

General Linear Model

Notes		
Output Created		12-JUL-2022 14:42:44
Comments		
Input	Data	S:\Quant\data cleaning\V2\KN\V3\Analysis\An alysis 27.06.2022\NERS_NS.sav
	Active Dataset	DataSet1
	Filter	(Cohort_Group = 1 Cohort_Group = 2 Cohort_Group = 3) & (status_code_2 = 4 status_code_2 = 6) (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	8313
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 init_sys_clean sys_16wk_clean WITH Age_at_ref2 Gender2 Cohort_Group IMD_Quintile Local_Authority /WSFACTOR=SYS 2 Simple(1) /METHOD=SSTYPE(3) /EMMEANS=TABLES(SYS) WITH(Age_at_ref2=MEAN Gender2=MEAN Cohort_Group=MEAN IMD_Quintile=MEAN Local_Authority=MEAN)COMP ARE ADJ(BONFERRONI) /PRINT=DESCRIPTIVE ETASQ /CRITERIA=ALPHA(.05) /WSDESIGN=SYS /DESIGN=Age_at_ref2 Gender2 Cohort_Group IMD_Quintile Local_Authority.
Resources	Processor Time	00:00:00.20
	Elapsed Time	00:00:00.20

Within-Subjects
Factors

Measure: MEASURE_1

Dependent

SYS	Variable
1	init_sys_clean
2	sys_16wk_clean

Descriptive Statistics

	Mean	Std. Deviation	N
init_sys_clean	133.0831	17.12986	7535
sys_16wk_clean	130.4220	15.24034	7535

Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
SYS	Pillai's Trace	.000	1.248 ^b	1.000	7529.000	.264	.000
	Wilks' Lambda	1.000	1.248 ^b	1.000	7529.000	.264	.000
	Hotelling's Trace	.000	1.248 ^b	1.000	7529.000	.264	.000
	Roy's Largest Root	.000	1.248 ^b	1.000	7529.000	.264	.000
SYS * Age_at_ref2	Pillai's Trace	.003	25.572 ^b	1.000	7529.000	<.001	.003
	Wilks' Lambda	.997	25.572 ^b	1.000	7529.000	<.001	.003
	Hotelling's Trace	.003	25.572 ^b	1.000	7529.000	<.001	.003
	Roy's Largest Root	.003	25.572 ^b	1.000	7529.000	<.001	.003
SYS * Gender2	Pillai's Trace	.000	.130 ^b	1.000	7529.000	.718	.000
	Wilks' Lambda	1.000	.130 ^b	1.000	7529.000	.718	.000
	Hotelling's Trace	.000	.130 ^b	1.000	7529.000	.718	.000
	Roy's Largest Root	.000	.130 ^b	1.000	7529.000	.718	.000
SYS * Cohort_Group	Pillai's Trace	.000	.739 ^b	1.000	7529.000	.390	.000
	Wilks' Lambda	1.000	.739 ^b	1.000	7529.000	.390	.000
	Hotelling's Trace	.000	.739 ^b	1.000	7529.000	.390	.000
	Roy's Largest Root	.000	.739 ^b	1.000	7529.000	.390	.000
SYS * IMD_Quintile	Pillai's Trace	.001	4.334 ^b	1.000	7529.000	.037	.001
	Wilks' Lambda	.999	4.334 ^b	1.000	7529.000	.037	.001
	Hotelling's Trace	.001	4.334 ^b	1.000	7529.000	.037	.001
	Roy's Largest Root	.001	4.334 ^b	1.000	7529.000	.037	.001
SYS * Local_Authority	Pillai's Trace	.000	.000 ^b	1.000	7529.000	.994	.000
	Wilks' Lambda	1.000	.000 ^b	1.000	7529.000	.994	.000
	Hotelling's Trace	.000	.000 ^b	1.000	7529.000	.994	.000
	Roy's Largest Root	.000	.000 ^b	1.000	7529.000	.994	.000

a. Design: Intercept + Age_at_ref2 + Gender2 + Cohort_Group + IMD_Quintile + Local_Authority

Within Subjects Design: SYS

b. Exact statistic

Mauchly's Test of Sphericity ^a					
Measure: MEASURE_1					
Within Subjects Effect	Mauchly's W		df	Sig.	Epsilon ^b

		Approx. Chi-Square			Greenhouse-Geisser	Huynh-Feldt	Lower-bound
SYS	1.000	.000	0	.	1.000	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 + Age_at_ref2 + Gender2 + Cohort_Group + IMD_Quintile + Local_Authority

Within Subjects Design: SYS

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	Sig.	Partial Eta Squared
SYS	Sphericity Assumed	87.808	1	87.808	1.248	.264	.000
	Greenhouse-Geisser	87.808	1.000	87.808	1.248	.264	.000
	Huynh-Feldt	87.808	1.000	87.808	1.248	.264	.000
	Lower-bound	87.808	1.000	87.808	1.248	.264	.000
SYS * Age_at_ref2	Sphericity Assumed	1799.274	1	1799.274	25.572	<.001	.003
	Greenhouse-Geisser	1799.274	1.000	1799.274	25.572	<.001	.003
	Huynh-Feldt	1799.274	1.000	1799.274	25.572	<.001	.003
	Lower-bound	1799.274	1.000	1799.274	25.572	<.001	.003
SYS * Gender2	Sphericity Assumed	9.175	1	9.175	.130	.718	.000
	Greenhouse-Geisser	9.175	1.000	9.175	.130	.718	.000
	Huynh-Feldt	9.175	1.000	9.175	.130	.718	.000
	Lower-bound	9.175	1.000	9.175	.130	.718	.000
SYS * Cohort_Group	Sphericity Assumed	52.011	1	52.011	.739	.390	.000
	Greenhouse-Geisser	52.011	1.000	52.011	.739	.390	.000
	Huynh-Feldt	52.011	1.000	52.011	.739	.390	.000
	Lower-bound	52.011	1.000	52.011	.739	.390	.000
SYS * IMD_Quintile	Sphericity Assumed	304.941	1	304.941	4.334	.037	.001
	Greenhouse-Geisser	304.941	1.000	304.941	4.334	.037	.001
	Huynh-Feldt	304.941	1.000	304.941	4.334	.037	.001
	Lower-bound	304.941	1.000	304.941	4.334	.037	.001
SYS * Local_Authority	Sphericity Assumed	.004	1	.004	.000	.994	.000
	Greenhouse-Geisser	.004	1.000	.004	.000	.994	.000
	Huynh-Feldt	.004	1.000	.004	.000	.994	.000

	Lower-bound	.004	1.000	.004	.000	.994	.000
Error(SYS)	Sphericity Assumed	529758.525	7529	70.362			
	Greenhouse-Geisser	529758.525	7529.000	70.362			
	Huynh-Feldt	529758.525	7529.000	70.362			
	Lower-bound	529758.525	7529.000	70.362			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	SYS	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
SYS	Level 2 vs. Level 1	175.616	1	175.616	1.248	.264	.000
SYS * Age_at_ref2	Level 2 vs. Level 1	3598.549	1	3598.549	25.572	<.001	.003
SYS * Gender2	Level 2 vs. Level 1	18.350	1	18.350	.130	.718	.000
SYS * Cohort_Group	Level 2 vs. Level 1	104.022	1	104.022	.739	.390	.000
SYS * IMD_Quintile	Level 2 vs. Level 1	609.883	1	609.883	4.334	.037	.001
SYS * Local_Authority	Level 2 vs. Level 1	.007	1	.007	.000	.994	.000
Error(SYS)	Level 2 vs. Level 1	1059517.051	7529	140.725			

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	2650709.437	1	2650709.437	12812.287	.000	.630
Age_at_ref2	131602.691	1	131602.691	636.106	<.001	.078
Gender2	13108.632	1	13108.632	63.361	<.001	.008
Cohort_Group	1717.382	1	1717.382	8.301	.004	.001
IMD_Quintile	2050.606	1	2050.606	9.912	.002	.001
Local_Authority	511.976	1	511.976	2.475	.116	.000
Error	1557660.318	7529	206.888			

Estimated Marginal Means

SYS

Estimates

Measure: MEASURE_1

SYS	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	133.083 ^a	.189	132.712	133.454
2	130.422 ^a	.169	130.091	130.753

a. Covariates appearing in the model are evaluated at the following values: Age_at_ref2 = 60.6977, Gender2 = 1.6285, Cohort_Group = 1.4289, IMD_Quintile = 3.1670, Local_Authority = 10.31427.

Pairwise Comparisons

Measure: MEASURE_1

(I) SYS	(J) SYS	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
1	2	2.661 [*]	.137	<.001	2.393	2.929
2	1	-2.661 [*]	.137	<.001	-2.929	-2.393

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.	Partial Eta Squared
Pillai's trace	.048	379.156 ^a	1.000	7529.000	<.001	.048
Wilks' lambda	.952	379.156 ^a	1.000	7529.000	<.001	.048
Hotelling's trace	.050	379.156 ^a	1.000	7529.000	<.001	.048
Roy's largest root	.050	379.156 ^a	1.000	7529.000	<.001	.048

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

