Stat 3202 (Spring 2019)

Topic 8: ANOVA

Examples

Example: Music and Pain Reduction

▶ Researchers investigated the way different types of audio impacted perception of pain in children undergoing major surgery.

▶ Children recovering from surgery were randomly assigned to one of three audio treatments, for 30 minutes:
  ▶ listening to music ($n = 18$)
  ▶ listening to an audio book ($n = 17$)
  ▶ listening to silence [control group] ($n = 19$)

▶ Children were asked to report their pain experience on a 10 point scale (where 0 means No Hurt and 10 means Hurts Worst) before and after the treatment; the change in pain score was the response variable.

▶ This data is manufactured, but is based on the results from a study by Suresh, De Oliveira, and Suresh (2015).

Example: Age at Death for Writers

- ▶ "She is the Gaelic muse, for she gives inspiration to those she persecutes. The Gaelic poets die young, for she is restless, and will not let them remain long on earth."
  - William Butler Yeats
- ▶ A study investigated the age at death for writers from different cultures and genders. Three categories of writers examined were novelists, poets, and nonfiction writers. The ages at death for female writers in these categories from North America are provided. Most of the writers are from the United States, but Canadian and Mexican writers are included.