**Module V: One-way Within Groups ANOVA**

•Use *F*-test to compare more than two groups (samples)

•One-way within groups ANOVA

•Ex. Drug condition (none, placebo, new drug) on pain experienced where the same

participants receive all three conditions

**Order effects result in error.**

• Reduce error by randomizing the order of presentation and averaging responses

• Some participants will see endomorph first

• Others will see mesomorph first

***F*-test within-group assumptions**

• Dependent variable is scale

• Participants are randomly selected

• Populations are normally distributed

• Population mean difference is 0 (*μMdiff* = 0)

• Participants experience all IV conditions

**Effect size**

Is not affected by *α*’s nor sample sizes

Cannot use Cohen’s *d,* use *R2* instead

•Effect size by convention

The percent of the variability (differences) of pain experienced (DV) among individual

patients (observations) can be accounted for by the drug type (IV; none, placebo, new drug)

when individual differences are removed.