Module 13 prep guide

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Sampling distributions

1. A statistical inference is the process of making a conclusion about the parameter of a population based on the statistic computed from a sample.
2. Sampling variability is the fact that the results from different samples are going to be different.
3. Sampling distribution is the distribution of values of a particular statistic computed from all possible samples of the same size from the same population.
4. The standard error of the statistic is used for the dispersion among statistics in a sampling distribution.
5. Standard deviation measures the dispersion among individuals while standard error measures the dispersion among statistics
6. Standard error is the measure of sampling variability and standard deviation is the measure of natural variability
7. A statistic is said to be unbiased if the center of its sampling distribution equals the parameter it was intended to estimate.
8. The center, shape and dispersion is dependent on the corresponding population distribution.
9. Sampling distribution is the distribution of values of a particular statistic computed from all possible samples of the same size from the same population, sample distribution is the distribution of all individuals in a sample and the population distribution is the distribution of all individuals in a sample.
10. If the sample size changes then the sampling distribution will change.
11. One reason to simulate sampling distributions is to use it as a tool for checking the theory concerning sampling distributions.
12. The central limit theorem is a method to identify the specific characteristics of the sampling distribution of the sample mean without going through the process of extracting multiple samples from the population.
13. The distribution used to compute probability about individuals is population distribution and the distribution used to compute the probability of statistics from samples is sampling distribution.
14. Whatever is being asked about must be normally distributed.
15. Accuracy is how closely a statistic estimates the intended parameter and a statistic is considered to be precise if multiple samples produce similar statistics.
16. The shape of a accurate graph will be more spread out but clustered closer to the point of interest while precise graphs will be grouped tightly together but farther away from the point of interest.