

**Florida State University College of Criminology and Criminal Justice**  
**Ph.D. Comprehensive Examination in Research Methods and Statistics, Fall 2021**

**DAY 1 OF THE EXAM**

**INSTRUCTIONS**

Answer one question from each of the two sections below. Please notify the proctor when you are finished. 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**

1. Develop an experimental design to test whether participation in a job training program in prison will reduce an inmate's likelihood of re-offending after release from prison. First, describe the proposed research design. Next, discuss how this research design represents an improvement over a quasi-experimental or correlational research design. Finally, explain any potential limitations/weaknesses of your proposed design.
2. Discuss the interrupted time series design. For what types of research questions might it be used? What are its key elements? What are its strengths? What are the major threats to internal validity that are associated with this design? How can those threats be evaluated or overcome? Illustrate your discussion with an example.

**II. DATA GATHERING METHODS**

3. Criminological research often utilizes large-scale publicly available secondary data. First, discuss some of the advantages and disadvantages associated with a secondary data analysis. Next, describe other types of research (e.g., experimental designs, survey, etc.) that are often used in the field. Finally, explain which of these types of research ought to be more or less influential as the field of criminology progresses.
4. Experimental designs tend to be favored over quasi-experimental or correlational designs. Provide a detailed discussion of primary advantages of experimental designs. In addition, provide a discussion of some of the primary limitations of experimental designs. Finally, provide an example in which an experimental design would be favored and another example in which a quasi-experimental or correlational design would be better suited.

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**DAY 2 OF THE EXAM**

**INSTRUCTIONS**

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**III. STATISTICS**

5. When setting forth his social concern theory of crime, Agnew (2014, p.14) states the following:

*“Social Concern has an Indirect, Negative Effect on Crime Through Its Impact on Social and Self-Control, Strain, and Association with Criminal Others. The inclinations that comprise social concern foster the formation of strong social bonds with conventional others such as parents. They also make people more amenable to the socialization and control efforts of these others. These effects, in turn, contribute to the internalization of moral beliefs and the development of self-control. Furthermore, those high in social concern are less likely to provoke negative treatment from others, reducing their strain. Finally, they should be less likely to associate with criminal others, who engage in behaviors they condemn.”*

Identify what type of relationship this hypothesis is describing. Assuming you have survey data that would allow you to reliably measure the main constructs of self-control, strain, and criminal associations, as well as social concern and offending, develop an analytical strategy that would allow you to test this hypothesis.

6. Explain the concept of statistical significance. Your answer should include a discussion of, among other things, the concepts of a sampling distribution, standard error, alpha level, and Type I and Type II error. Conclude your answer by explaining why our discipline may be giving too much emphasis to statistical significance.

**IV. DATA INTERPRETATION**

7. Interpret the findings of the attached article by Baker et al., 2018. 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 Cunningham et al., 2021. 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?