Variable(s) of Interest	Parameter of Interest	Statistic of Interest	Descriptive Method(s)	Inferential Method(s)	Assumption(s) for Inferential Methods
Single Categorical Variable (e.g., seasons) **(More than two categories)**	True Population Proportion $(\pi_1, \pi_2, \dots)$	Sample proportions $(\hat{p}_1, \hat{p}_2 \dots)$	▪ Report $\hat{p}_1, \hat{p}_2$ … ▪ Stacked/Filled bar chart	▪ Chi-square Goodness of Fit	▪ Observations are independent ▪ EXPECTED counts should be greater than 5
Two Categorical Variables (e.g., yawn) (in general)	True Conditional Population Proportions $(\pi_{1|G1}, \pi_{1|G2}, \dots)$	Sample Proportions $(\hat{p}_{1|G1}, \hat{p}_{1|G2} \dots)$	▪ Report sample proportions ▪ Contingency table ▪ Stacked/Dodged/Filled Bar Plot	▪ Chi-square test of Independence	▪ Observations are independent ▪ EXPECTED counts should be greater than 5
Single Numerical Variable (e.g., body temps)	True Population Mean (μ)	Sample Mean $(\bar{x})$	▪ Report measures of center and variation ▪ Dotplot, boxplot, histogram ▪ Describe shape ▪ Identify outliers	▪ One-sample t-test ▪ Confidence interval for μ	▪ Either the sample size is fairly large OR the data reasonably follow a normal distribution