Simple Tests - Pratice

For the 48hr you will receive a data set and will be basically told to "Just analyse it." That is, you should come up with some analyses to generate interesting insides and connect it with a "story line".

This is your chance to practice! You may use this document as a basis and just start. For each simple tests covered in the last session, pick an R dataset (run `data()` for a list), run the test and analyse the results. Report the results using in-line code, if you like. Hint: First, always think of which is your dependent variable (what you want to explain/ predict) and which is the independent variable (what you use to explain/ group) and your decision criterion (what to conclude if the p-value is larger/smaller than a threshold like 0.05).

Example

- Dataset: ToothGrowth
- Test: t.test
- IV: `supp` (supplement), DV: `len` (tooth length)
- Decision criterion: If $p \leq 0.05 \longrightarrow$ groups differ significantly

There was no significant difference in mean tooth length of guinea pigs between the group that was given orange juice ($M = 20.66$, $SD = 6.61$) and the group that was given vitamin C ($M = 16.96$, $SD = 8.27$) as supplement, $t(55.31) = 1.92$, $p = .061$, $d = 0.49$.

Shapiro-Wilk

F-test

T-test

Chi-Square