

**Florida State University
College of Criminology and Criminal Justice**

PhD Comprehensive Examination in Research Methods & Statistics

Fall 2007

Instructions:

There are four sections to the exam. Answer one question from each section. You have until 4:00pm to finish. If you have problems with the exam, you may consult with faculty proctoring the exam. Return your completed exam to the proctor on duty when you are finished.

Kevin Beaver (Room 322A), 8:00am – 10:00am;

Mike Reisig (Room 305), 10:00am – 12:00pm;

Bill Bales (Room 324), 12:00pm – 2:00pm;

Gary Kleck (Room 306), 2:00pm – 4:00pm

SECTION I: RESEARCH DESIGN

1. Explain in exactly what way research is weakened as a result of each of the following flaws in a research design:
 - a) the researcher does not have a control group
 - b) the researcher cannot control which subjects are exposed to the treatment and which are not
 - c) the researcher randomly assigned subjects to experimental and control groups, but has post-test (after the intervention) measurements only, no pre-test measurements
 - d) the researcher cannot do random assignment of subjects to experimental (treatment) and control groups, and must do matching instead.

2. You are writing a grant proposal based on a solicitation from the National Institute of Justice to evaluate the effectiveness of using Electronic Monitoring (EM) for medium and high risk offenders placed on supervision in Florida. Specifically, they want the following questions addressed: (1) Are offenders placed on EM less likely to fail while on supervision; (2) If EM is found to be effective, what is it about EM that results in lower failure rates. Describe the research design you would propose to address these research questions.

SECTION II: DATA GATHERING METHODS

3. A fundamental problem in crime research is accurate measurement of the frequency of criminal behavior. Self-report surveys try to get respondents to confess to the crimes they have committed. Explain the strategies that can (a) encourage more complete and accurate self-reports of criminal/delinquent behavior, and (b) assess the validity and reliability of responses to the self-report questions.
4. Suppose you wanted to do a qualitative field study of the way crack dealers went about their business and the way they thought and felt about it. Explain how you could solve the following problems.
 - a) gain entrée in to the situation and make contact with potential subjects
 - b) gain the confidence of informants
 - c) gain information about specific topics without appearing to “interrogate” your informants
 - d) record what your informants told you, but without using technological aids such as audio or videotape that might jeopardize your relationship with informants

SECTION III: STATISTICS

5. It is not uncommon for criminologists to use the terms “mediator” and “moderator” interchangeably to describe the function of a third variable in a multivariate regression context. First, please differentiate between a “moderator variable” and a “mediating variable.” Next, provide one example from the criminological research literature for each type of variable (i.e., one mediator and one moderator). Finally, discuss at least one statistical issue that data analysts sometimes confront when assessing the functions of these third variables.
6. Provide a general description of Event History Analysis and why researchers use this method versus Logistic and Ordinary Least Squared Regression. Three methods of conducting Survival Analysis include LifeTest, LifeReg, and Phreg. Provide an overview of at least two of these methods, including their purposes, how they differ, and the advantages and disadvantages of each method.

Sentencing research is a major line of inquiry in our field. Explain at least two of the common statistical modeling techniques typically used in sentencing research including; how the methods are specifically applied to understanding sentencing decisions, what methods are used to convince the reader that that sentencing models are properly constructed, how the results are interpreted, and issues researchers have to typically confront relative to the independent and dependent variables used in their sentencing research.

SECTION IV: DATA INTERPRETATION

7. Interpret the findings of the attached article by Thaxton and Agnew. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?

8. Interpret the findings of the attached article by Sellers. This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?