

Data Analysis Project (DAP) Directions For Dr. Kim's EDPS 621

Purpose

The purpose of this project is to demonstrate your knowledge and understanding of quantitative data analysis and data interpretation learned in EDPS 621 using real data. You are required to demonstrate your knowledge of applying and interpreting each of the data analysis/statistical procedures we've covered in class, including graphically representing data, measures of central tendency, variability, bivariate correlations and regression. To simulate a real-life data-analysis project, you will be required to format your paper as a research article and include an introduction, methods, results and a discussion section.

Data Sources

You may use data files that I provide for the class or your own dataset. If you choose your own data file you must get prior approval before you begin your analysis. Data files will need to include background information (e.g., gender, SES, ethnicity, etc.) about your subjects as well as quantitative data (e.g., assessment performance, survey responses, etc.).

Formatting

- 1) You will need to follow APA guidelines for text (including headings, subheadings, writing style, and citations), tables, charts, graphs and the reference list. Guidelines are available in the 5th edition of the APA publication manual, or on-line at:
<http://www.stylewizard.com/>
- 2) Papers should be double spaced, 12-point font, with 1" margins, & no spaces between sections.
- 3) Must have a page number with your last name on the top right corner of each page.
- 4) Must start with a numbered title page that includes Study Title, Course Number & Title, My Name, Your Name, Your Department, Eastern Michigan University, Date of submission, & Semester.
- 5) Key tables and graphs should be integrated into the text with supporting evidence provided in appendices
- 6) Separate pages for Title, Abstract, References, Appendices
- 7) Staple your final projects (no binders, covers, folders, etc.)

Content

Each report should include five parts: 1) abstract; 2) introduction; 3) methods; 4) results; and 5) discussion. Written components should be presented in paragraph form, where each new paragraph is indented. APA style should be used. The paper should follow standard rules for good grammar, spelling, punctuation, and written communication. Tables and graphs should be integrated into the text with appropriate APA formatting (See the example, "How to make titles for tables and Figures"). Each section is described in detail below:

Title

- 1) Your title should be complete in giving the reader a clear idea of the contents of the paper.
- 2) Your title should make clear the population of interest and the major variables.

Abstract

- 1) No more than 120 words in a separate page
- 2) Clearly stated problem
- 3) Number & type of subjects
- 4) Major variables

- 5) Measuring instruments used
- 6) Design used
- 7) Brief procedures
- 8) Major results & conclusions

Introduction

Statement of the Problem

- 1) An overview of the issue you are studying
- 2) Variables of interest & the specific relationship(s) between those variables
- 3) AT LEAST THREE relevant empirical articles in your review

Purpose of the Study

- 1) Educational significance of the problem

Research Questions

- 1) Research questions or hypotheses follow logically from the statement of the problem
- 2) Clearly & specifically stated questions and/or hypotheses
- 3) Variables (independent, dependent, confounding, & moderator) & operational definitions (if needed)
- 4) Expected relationship or difference among variables
- 5) Each Analysis must be based on its research question

Methods

Participants

- 1) Participants of the study & how they were selected
- 2) Size & major characteristics of the sample (Minimum sample size 100 for a descriptive; 50 for a correlational; 30 in each group for experimental & causal-comparative studies)
- 3) Sampling method used

Instruments

- 1) Instruments used & their validity & reliability
- 2) Rationale for the selection of each of the instruments
- 3) Purpose & content of the instruments
- 4) Administration, scoring, & interpretation procedures of the instruments
- 5) Procedures of the development & validation of the instrument developed for your study

Procedures

- 1) Detail procedures to permit them to be replicated by another researcher
- 2) Sufficient control for internal validity (possible impact of confounding variables)

Data Analysis

YOUR Data Analysis

- 1) Data analysis & statistical procedures
- 2) Graphically representing data
- 3) Measures of central tendency
- 4) Measures of Variability
- 5) Correlation
- 6) Regression

Results

Your Results

- 1) A frequency table & explanation of all qualitative variables
- 2) A descriptive table & explanation of all quantitative variables

3) A histogram, a stem-and-leaf plot, & a boxplot for quantitative variables with an explanation of the shape of the distribution & implications

4) A scatterplot of two quantitative variables with an explanation of what the graphic indicates.

5) A table with at least 3 Pearson correlations with an explanation of what each result means (including the direction, strength, & implications).

6) A table for one linear regression with an interpretation of what the result means (include the direction, strength, & implications).

Discussion

Conclusions

1) Interpretation of the results in relation to the hypotheses

2) Discussion of the results in terms of their agreement or disagreement with previous research results

Implications of the study

1) Theoretical & practical implications of the findings

2) Practical & statistical significance

Limitations of the study

1) Are the possible effects of uncontrolled variables on the results discussed?

2) Are plausible alternative hypotheses discussed?

Suggestions for Future Studies

1) Recommendations for future research

References

1) Need for APA Style

Appendices

1) SPSS output

2) No need for APA Style

3) Raw output for tables in your text and information not included in the text on all analyses to help me if I have questions about what you've done or your interpretation