

Distributed lag models to identify the cumulative effects of training and recovery in athletes using multivariate ordinal wellness data

Supplementary Material

A Data and Code

The original athlete data are the property of the Professional Referees Organization and contracts require the data to remain confidential. Pseudo data is provided to run the code and produce summary measures and figures. The pseudo data resemble that used in the manuscript, and contains daily wellness, training, and recovery data for 9 athletes for 360 days. As in the manuscript, there are six ordinal wellness variables (Z_1, \dots, Z_6) taking on ordinal values in the set $\{1, \dots, 5\}$ and two explanatory covariates resembling training and recovery (X_1 and X_2). The R code can be used to conduct Bayesian model inference, compute posterior summaries, and create figures resembling those in the manuscript using the pseudo dataset.

B Figures

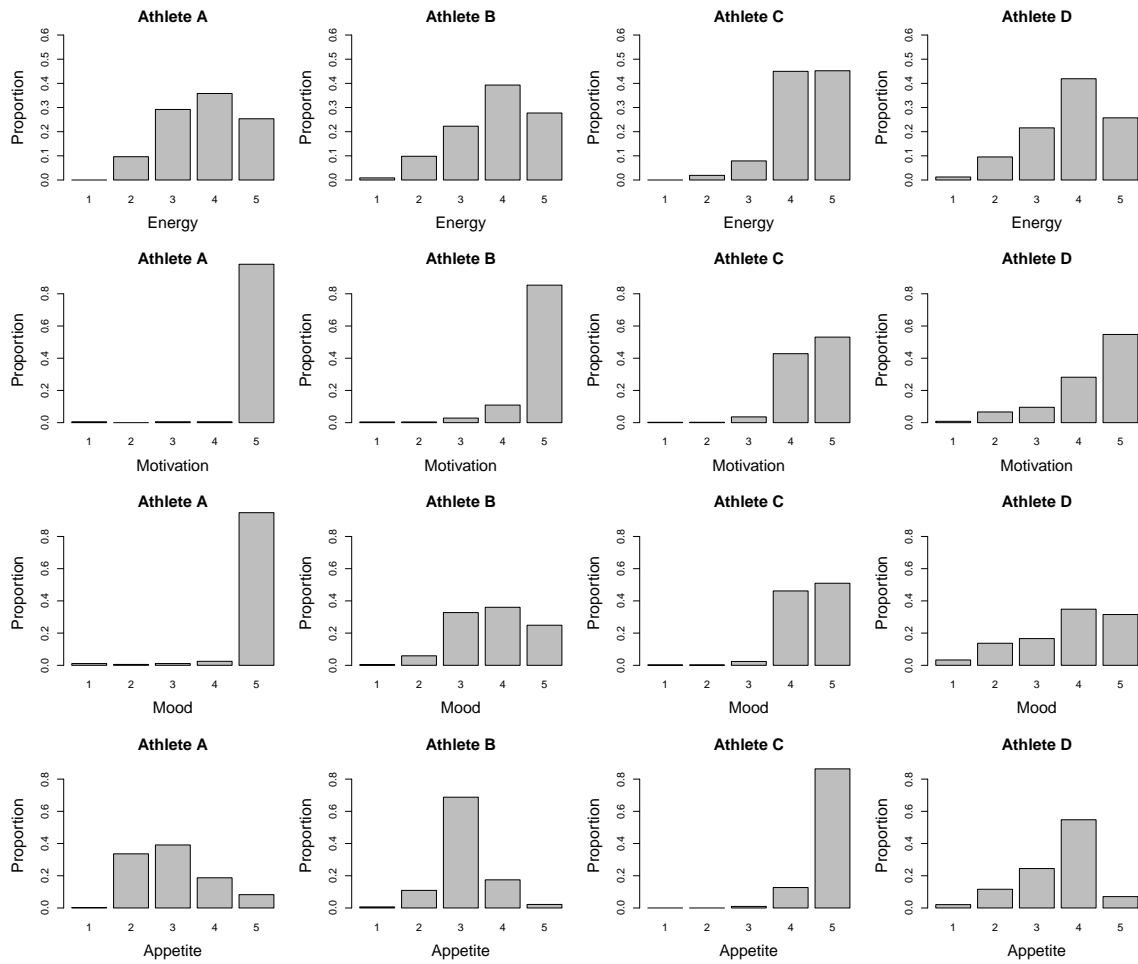


Figure B1: Raw summaries of the ordinal wellness metrics *energy*, *motivation*, *mood*, and *appetite* for four athletes.

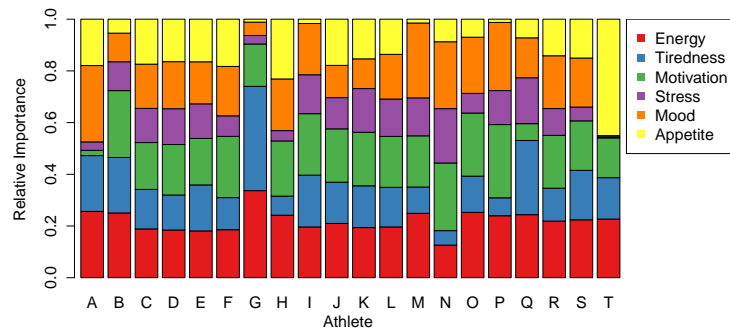


Figure B2: Posterior mean estimates of the relative importance statistics, R_j , defined in (9) for all athletes and metric.

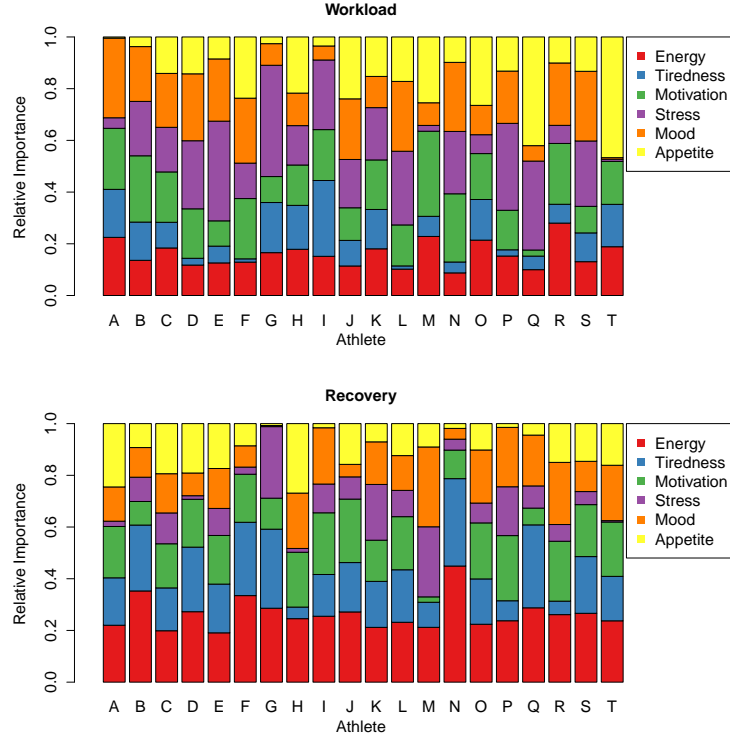


Figure B3: Posterior mean estimates of the relative importance statistics, R_{mj} , defined in (10) for each athlete and metric for the workload latent factor (top) and recovery latent factor (bottom).