

# Gravesend Inn-frasound Experiment: Statistical Results

Prepared by Dr. Toiija Riggins, using SPSS version 15

Last Updated November 8, 2010

## General Linear Model

Between-Subjects Factors			
		Value Label	N
Infrasound on or off during trial	0	Infrasound Off	90
	1	Infrasound On	118

Descriptive Statistics					
	Infrasound on or off during trial	Mean	Std. Deviation	N	
Happy-Sad Emotional Scale	0 Infrasound Off	3.47	.837	90	
	1 Infrasound On	3.49	.793	118	
	Total	3.48	.810	208	
Aroused-Sleepy Emotional Scale	0 Infrasound Off	2.54	.950	90	
	1 Infrasound On	2.86	.954	118	
	Total	2.72	.963	208	
Excited-Bored Emotional Scale	0 Infrasound Off	2.38	.990	90	
	1 Infrasound On	2.51	1.019	118	
	Total	2.45	1.006	208	
Angry-Calm Emotional Scale	0 Infrasound Off	4.07	.859	90	
	1 Infrasound On	3.92	1.022	118	
	Total	3.99	.955	208	
Confident-Fearful Emotional Scale	0 Infrasound Off	3.50	1.124	90	
	1 Infrasound On	3.51	1.068	118	
	Total	3.50	1.090	208	

**Box's Test of Equality of Covariance Matrices <sup>a</sup>**

Box's M	18.627
F	1.209
df1	15
df2	146892.286
Sig.	.256

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

<sup>a</sup>. Design: Intercept+OnOff

**Multivariate Tests <sup>b</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.978	1826.976 <sup>a</sup>	5.000	202.000	.000	.978
	Wilks' Lambda	.022	1826.976 <sup>a</sup>	5.000	202.000	.000	.978
	Hotelling's Trace	45.222	1826.976 <sup>a</sup>	5.000	202.000	.000	.978
	Roy's Largest Root	45.222	1826.976 <sup>a</sup>	5.000	202.000	.000	.978
OnOff	Pillai's Trace	.037	1.542 <sup>a</sup>	5.000	202.000	.178	.037
	Wilks' Lambda	.963	1.542 <sup>a</sup>	5.000	202.000	.178	.037
	Hotelling's Trace	.038	1.542 <sup>a</sup>	5.000	202.000	.178	.037
	Roy's Largest Root	.038	1.542 <sup>a</sup>	5.000	202.000	.178	.037

<sup>a</sup>. Exact statistic

<sup>b</sup>. Design: Intercept+OnOff

**Levene's Test of Equality of Error Variances <sup>a</sup>**

	F	df1	df2	Sig.
Happy-Sad Emotional Scale	.254	1	206	.615
Aroused-Sleepy Emotional Scale	.380	1	206	.538
Excited-Bored Emotional Scale	.182	1	206	.670
Angry-Calm Emotional Scale	1.465	1	206	.228
Confident-Fearful Emotional Scale	.210	1	206	.647

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

<sup>a</sup>. Design: Intercept+OnOff

**Tests of Between-Subjects Effects**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Happy-Sad Emotional Scale	.032 <sup>a</sup>	1	.032	.048	.827	.000
	Aroused-Sleepy Emotional Scale	4.954 <sup>b</sup>	1	4.954	5.461	.020	.026
	Excited-Bored Emotional Scale	.872 <sup>c</sup>	1	.872	.861	.355	.004
	Angry-Calm Emotional Scale	1.043 <sup>d</sup>	1	1.043	1.144	.286	.006
	Confident-Fearful Emotional Scale	.004 <sup>a</sup>	1	.004	.003	.956	.000
Intercept	Happy-Sad Emotional Scale	2472.032	1	2472.032	3747.390	.000	.948
	Aroused-Sleepy Emotional Scale	1489.050	1	1489.050	1641.458	.000	.888
	Excited-Bored Emotional Scale	1219.026	1	1219.026	1203.560	.000	.854
	Angry-Calm Emotional Scale	3259.851	1	3259.851	3573.607	.000	.945
	Confident-Fearful Emotional Scale	2507.888	1	2507.888	2100.174	.000	.911
OnOff	Happy-Sad Emotional Scale	.032	1	.032	.048	.827	.000
	Aroused-Sleepy Emotional Scale	4.954	1	4.954	5.461	.020	.026
	Excited-Bored Emotional Scale	.872	1	.872	.861	.355	.004
	Angry-Calm Emotional Scale	1.043	1	1.043	1.144	.286	.006
	Confident-Fearful Emotional Scale	.004	1	.004	.003	.956	.000
Error	Happy-Sad Emotional Scale	135.892	206	.660			
	Aroused-Sleepy Emotional Scale	186.873	206	.907			
	Excited-Bored Emotional Scale	208.647	206	1.013			
	Angry-Calm Emotional Scale	187.914	206	.912			
	Confident-Fearful Emotional Scale	245.992	206	1.194			
Total	Happy-Sad Emotional Scale	2656.000	208				
	Aroused-Sleepy Emotional Scale	1732.000	208				
	Excited-Bored Emotional Scale	1460.000	208				
	Angry-Calm Emotional Scale	3493.000	208				
	Confident-Fearful Emotional Scale	2801.000	208				
Corrected Total	Happy-Sad Emotional Scale	135.923	207				
	Aroused-Sleepy Emotional Scale	191.827	207				
	Excited-Bored Emotional Scale	209.519	207				
	Angry-Calm Emotional Scale	188.957	207				
	Confident-Fearful Emotional Scale	245.995	207				

a. R Squared = .000 (Adjusted R Squared = -.005)

b. R Squared = .026 (Adjusted R Squared = .021)

c. R Squared = .004 (Adjusted R Squared = -.001)

d. R Squared = .006 (Adjusted R Squared = .001)

## Estimated Marginal Means

### Infrasound on or off during trial

Dependent Variable	Infrasound on or off during trial	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Happy-Sad Emotional Scale	0 Infrasound Off	3.467	.086	3.298	3.635
	1 Infrasound On	3.492	.075	3.344	3.639
Aroused-Sleepy Emotional Scale	0 Infrasound Off	2.544	.100	2.347	2.742
	1 Infrasound On	2.856	.088	2.683	3.029
Excited-Bored Emotional Scale	0 Infrasound Off	2.378	.106	2.169	2.587
	1 Infrasound On	2.508	.093	2.326	2.691
Angry-Calm Emotional Scale	0 Infrasound Off	4.067	.101	3.868	4.265
	1 Infrasound On	3.924	.088	3.750	4.097
Confident-Fearful Emotional Scale	0 Infrasound Off	3.500	.115	3.273	3.727
	1 Infrasound On	3.508	.101	3.310	3.707