General Linear Model

Notes

Output Created		24-MAR-2024 20:15:05
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
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 Neuro_Gaze Eye_Gaze_Hands VR_Controllers /WSFACTOR=Selection 3 Polynomial /METHOD=SSTYPE(3) /EMMEANS=TABLES (Selection) COMPARE ADJ (BONFERRONI) /PRINT=DESCRIPTIVE ETASQ HOMOGENEITY /PLOT=RESIDUALS /CRITERIA=ALPHA(.05) /WSDESIGN=Selection.
Resources	Processor Time	00:00:02.06
	Elapsed Time	00:00:02.38

[DataSet0]

Warnings

The HOMOGENEITY specification in the PRINT subcommand will be ignored because there are no between-subjects factors.

Within-Subjects Factors

Measure: MEASURE_1

Selection	Dependent Variable
1	Neuro_Gaze
2	Eye_Gaze_Hands
3	VR_Controllers

Descriptive Statistics

	Mean	Std. Deviation	N
Neuro_Gaze	.0824	.07004	16
Eye_Gaze_Hands	.1589	.07678	16
VR_Controllers	.1128	.06025	16

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Selection	Pillai's Trace	.313	3.185[b]	2.000	14.000	.072
	Wilks' Lambda	.687	3.185[b]	2.000	14.000	.072
	Hotelling's Trace	.455	3.185[b]	2.000	14.000	.072
	Roy's Largest Root	.455	3.185[b]	2.000	14.000	.072

Multivariate Tests[a]

Effect		Partial Eta Squared
Selection	Pillai's Trace	.313
	Wilks' Lambda	.313
	Hotelling's Trace	.313
	Roy's Largest Root	.313

a. Design: Intercept
   Within Subjects Design: Selection

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
Selection	.805	3.042	2	.218	.837

Mauchly's Test of Sphericity[a]

Measure: MEASURE_1

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Selection	.929	.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
   Within Subjects Design: Selection

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
Selection	Sphericity Assumed	.047	2	.024	4.502
	Greenhouse-Geisser	.047	1.673	.028	4.502
	Huynh-Feldt	.047	1.859	.026	4.502
	Lower-bound	.047	1.000	.047	4.502
Error(Selection)	Sphericity Assumed	.158	30	.005	
	Greenhouse-Geisser	.158	25.098	.006	
	Huynh-Feldt	.158	27.882	.006	
	Lower-bound	.158	15.000	.011	

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Sig.	Partial Eta Squared
Selection	Sphericity Assumed	.020	.231
	Greenhouse-Geisser	.027	.231
	Huynh-Feldt	.022	.231
	Lower-bound	.051	.231
Error(Selection)	Sphericity Assumed		
	Greenhouse-Geisser		
	Huynh-Feldt		
	Lower-bound		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Selection	Type III Sum of Squares	df	Mean Square	F	Sig.
Selection	Linear	.007	1	.007	1.591	.226
	Quadratic	.040	1	.040	6.799	.020
Error(Selection)	Linear	.070	15	.005		
	Quadratic	.088	15	.006		

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	Selection	Partial Eta Squared
Selection	Linear	.096
	Quadratic	.312
Error(Selection)	Linear	
	Quadratic	

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	.669	1	.669	172.030	<.001	.920
Error	.058	15	.004			

Estimated Marginal Means

Selection

Estimates

Measure: MEASURE_1

Selection	Mean	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
1	.082	.018	.045	.120
2	.159	.019	.118	.200
3	.113	.015	.081	.145

Pairwise Comparisons

Measure: MEASURE_1

(I) Selection	(J) Selection	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a] Lower Bound	95% Confidence Interval for Difference[a] Upper Bound
1	2	-.076	.031	.074	-.159	.006
	3	-.030	.024	.679	-.095	.035
2	1	.076	.031	.074	-.006	.159
	3	.046	.021	.142	-.011	.104
3	1	.030	.024	.679	-.035	.095
	2	-.046	.021	.142	-.104	.011

Based on estimated marginal means
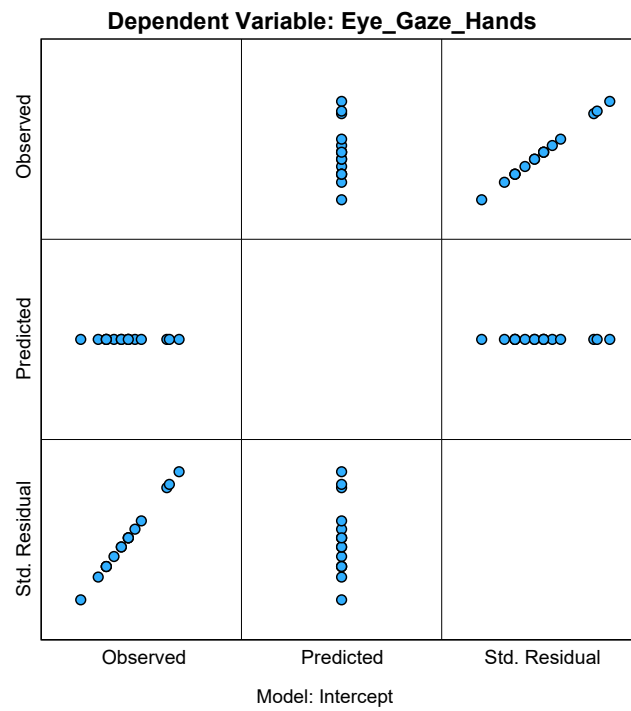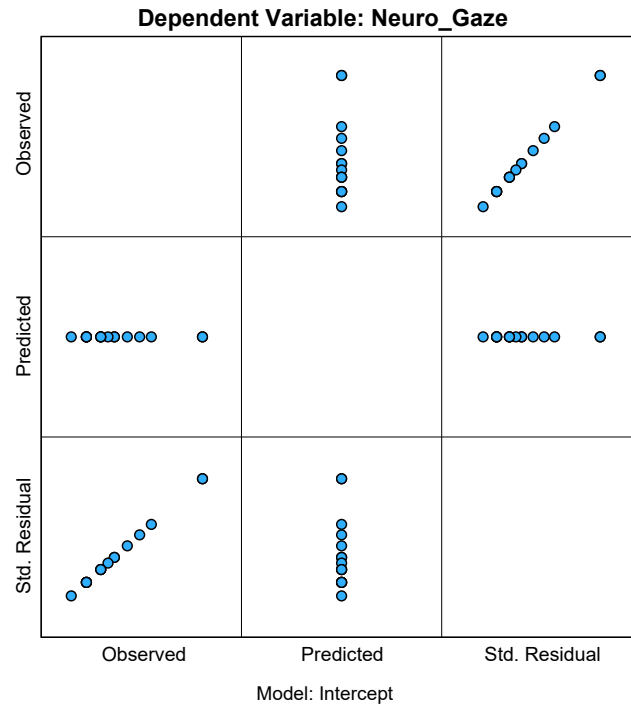
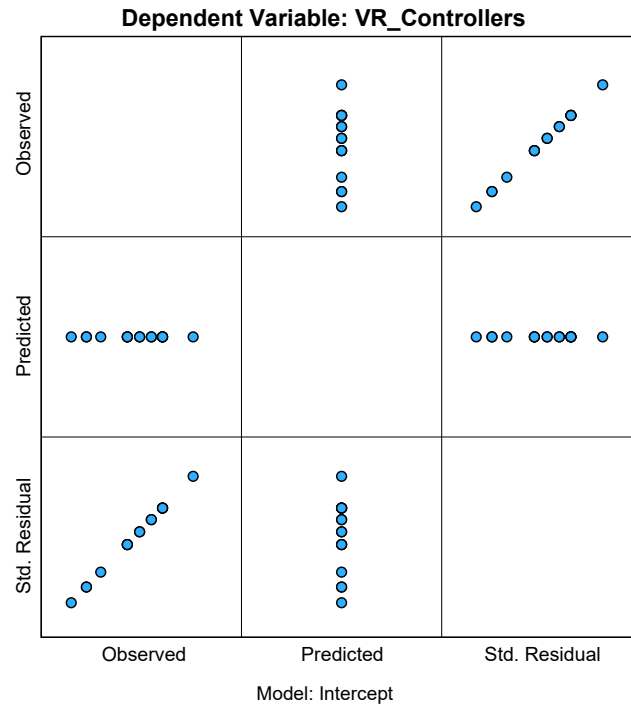a. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.313	3.185[a]	2.000	14.000	.072	.313
Wilks' lambda	.687	3.185[a]	2.000	14.000	.072	.313
Hotelling's trace	.455	3.185[a]	2.000	14.000	.072	.313
Roy's largest root	.455	3.185[a]	2.000	14.000	.072	.313

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

a. Exact statistic

Observed * Predicted * Std. Residual Plots

Dependent Variable: Neuro_Gaze

Model: Intercept

Dependent Variable: Eye_Gaze_Hands

Model: Intercept

Dependent Variable: VR_Controllers

Model: Intercept

T-Test

Notes

Output Created		24-MAR-2024 20:16:37
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.

Notes

Syntax		T-TEST PAIRS=Neuro_Gaze Neuro_Gaze Eye_Gaze_Hands WITH Eye_Gaze_Hands VR_Controllers VR_Controllers (PAIRED) /ES DISPLAY(TRUE) STANDARDIZER(SD) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Neuro_Gaze	.0824	16	.07004	.01751
	Eye_Gaze_Hands	.1589	16	.07678	.01919
Pair 2	Neuro_Gaze	.0824	16	.07004	.01751
	VR_Controllers	.1128	16	.06025	.01506
Pair 3	Eye_Gaze_Hands	.1589	16	.07678	.01919
	VR_Controllers	.1128	16	.06025	.01506

Paired Samples Correlations

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Neuro_Gaze & Eye_Gaze_Hands	16	-.396	.065	.129
Pair 2	Neuro_Gaze & VR_Controllers	16	-.091	.369	.739
Pair 3	Eye_Gaze_Hands & VR_Controllers	16	.243	.182	.364

Paired Samples Test

		Paired Differences			95% Confidence Interval of the ...
		Mean	Std. Deviation	Std. Error Mean	Lower
Pair 1	Neuro_Gaze - Eye_Gaze_Hands	-.07649	.12269	.03067	-.14187
Pair 2	Neuro_Gaze - VR_Controllers	-.03041	.09644	.02411	-.08180
Pair 3	Eye_Gaze_Hands - VR_Controllers	.04609	.08530	.02133	.00063

Paired Samples Test

		Paired ...			Significance	
		95% Confidence Interval of the ... Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Neuro_Gaze - Eye_Gaze_Hands	-.01112	-2.494	15	.012	.025
Pair 2	Neuro_Gaze - VR_Controllers	.02098	-1.261	15	.113	.226
Pair 3	Eye_Gaze_Hands - VR_Controllers	.09154	2.161	15	.024	.047

Paired Samples Effect Sizes

			Standardizer[a]	Point Estimate	95% ... Lower
Pair 1	Neuro_Gaze - Eye_Gaze_Hands	Cohen's d	.12269	-.623	-1.152
		Hedges' correction	.12929	-.592	-1.094
Pair 2	Neuro_Gaze - VR_Controllers	Cohen's d	.09644	-.315	-.813
		Hedges' correction	.10162	-.299	-.772
Pair 3	Eye_Gaze_Hands - VR_Controllers	Cohen's d	.08530	.540	.006
		Hedges' correction	.08988	.513	.006

Paired Samples Effect Sizes

			95% ... Upper
Pair 1	Neuro_Gaze - Eye_Gaze_Hands	Cohen's d	-.077
		Hedges' correction	-.073
Pair 2	Neuro_Gaze - VR_Controllers	Cohen's d	.192
		Hedges' correction	.182
Pair 3	Eye_Gaze_Hands - VR_Controllers	Cohen's d	1.059
		Hedges' correction	1.005

a. The denominator used in estimating the effect sizes.
   Cohen's d uses the sample standard deviation of the mean difference.
   Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.