

Biostatistics Lab Poster Requirements and Check List

1. Use the Lab template!

2. Banner:

- a) College of Medicine Logo
- b) Conference Title
- c) Project Title
- d) Authors (make sure the order is correct) with degrees, e.g., Thanh Pham, PhD
- e) Last line: Burnett School of Biomedical Sciences, College of Medicine, University of Central Florida – for external conferences; Soulakova Lab, Burnett School of Biomedical Sciences, College of Medicine, University of Central Florida –for UCF conferences

f) Introduction (or Background)

- Prior studies
- What is the missing knowledge?

g) Study Goals

- Major goals/objectives you hoped to achieve from the study

h) Data and Measures

- Data source (with reference of the organization) and related info (e.g., time period)
- Dependent and independent measures
- Sample: size (e.g., $n=13,232$) and summary – Table is preferable
- Statistical analysis methods, significance and/or confidence level
- Software used (Ref)

i) Results

Follow Statistical Guidelines:

- **Percentages:** Report percentages to one decimal place.
- **Standard deviations (SD)/standard errors (SE):** Please specify the measures used: using “mean (SD)” for data summary and description; to show sampling variability, consider reporting confidence intervals, rather than standard errors, when possible to avoid confusion. Mean and Standard Deviation are most clearly presented in parentheses e.g. The sample as a whole was relatively young (Mean = 19.2, SD = 3.5)
- **P values:** The inclusion of P-values in tables is unnecessary in the presence of 95% confidence intervals.
 - Although not preferred to confidence intervals, if desired, P values should be reported as equalities when possible and to one or two decimal places (e.g., $P = 0.03$ or 0.22 not as inequalities: e.g., $P < 0.05$).
 - Do NOT report “NS”; give the actual P value.
 - Test statistics and p values should be rounded to two decimal places.

- **Missing values:** You have to know-- how missing data were handled in the analysis. Consider adding a column to tables or a footnote that makes it clear
- Make sure you include the results which answer the stated goals/hypotheses.
- Remove all non-essential information from graphs and tables

Useful Statistical Tests

- **T tests AND Chi square tests:** From the SAS output you need the **degrees of freedom (df)**, the **test statistic value (t)**, (χ^2) and the **p value**. These are reported as follows:

T-test: "t (df) = t-value, p value" e.g., "The two groups differed significantly from each other with t (14) = 9.56, p = .02

Chi-sq.: χ^2 (14) = 9.56, p=0.02

- **Correlations:** Here you simply report the **r value** and, if appropriate, the corresponding **p-value**. e.g., "Smelliness and number of friends were correlated with $r = -0.70$, $p = .02$
- **Regression:**
 - With simple linear regression the key things you need are the **R-squared value** and the **equation**. e.g., "Number of friends could be predicted from smelliness by the following formula: friends = -0.4 x smelliness + 0.6, $R^2 = .49$ "
 - With **multiple regression** you again need the **R-squared value**, but you also need to report the influence of each predictor. This is often done by giving the **standardized coefficient, Beta (it's in the SAS output table) as well as the p-value for each predictor**.
 - Depending on the question you are answering, you might also want to report the regression equation, either in normal equation form or in a table that gives the intercept and the unstandardized coefficients
- With **one-way ANOVA** you need to find the following in the SAS output: the F value, the p-value, the error mean square, the degrees of freedom for the effect and the degrees of freedom for the error term. They are reported as follows:
 - "F (df effect, df error) = F-value, MSE = mean-square error, p-value".
 - If necessary, you also report the results of post-hoc tests. However, all you need do is say something like "post-hoc Tukey's HSD tests showed that psychologists had significantly higher IQ scores than the other two groups at the .05 level of significance. All other comparisons were not significant."

j) Conclusion:

- The conclusions must derive directly from the results section and answer solely what has been proposed at the start of the paper.
- Comment on main results and discuss why they are conclusive and interesting. Discuss potential biases and confounders. What are your recommendations?
- **Study limitations** (can be presented as an additional section)
- **Future studies** (can be presented as an additional section)

k) Acknowledgments

- Acknowledgement for data and the study – depends on the project

l) Funding

- Official info-ask Dr. Julia

m) Statement “There is no conflict of interest.”

n) References