Music, Age, and Blood Pressure

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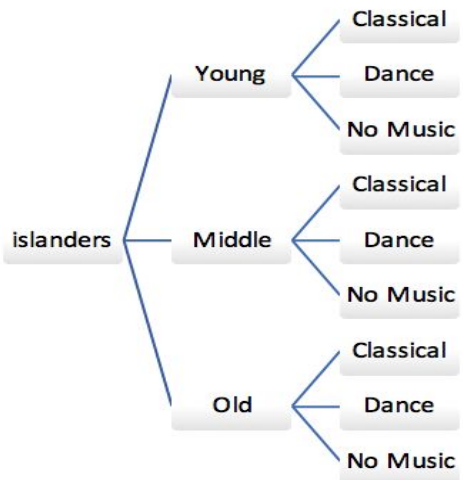
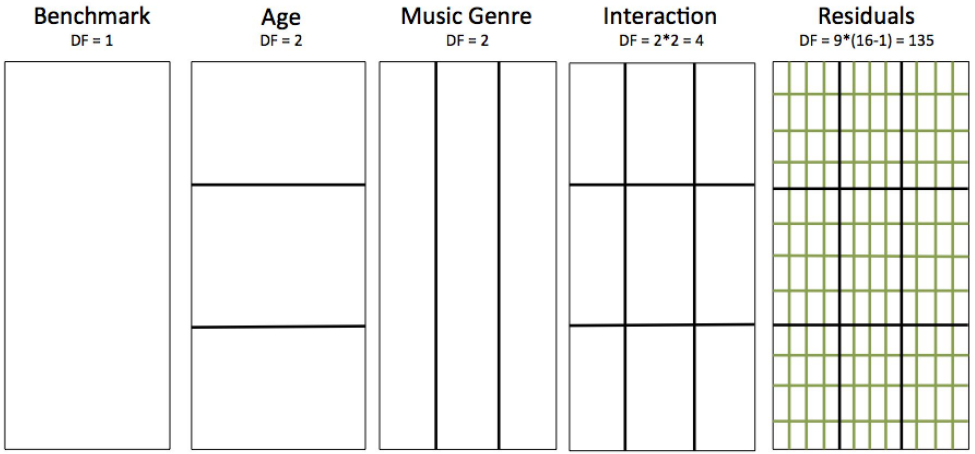
Topic and Questions

- **Purpose**
  - To determine the effects that music genres and age have on blood pressure.
- **Questions**
  - Does different musical genres (classical or dance) affect blood pressure?
  - Does age have a significant effect on blood pressure?
  - Is there a significant interaction between age and music genres in relation to their effects on the blood pressure.

Design

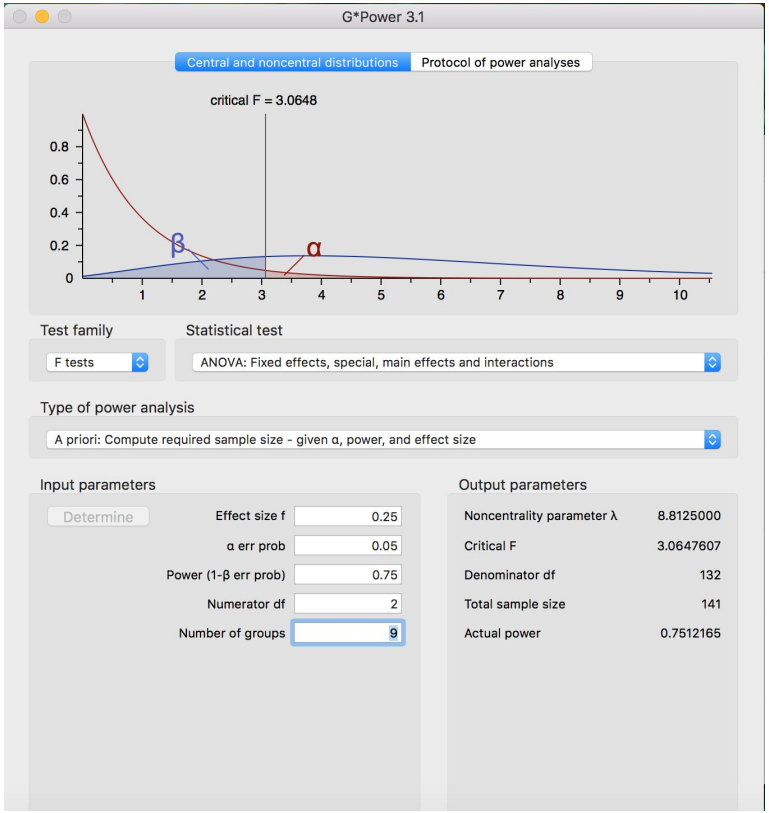




- 2-way basic factorial
- Interaction
- Smoking held constant
- Factors: Age and Music Genre
- Response: Blood Pressure

Sample Size

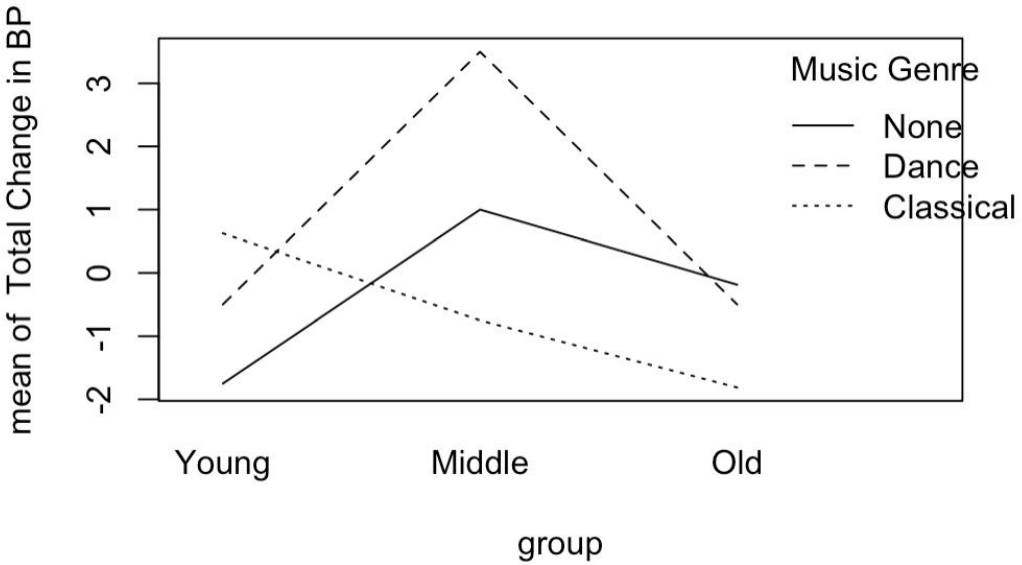
- Effect size: 0.25
- Power: 0.75
- Alpha: 0.05
- 144 participants
  - 9 treatment combinations
  - 16 people per combination

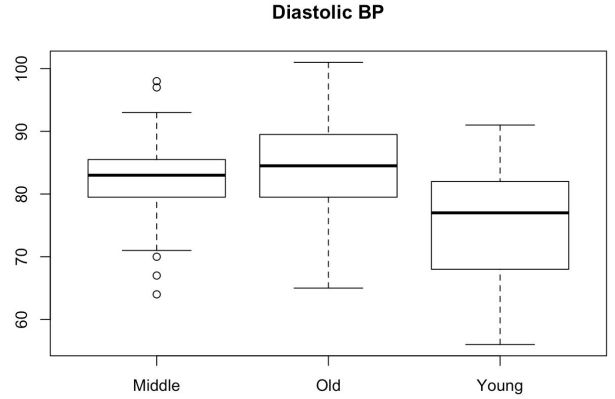


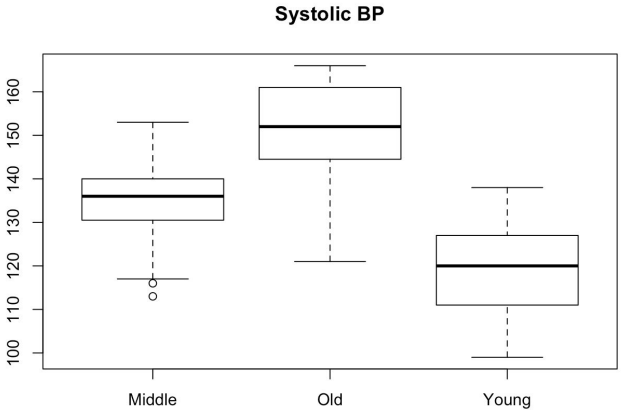
Randomization

- 48 people from each age group
    - 35 and below, 35-54, 55 and above
- Random assignment of treatment within each age group using R
- 16 people within each age group assigned to each musical treatment

Results and Analysis







Limitations and Future Research

- Slow classical music (10-second rhythm) VS. faster classical music
- 3 separate 10 mins treatments VS. 1 long 30 min treatment
- Longer sessions of musical treatments