

The GLM Procedure

Class Level Information

Class	Levels	Values
trt	3	1 2 3
subj	15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Number of Observations Read 15  
Number of Observations Used 15

The GLM Procedure  
 Repeated Measures Analysis of Variance

Repeated Measures Level Information

Dependent Variable	w1	w3	w4	w5	w6	w7
Level of time	1	2	3	4	5	6

Partial Correlation Coefficients from the Error SSCP Matrix / Prob > |r|

DF = 12	w1	w3	w4	w5	w6	w7
w1	1.000000	0.707584 0.0068	0.459151 0.1145	0.543739 0.0548	0.492366 0.0874	0.502098 0.0804
w3	0.707584 0.0068	1.000000	0.889996 <.0001	0.874228 <.0001	0.676753 0.0111	0.834899 0.0004
w4	0.459151 0.1145	0.889996 <.0001	1.000000	0.881217 <.0001	0.789575 0.0013	0.847786 0.0003
w5	0.543739 0.0548	0.874228 <.0001	0.881217 <.0001	1.000000	0.803051 0.0009	0.919350 <.0001
w6	0.492366 0.0874	0.676753 0.0111	0.789575 0.0013	0.803051 0.0009	1.000000	0.895603 <.0001
w7	0.502098 0.0804	0.834899 0.0004	0.847786 0.0003	0.919350 <.0001	0.895603 <.0001	1.000000

E = Error SSCP Matrix

time\_N represents the contrast between the nth level of time and the last

	time_1	time_2	time_3	time_4	time_5
time_1	25083.6	13574.0	12193.2	4959.0	2274.8
time_2	13574.0	10638.4	9099.2	4354.6	-968.2
time_3	12193.2	9099.2	11136.8	4293.8	1623.6
time_4	4959.0	4354.6	4293.8	5194.4	-365.8
time_5	2274.8	-968.2	1623.6	-365.8	7425.2

The GLM Procedure  
 Repeated Measures Analysis of Variance

Partial Correlation Coefficients from the Error SSCP Matrix of the  
 Variables Defined by the Specified Transformation / Prob > |r|

DF = 12	time_1	time_2	time_3	time_4	time_5
time_1	1.000000	0.830950 0.0004	0.729529 0.0047	0.434442 0.1380	0.166684 0.5863
time_2	0.830950 0.0004	1.000000	0.835959 0.0004	0.585791 0.0354	-0.108936 0.7231
time_3	0.729529 0.0047	0.835959 0.0004	1.000000	0.564539 0.0444	0.178544 0.5595
time_4	0.434442 0.1380	0.585791 0.0354	0.564539 0.0444	1.000000	-0.058901 0.8484
time_5	0.166684 0.5863	-0.108936 0.7231	0.178544 0.5595	-0.058901 0.8484	1.000000

Sphericity Tests

Variables	DF	Mauchly's Criterion	Chi-Square	Pr > ChiSq
Transformed Variates	14	0.0160527	41.731963	0.0001
Orthogonal Components	14	0.0544835	29.389556	0.0093

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
trt	2	18548.0667	9274.0333	1.06	0.3782
Error	12	105434.2000	8786.1833		

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
time	5	142554.5000	28510.9000	52.55	<.0001
time*trt	10	9762.7333	976.2733	1.80	0.0801
Error(time)	60	32552.6000	542.5433		

Source	Adj Pr > F	
	G - G	H-F-L
time	<.0001	<.0001
time*trt	0.1457	0.1243
Error(time)		

Greenhouse-Geisser Epsilon	0.4856
Huynh-Feldt-Lecoutre Epsilon	0.6177

## The Mixed Procedure

## Model Information

Data Set	WORK.GPIG2
Dependent Variable	y
Covariance Structure	Variance Components
Subject Effect	subj
Estimation Method	ML
Residual Variance Method	Profile
Fixed Effects SE Method	Kenward-Roger
Degrees of Freedom Method	Kenward-Roger

## Class Level Information

Class	Levels	Values
subj	15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
trt	3	1 2 3
time	6	1 3 4 5 6 7

## Dimensions

Covariance Parameters	2
Columns in X	28
Columns in Z Per Subject	1
Subjects	15
Max Obs Per Subject	6

## Number of Observations

Number of Observations Read	90
Number of Observations Used	90
Number of Observations Not Used	0

## Iteration History

Iteration	Evaluations	-2 Log Like	Criterion
0	1	915.56826331	
1	1	843.76014867	0.00000000

Convergence criteria met.

## The Mixed Procedure

## Covariance Parameter Estimates

Cov Parm	Subject	Estimate
Intercept	subj	1099.15
Residual		434.03

## Fit Statistics

-2 Log Likelihood	843.8
AIC (smaller is better)	883.8
AICC (smaller is better)	895.9
BIC (smaller is better)	897.9

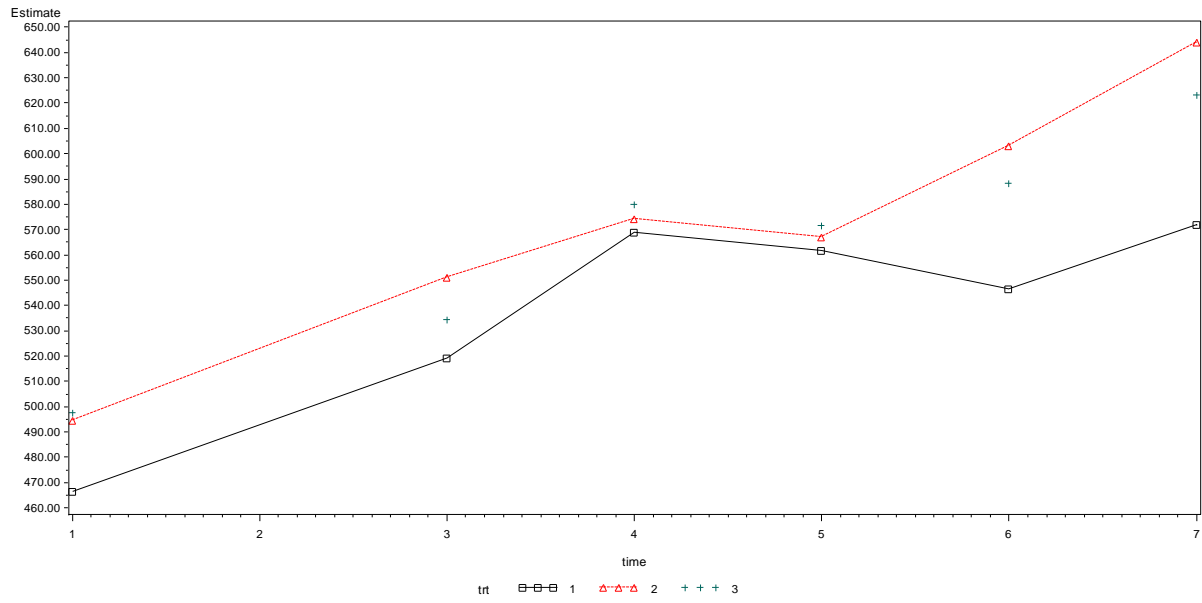
## Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
trt	2	15	1.32	0.2966
time	5	75	65.69	<.0001
trt*time	10	75	2.25	0.0234

## Least Squares Means

Effect	trt	time	Estimate	Standard Error	DF	t Value	Pr >  t
trt*time	1	1	466.40	17.5111	25.2	26.63	<.0001
trt*time	1	3	519.40	17.5111	25.2	29.66	<.0001
trt*time	1	4	568.80	17.5111	25.2	32.48	<.0001
trt*time	1	5	561.60	17.5111	25.2	32.07	<.0001
trt*time	1	6	546.60	17.5111	25.2	31.21	<.0001
trt*time	1	7	572.00	17.5111	25.2	32.67	<.0001
trt*time	2	1	494.40	17.5111	25.2	28.23	<.0001
trt*time	2	3	551.00	17.5111	25.2	31.47	<.0001
trt*time	2	4	574.20	17.5111	25.2	32.79	<.0001
trt*time	2	5	567.00	17.5111	25.2	32.38	<.0001
trt*time	2	6	603.00	17.5111	25.2	34.44	<.0001
trt*time	2	7	644.00	17.5111	25.2	36.78	<.0001
trt*time	3	1	497.80	17.5111	25.2	28.43	<.0001
trt*time	3	3	534.60	17.5111	25.2	30.53	<.0001
trt*time	3	4	579.80	17.5111	25.2	33.11	<.0001
trt*time	3	5	571.80	17.5111	25.2	32.65	<.0001
trt*time	3	6	588.20	17.5111	25.2	33.59	<.0001
trt*time	3	7	623.20	17.5111	25.2	35.59	<.0001

Profile plot of estimated joint treatment means



## The Mixed Procedure

## Model Information

Data Set	WORK.GPIG2
Dependent Variable	y
Covariance Structure	Variance Components
Subject Effect	subj
Estimation Method	ML
Residual Variance Method	Profile
Fixed Effects SE Method	Kenward-Roger
Degrees of Freedom Method	Kenward-Roger

## Class Level Information

Class	Levels	Values
subj	15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
trt	3	1 2 3

## Dimensions

Covariance Parameters	2
Columns in X	8
Columns in Z Per Subject	1
Subjects	15
Max Obs Per Subject	6

## Number of Observations

Number of Observations Read	90
Number of Observations Used	90
Number of Observations Not Used	0

## Iteration History

Iteration	Evaluations	-2 Log Like	Criterion
0	1	926.63647233	
1	1	876.85677339	0.00000000

Convergence criteria met.



The Mixed Procedure

Covariance Parameter Estimates

Cov Parm	Subject	Estimate
Intercept	subj	1059.02
Residual		674.80

Fit Statistics

-2 Log Likelihood	876.9
AIC (smaller is better)	892.9
AICC (smaller is better)	894.6
BIC (smaller is better)	898.5

Solution for Fixed Effects

Effect	trt	Estimate	Standard Error	DF	t Value	Pr >  t
Intercept		480.84	18.5178	30.8	25.97	<.0001
trt	1	-11.1543	26.1881	30.8	-0.43	0.6731
trt	2	-6.3114	26.1881	30.8	-0.24	0.8111
trt	3	0	.	.	.	.
time		19.6286	2.4050	75	8.16	<.0001
time*trt	1	-3.6029	3.4012	75	-1.06	0.2929
time*trt	2	2.9257	3.4012	75	0.86	0.3924
time*trt	3	0	.	.	.	.

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
trt	2	30.8	0.09	0.9131
time	1	75	195.27	<.0001
time*trt	2	75	1.85	0.1645

## The Mixed Procedure

## Model Information

Data Set	WORK.GPIG2
Dependent Variable	y
Covariance Structures	Variance Components, Autoregressive
Subject Effects	subj, subj
Estimation Method	ML
Residual Variance Method	Profile
Fixed Effects SE Method	Kenward-Roger
Degrees of Freedom Method	Kenward-Roger

## Class Level Information

Class	Levels	Values
subj	15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
trt	3	1 2 3
week	6	w1 w3 w4 w5 w6 w7

## Dimensions

Covariance Parameters	3
Columns in X	8
Columns in Z Per Subject	1
Subjects	15
Max Obs Per Subject	6

## Number of Observations

Number of Observations Read	90
Number of Observations Used	90
Number of Observations Not Used	0

## Iteration History

Iteration	Evaluations	-2 Log Like	Criterion
0	1	926.63647233	
1	3	866.94487214	0.00020601
2	1	866.86505119	0.00000793
3	1	866.86219738	0.00000001
4	1	866.86219226	0.00000000

## The Mixed Procedure

Convergence criteria met.

## Covariance Parameter Estimates

Cov Parm	Subject	Estimate
Intercept	subj	771.94
AR(1)	subj	0.4908
Residual		921.73

## Fit Statistics

-2 Log Likelihood	866.9
AIC (smaller is better)	884.9
AICC (smaller is better)	887.1
BIC (smaller is better)	891.2

## Solution for Fixed Effects

Effect	trt	Estimate	Standard Error	DF	t Value	Pr >  t
Intercept		478.74	20.1257	37.1	23.79	<.0001
trt	1	-19.5868	28.4620	37.1	-0.69	0.4956
trt	2	-9.8050	28.4620	37.1	-0.34	0.7324
trt	3	0	.	.	.	.
time		20.1875	3.2269	23.8	6.26	<.0001
time*trt	1	-2.5196	4.5635	23.8	-0.55	0.5860
time*trt	2	3.9365	4.5635	23.8	0.86	0.3970
time*trt	3	0	.	.	.	.

## Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
trt	2	37.1	0.24	0.7903
time	1	23.8	122.97	<.0001
time*trt	2	23.8	1.02	0.3769