

SPSS Analysis of Reaction Time Data

Incorrect Analysis:

Compare Means – One-way ANOVA

Dependent List: Reaction Time

Factor: Alcohol

Descriptives

ReactionTime

	N	Mean	Std. Deviation
0 oz	10	1.9400	.89592
2 oz	10	2.1000	1.00333
4 oz	10	2.6400	.86436
Total	30	2.2267	.94136

ANOVA

ReactionTime

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.691	2	1.345	1.579	.225
Within Groups	23.008	27	.852		
Total	25.699	29			

Correct Analysis:

General Linear Model – Univariate

Dependent Variable: Reaction Time

**Independent Variables: Alcohol
Individual**

Model: Custom – Alcohol, Individual

Tests of Between-Subjects Effects

Dependent Variable: ReactionTime

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25.456(a)	11	2.314	171.656	.000
Intercept	148.741	1	148.741	11033.011	.000
Alcohol	2.691	2	1.345	99.791	.000
Individual	22.765	9	2.529	187.626	.000
Error	.243	18	.013		
Total	174.440	30			
Corrected Total	25.699	29			

(a) R Squared = .991 (Adjusted R Squared = .985)

Multiple Comparisons

Dependent Variable: ReactionTime

LSD

(I) Alcohol	(J) Alcohol	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0 oz	2 oz	-.1600(*)	.05193	.006	-.2691	-.0509
	4 oz	-.7000(*)	.05193	.000	-.8091	-.5909
2 oz	0 oz	.1600(*)	.05193	.006	.0509	.2691
	4 oz	-.5400(*)	.05193	.000	-.6491	-.4309
4 oz	0 oz	.7000(*)	.05193	.000	.5909	.8091
	2 oz	.5400(*)	.05193	.000	.4309	.6491

Based on observed means.

* The mean difference is significant at the .05 level.