```
 DATASET ACTIVATE DataSet2.
GLM HA_faces SA_faces BY Groups
  /WSFACTOR=emotion 2 Polynomial
  /METHOD=SSTYPE(3)
  /EMMEANS=TABLES(Groups) COMPARE ADJ(BONFERRONI)
  /EMMEANS=TABLES(emotion) COMPARE ADJ(BONFERRONI)
  /PRINT=DESCRIPTIVE HOMOGENEITY
  /CRITERIA=ALPHA(.05)
  /WSDESIGN=emotion
  /DESIGN=Groups.
```

# General Linear Model

## Notes

| | | |
|---|---|---|
| Output Created | | 31-DEC-2018 21:51:26 |
| Comments | | |
| Input | Data | D:\Documents\initial_orientation.sav |
| | Active Dataset | DataSet2 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 32 |
| 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. |
| Syntax | | GLM HA_faces SA_faces BY Groups<br>/WSFACTOR=emotion 2 Polynomial<br>/METHOD=SSTYPE(3)<br>/EMMEANS=TABLES (Groups) COMPARE ADJ (BONFERRONI)<br>/EMMEANS=TABLES (emotion) COMPARE ADJ (BONFERRONI)<br>/PRINT=DESCRIPTIVE HOMOGENEITY<br>/CRITERIA=ALPHA(.05)<br>/WSDESIGN=emotion<br>/DESIGN=Groups. |

## Notes

| | | |
|---|---|---|
| Resources | Processor Time | 00:00:00.13 |
| | Elapsed Time | 00:00:00.83 |

[DataSet2] D:\Documents\initial_orientation.sav

### Within-Subjects Factors

Measure: MEASURE_1

| emotion | Dependent Variable |
|---|---|
| 1 | HA_faces |
| 2 | SA_faces |

### Between-Subjects Factors

| | | Value Label | N |
|---|---|---|---|
| Groups | .00 | neutral primer | 16 |
| | 1.00 | sad primer | 16 |

### Descriptive Statistics

| | Groups | Mean | Std. Deviation | N |
|---|---|---|---|---|
| HA_faces | neutral primer | 18.8750 | 2.80179 | 16 |
| | sad primer | 19.2500 | 3.08761 | 16 |
| | Total | 19.0625 | 2.90647 | 32 |
| SA_faces | neutral primer | 16.6250 | 1.96214 | 16 |
| | sad primer | 17.6875 | 3.47791 | 16 |
| | Total | 17.1563 | 2.82967 | 32 |

## Box's Test of Equality of Covariance Matrices[a]

| | |
|---|---|
| Box's M | 6.093 |
| F | 1.884 |
| df1 | 3 |
| df2 | 162000.000 |
| Sig. | .130 |

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a. Design: Intercept + Groups
Within Subjects Design: emotion

## Multivariate Tests[a]

| Effect | | Value | F | Hypothesis df | Error df |
|---|---|---|---|---|---|
| emotion | Pillai's Trace | .224 | 8.658[b] | 1.000 | 30.000 |
| | Wilks' Lambda | .776 | 8.658[b] | 1.000 | 30.000 |
| | Hotelling's Trace | .289 | 8.658[b] | 1.000 | 30.000 |
| | Roy's Largest Root | .289 | 8.658[b] | 1.000 | 30.000 |
| emotion * Groups | Pillai's Trace | .009 | .282[b] | 1.000 | 30.000 |
| | Wilks' Lambda | .991 | .282[b] | 1.000 | 30.000 |
| | Hotelling's Trace | .009 | .282[b] | 1.000 | 30.000 |
| | Roy's Largest Root | .009 | .282[b] | 1.000 | 30.000 |

## Multivariate Tests[a]

| Effect | | Sig. |
|---|---|---|
| emotion | Pillai's Trace | .006 |
| | Wilks' Lambda | .006 |
| | Hotelling's Trace | .006 |
| | Roy's Largest Root | .006 |
| emotion * Groups | Pillai's Trace | .600 |
| | Wilks' Lambda | .600 |
| | Hotelling's Trace | .600 |
| | Roy's Largest Root | .600 |

a. Design: Intercept + Groups
Within Subjects Design: emotion

b. Exact statistic

## Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

| Within Subjects Effect | Mauchly's W | Approx. Chi-Square | df | Sig. | Epsilon[b] Greenhouse-Geisser |
|---|---|---|---|---|---|
| emotion | 1.000 | .000 | 0 | . | 1.000 |

## Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

| Within Subjects Effect | Epsilon[b] Huynh-Feldt | Lower-bound |
|---|---|---|
| emotion | 1.000 | 1.000 |

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

a. Design: Intercept + Groups
Within Subjects Design: emotion

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: MEASURE_1

| Source | | Type III Sum of Squares | df | Mean Square | F |
|---|---|---|---|---|---|
| emotion | Sphericity Assumed | 58.141 | 1 | 58.141 | 8.658 |
| | Greenhouse-Geisser | 58.141 | 1.000 | 58.141 | 8.658 |
| | Huynh-Feldt | 58.141 | 1.000 | 58.141 | 8.658 |
| | Lower-bound | 58.141 | 1.000 | 58.141 | 8.658 |
| emotion * Groups | Sphericity Assumed | 1.891 | 1 | 1.891 | .282 |
| | Greenhouse-Geisser | 1.891 | 1.000 | 1.891 | .282 |
| | Huynh-Feldt | 1.891 | 1.000 | 1.891 | .282 |
| | Lower-bound | 1.891 | 1.000 | 1.891 | .282 |
| Error(emotion) | Sphericity Assumed | 201.469 | 30 | 6.716 | |
| | Greenhouse-Geisser | 201.469 | 30.000 | 6.716 | |
| | Huynh-Feldt | 201.469 | 30.000 | 6.716 | |
| | Lower-bound | 201.469 | 30.000 | 6.716 | |

## Tests of Within-Subjects Effects

Measure: MEASURE_1

| Source | | Sig. |
|---|---|---|
| emotion | Sphericity Assumed | .006 |
| | Greenhouse-Geisser | .006 |
| | Huynh-Feldt | .006 |
| | Lower-bound | .006 |
| emotion * Groups | Sphericity Assumed | .600 |
| | Greenhouse-Geisser | .600 |
| | Huynh-Feldt | .600 |
| | Lower-bound | .600 |
| Error(emotion) | Sphericity Assumed | |
| | Greenhouse-Geisser | |
| | Huynh-Feldt | |
| | Lower-bound | |

## Tests of Within-Subjects Contrasts

Measure: MEASURE_1

| Source | emotion | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| emotion | Linear | 58.141 | 1 | 58.141 | 8.658 | .006 |
| emotion * Groups | Linear | 1.891 | 1 | 1.891 | .282 | .600 |
| Error(emotion) | Linear | 201.469 | 30 | 6.716 | | |

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

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| HA_faces | Based on Mean | .036 | 1 | 30 | .850 |
| | Based on Median | .034 | 1 | 30 | .854 |
| | Based on Median and with adjusted df | .034 | 1 | 29.264 | .854 |
| | Based on trimmed mean | .061 | 1 | 30 | .807 |
| SA_faces | Based on Mean | 3.734 | 1 | 30 | .063 |
| | Based on Median | 3.257 | 1 | 30 | .081 |
| | Based on Median and with adjusted df | 3.257 | 1 | 21.644 | .085 |
| | Based on trimmed mean | 3.461 | 1 | 30 | .073 |

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

a. Design: Intercept + Groups
Within Subjects Design: emotion

### Tests of Between-Subjects Effects

Measure: MEASURE_1

Transformed Variable: Average

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Intercept | 20988.766 | 1 | 20988.766 | 2109.645 | .000 |
| Groups | 8.266 | 1 | 8.266 | .831 | .369 |
| Error | 298.469 | 30 | 9.949 | | |

## Estimated Marginal Means

## 1. Groups

### Estimates

Measure: MEASURE_1

| Groups | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower Bound | Upper Bound |
| neutral primer | 17.750 | .558 | 16.611 | 18.889 |
| sad primer | 18.469 | .558 | 17.330 | 19.607 |

### Pairwise Comparisons

Measure: MEASURE_1

| (I) Groups | (J) Groups | Mean Difference (I-J) | Std. Error | Sig.[a] | 95% Confidence ... Lower Bound |
|---|---|---|---|---|---|
| neutral primer | sad primer | -.719 | .789 | .369 | -2.329 |
| sad primer | neutral primer | .719 | .789 | .369 | -.892 |

### Pairwise Comparisons

Measure: MEASURE_1

| (I) Groups | (J) Groups | 95% Confidence Interval for ... Upper Bound |
|---|---|---|
| neutral primer | sad primer | .892 |
| sad primer | neutral primer | 2.329 |

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

### Univariate Tests

Measure: MEASURE_1

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Contrast | 4.133 | 1 | 4.133 | .831 | .369 |
| Error | 149.234 | 30 | 4.974 | | |

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

## 2. emotion

### Estimates

Measure: MEASURE_1

| emotion | Mean | Std. Error | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|
| 1 | 19.063 | .521 | 17.998 | 20.127 |
| 2 | 17.156 | .499 | 16.137 | 18.176 |

## Pairwise Comparisons

Measure: MEASURE_1

| (I) emotion | (J) emotion | Mean Difference (I-J) | Std. Error | Sig.[b] | 95% Confidence Interval for Difference[b] | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| 1 | 2 | 1.906* | .648 | .006 | .583 | 3.229 |
| 2 | 1 | -1.906* | .648 | .006 | -3.229 | -.583 |

Based on estimated marginal means

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

b. Adjustment for multiple comparisons: Bonferroni.

## Multivariate Tests

| | Value | F | Hypothesis df | Error df | Sig. |
|---|---|---|---|---|---|
| Pillai's trace | .224 | 8.658[a] | 1.000 | 30.000 | .006 |
| Wilks' lambda | .776 | 8.658[a] | 1.000 | 30.000 | .006 |
| Hotelling's trace | .289 | 8.658[a] | 1.000 | 30.000 | .006 |
| Roy's largest root | .289 | 8.658[a] | 1.000 | 30.000 | .006 |

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

a. Exact statistic