Module 03 Lesson 05
Interactive Animation: Impact Sample Sizes on Mean
Transcript

Title reads "Impact Sample Sizes on Mean"

There is an arrow on the left side of the animation pointing up with the text "Population Mean" alongside of it. There is an arrow intersecting on the bottom pointing to the right with three buttons "Calculate Mean," Sample Size=5; "Calculate Mean," Sample Size=10; "Calculate Mean," Sample Size=20. There is a red dotted line that starts at the left arrow and continues to the right side of the animation.

Text in the center of the animation reads:

- The red dotted line represents the Population Mean
- Three different sample sizes are represented (n=5, 10, 20).
- Click on the 'Calculate mean' button for each sample size (up to 5 times) for an approximation of the Sample Mean based on that particular sample size. A small horizontal black line will represent the calculated sample mean.
- Note what happens to the calculate sample means when the sample sizes change.

Text on the bottom of the graph reads "How does the sample mean approximate the population mean as the sample sizes change?"

This animation shows a population mean and changes sample sizes. This shows that the more scattered around, the population mean is reduced as sample size increases.

Clicking on the sample size button will generate a calculated sample mean based on that particular sample size.

Click on each sample size a total of five times to see how the calculated sample mean corresponds to the actual population mean.

Black dots appear when the sample size button is clicked.

The calculated sample means get closer to the actual population mean as the sample size increases. Based on the normal probability, the more samples that are taken will increase the number of values that are closer to the population mean and the effect of the outlier values will therefore be reduced accordingly.

A few notes regarding this animation:

- The sample sizes of 5 will show the widest variance from the actual mean
- The sample sizes of the 20 will show the smallest variance from the mean
- The sample sizes of the 10 will be in between the 5 and the 20 (see above)
- The 'reset' button will reset the entire animation to original state