BST 210 HOMEWORK #4 – Group Project

Due 11:59pm, Tuesday, October 22, 2019

***Please be sure to submit your <u>group</u> assignment by 11:55ish pm (or before) to prevent any glitches in the upload from precluding your timely submission.
*Please work well in advance, getting help during office hours and labs, as there will be no extensions given for this assignment, outside of extreme, extenuating circumstances which must be communicated in advance to the primary instructor.**

Group Project:
For this data analysis group project, you should work with 1 to 3 colleagues (groups of size 2 to 4, no singletons). Groups will submit one solution and group members will receive the same grade. If you would like help in getting connected with a group, please contact your lab TA as soon as possible and we will try to connect you with a group soon.

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Use basic statistics, applied regression, and your knowledge of model building and model selection, confounding and effect modification, and regression diagnostics to develop and assess an appropriate model (or models) to address the research question. Use logic, common sense, and good statistical methods to do this.

Write up your findings by developing:
- A title
- A 250 word abstract matching a standard journal style (e.g., Background, Methods, Results, Conclusions)
- One to two paragraphs describing your statistical methods
- Up to five tables and/or figures (you may need fewer--no multi-panel figures)
- One to three paragraphs summarizing your results (including referring to your tables and figures)

All of this should be appropriate for submission as part of a manuscript. Use appropriate number of decimal places, labeling of variables, footnotes, nice layouts of abstracts and tables, and a good writing style, like you were submitting your work to a journal. Look at a few articles in journals for ideas. Higher grades will be assigned to strong analyses, perhaps with some interesting or challenging methods or findings, but also answering the research question well, having a professional appearance and writing style, and having nice tables, figures, and appropriate statistical methods and summarization of results. Focus your summarization of results to only include the most important information, not all the technical details, as you

would see in a manuscript. (Excessive, less relevant material would be considered a negative in such a setting.)

You will submit your write-up in .pdf format online, through Canvas. You may also attach at the end *a limited number* of computer outputs (with comments) to help justify your approach and findings, or possibly to include some details not included in your summarizing of results text. However, the grading of this assignment will focus on your findings as described above, and only a limited number of additional pages should be submitted.