. (2006). The Content and Process of Mother-Adolescent Communication about Sex in Latino Families. *Social Work Research*, 30(3), 169-181.

## **Assignments Due:**

Quizzes for Chapters 10, 11, 12 and 13 must be completed prior to the next class.

## **Required Readings:**

Rubin & Babbie. chapter 14: Sampling

## **Recommended Readings:**

*COURAGE* Study :

This study was recently published in the *New England Journal of Medicine (NEJM)* and reported in the *New York Times*. The study tests the effectiveness of two alternative interventions for the treatment of stable coronary heart disease in a randomized control trial. It illustrates some of the concepts discussed in the prior class which dealt with designs for causal research. It also illustrates a number of issues pertaining to sampling (e.g., what population is studied and how the population is selected) as well as the role of sample size in determining a study's power to reject or falsify a null hypothesis (in this case the hypothesis of no difference between the two interventions). Appendix A from the NEJM describes the criteria for inclusion and exclusion of subjects as well as the information used to calculate the study's power. The statistical method used is advanced and you should not expect to understand that methodology at this point in your studies. Nevertheless we can use this example to illustrate how sample size can affect power as well as the importance of being clear about inclusion and exclusion criteria when sampling.

- Barnaby J Feder. (March 26, 2007)..Drugs Work as well as Stents: Study Finds, *New York Times*.
- Boden, W. E., O'Rourke, R. A., Teo, K. K., Hartigan, P. M., Maron, D. J., William J. Kostuk, et al. (2007). Optimal medical therapy with or without PCI for stable coronary disease. *New England Journal of Medicine*. Published at [www.nejm.org](http://www.nejm.org) March 26, 2007 (10.1056/NEJMoa070829)

## **Session 11**

### **Topic:**

Survey Research & Using Available Records

### **Class Plan:**

Evidence-based practitioners frequently ask descriptive questions. Indeed, most questions that practitioners need to have answered are descriptive. For example policy analysts frequently require information about population characteristics such as the incidence, prevalence and distribution of mental disorders, substance use, and other social problems. Administrators may wish to know how clients evaluate services provided by their agencies. Socio-demographic data is often need by evidence-based practitioners to better understand the characteristics of populations served by their agencies. Much of this evidence can be gathered through the use of surveys or by the examination of existing data sets such as those included in the *Inter-University Consortium for Political and Social Research (ICPSR)*. When existing data sets are not available to answer an evidence-based practice question then practitioners may need to design and conduct their own studies using survey research methods or by examining existing data available in

their agency records. This class will provide an introduction to these data sources and methods.

The class will be structured as follows:

- Key concepts in the chapters discussing survey research and the use of available records will be examined.
- Because scientific sample surveys typically use probability sampling methods this class will give special emphasis to the link between sampling methods and sample survey design. Also, many of the more important available data sets use sample survey research so a good understanding of sampling methods and survey research design will help you to use available data sets more critically.
- Using the Internet this class will provide an introduction on how to access available data sets through Columbia Universities Electronic Data Service (EDS) at <http://www.columbia.edu/acis/eds/> .
- In particular the class will examine access to important data sets through the EDS DataGate which includes access to the holdings of the *Inter-University Consortium for Political and Social Research (ICPSR)* at <http://www.columbia.edu/cu/lweb/eresources/databases/1360887.html> .
- Also we will access the *National Data Archive on Child Abuse and Neglect* at <http://www.ndacan.cornell.edu/NDACAN/AboutNDACAN.html> .
  - The Archive includes access to the *National Survey of Child and Adolescent Well-Being (NSCAW)* which makes available, for the first time, nationally representative longitudinal data drawn from first-hand reports of children and families or other caregivers who have had contact with the child welfare system. Data from service providers are also collected. NSCAW is the first national study to provide detailed information on the experiences of children and families with the child welfare system and to collect measures of well-being for this population. The NSCAW is designed to address the following questions:
    - What paths do children follow into and through the child welfare system?
    - What factors affect investigation, services, placements, and length of involvement?
    - What are the long- and short-term outcomes for children and families in the child welfare system in terms of safety, well-being, and permanence?
- We will access the Columbia University School of Social Work's New York City *Social Indicators Survey Center* website at <http://www.columbia.edu/cu/ssw/projects/surcent/>
  - Using scientific sampling survey methods this periodic study examines key social indicators tracking the health and welfare of New York City residents.
- We will discuss an example of how an existing data set can be used to answer a specific research question as reported in the *New York Times* (April 3, 2007) and reported in the *Archives of General Psychiatry* (Extending the bereavement exclusion for major depression to other losses: Evidence from the National

Comorbidity Survey by Jerome C. Wakefield, PhD, DSW; Mark F. Schmitz, PhD; Michael B. First, MD; Allan V. Horwitz, PhD, *Arch Gen Psychiatry*. 2007;64:433-440.

**Assignments Due:**

Completion of the quizzes for chapters 15 & 16 prior to next class.

**Required Readings:**

Rubin & Babbie. chapter 15: Survey Research & chapter 16: Analyzing Available Records: Quantitative and Qualitative Methods

***Session 12***

**Topic:**

Quantitative Data Analysis & Inferential Statistics

**Class Plan:**

Once data collection is completed, the next step is to examine and analyze the data and then draw conclusions about the findings. By the same token, as an evidence-based practitioner, once you locate relevant evidence to support your COPES question, you need to have the skill set to analyze the strength and clinical relevance of the findings. For example, descriptive data that characterize a study's sample population will help you decide how relevant the study is to your client(s). Additionally, knowing the effect of an intervention or variable of interest may shed light on whether it is effective, culturally relevant, and/or a good match with your client(s) needs and expectations. This class will provide an introduction to quantitative data analysis, which involves the conversion of data into numbers for statistical analyses. Key concepts from chapters 20 and 21, including levels of measurement, univariate and bivariate analyses, statistical significance, strength of relationship, and clinical significance, will be examined. This session builds on your prior study of statistics which is a prerequisite for this course. Accordingly the focus is not on teaching the statistics per se but rather on using the statistics you have already learned for purposes of analyzing study data and critically assessing how researchers have used statistics in reported studies.

*Required Readings:*

Rubin & Babbie. chapter 20: Quantitative Data Analysis & chapter 21: Inferential Data Analysis: Part 1

***Session 13***

**Topic:**

Qualitative Research Methods & Analysis

**Class Plan:**

This class will be used to review key concepts in Part 6 of the Rubbin & Babbie text. The focus will be on helping students gain a beginning understanding of qualitative

research methods. Notice that only a portion of each chapter has been assigned. Students are encouraged to read beyond the required pages in each chapter, but the quiz will draw from only the assigned pages. In your EBP group projects depending on the studies that you identify and decide to review you may wish to read non-assigned pages in these chapters as relevant to the studies you are examining. Indeed the entire text can be used as a reference to help you understand the studies that you locate in you EBP group project.

### **Required Readings:**

Rubin & Babbie. chapters 17: Qualitative Research: General Principles (only pages 417-428 required) & chapters 18: Qualitative Research: Specific Methods (only pages 437-448 required) & chapter 19: Qualitative Data Analysis (only pages 456-464 required)

### ***Session 14 & 15***

#### **Topic:**

Student Group Reports on EBP Assignment

#### **Class Plan**

Each group will present a brief group report of the final assignment. Student groups are expected to use a PowerPoint presentation and to address each of the questions asked in the final assignment. The final assignment is outlined below.

## **Final Assignment: Evidence-Based Practice Group Project**

This assignment is designed to provide you with an opportunity to use the steps in Evidence-Based Practice to address a social work practice need. This is a group assignment and is arranged into two parts which are described below. This final assignment is worth 25% of the course grade.

### **Part 1: Research Question and Search Plan**

#### **Due: Mid-semester**

Each group should submit the following worksheets using the Gibbs' Evidence-Based Practice framework:

- **Researchable question.** Report a COPES question (specifying which type of question it is - effectiveness, prevention, assessment, description, risk/prognosis) and complete the Gibbs' COPES worksheet describing how the question incorporates each of the four elements required for a COPES question - population/problem, action contemplated, alternative action considered, and result sought). You can download examples of different types of COPES questions on Courseworks.
- **Search plan strategy.** Complete the Gibbs' Search Planning Sheet and where indicated include: 1) the four elements of your question, 2) search terms that represent the same concept as those described in the four question elements, 3) the appropriate Methodology Oriented Locaters for Evidence Searching (MOLES) for

your question, and 4) relevant databases. The Search Planning Sheet can be found in the Assignment section of Courseworks.

## **Part 2: Evidence-Based Practice Project Paper**

### **Due: Final Class**

The final EBP project paper should clearly and concisely describe the EBP steps as we discussed throughout the semester, using knowledge gained from lectures and required readings. The paper should cover the following elements:

- Researchable question (using the COPES framework)
- Search plan (with attached search history forms)
- Results of the evidence search
- Critical appraisal of the evidence for its validity
- Discussion of how critical appraisal will be integrated with practice experience, client/population's strengths, values, and circumstances
- Evaluation of the effectiveness and efficiency in exercising the steps above
- Discussion of how you can improve upon the EBP process

This paper should be no more than 10-12 pages, double spaced and scholarly written according to APA format.

## **Evidence-Based Practice Project Guidelines for the Presentation and Final Paper**

### **Presentations will take place in the last two classes**

Each group should be prepared to give a 10-12 minute presentation on their EBP Project. Presentations should cover the main elements in the final paper (outlined below). We have 13 groups that will be presenting across 2 days, which means presentations should be no longer than 12 minutes in order for all groups to have an opportunity to present. Please plan your presentations accordingly.

### **Papers are due at the last class**

The final EBP project paper should clearly and concisely describe the EBP steps as we discussed throughout the semester, using knowledge gained from lectures and required readings. This paper should be no more than 10-12 pages (PLUS references), double spaced and scholarly written according to APA format. The final paper should cover the following elements:

- **COPES question:** Clearly state and describe COPES question and rationale for having selected the question (i.e., clinical need or decision on which question is based). Remember that questions should be designed to produce relevant, concrete, and useful questions to aid in your search for evidence.
- **Search plan:** Describe the relevant search terms (including Boolean and truncation operators) and databases used in your searches.
- **Results of the evidence search:** Indicate the number of total and useful 'hits' (sources) your searches yielded. Complete and include the Search History Form

as an appendix to the paper. Keep in mind that you should provide enough evidence to substantiate an answer to your COPES question. Note: The Search History Form is located in the 'Worksheets' folder in the assignment section on Courseworks.

- **Critical appraisal of the evidence:** Discuss the validity, impact, and applicability of the research findings to the problem area of your client, group, or population in need. Some questions to consider are: (1) Was the outcome measured in a reliable and valid manner? (2) Was the research design strong enough to conclude whether the intervention or something else explains the variations in client outcome? Keep in mind that evaluating evidence is part of a process that not only values research according to its methodological strength, but also places value on the feasibility and clinical relevance of the evidence as well as how the evidence fits with client values and preferences.
- **Discussion of how critical appraisal will be integrated with practice experience, client/population's strengths, values, and circumstances:** Discuss the process by which you will consider and apply the evidence in practice along with your experience and the values and preferences of your client or target population.
- **Evaluation of the effectiveness and efficiency in exercising the steps above:** Critically discuss the process you went through in developing your COPES question, conducting your search, and evaluating the evidence. Discuss the likely promoters/facilitators and barriers to applying the evidence to your work with your client or target population. In addition, discuss how you and the client will measure progress in achieving the desired outcome(s). Rubin and Babbie chapters 8, 9, 12, and 13 may help you design the methods for evaluating progress.
- **Discussion of how you can improve upon the EBP process:** Discuss how you would improve the process and what you would do differently in the future. Conclude your discussion with implications and recommendations for incorporating the EBP process into your agency.