

**Florida State University College of Criminology and Criminal Justice**  
**Ph.D. Comprehensive Examination in Research Methods and Statistics, Fall 2015**

**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: Kevin Beaver (Room 315C), 8:00 AM to 10 AM; Gary Kleck (Room 314B), 10 AM to 12 PM; Bill Bales (Room 404), 12 PM to 2 PM; Brian Stults (Room 302A), 2 PM to 4 PM. Please notify Margarita Frankeberger (Room 107E) when you are finished and ready to have your exam answers printed. Please note: Once a student takes possession of the examination at the 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) Research has found that there is a negative association between the affection that parents have for their child and that child's delinquent behavior, but there is doubt about the causal order underlying this association. While parental affection may reduce the child's delinquent behavior, it is also possible that a child's misbehavior can reduce their parents' affection for them. Describe multiple strategies or features of research designs that could help resolve this issue of causal order.
- 2) A local high school recently implemented a policy that students who participate in physical fights on campus are automatically suspended for three days. Design a strong study to determine whether the policy affected school safety. In your answer, (1) describe your units of analysis and the comparison(s) you will make, (2) discuss how you will measure key study variables, (3) discuss your analytical strategy, and (4) explain the strengths and weaknesses of your design.

**II. DATA GATHERING METHODS** (Answer one of the two questions in this section.)

- 3) Much of our knowledge about the association of offending with socioeconomic status comes from survey data from school-based samples of adolescents. Describe the disadvantages of relying on that data source and population to study this topic. Describe an alternative data source or data collection strategy that would overcome some of those disadvantages, and explain how it would do so.
- 4) Describe three distinct nonprobability sampling techniques, and three distinct probability sampling methods. For each technique, discuss strengths and weaknesses, and provide an example of when each technique might be particularly useful.

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

- 5) Describe how to test for an interaction effect between two variables. What are some of the main issues related to testing for interactions?
- 6) A researcher is interested in the effect of X on Y and has a body of nonexperimental data to test this effect. She is, however, aware that variables A, B, C, and D also affect Y and suspects that they may also be highly correlated with X.
  - (a) Describe the method(s) she should use to test how bad this problem is,
  - (b) state what the consequences of this problem would be for her estimate of the coefficient for X, if the problem exists, and
  - (c) state what she could do to fix or reduce this problem.

**IV. DATA INTERPRETATION** (Answer one of the two questions in this section.)

- 7) Interpret the findings of the attached article by Bishopp and Boots. 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 Tillyer, Tillyer, and Kelsay. 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?