

```

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  /POSTHOC=Age3categories(LSD)
  /PLOT=PROFILE(Instrumental*Age3categories)
  /EMMEANS=TABLES(OVERALL)
  /EMMEANS=TABLES(Age3categories) COMPARE ADJ(LSD)
  /EMMEANS=TABLES(Instrumental) COMPARE ADJ(LSD)
  /EMMEANS=TABLES(Age3categories*Instrumental)
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  /CRITERIA=ALPHA(.05)
  /WSDSIGN=Instrumental
  /DESIGN=Age3categories.

```

## General Linear Model

### Notes

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Comments		
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	Active Dataset	DataSet1
	Filter	<none>
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	N of Rows in Working Data File	579
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.

## Notes

Syntax	GLM muminstrumental dadinstrumental sibinstrumental relativeinstrumental romanticinstrumental samesexinstrumental othersexinstrumental extrainstrumental BY Age3categories  /WSFACTOR=Instrumental 1 8 Polynomial /METHOD=SSTYPE(3)  /POSTHOC=Age3categories(LSD) /PLOT=PROFILE (Instrumental*Age3categories) /EMMEANS=TABLES (OVERALL) /EMMEANS=TABLES (Age3categories) COMPARE ADJ(LSD) /EMMEANS=TABLES (Instrumental) COMPARE ADJ(LSD) /EMMEANS=TABLES (Age3categories*Instrumental) /PRINT=DESCRIPTIVE ETASQ OPOWER /CRITERIA=ALPHA(.05)  /WSDESIGN=Instrumental  /DESIGN=Age3categories.
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[DataSet1] E:\thesis stuff\writing&spss printouts\SPSS stuff\variabledata3  
AGEGROUPS.sav

### Within-Subjects Factors

Measure: MEASURE\_1

Instrumental	Dependent Variable
1	muminstrumental
2	dadinstrumental
3	sibinstrumental
4	relativeinstrumental
5	romanticinstrumental
6	samesexinstrumental
7	othersexinstrumental
8	extrainstrumental

### Between-Subjects Factors

		N
Age3categories	1.00	269
	2.00	201
	3.00	79

### Descriptive Statistics

	Age3categories	Mean	Std. Deviation	N
muminstrumental	1.00	3.6332	.98376	269
	2.00	3.1260	1.17834	201
	3.00	1.9873	1.06811	79
	Total	3.2107	1.20351	549
dadinstrumental	1.00	3.1933	1.17314	269
	2.00	2.8773	1.18527	201
	3.00	1.9578	1.18678	79
	Total	2.8998	1.24766	549
sibinstrumental	1.00	2.4052	1.14016	269
	2.00	2.1824	1.17658	201
	3.00	2.0886	.85019	79
	Total	2.2781	1.12264	549
relativeinstrumental	1.00	2.1599	1.05432	269
	2.00	1.9337	1.01161	201
	3.00	1.4937	.95759	79
	Total	1.9812	1.04804	549
romanticinstrumental	1.00	2.9009	1.33212	269
	2.00	3.1973	1.30140	201
	3.00	3.3038	1.23134	79
	Total	3.0674	1.31516	549
samesexinstrumental	1.00	3.0372	.99723	269
	2.00	2.8823	.82325	201
	3.00	2.4557	1.01580	79
	Total	2.8968	.95831	549
othersexinstrumental	1.00	2.3532	1.05391	269
	2.00	2.2670	1.00831	201
	3.00	1.9620	1.07283	79
	Total	2.2653	1.04648	549
extrainstrumental	1.00	2.1152	1.45508	269
	2.00	2.0265	1.29115	201
	3.00	1.7595	1.33860	79
	Total	2.0316	1.38312	549

**Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df
Instrumental	Pillai's Trace	.512	81.049 <sup>b</sup>	7.000	540.000
	Wilks' Lambda	.488	81.049 <sup>b</sup>	7.000	540.000
	Hotelling's Trace	1.051	81.049 <sup>b</sup>	7.000	540.000
	Roy's Largest Root	1.051	81.049 <sup>b</sup>	7.000	540.000
Instrumental * Age3categories	Pillai's Trace	.204	8.789	14.000	1082.000
	Wilks' Lambda	.798	9.238 <sup>b</sup>	14.000	1080.000
	Hotelling's Trace	.252	9.687	14.000	1078.000
	Roy's Largest Root	.242	18.739 <sup>c</sup>	7.000	541.000

**Multivariate Tests<sup>a</sup>**

Effect		Sig.	Partial Eta Squared	Noncent. Parameter
Instrumental	Pillai's Trace	.000	.512	567.341
	Wilks' Lambda	.000	.512	567.341
	Hotelling's Trace	.000	.512	567.341
	Roy's Largest Root	.000	.512	567.341
Instrumental * Age3categories	Pillai's Trace	.000	.102	123.050
	Wilks' Lambda	.000	.107	129.331
	Hotelling's Trace	.000	.112	135.624
	Roy's Largest Root	.000	.195	131.171

**Multivariate Tests<sup>a</sup>**

Effect		Observed Power <sup>d</sup>
Instrumental	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000
Instrumental * Age3categories	Pillai's Trace	1.000
	Wilks' Lambda	1.000
	Hotelling's Trace	1.000
	Roy's Largest Root	1.000

a. Design: Intercept + Age3categories  
Within Subjects Design: Instrumental

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

### Mauchly's Test of Sphericity<sup>a</sup>

Measure: MEASURE\_1

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon <sup>b</sup>
					Greenhouse-Geisser
Instrumental	.525	350.083	27	.000	.846

### Mauchly's Test of Sphericity<sup>a</sup>

Measure: MEASURE\_1

Within Subjects Effect	Epsilon <sup>b</sup>	
	Huynh-Feldt	Lower-bound
Instrumental	.859	.143

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

- Design: Intercept + Age3categories  
Within Subjects Design: Instrumental
- 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: MEASURE\_1

Source		Type III Sum of Squares	df	Mean Square
Instrumental	Sphericity Assumed	650.608	7	92.944
	Greenhouse-Geisser	650.608	5.920	109.897
	Huynh-Feldt	650.608	6.014	108.178
	Lower-bound	650.608	1.000	650.608
Instrumental * Age3categories	Sphericity Assumed	175.106	14	12.508
	Greenhouse-Geisser	175.106	11.840	14.789
	Huynh-Feldt	175.106	12.029	14.558
	Lower-bound	175.106	2.000	87.553
Error(Instrumental)	Sphericity Assumed	4135.706	3822	1.082
	Greenhouse-Geisser	4135.706	3232.419	1.279
	Huynh-Feldt	4135.706	3283.785	1.259
	Lower-bound	4135.706	546.000	7.575

### Tests of Within-Subjects Effects

Measure: MEASURE\_1

Source		F	Sig.	Partial Eta Squared
Instrumental	Sphericity Assumed	85.894	.000	.136
	Greenhouse-Geisser	85.894	.000	.136
	Huynh-Feldt	85.894	.000	.136
	Lower-bound	85.894	.000	.136
Instrumental * Age3categories	Sphericity Assumed	11.559	.000	.041
	Greenhouse-Geisser	11.559	.000	.041
	Huynh-Feldt	11.559	.000	.041
	Lower-bound	11.559	.000	.041
Error(Instrumental)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

### Tests of Within-Subjects Effects

Measure: MEASURE\_1

Source		Noncent. Parameter	Observed Power <sup>a</sup>
Instrumental	Sphericity Assumed	601.257	1.000
	Greenhouse-Geisser	508.508	1.000
	Huynh-Feldt	516.588	1.000
	Lower-bound	85.894	1.000
Instrumental * Age3categories	Sphericity Assumed	161.824	1.000
	Greenhouse-Geisser	136.861	1.000
	Huynh-Feldt	139.036	1.000
	Lower-bound	23.118	.994
Error(Instrumental)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		

a. Computed using alpha = .05

### Tests of Within-Subjects Contrasts

Measure: MEASURE\_1

Source	Instrumental	Type III Sum of Squares	df	Mean Square	F
Instrumental	Linear	92.720	1	92.720	55.893
	Quadratic	2.434	1	2.434	2.228
	Cubic	230.218	1	230.218	241.620
	Order 4	.419	1	.419	.400
	Order 5	212.097	1	212.097	245.969
	Order 6	.791	1	.791	.937
	Order 7	111.931	1	111.931	100.213
Instrumental * Age3categories	Linear	68.793	2	34.396	20.735
	Quadratic	50.150	2	25.075	22.953
	Cubic	3.292	2	1.646	1.728
	Order 4	5.781	2	2.890	2.760
	Order 5	2.408	2	1.204	1.397
	Order 6	2.411	2	1.206	1.429
	Order 7	42.271	2	21.135	18.923
Error(Instrumental)	Linear	905.751	546	1.659	
	Quadratic	596.484	546	1.092	
	Cubic	520.233	546	.953	
	Order 4	571.775	546	1.047	
	Order 5	470.811	546	.862	
	Order 6	460.807	546	.844	
	Order 7	609.845	546	1.117	

### Tests of Within-Subjects Contrasts

Measure: MEASURE\_1

Source	Instrumental	Sig.	Partial Eta Squared	Noncent. Parameter
Instrumental	Linear	.000	.093	55.893
	Quadratic	.136	.004	2.228
	Cubic	.000	.307	241.620
	Order 4	.528	.001	.400
	Order 5	.000	.311	245.969
	Order 6	.333	.002	.937
	Order 7	.000	.155	100.213
Instrumental * Age3categories	Linear	.000	.071	41.469
	Quadratic	.000	.078	45.905
	Cubic	.179	.006	3.455
	Order 4	.064	.010	5.520
	Order 5	.248	.005	2.793
	Order 6	.241	.005	2.857
	Order 7	.000	.065	37.846
Error(Instrumental)	Linear			
	Quadratic			
	Cubic			
	Order 4			
	Order 5			
	Order 6			
	Order 7			

### Tests of Within-Subjects Contrasts

Measure: MEASURE\_1

Source	Instrumental	Observed Power <sup>a</sup>
Instrumental	Linear	1.000
	Quadratic	.319
	Cubic	1.000
	Order 4	.097
	Order 5	1.000
	Order 6	.162
	Order 7	1.000
Instrumental * Age3categories	Linear	1.000
	Quadratic	1.000
	Cubic	.363
	Order 4	.544
	Order 5	.300
	Order 6	.306
	Order 7	1.000
Error(Instrumental)	Linear	
	Quadratic	
	Cubic	
	Order 4	
	Order 5	
	Order 6	
	Order 7	

a. Computed using alpha = .05

### Tests of Between-Subjects Effects

Measure: MEASURE\_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	20586.855	1	20586.855	7241.353	.000	.930
Age3categories	175.866	2	87.933	30.930	.000	.102
Error	1552.255	546	2.843			

### Tests of Between-Subjects Effects

Measure: MEASURE\_1

Transformed Variable: Average

Source	Noncent. Parameter	Observed Power <sup>a</sup>
Intercept	7241.353	1.000
Age3categories	61.860	1.000
Error		

a. Computed using alpha = .05

## Estimated Marginal Means

### 1. Grand Mean

Measure: MEASURE\_1

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
2.471	.029	2.414	2.528

### 2. Age3categories

#### Estimates

Measure: MEASURE\_1

Age3categories	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.00	2.725	.036	2.653	2.796
2.00	2.562	.042	2.479	2.644
3.00	2.126	.067	1.994	2.258

#### Pairwise Comparisons

Measure: MEASURE\_1

		Mean Difference (I- J)	Std. Error	Sig. <sup>b</sup>	95% Confidence b...
(I) Age3categories	(J) Age3categories				Lower Bound
1.00	2.00	.163 <sup>*</sup>	.056	.003	.054
	3.00	.599 <sup>*</sup>	.076	.000	.449
2.00	1.00	-.163 <sup>*</sup>	.056	.003	-.272
	3.00	.436 <sup>*</sup>	.079	.000	.280
3.00	1.00	-.599 <sup>*</sup>	.076	.000	-.749
	2.00	-.436 <sup>*</sup>	.079	.000	-.591

#### Pairwise Comparisons

Measure: MEASURE\_1

		95% Confidence b...
(I) Age3categories	(J) Age3categories	Upper Bound
1.00	2.00	.272
	3.00	.749
2.00	1.00	-.054
	3.00	.591
3.00	1.00	-.449
	2.00	-.280

Based on estimated marginal means

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

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

#### Univariate Tests

Measure: MEASURE\_1

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	21.983	2	10.992	30.930	.000	.102
Error	194.032	546	.355			

#### Univariate Tests

Measure: MEASURE\_1

	Noncent. Parameter	Observed Power <sup>a</sup>
Contrast	61.860	1.000
Error		

The F tests the effect of Age3categories. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

### 3. Instrumental

#### Estimates

Measure: MEASURE\_1

Instrumental	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	2.916	.052	2.813	3.018
2	2.676	.057	2.563	2.789
3	2.225	.054	2.119	2.332
4	1.862	.050	1.764	1.961
5	3.134	.064	3.009	3.259
6	2.792	.046	2.702	2.882
7	2.194	.051	2.095	2.294
8	1.967	.067	1.835	2.099

### Pairwise Comparisons

Measure: MEASURE\_1

(I) Instrumental	(J) Instrumental	Mean Difference (I- J)	Std. Error	Sig. <sup>b</sup>	95% Confidence ... <sup>b</sup>
					Lower Bound
1	2	.239 <sup>*</sup>	.058	.000	.125
	3	.690 <sup>*</sup>	.064	.000	.564
	4	1.053 <sup>*</sup>	.062	.000	.931
	5	-.218 <sup>*</sup>	.078	.005	-.372
	6	.124 <sup>*</sup>	.062	.046	.002
	7	.721 <sup>*</sup>	.069	.000	.587
	8	.948 <sup>*</sup>	.079	.000	.794
2	1	-.239 <sup>*</sup>	.058	.000	-.354
	3	.451 <sup>*</sup>	.067	.000	.320
	4	.814 <sup>*</sup>	.067	.000	.683
	5	-.458 <sup>*</sup>	.084	.000	-.623
	6	-.116	.069	.093	-.251
	7	.482 <sup>*</sup>	.072	.000	.340
	8	.709 <sup>*</sup>	.085	.000	.543
3	1	-.690 <sup>*</sup>	.064	.000	-.817
	2	-.451 <sup>*</sup>	.067	.000	-.582
	4	.363 <sup>*</sup>	.067	.000	.232
	5	-.909 <sup>*</sup>	.083	.000	-1.071
	6	-.566 <sup>*</sup>	.064	.000	-.693
	7	.031	.067	.640	-.100
	8	.258 <sup>*</sup>	.080	.001	.102
4	1	-1.053 <sup>*</sup>	.062	.000	-1.176
	2	-.814 <sup>*</sup>	.067	.000	-.944
	3	-.363 <sup>*</sup>	.067	.000	-.495
	5	-1.272 <sup>*</sup>	.079	.000	-1.427
	6	-.929 <sup>*</sup>	.061	.000	-1.049
	7	-.332 <sup>*</sup>	.062	.000	-.453
	8	-.105	.075	.162	-.252
5	1	.218 <sup>*</sup>	.078	.005	.065
	2	.458 <sup>*</sup>	.084	.000	.293
	3	.909 <sup>*</sup>	.083	.000	.746
	4	1.272 <sup>*</sup>	.079	.000	1.117
	6	.342 <sup>*</sup>	.076	.000	.193
	7	.940 <sup>*</sup>	.082	.000	.779
	8	1.167 <sup>*</sup>	.089	.000	.992
6	1	-.124 <sup>*</sup>	.062	.046	-.245
	2	.116	.069	.093	-.019
	3	.566 <sup>*</sup>	.064	.000	.440
	4	.929 <sup>*</sup>	.061	.000	.810

### Pairwise Comparisons

Measure: MEASURE\_1

		95% Confidence ... <sup>b</sup>
(I) Instrumental	(J) Instrumental	Upper Bound
1	2	.354
	3	.817
	4	1.176
	5	-.065
	6	.245
	7	.856
	8	1.103
2	1	-.125
	3	.582
	4	.944
	5	-.293
	6	.019
	7	.624
	8	.875
3	1	-.564
	2	-.320
	4	.495
	5	-.746
	6	-.440
	7	.163
	8	.415
4	1	-.931
	2	-.683
	3	-.232
	5	-1.117
	6	-.810
	7	-.210
	8	.042
5	1	.372
	2	.623
	3	1.071
	4	1.427
	6	.491
	7	1.101
	8	1.342
6	1	-.002
	2	.251
	3	.693
	4	1.049

### Pairwise Comparisons

Measure: MEASURE\_1

		Mean Difference (I- J)	Std. Error	Sig. <sup>b</sup>	95% Confidence ... <sup>b</sup>
(I) Instrumental	(J) Instrumental				Lower Bound
7	5	-.342 <sup>*</sup>	.076	.000	-.491
	7	.598 <sup>*</sup>	.050	.000	.499
	8	.825 <sup>*</sup>	.071	.000	.686
	1	-.721 <sup>*</sup>	.069	.000	-.856
	2	-.482 <sup>*</sup>	.072	.000	-.624
	3	-.031	.067	.640	-.163
	4	.332 <sup>*</sup>	.062	.000	.210
	5	-.940 <sup>*</sup>	.082	.000	-1.101
	6	-.598 <sup>*</sup>	.050	.000	-.696
	8	.227 <sup>*</sup>	.069	.001	.091
8	1	-.948 <sup>*</sup>	.079	.000	-1.103
	2	-.709 <sup>*</sup>	.085	.000	-.875
	3	-.258 <sup>*</sup>	.080	.001	-.415
	4	.105	.075	.162	-.042
	5	-1.167 <sup>*</sup>	.089	.000	-1.342
	6	-.825 <sup>*</sup>	.071	.000	-.964
	7	-.227 <sup>*</sup>	.069	.001	-.363

### Pairwise Comparisons

Measure: MEASURE\_1

		95% Confidence ... <sup>b</sup>
(I) Instrumental	(J) Instrumental	Upper Bound
7	5	-.193
	7	.696
	8	.964
	1	-.587
	2	-.340
	3	.100
	4	.453
	5	-.779
	6	-.499
	8	.363
8	1	-.794
	2	-.543
	3	-.102
	4	.252
	5	-.992
	6	-.686
	7	-.091

Based on estimated marginal means

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

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

### Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.512	81.049 <sup>a</sup>	7.000	540.000	.000	.512
Wilks' lambda	.488	81.049 <sup>a</sup>	7.000	540.000	.000	.512
Hotelling's trace	1.051	81.049 <sup>a</sup>	7.000	540.000	.000	.512
Roy's largest root	1.051	81.049 <sup>a</sup>	7.000	540.000	.000	.512

### Multivariate Tests

	Noncent. Parameter	Observed Power <sup>b</sup>
Pillai's trace	567.341	1.000
Wilks' lambda	567.341	1.000
Hotelling's trace	567.341	1.000
Roy's largest root	567.341	1.000

Each F tests the multivariate effect of Instrumental. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

- a. Exact statistic
- b. Computed using alpha = .05

#### 4. Age3categories \* Instrumental

Measure: MEASURE\_1

Age3categories	Instrumental	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1.00	1	3.633	.065	3.505	3.761
	2	3.193	.072	3.052	3.335
	3	2.405	.068	2.271	2.539
	4	2.160	.063	2.037	2.283
	5	2.901	.080	2.744	3.057
	6	3.037	.057	2.925	3.150
	7	2.353	.063	2.229	2.478
	8	2.115	.084	1.950	2.281
2.00	1	3.126	.076	2.978	3.274
	2	2.877	.083	2.714	3.041
	3	2.182	.079	2.028	2.337
	4	1.934	.072	1.792	2.076
	5	3.197	.092	3.016	3.378
	6	2.882	.066	2.752	3.013
	7	2.267	.073	2.123	2.411
	8	2.027	.097	1.835	2.218
3.00	1	1.987	.120	1.751	2.224
	2	1.958	.133	1.697	2.218
	3	2.089	.126	1.842	2.336
	4	1.494	.115	1.267	1.720
	5	3.304	.147	3.015	3.593
	6	2.456	.106	2.248	2.663
	7	1.962	.117	1.732	2.192
	8	1.759	.155	1.454	2.065

## Post Hoc Tests

### Age3categories

### Multiple Comparisons

Measure: MEASURE\_1

LSD

(I) Age3categories	(J) Age3categories	Mean Difference (I-J)	Std. Error	Sig.	95% ...
					Lower Bound
1.00	2.00	.1632*	.05558	.003	.0540
	3.00	.5987*	.07629	.000	.4488
2.00	1.00	-.1632*	.05558	.003	-.2724
	3.00	.4355*	.07916	.000	.2800
3.00	1.00	-.5987*	.07629	.000	-.7485
	2.00	-.4355*	.07916	.000	-.5910

### Multiple Comparisons

Measure: MEASURE\_1

LSD

(I) Age3categories	(J) Age3categories	95% ...
		Upper Bound
1.00	2.00	.2724
	3.00	.7485
2.00	1.00	-.0540
	3.00	.5910
3.00	1.00	-.4488
	2.00	-.2800

Based on observed means.

The error term is Mean Square(Error) = .355.

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

## Profile Plots

