

This must be submitted to Canvas as a .doc or .docx only

PSY 3010 Assignment #3

Read the instructions carefully!

Adding SEMs to graphs and interpreting their meaning

Recall that in assignment 1, you graphed the mean GPA for men and women across three semesters: fall, spring and summer. You “came up” with your own values for the means (anything between 1.5 and 3.5) and then graphed them as a polygon and a bar graph. Note that this gave you 6 means (2 sex x 3 semesters).

NOW I want you to come up with 6 SEMs, one for each mean. The SEMs can be any number between .2 and 2, but no 2 SEMs may have the same value... all 6 SEMs must be different.**

ADD these SEMs (as y-error bars) to either your polygon or histogram – I will let you decide which one. Make sure that you correct any errors on the graph itself – errors that I pointed out to you on assignment 1.

INDICATE, whether the difference for men vs. women is *probably* significant or *probably* not significant, separately for each semester. Use the (non)overlapping rule I gave you in class.

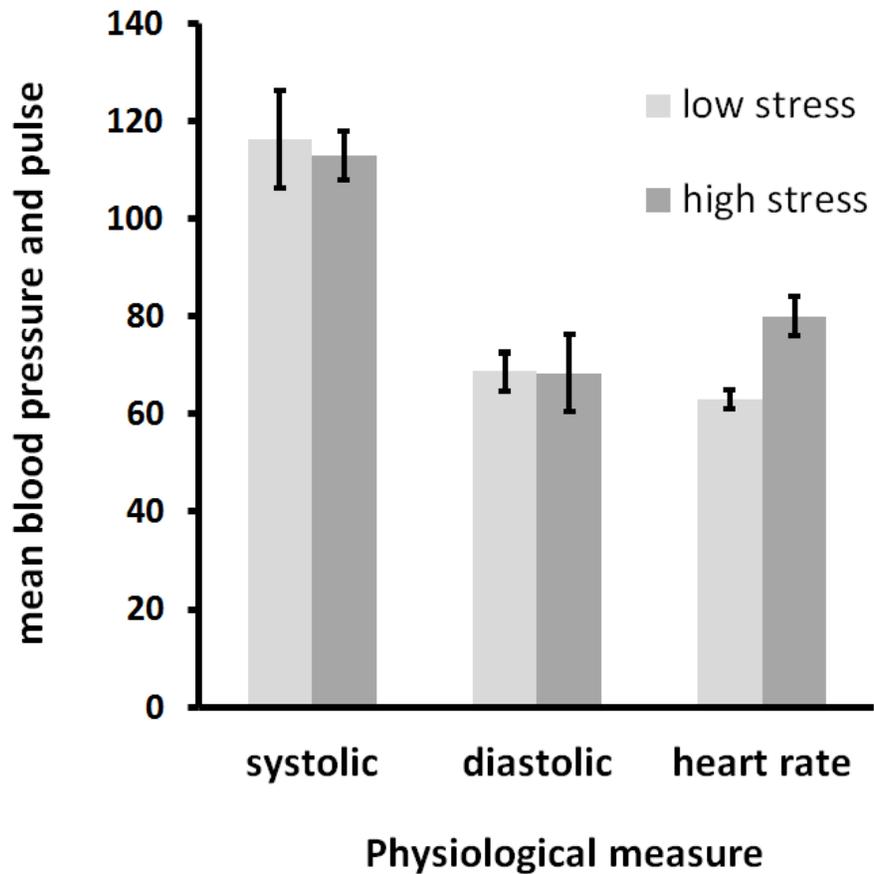
** I want you to make sure that 1 or 2 of the comparisons are probably significant and the rest probably not significant. That means that the y-error bars should clearly overlap or clearly not overlap.

Finally, indicate which group’s mean has the MOST sampling error, and which has the least.

Turn in a) your graph showing the SEMs as y-error bars, b) typed on the same page below it, your interpretation of which male-female comparisons are probably significant and probably not, and c) which group’s mean has the most and least amount of sampling error. Finally, include a screenshot of your excel file that shows the means for each group and their corresponding SEMs.

This is NOT a group project. Please turn in work that is truly your own.

An example of a graph with SEMS as error bars is on the next page.



Systolic: low vs. high stress probably not significantly different

Diastolic: low vs. high stress probably not significantly different

Heart rate: low vs. high stress probably significantly different

The mean heart rate in the low stress group has the least amount of sampling error.

The mean systolic blood pressure in the low stress group has the most amount of sampling error.