

Binomial Logistic Regression

with Criterion A in 2nd step

Model Fit Measures

Model	Deviance	AIC	R ² _{McF}	R ² _{CS}	R ² _N	Overall Model Test		
						χ ²	df	p
1	52.1	72.1	0.650	0.592	0.791	96.7	9	<.001
2	51.5	73.5	0.654	0.594	0.794	97.3	10	<.001
3	41.4	65.4	0.722	0.630	0.843	107.4	11	<.001

Model Comparisons

Comparison					
Model	Model	χ ²	df	p	
1	- 2	0.535	1	0.464	
2	- 3	10.153	1	0.001	

Model Specific ResultsModel 1Model 2Model 3

Model Coefficients - Psychiatric_hospitalization

Predictor	Estimate	95% Confidence Interval		SE	Z	p	Odds ratio	95% Confidence Interval	
		Lower	Upper					Lower	Upper
Intercept	-5.135	-11.479	1.209	3.2369	-1.586	0.113	0.00589	1.03e-5	3.350
SEX:									
M – W	4.013	1.963	6.062	1.0455	3.838	<.001	55.28491	7.12363	429.054
NB – W	2.217	-1.812	6.245	2.0552	1.079	0.281	9.17604	0.16339	515.324
AGE	0.318	0.124	0.512	0.0992	3.205	0.001	1.37442	1.13153	1.669
NEW EDU	-3.646	-6.141	-1.151	1.2730	-2.864	0.004	0.02609	0.00215	0.316
Antagonism	-0.499	-2.443	1.444	0.9914	-0.504	0.614	0.60691	0.08694	4.237
Detachment	1.740	-0.250	3.730	1.0154	1.714	0.087	5.69855	0.77891	41.691
Disinhibtion	0.777	-1.153	2.706	0.9844	0.789	0.430	2.17442	0.31583	14.971
Negative_Affect	3.084	0.360	5.807	1.3897	2.219	0.026	21.83520	1.43308	332.694
Psychoticism	1.553	-0.609	3.716	1.1031	1.408	0.159	4.72798	0.54414	41.081

Note. Estimates represent the log odds of "Psychiatric_hospitalization = hospitalized" vs. "Psychiatric_hospitalization = non_hospitalized"

Assumption Checks

Collinearity Statistics

	VIF	Tolerance
SEX	1.22	0.820
AGE	1.71	0.584
NEW EDU	1.75	0.573
Antagonism	1.14	0.876
Detachment	1.42	0.703
Disinhibition	1.22	0.821
Negative_Affect	1.74	0.574
Psychoticism	1.44	0.696

Prediction

Predictive Measures

AUC
0.962

Note. The cut-off value is set to 0.5

Model Coefficients - Psychiatric_hospitalization

Predictor	Estimate	95% Confidence Interval		SE	Z	p	Odds ratio	95% Confidence Interval	
		Lower	Upper					Lower	Upper
Intercept	-5.5892	-12.109	0.9308	3.3266	-1.680	0.093	0.00374	5.51e-6	2.537
SEX:									
M – W	3.9431	1.860	6.0259	1.0627	3.710	<.001	51.57735	6.42535	414.020
NB – W	2.3148	-1.919	6.5485	2.1601	1.072	0.284	10.12270	0.14676	698.230
AGE	0.3339	0.133	0.5352	0.1027	3.251	0.001	1.39646	1.14183	1.708
NEW EDU	-3.7919	-6.343	-1.2407	1.3017	-2.913	0.004	0.02255	0.00176	0.289
Antagonism	-0.1878	-2.286	1.9104	1.0706	-0.175	0.861	0.82878	0.10167	6.756
Detachment	2.1926	-0.210	4.5949	1.2257	1.789	0.074	8.95866	0.81089	98.974
Disinhibition	0.9557	-1.073	2.9839	1.0349	0.923	0.356	2.60040	0.34212	19.765
Negative_Affect	3.5374	0.414	6.6609	1.5937	2.220	0.026	34.37606	1.51256	781.268
Psychoticism	1.6135	-0.559	3.7863	1.1086	1.455	0.146	5.02029	0.57157	44.095
Criterion A	-0.0313	-0.116	0.0537	0.0434	-0.722	0.470	0.96916	0.89016	1.055

Note. Estimates represent the log odds of "Psychiatric_hospitalization = hospitalized" vs. "Psychiatric_hospitalization = non_hospitalized"

Assumption Checks

Collinearity Statistics

	VIF	Tolerance
SEX	1.23	0.814
AGE	1.78	0.561
NEW EDU	1.79	0.557
Antagonism	1.25	0.800
Detachment	1.71	0.586
Disinhibition	1.29	0.775
Negative_Affect	1.99	0.504
Psychoticism	1.46	0.683
Criterion A	2.05	0.487

Prediction

Predictive Measures

AUC
0.963

Note. The cut-off value is set to 0.5

Model Coefficients - Psychiatric_hospitalization

Predictor	Estimate	95% Confidence Interval		SE	Z	p	Odds ratio	95% Confidence Interval	
		Lower	Upper					Lower	Upper
Intercept	-1.4787	-9.13418	6.1769	3.9060	-0.379	0.705	0.22794	1.08e-4	481.482
SEX:									
M – W	4.8764	2.22375	7.5291	1.3534	3.603	<.001	131.16294	9.2420	1861.478
NB – W	2.4684	-1.89901	6.8358	2.2283	1.108	0.268	11.80368	0.1497	930.598
AGE	0.3978	0.10256	0.6931	0.1507	2.641	0.008	1.48861	1.1080	2.000
NEW EDU	-5.2826	-9.37757	-1.1877	2.0893	-2.528	0.011	0.00508	8.46e-5	0.305
Antagonism	-1.2052	-3.75746	1.3471	1.3022	-0.925	0.355	0.29964	0.0233	3.846
Detachment	1.0589	-1.67432	3.7921	1.3945	0.759	0.448	2.88318	0.1874	44.350
Disinhibition	0.3548	-1.73022	2.4398	1.0638	0.334	0.739	1.42589	0.1772	11.471
Negative_Affect	3.1283	-0.00594	6.2625	1.5991	1.956	0.050	22.83464	0.9941	524.528
Psychoticism	1.4845	-1.16644	4.1354	1.3525	1.098	0.272	4.41269	0.3115	62.515
Criterion A	-0.0165	-0.11259	0.0795	0.0490	-0.338	0.736	0.98359	0.8935	1.083
Number_of_diagnosis	2.1060	0.40707	3.8049	0.8668	2.430	0.015	8.21506	1.5024	44.919

Note. Estimates represent the log odds of "Psychiatric_hospitalization = hospitalized" vs. "Psychiatric_hospitalization = non_hospitalized"

Assumption Checks

Collinearity Statistics

	VIF	Tolerance
SEX	1.36	0.736
AGE	2.31	0.432
NEW EDU	2.49	0.402
Antagonism	1.24	0.804
Detachment	1.64	0.609
Disinhibition	1.15	0.870
Negative_Affect	1.68	0.595
Psychoticism	1.37	0.729
Criterion A	1.78	0.560
Number_of_diagnosis	1.63	0.614

Prediction

Predictive Measures

AUC
0.977

Note. The cut-off value is set to 0.5