QUIZ 30

Here's a set of outputs from the slideshow:

Within–Subjects Factors

Measure: LDL

times	Dependent Variable
1	BASELINE_LDL
2	MID_LDL
3	POST_LDL

Between–Subjects Factors

		Value Label	N
Treatment_Group	0	Placebo	7
	1	Viking Atorvastatin	7
	2	Ninja Simvastatin	7

Mauchly's Test of Sphericity[a]

Measure: LDL

Within Subjects Effect	Mauchly's W	Approx. Chi–Square	df	Sig.	Greenhouse–Geisser	Huynh–Feldt	Lower–bound
times	.237	24.485	2	.000	.567	.647	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Treatment_Group
Within Subjects Design: times

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within–Subjects Effects table.

Tests of Within–Subjects Effects

Measure: LDL

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
times	Sphericity Assumed	72.222	2	36.111	12.829	.000	.416
	Greenhouse–Geisser	72.222	1.134	63.669	12.829	.001	.416
	Huynh–Feldt	72.222	1.294	55.821	12.829	.001	.416
	Lower–bound	72.222	1.000	72.222	12.829	.002	.416
times * Treatment_Group	Sphericity Assumed	75.111	4	18.778	6.671	.000	.426
	Greenhouse–Geisser	75.111	2.269	33.108	6.671	.005	.426
	Huynh–Feldt	75.111	2.588	29.027	6.671	.003	.426
	Lower–bound	75.111	2.000	37.556	6.671	.007	.426
Error(times)	Sphericity Assumed	101.333	36	2.815			
	Greenhouse–Geisser	101.333	20.418	4.963			
	Huynh–Feldt	101.333	23.289	4.351			
	Lower–bound	101.333	18.000	5.630			

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
BASELINE_LDL	1.117	2	18	.349
MID_LDL	1.162	2	18	.335
POST_LDL	1.284	2	18	.301

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

a. Design: Intercept + Treatment_Group
Within Subjects Design: times

Estimated Marginal Means

1. times

Estimates

Measure: LDL

times	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
1	121.762	4.392	112.536	130.988
2	120.571	4.162	111.828	129.315
3	119.143	3.940	110.866	127.420

Pairwise Comparisons

Measure: LDL

(I) times	(J) times	Mean Difference (I–J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	95% Confidence Interval for Difference[b] Upper Bound
1	2	1.190*	.355	.011	.253	2.128
	3	2.619*	.707	.005	.752	4.486
2	1	−1.190*	.355	.011	−2.128	−.253
	3	1.429*	.421	.010	.316	2.541
3	1	−2.619*	.707	.005	−4.486	−.752
	2	−1.429*	.421	.010	−2.541	−.316

Based on estimated marginal means

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

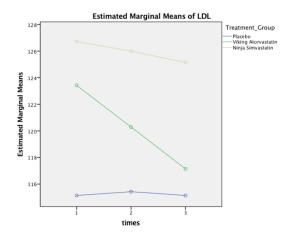b. Adjustment for multiple comparisons: Bonferroni.

2. Treatment_Group * times

Measure: LDL

Treatment_Group	times	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Placebo	1	115.143	7.606	99.162	131.123
	2	115.429	7.208	100.284	130.573
	3	115.143	6.823	100.807	129.478
Viking Atorvastatin	1	123.429	7.606	107.448	139.409
	2	120.286	7.208	105.141	135.430
	3	117.143	6.823	102.807	131.478
Ninja Simvastatin	1	126.714	7.606	110.734	142.695
	2	126.000	7.208	110.856	141.144
	3	125.143	6.823	110.807	139.478

**Profile Plo
ts**

Multiple Comparisons

Measure: LDL

	(I) Treatment_Group	(J) Treatment_Group	Mean Difference (I–J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	Placebo	Viking Atorvastatin	–5.05	10.184	.874	–31.04	20.94
		Ninja Simvastatin	–10.71	10.184	.555	–36.71	15.28
	Viking Atorvastatin	Placebo	5.05	10.184	.874	–20.94	31.04
		Ninja Simvastatin	–5.67	10.184	.845	–31.66	20.32
	Ninja Simvastatin	Placebo	10.71	10.184	.555	–15.28	36.71
		Viking Atorvastatin	5.67	10.184	.845	–20.32	31.66
Games–Howell	Placebo	Viking Atorvastatin	–5.05	8.426	.823	–27.62	17.52
		Ninja Simvastatin	–10.71	11.234	.620	–41.16	19.73
	Viking Atorvastatin	Placebo	5.05	8.426	.823	–17.52	27.62
		Ninja Simvastatin	–5.67	10.675	.858	–35.07	23.74
	Ninja Simvastatin	Placebo	10.71	11.234	.620	–19.73	41.16
		Viking Atorvastatin	5.67	10.675	.858	–23.74	35.07

Based on observed means.
 The error term is Mean Square(Error) = 363.007.

Estimated Marginal Means of LDL

Interpret these outputs.

What's a post-hoc power analysis? What is "power level"?