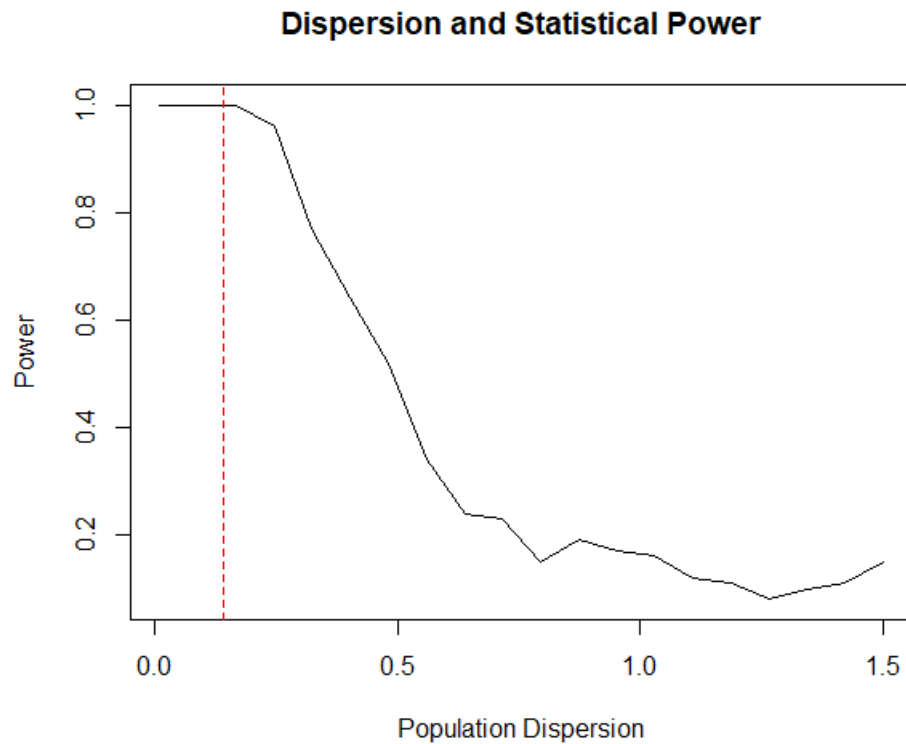


Julia Vineyard

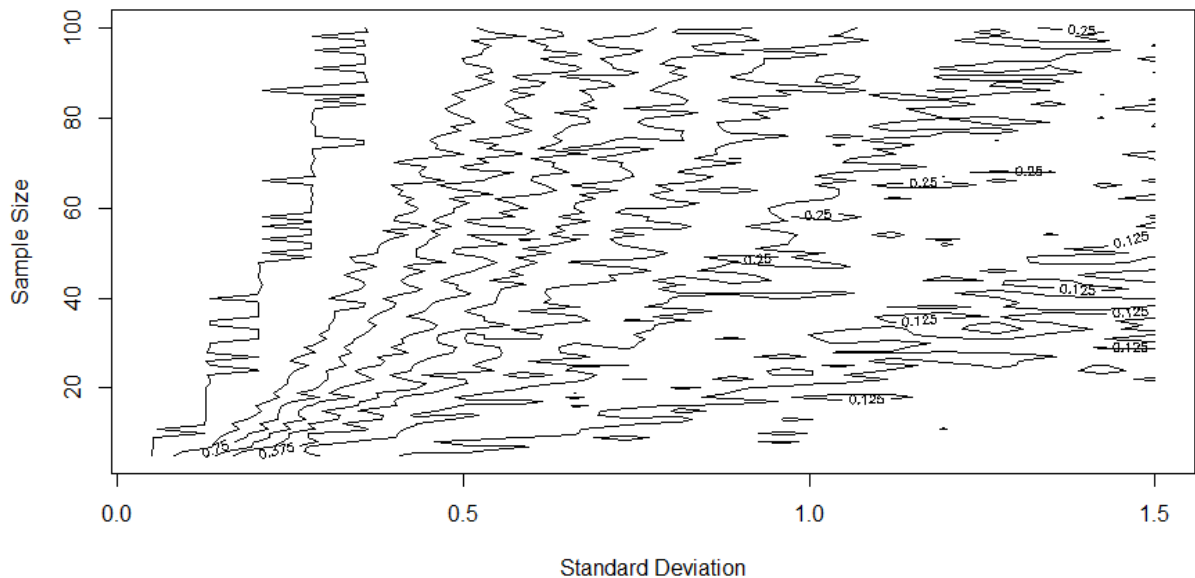
Worked with: Andrew Gordon, Jessica Bonin, Juliana Berube

Lab 11 Report



2. An increased variability in the population will make it harder for you to draw conclusions about the population, so the power decreases.

Contour Plot of Sample Size and Population Dispersion



4. Looking at the values along the lines on the contour map you can see that the highest power values are associated with the greater sample sizes. Looking across the plot along the 80-sample size you can see that the greatest power (1) is associated with the lowest standard deviation, and the lowest power with the greatest standard deviation. As the standard deviation increases the power decreases, no matter the sample size, but the greater sample sizes do result in highest power even at the greatest standard deviation values.
5. FILE UPLOAD
6. The 3D plot shows that at a highest sample size and lowest standard deviation you have the greatest power. You can also clearly see that as the sample size decreases and standard deviation increases your power rapidly drops off. You can use this when designing an experiment to determine the number of samples that you need to collect.