

General Linear Model

Notes		
Output Created		12-JUL-2022 14:44:14
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_bmp_clean bpm_16wk_clean WITH Age_at_ref2 Gender2 Cohort_Group IMD_Quintile Local_Authority /WSFACTOR=BPM 2 Simple(1) /METHOD=SSTYPE(3) /EMMEANS=TABLES(BPM) 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=BPM /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	
BPM	
Variable	
1	init_bmp_clean
2	bpm_16wk_clean

Descriptive Statistics

	Mean	Std. Deviation	N
init_bmp_clean	74.4168	10.86647	7659
bpm_16wk_clean	74.2152	10.21954	7659

Multivariate Tests ^a							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
BPM	Pillai's Trace	.002	12.161 ^b	1.000	7653.000	<.001	.002
	Wilks' Lambda	.998	12.161 ^b	1.000	7653.000	<.001	.002
	Hotelling's Trace	.002	12.161 ^b	1.000	7653.000	<.001	.002
	Roy's Largest Root	.002	12.161 ^b	1.000	7653.000	<.001	.002
BPM * Age_at_ref2	Pillai's Trace	.003	23.100 ^b	1.000	7653.000	<.001	.003
	Wilks' Lambda	.997	23.100 ^b	1.000	7653.000	<.001	.003
	Hotelling's Trace	.003	23.100 ^b	1.000	7653.000	<.001	.003
	Roy's Largest Root	.003	23.100 ^b	1.000	7653.000	<.001	.003
BPM * Gender2	Pillai's Trace	.000	2.947 ^b	1.000	7653.000	.086	.000
	Wilks' Lambda	1.000	2.947 ^b	1.000	7653.000	.086	.000
	Hotelling's Trace	.000	2.947 ^b	1.000	7653.000	.086	.000
	Roy's Largest Root	.000	2.947 ^b	1.000	7653.000	.086	.000
BPM * Cohort_Group	Pillai's Trace	.000	.220 ^b	1.000	7653.000	.639	.000
	Wilks' Lambda	1.000	.220 ^b	1.000	7653.000	.639	.000
	Hotelling's Trace	.000	.220 ^b	1.000	7653.000	.639	.000
	Roy's Largest Root	.000	.220 ^b	1.000	7653.000	.639	.000
BPM * IMD_Quintile	Pillai's Trace	.000	.416 ^b	1.000	7653.000	.519	.000
	Wilks' Lambda	1.000	.416 ^b	1.000	7653.000	.519	.000
	Hotelling's Trace	.000	.416 ^b	1.000	7653.000	.519	.000
	Roy's Largest Root	.000	.416 ^b	1.000	7653.000	.519	.000
BPM * Local_Authority	Pillai's Trace	.002	15.487 ^b	1.000	7653.000	<.001	.002
	Wilks' Lambda	.998	15.487 ^b	1.000	7653.000	<.001	.002
	Hotelling's Trace	.002	15.487 ^b	1.000	7653.000	<.001	.002
	Roy's Largest Root	.002	15.487 ^b	1.000	7653.000	<.001	.002

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

Within Subjects Design: BPM

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
BPM	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: BPM

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
BPM	Sphericity Assumed	405.069	1	405.069	12.161	<.001	.002
	Greenhouse-Geisser	405.069	1.000	405.069	12.161	<.001	.002
	Huynh-Feldt	405.069	1.000	405.069	12.161	<.001	.002
	Lower-bound	405.069	1.000	405.069	12.161	<.001	.002
BPM * Age_at_ref2	Sphericity Assumed	769.430	1	769.430	23.100	<.001	.003
	Greenhouse-Geisser	769.430	1.000	769.430	23.100	<.001	.003
	Huynh-Feldt	769.430	1.000	769.430	23.100	<.001	.003
	Lower-bound	769.430	1.000	769.430	23.100	<.001	.003
BPM * Gender2	Sphericity Assumed	98.155	1	98.155	2.947	.086	.000
	Greenhouse-Geisser	98.155	1.000	98.155	2.947	.086	.000
	Huynh-Feldt	98.155	1.000	98.155	2.947	.086	.000
	Lower-bound	98.155	1.000	98.155	2.947	.086	.000
BPM * Cohort_Group	Sphericity Assumed	7.338	1	7.338	.220	.639	.000
	Greenhouse-Geisser	7.338	1.000	7.338	.220	.639	.000
	Huynh-Feldt	7.338	1.000	7.338	.220	.639	.000
	Lower-bound	7.338	1.000	7.338	.220	.639	.000
BPM * IMD_Quintile	Sphericity Assumed	13.855	1	13.855	.416	.519	.000
	Greenhouse-Geisser	13.855	1.000	13.855	.416	.519	.000
	Huynh-Feldt	13.855	1.000	13.855	.416	.519	.000
	Lower-bound	13.855	1.000	13.855	.416	.519	.000
BPM * Local_Authority	Sphericity Assumed	515.848	1	515.848	15.487	<.001	.002
	Greenhouse-Geisser	515.848	1.000	515.848	15.487	<.001	.002
	Huynh-Feldt	515.848	1.000	515.848	15.487	<.001	.002

	Lower-bound	515.848	1.000	515.848	15.487	<.001	.002
Error(BPM)	Sphericity Assumed	254911.604	7653	33.309			
	Greenhouse-Geisser	254911.604	7653.000	33.309			
	Huynh-Feldt	254911.604	7653.000	33.309			
	Lower-bound	254911.604	7653.000	33.309			

Tests of Within-Subjects Contrasts

Measure: MEASURE_1

Source	BPM	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
BPM	Level 2 vs. Level 1	810.139	1	810.139	12.161	<.001	.002
BPM * Age_at_ref2	Level 2 vs. Level 1	1538.859	1	1538.859	23.100	<.001	.003
BPM * Gender2	Level 2 vs. Level 1	196.309	1	196.309	2.947	.086	.000
BPM * Cohort_Group	Level 2 vs. Level 1	14.677	1	14.677	.220	.639	.000
BPM * IMD_Quintile	Level 2 vs. Level 1	27.710	1	27.710	.416	.519	.000
BPM * Local_Authority	Level 2 vs. Level 1	1031.695	1	1031.695	15.487	<.001	.002
Error(BPM)	Level 2 vs. Level 1	509823.209	7653	66.617			

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	1196814.465	1	1196814.465	13056.715	.000	.630
Age_at_ref2	9094.391	1	9094.391	99.216	<.001	.013
Gender2	2317.730	1	2317.730	25.285	<.001	.003
Cohort_Group	39.310	1	39.310	.429	.513	.000
IMD_Quintile	2652.777	1	2652.777	28.941	<.001	.004
Local_Authority	4060.003	1	4060.003	44.293	<.001	.006
Error	701495.056	7653	91.663			

Estimated Marginal Means

BPM

Estimates

Measure: MEASURE_1

BPM	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	74.417 ^a	.122	74.177	74.656
2	74.215 ^a	.116	73.988	74.442

a. Covariates appearing in the model are evaluated at the following values: Age_at_ref2 = 60.6926, Gender2 = 1.6278, Cohort_Group = 1.4277, IMD_Quintile = 3.1589, Local_Authority = 10.39287.

Pairwise Comparisons

Measure: MEASURE_1

(I) BPM	(J) BPM	Mean Difference		Sig. ^b	95% Confidence Interval for Difference ^b	
		(I-J)	Std. Error		Lower Bound	Upper Bound
1	2	.202 [*]	.093	.031	.019	.384
2	1	-.202 [*]	.093	.031	-.384	-.019

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	.001	4.672 ^a	1.000	7653.000	.031	.001
Wilks' lambda	.999	4.672 ^a	1.000	7653.000	.031	.001
Hotelling's trace	.001	4.672 ^a	1.000	7653.000	.031	.001
Roy's largest root	.001	4.672 ^a	1.000	7653.000	.031	.001

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

