

Florida State University College of Criminology and Criminal Justice
Ph.D. Comprehensive Examination in Research Methods and Statistics, Spring 2014

Instructions:

There are four sections to the exam. Answer one question from each section. You have until 4:00 PM to finish. If you have problems with the exam, you may consult with faculty proctoring the exam: 8:00-10:00 AM: Dan Mears (Room 314C); 10:00 AM to Noon: Brian Stults (Room 302A); Noon to 2:00 PM: Sonja Siennick (Room 204D inside Dean's Suite); 2:00-4:00 PM: Bill Bales (Room 303A). Please notify Margarita Frankeberger (Room 101A) when you are finished and ready to have your exam answers printed out. *Please note:* Once a student takes possession of the examination at start of the exam period, this constitutes an attempt at taking the exam, regardless of whether the student completes the exam, hands in any answers, or remains for the full exam period.

I. Research Design (Answer one of the two questions in this section.)

1. When designing strategies for measuring variables, criminologists are often concerned with validity (sometimes referred to as "test" or "measurement" validity). Define the general concept of validity, as well as the subtypes of construct validity, content validity, and criterion validity. Explain how you would establish each type of validity for a single criminological variable of your choosing.
2. What is a confounding variable (define it), and what purpose is served by somehow "controlling for" such a variable? What sensible procedures might be followed in nonexperimental (observational) research to identify in advance of data-gathering which variables might be confounders and thus should be measured and controlled?

II. Data Gathering Methods (Answer one of the two questions in this section.)

3. Nonresponse can be a serious issue for survey research. First, explain why this is such a serious concern. Second, describe several potential reasons for both unit nonresponse and item nonresponse. Next, list as many ways as you can think of to reduce each type of nonresponse. Finally, explain how we might evaluate whether nonresponse is a problem in our survey data.
4. Describe two scenarios where simple random sampling is not possible or is not desirable. Describe a preferable alternative sampling strategy for each scenario. Discuss any weaknesses or complications of each alternative sampling strategy.

III. Statistics (Answer one of the two questions in this section.)

5. Describe at least three different types of nonlinear relationships and how you would model the relationships statistically. In each instance, describe how the nonlinearity may be relevant to modifying a theory or developing a policy, providing a specific criminological example.
6. Describe the two different ways that criminologists commonly use to test for interactions, and state the relative strengths and weaknesses of each of them, illustrating them using a specific criminological example of an interaction with which you are familiar.

IV. Data Interpretation (Answer one of the two questions in this section)

7. Interpret the findings of the attached article by Haynie and South (2005). 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 if 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 Piquero et al. 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 if 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?