

Multivariate Covariance Generalized Linear Models

Supplementary material

Wagner Hugo Bonat

Department of Statistics, Paraná Federal University, Curitiba, Brazil.

Department of Mathematics and Computer Science, University of Southern Denmark, Odense, Denmark.

Bent Jørgensen

Department of Mathematics and Computer Science, University of Southern Denmark, Odense, Denmark.

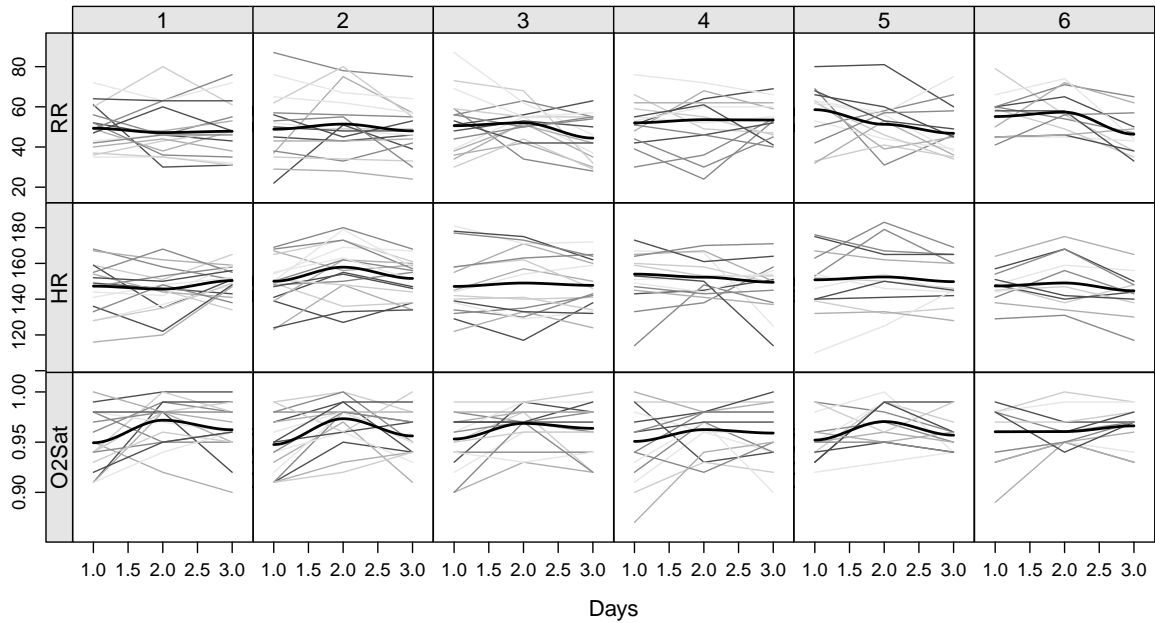


Fig. 1. Individual and average (solid line) trajectories by outcome and evaluation for the Respiratory physiotherapy data.

Table 1. Coverage rate by distribution and sample size for univariate, longitudinal and bivariate models.

Parameters	Gaussian				Gamma				Poisson				Negative Binomial			
	Sample size															
	100	250	500	1000	100	250	500	1000	100	250	500	1000	100	250	500	1000
Univariate case																
β_0	0.94	0.94	0.95	0.94	0.93	0.93	0.94	0.95	0.95	0.95	0.94	0.95	0.95	0.95	0.93	0.96
β_1	0.93	0.95	0.94	0.95	0.93	0.95	0.95	0.95	0.94	0.94	0.91	0.95	0.95	0.95	0.94	0.93
p	0.98	0.99	0.96	0.97	0.98	0.99	0.99	0.99	1	1	1	0.98	0.99	1	1	0.99
τ_0	0.92	0.91	0.91	0.93	0.96	0.97	0.97	0.96	1	0.94	0.97	0.95	0.99	0.99	0.99	0.97
Longitudinal case																
β_0	0.95	0.95	0.95	0.94	0.95	0.95	0.94	0.93	0.94	0.95	0.95	0.94	0.95	0.93	0.95	0.95
β_1	0.95	0.95	0.96	0.95	0.95	0.95	0.93	0.94	0.93	0.96	0.94	0.94	0.95	0.95	0.94	0.94
p	0.94	0.95	0.94	0.94	0.97	0.96	0.97	0.97	0.97	0.97	0.98	0.96	0.96	0.98	0.97	0.97
τ_0	0.93	0.94	0.94	0.94	0.92	0.95	0.97	0.96	0.92	0.94	0.96	0.96	0.96	0.95	0.95	0.97
τ_1	0.87	0.92	0.93	0.95	0.88	0.94	0.95	0.95	0.87	0.91	0.94	0.94	0.91	0.93	0.94	0.96
Bivariate case																
β_{01}	0.94	0.95	0.95	0.94	0.95	0.95	0.94	0.95	0.96	0.96	0.94	0.94	0.96	0.96	0.94	0.95
β_{11}	0.94	0.94	0.96	0.94	0.93	0.95	0.95	0.94	0.94	0.95	0.94	0.94	0.94	0.95	0.95	0.95
β_{02}	0.94	0.96	0.95	0.94	0.93	0.94	0.96	0.96	0.94	0.92	0.95	0.96	0.94	0.94	0.95	0.95
β_{12}	0.95	0.95	0.94	0.93	0.93	0.93	0.95	0.97	0.93	0.93	0.96	0.95	0.96	0.95	0.96	0.96
ρ	0.96	0.95	0.96	0.96	0.95	0.93	0.94	0.95	0.96	0.94	0.96	0.95	0.96	0.96	0.96	0.96
p_1	0.90	0.92	0.93	0.95	0.91	0.96	0.96	0.97	0.89	0.92	0.93	0.94	0.95	0.98	0.98	0.99
τ_{01}	0.96	0.92	0.92	0.94	0.95	0.96	0.95	0.94	0.90	0.91	0.91	0.93	0.96	0.96	0.95	0.98
p_2	0.87	0.90	0.92	0.94	0.91	0.94	0.94	0.97	0.89	0.89	0.92	0.93	0.95	0.97	0.99	0.98
τ_{02}	0.90	0.87	0.92	0.93	0.96	0.94	0.92	0.95	0.91	0.87	0.90	0.90	0.97	0.96	0.95	0.94