Effects of Music

Team: We're Skewed
Christine Lee
Sangjun Han

Research Questions:

- How do different genres of music affect people?
- Will blood pressure change by listening to specific genres of music?
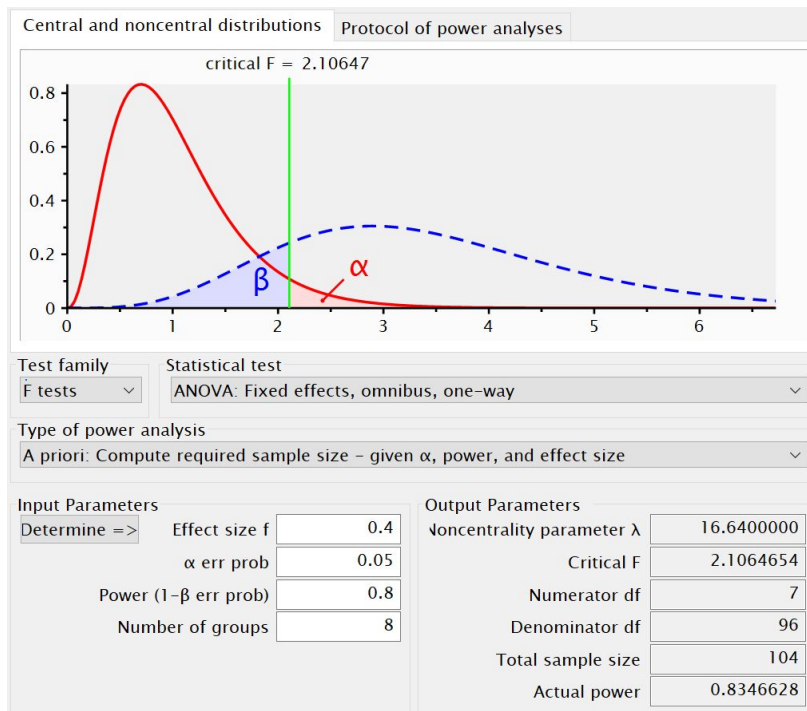
Benchmark	Factor (Gender)		Treatment (Genre)	Residual	
	M	F	Classic	13	13
			Dance	13	13
			Metal	13	13
			Control	13	13

Design: Completely Randomized Basic Factorial [2]

Power Analysis

Method

Response: Pulse Pressure
(Systolic BP - Diastolic BP)
Treatment: Genre of Music
Factor: Gender
Nuisance: Age (24–26)

Sample Size: 104
Power: 80%
Effect Size: 0.4 - Large

13 subjects per 8 groups

Regression Results and ANOVA Table

Table 1: Regression Results

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.8462	1.6717	-0.51	0.6139
GenderMale	2.0769	2.3641	0.88	0.3819
'Music Treatment'Dance	1.9231	2.3641	0.81	0.4180
'Music Treatment'Metal	2.4615	2.3641	1.04	0.3004
'Music Treatment'Sit	1.4615	2.3641	0.62	0.5379
GenderMale:'Music Treatment'Dance	-2.1538	3.3434	-0.64	0.5210
GenderMale:'Music Treatment'Metal	-4.1538	3.3434	-1.24	0.2171
GenderMale:'Music Treatment'Sit	-2.2308	3.3434	-0.67	0.5062

Table 2: ANOVA Table

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Gender	1	0.09	0.09	0.00	0.9612
'Music Treatment'	3	9.41	3.14	0.09	0.9673
Gender:'Music Treatment'	3	56.18	18.73	0.52	0.6726
Residuals	96	3487.54	36.33		

Effect of Music on Pulse Pressure
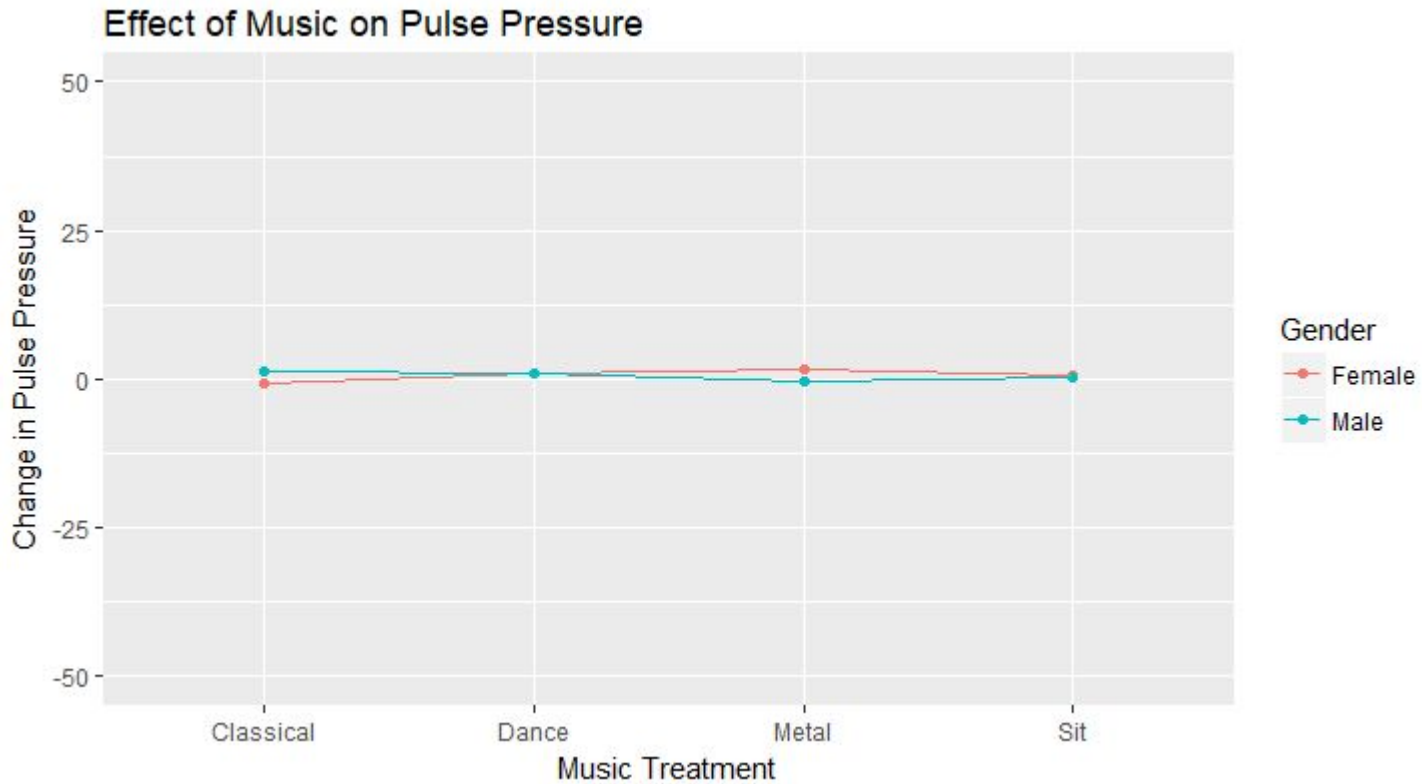
Interaction Plot

Limitations

- Limited music genres
- Small sample size
- Could not perform two tasks at once

Improvements

- Expand music genres
- Take into consideration subject's favourite genre of music
- Explore music's effect on physical tests (simultaneous)
- Explore music's effect on memory tests (simultaneous)
- Explore effects on different age groups