Power and Sample Size Homework

Due January 29th by 11:55pm (via Moodle)

You have been asked to plan a study that is an extension of the study presented in the paper by Sibilitz et al (see pdf with this assignment).

Using values from the attached study to inform your power analysis, what sample size is needed to detect a difference of 0.5 units between the control and cardiac rehabilitation groups in the VO2 peak at 4 months with 80 percent power? With 90 percent power?

Find these sample sizes using

1. An online calculator of your choosing OR

2. R OR

3. SAS.

For homework, upload a file that includes justification for the numbers used in your power analysis, a screen-grab and link for your online calculator or commented code for R or SAS.

Also include a paragraph (3 to 5 sentences) explaining the results of your calculations to the researchers planning the new study in terms that a non-statistician could understand.

In this forum, please discuss how you found standard errors for your calculations AND compare sample sizes. Also, how much does the sample size change between group members depending on the values you input in your power calculations?

Note: The number in parenthesis in Table 2 is NOT the standard error or standard deviation. However, Figure 2 shows the distribution of the data.