

Supplementary Figure 2

LOO sequential model with proportional odds assumption (fit_1):

	Estimate	SE
elpd_loo	-192.0	10.5
p_loo	50.9	7.5
looic	384.1	20.9

Pareto k diagnostic values:

		Count	Pct.	Min. n_eff
(-Inf, 0.5]	(good)	99	86.8%	8414
(0.5, 0.7]	(ok)	12	10.5%	1834
(0.7, 1]	(bad)	2	1.8%	830
(1, Inf)	(very bad)	1	0.9%	36

LOO sequential model without proportional odds assumption, category-specific parameters for all predictors (fit_2):

	Estimate	SE
elpd_loo	-207.8	11.0
p_loo	79.0	7.2
looic	415.6	22.0

Pareto k diagnostic values:

		Count	Pct.	Min. n_eff
(-Inf, 0.5]	(good)	89	78.1%	9770
(0.5, 0.7]	(ok)	23	20.2%	751
(0.7, 1]	(bad)	1	0.9%	633
(1, Inf)	(very bad)	1	0.9%	20

LOO sequential model with proportional odds assumption, category-specific parameters for most relevant predictors (immunosuppression, organs_greater_1) (fit_3):

	Estimate	SE
elpd_loo	-190.4	11.3
p_loo	49.3	8.2
looic	380.8	22.6

Pareto k diagnostic values:

		Count	Pct.	Min. n_eff
(-Inf, 0.5]	(good)	100	87.7%	10642
(0.5, 0.7]	(ok)	11	9.6%	1806
(0.7, 1]	(bad)	2	1.8%	271
(1, Inf)	(very bad)	1	0.9%	8

LOO comparisons (fit 1 vs. fit 2 vs. fit 3):

	elpd_diff	se_diff
fit	0.0	0.0
fit_3	-1.7	1.6
fit_2	-17.4	6.0

Leave-one-out cross-validation (LOO) demonstrates that the chosen model has a similar ELPD (expected log-predictive density, a measure of its ability to generalize to unseen data) as a sequential model without category-specific effects, meaning that including category-specific effects does not improve model performance and the proportional odds assumption does not have a strong effect on the model conclusions.