

The familywise error rate

- This is known as the familywise error rate.

$$\text{familywise error} = 1 - (0.95)^n$$

- If we had 5 conditions, and hence 10 t-tests to conduct, our error rate would be 0.4 – which means there is a 40% chance of having made at least one type I error (i.e., thinking we have an effect when none is present).

Similarities between t-tests and the ANOVA

- t-tests tell us whether or not two samples have the same mean.
- ANOVA tells us whether two or more samples have the same mean.
- As the t-test produced the t-statistic, the ANOVA gives us an F-statistic or F-ratio which compares the amount of systematic variance with the amount of unsystematic variance.