

Sphericity Tests

Variables	DF	Mauchly's Criterion	Chi-Square	Pr > ChiSq
Transformed Variates	20	0.0009992	357.70745	<.0001
Orthogonal Components	20	0.0403737	166.18471	<.0001

The GLM Procedure
 Repeated Measures Analysis of Variance
 Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
program	2	419.435262	209.717631	3.07	0.0548
Error	54	3694.690051	68.420186		

The GLM Procedure
 Repeated Measures Analysis of Variance
 Univariate Tests of Hypotheses for Within Subject Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F	Adj Pr > F	
						G - G	H-F-L
time	6	53.3542637	8.8923773	7.43	<.0001	0.0003	0.0002
time*program	12	43.0002327	3.5833527	2.99	0.0005	0.0130	0.0114
Error(time)	324	387.7867347	1.1968726				

Greenhouse-Geisser Epsilon 0.4233
 Huynh-Feldt-Lecoutre Epsilon 0.4459

The Mixed Procedure Cov structure for UN model

Estimated R Matrix for subj(program) 1 CONT

Row	Col1	Col2	Col3	Col4	Col5	Col6	Col7
1	8.7804	8.7573	8.9659	8.1986	8.6784	8.2206	8.4172
2	8.7573	9.4732	9.4633	8.5688	9.2015	8.7310	8.6878
3	8.9659	9.4633	10.7083	9.9268	10.6664	10.0704	10.2142
4	8.1986	8.5688	9.9268	10.0776	10.5998	9.8989	10.0436
5	8.6784	9.2015	10.6664	10.5998	12.0954	11.3447	11.3641
6	8.2206	8.7310	10.0704	9.8989	11.3447	11.7562	11.6504
7	8.4172	8.6878	10.2142	10.0436	11.3641	11.6504	12.7104

Estimated R Correlation Matrix for subj(program) 1 CONT

Row	Col1	Col2	Col3	Col4	Col5	Col6	Col7
1	1.0000	0.9602	0.9246	0.8716	0.8421	0.8091	0.7968
2	0.9602	1.0000	0.9396	0.8770	0.8596	0.8273	0.7917
3	0.9246	0.9396	1.0000	0.9556	0.9372	0.8975	0.8755
4	0.8716	0.8770	0.9556	1.0000	0.9601	0.9094	0.8874
5	0.8421	0.8596	0.9372	0.9601	1.0000	0.9514	0.9165
6	0.8091	0.8273	0.8975	0.9094	0.9514	1.0000	0.9531
7	0.7968	0.7917	0.8755	0.8874	0.9165	0.9531	1.0000

Convergence criteria are met for every model

All variance parameter estimates are nonzero

Covariance structure for AR(1) model
Estimated R Matrix for subj(program) 1 CONT

Row	Col1	Col2	Col3	Col4	Col5	Col6	Col7
1	10.7600	10.2411	9.7473	9.2772	8.8298	8.4040	7.9988
2	10.2411	10.7600	10.2411	9.7473	9.2772	8.8298	8.4040
3	9.7473	10.2411	10.7600	10.2411	9.7473	9.2772	8.8298
4	9.2772	9.7473	10.2411	10.7600	10.2411	9.7473	9.2772
5	8.8298	9.2772	9.7473	10.2411	10.7600	10.2411	9.7473
6	8.4040	8.8298	9.2772	9.7473	10.2411	10.7600	10.2411
7	7.9988	8.4040	8.8298	9.2772	9.7473	10.2411	10.7600

VC

Fit Statistics

-2 Res Log Likelihood	1420.8
AIC (smaller is better)	1424.8
AICC (smaller is better)	1424.9
BIC (smaller is better)	1428.9

CS

Fit Statistics

-2 Res Log Likelihood	1420.8
AIC (smaller is better)	1424.8
AICC (smaller is better)	1424.9
BIC (smaller is better)	1428.9

HF

Fit Statistics

-2 Res Log Likelihood	1408.2
AIC (smaller is better)	1424.2
AICC (smaller is better)	1424.6
BIC (smaller is better)	1440.6

AR(1)

Fit Statistics

-2 Res Log Likelihood	1266.8
AIC (smaller is better)	1270.8
AICC (smaller is better)	1270.8
BIC (smaller is better)	1274.9

UN

Fit Statistics

-2 Res Log Likelihood	1234.9
AIC (smaller is better)	1290.9
AICC (smaller is better)	1295.5
BIC (smaller is better)	1348.1

Fixed effects results for the AR(1) model

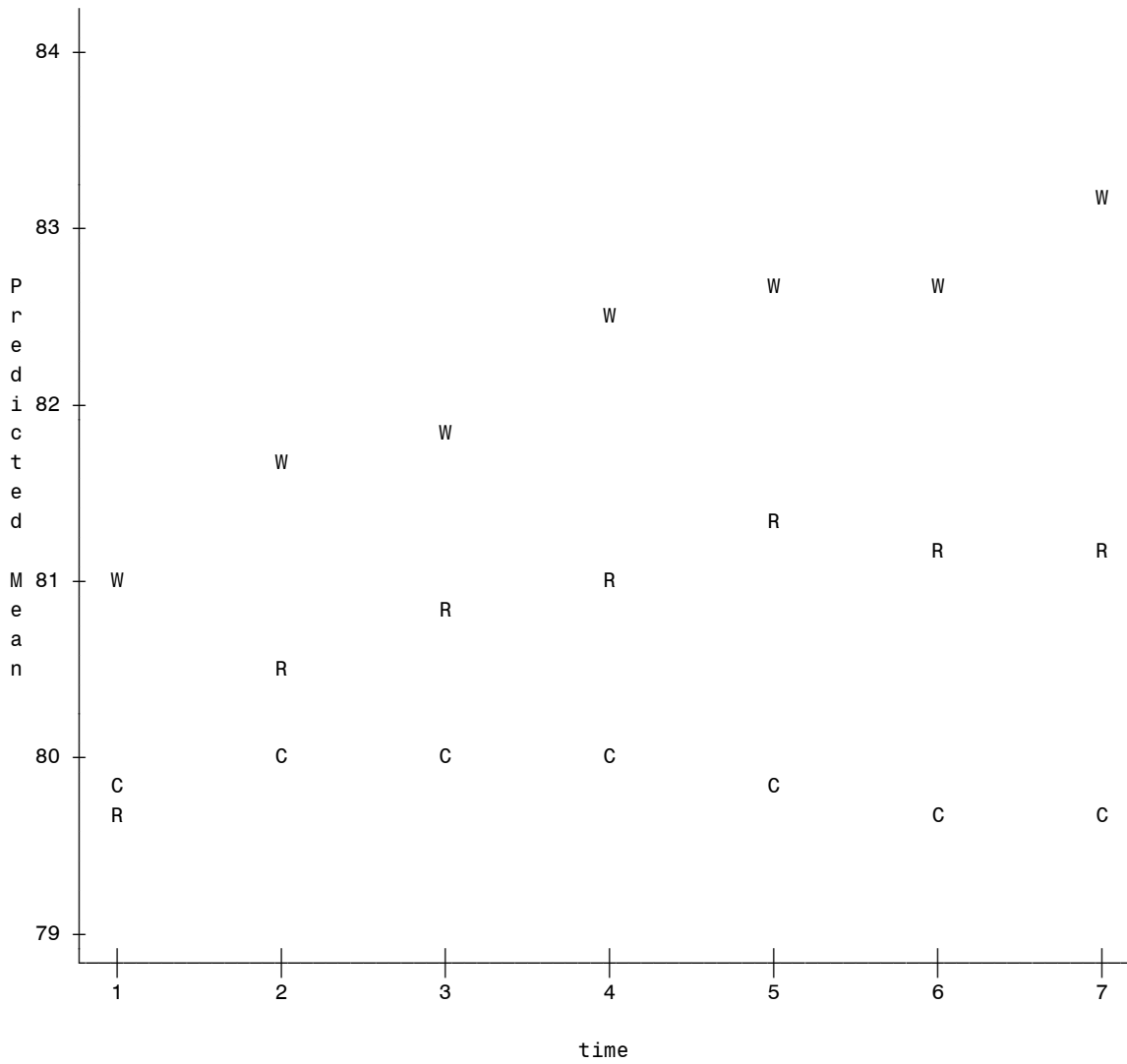
The Mixed Procedure
Null Model Likelihood Ratio Test

DF	Chi-Square	Pr > ChiSq
1	767.08	<.0001

Type 3 Tests of Fixed Effects

Effect	Num		Den		F Value	Pr > F
	DF		DF			
program	2		54		3.11	0.0528
time	6		324		4.30	0.0003
program*time	12		324		1.17	0.3007

Plot of Pred*time. Symbol is value of program.



NOTE: 378 obs hidden.

To check this change in model interpretation about interaction, we can model TIME directly as a covariate:

The Mixed Procedure

Type 1 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
program	2	54	3.10	0.0530
time	1	336	12.69	0.0004
time*program	2	336	4.75	0.0093
time*time	1	336	7.18	0.0077
time*time*program	2	336	0.88	0.4167

We can also obtain equations for the three groups:

The Mixed Procedure

Solution for Fixed Effects

Effect	program	Estimate	Standard Error	DF	t Value	Pr > t
program	CONT	79.5708	0.7972	54	99.82	<.0001
program	RI	78.9054	0.8913	54	88.53	<.0001
program	WI	80.4928	0.7780	54	103.47	<.0001
time*program	CONT	0.2092	0.2353	336	0.89	0.3746
time*program	RI	0.8606	0.2630	336	3.27	0.0012
time*program	WI	0.5861	0.2296	336	2.55	0.0111
time*time*program	CONT	-0.02930	0.02731	336	-1.07	0.2842
time*time*program	RI	-0.07767	0.03054	336	-2.54	0.0114
time*time*program	WI	-0.03063	0.02666	336	-1.15	0.2514

Type 1 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
program	3	54	12910.8	<.0001
time*program	3	336	7.39	<.0001
time*time*program	3	336	2.98	0.0316