Lecture 1.1

Sceintific Method

1. Question
2. Research
3. Hypothesis/Prediction
4. Experiment/Collect Data
5. Analyze Data
6. Conclusions’

Population – Not a number

Sample – subgroup of pop. that we collect info from

Sampling Unit: smallest unit selected from population

Obs. Unit: Unit actually measured for sample

Statistic: summary of a variable for a sample

Parameter: summary of a variable for the entire population

Lecutre 1.2 Types of Samples

Precision: sample stats are close to true value of pop parameters

Feasibility: gauge of when a plan can be reasonably implemented

Problems with Samples:

* Biased, Convenience, Volunteer
* Random Samples ensure: independence and identically distrib.

SRS: every set of n units has equal chance of being chosen

sampling frame: a numbered list of the units in a population

Stratified Sample: units inside the strata should be similar to other units inside the strata and random samples are taken within each strata

Clustered Sample: each cluster should have a diverse set o funits and make each cluster similar to other clusters as a whole

Multi-Stage: Combo of Stratified and Clustered

Lecture 1.3