

# Figures from pseudo data analysis

Compiled figures from the script “Run\_LFDistributedLagModels.R”

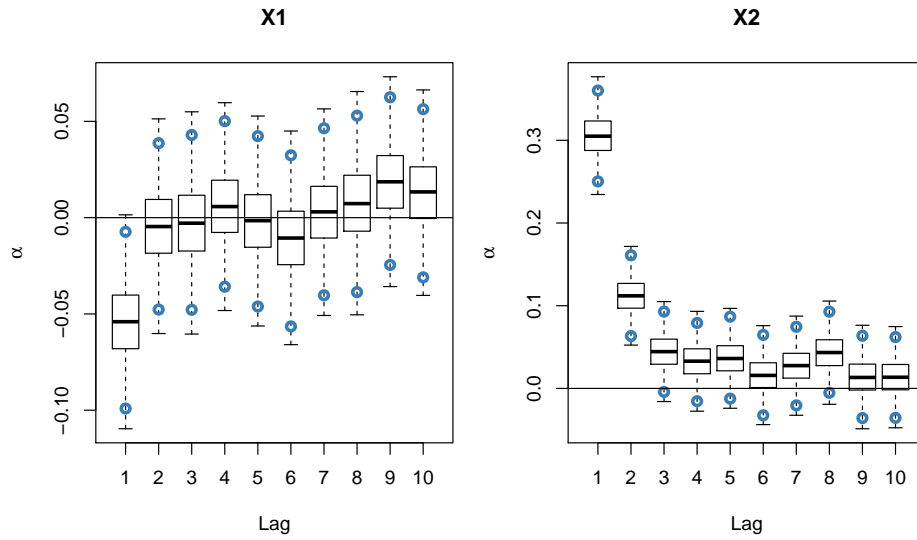


Figure 4: (Pseudo data) Distribution of the global lagged coefficients for the one factor model for X1 (left) and X2 (right).  $\circ$  indicates 95% credible interval.

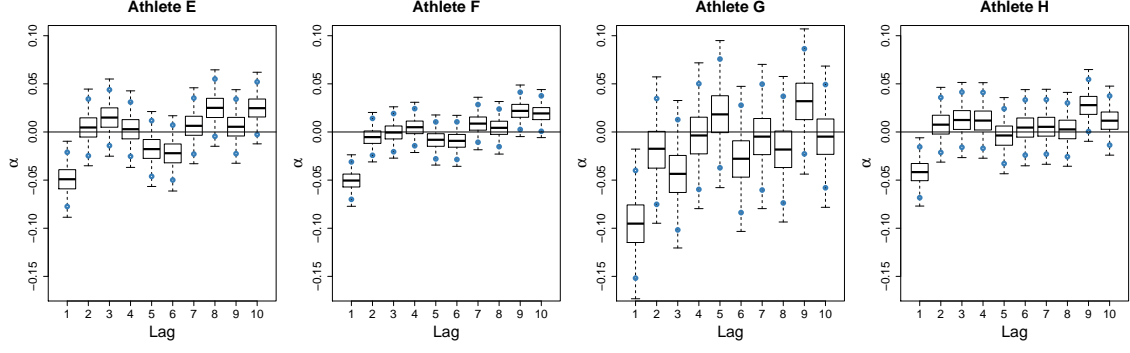


Figure 5: (Pseudo data) Distribution of the individual specific lagged coefficients for the X1 covariate in the univariate latent factor model.  $\bullet$  indicates 95% credible interval.

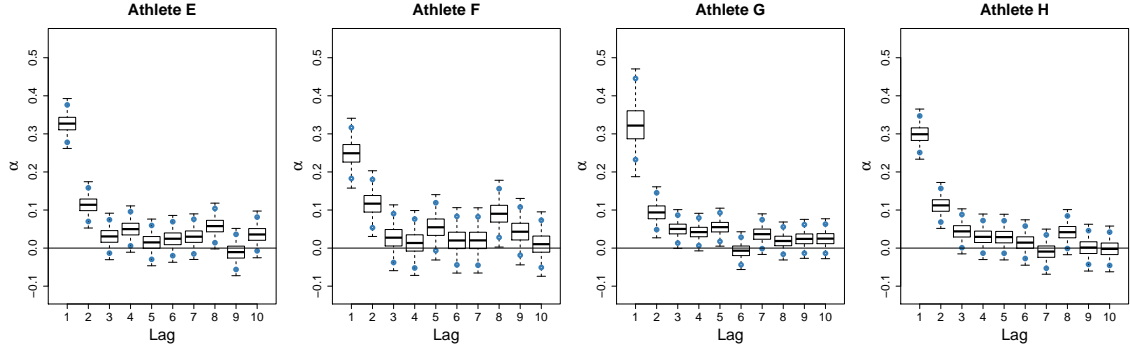


Figure 6: (Pseudo data) Distribution of the individual specific lagged coefficients for the X2 covariate in the univariate latent factor model.  $\bullet$  indicates 95% credible interval.

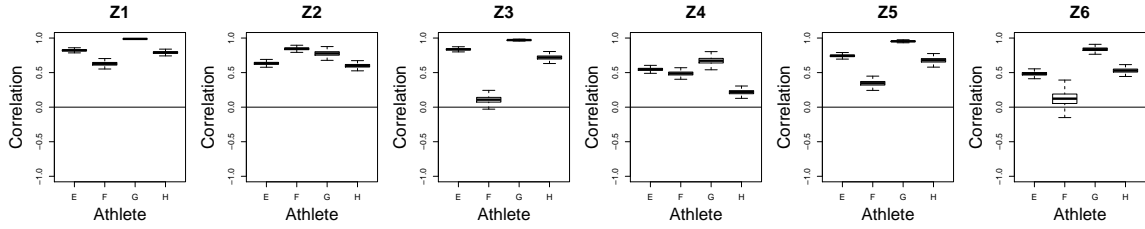


Figure 8: (Pseudo data) Correlation between the univariate latent factor,  $\mathbf{Y}_i$  and  $\tilde{\mathbf{Z}}_{ij}$  for each athlete and latent metric variable.

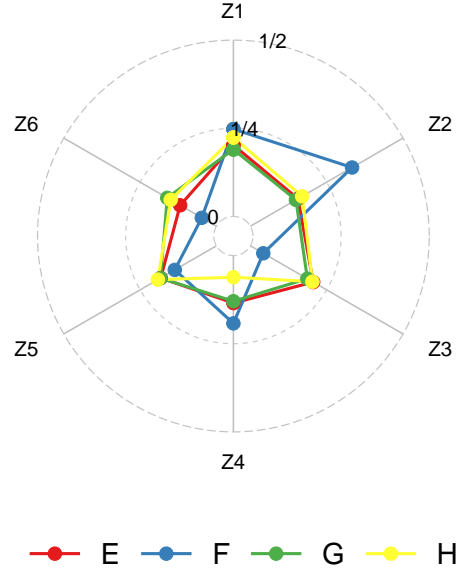


Figure 9: (Pseudo data) Posterior mean estimates of the relative importance statistics,  $R_j$ , defined in (9) for each athlete and metric.

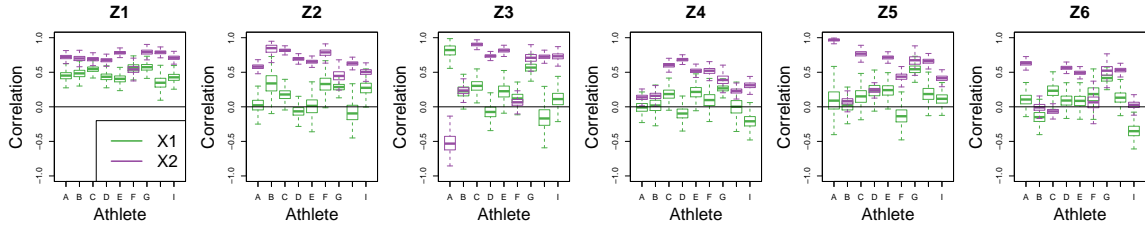


Figure 10: (Pseudo data) Correlation between each latent continuous wellness metric,  $\tilde{\mathbf{Z}}_{ij}$  and X1 latent factor,  $\mathbf{Y}_{i1}$  (left), and X2 latent factor,  $\mathbf{Y}_{i2}$  (right) for each athlete  $i$  and latent metric variable  $j$ .

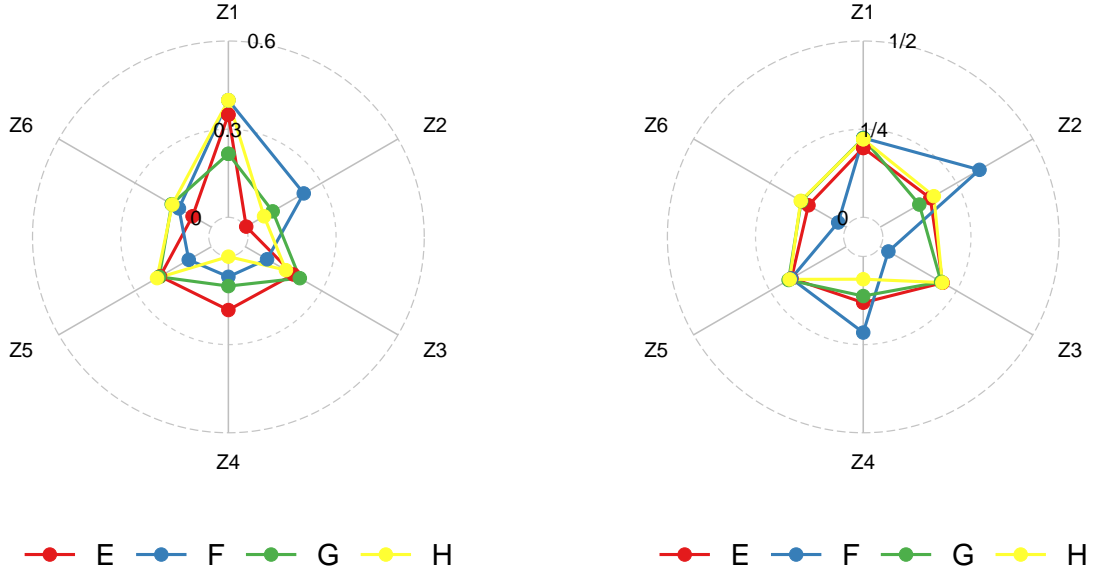


Figure 11: (Pseudo data) Posterior mean estimates of the relative importance statistics,  $R_{mj}$ , defined in (10) for each athlete and metric for the X1 latent factor (left) and X2 latent factor (right).

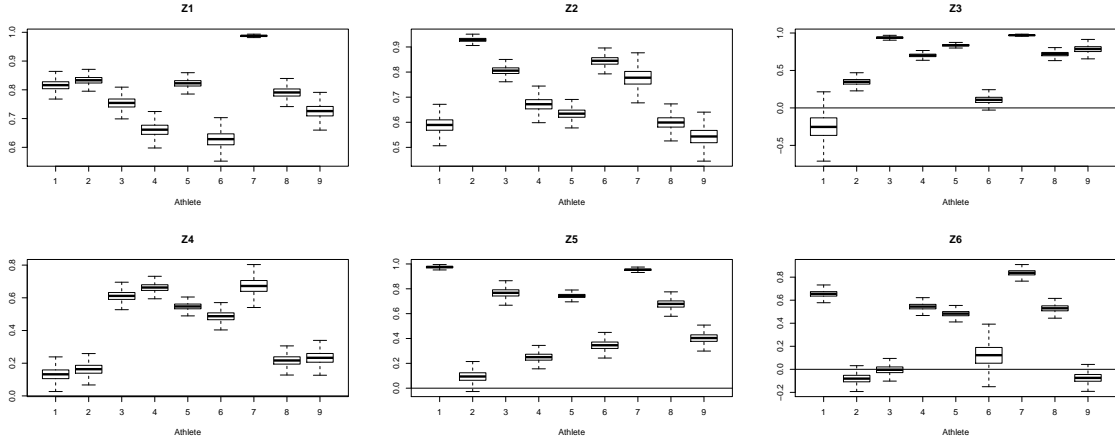


Figure A2: (Pseudo data) Boxplots of the posterior distributions of the correlation between the univariate latent factor,  $\mathbf{Y}_i$  and  $\tilde{\mathbf{Z}}_{ij}$ , for all athletes and metric.

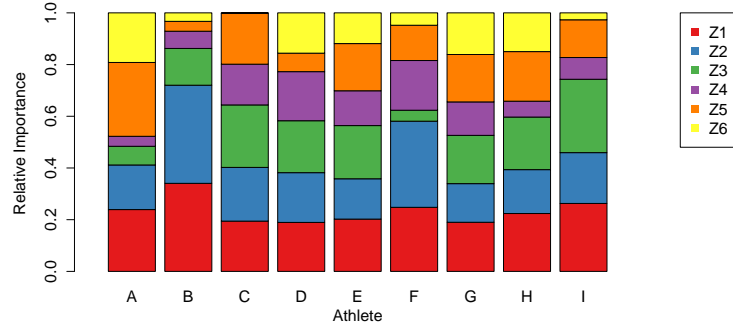


Figure A3: (Pseudo data) Posterior mean estimates of the relative importance statistics,  $R_j$ , defined in (9) for all athletes and metric.

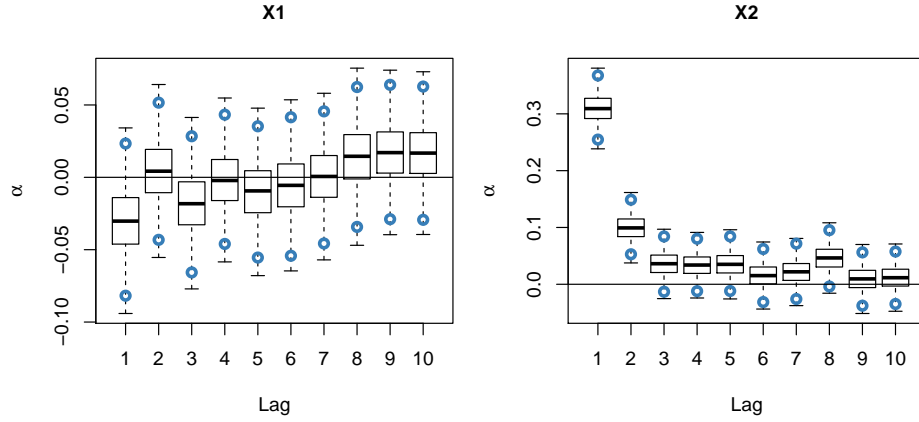


Figure A4: (Pseudo data) Distribution of the global lagged coefficients for the two factor model for X1 (left) and X2 (right).  $\circ$  indicates 95% credible interval.

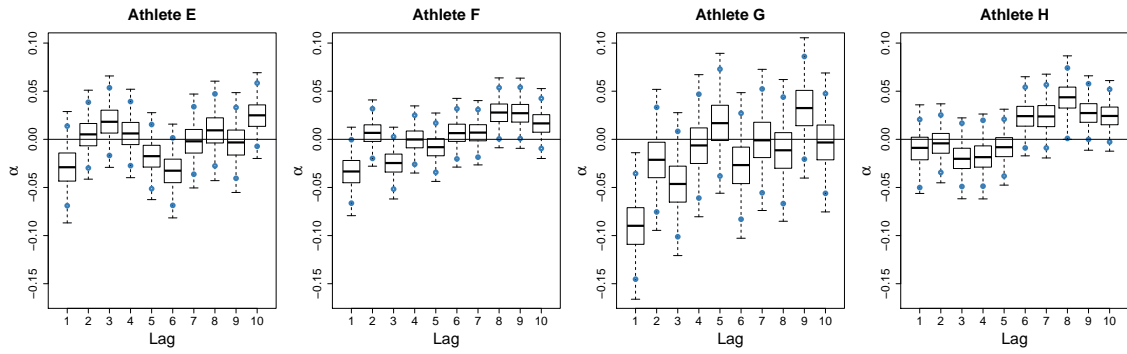


Figure A5: (Pseudo data) Distribution of the individual specific lagged coefficients for the X1 latent factor.  $\circ$  indicates 95% credible interval.

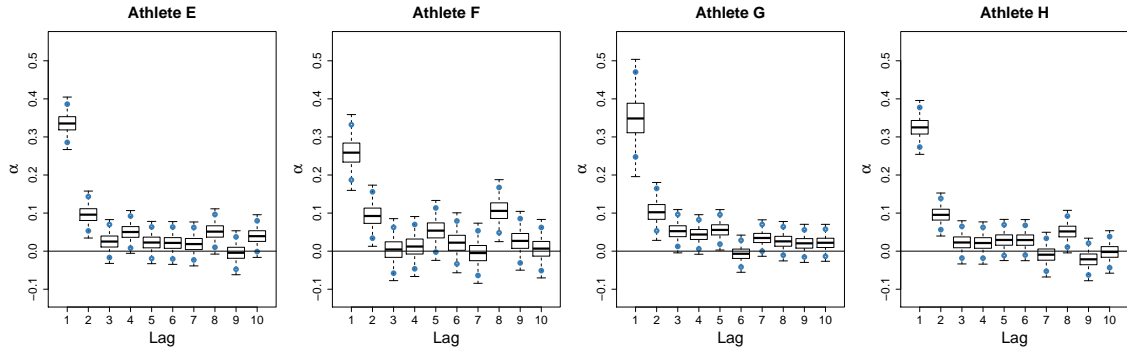


Figure A6: (Pseudo data) Distribution of the individual specific lagged coefficients for the X2 latent factor.  $\circ$  indicates 95% credible interval.

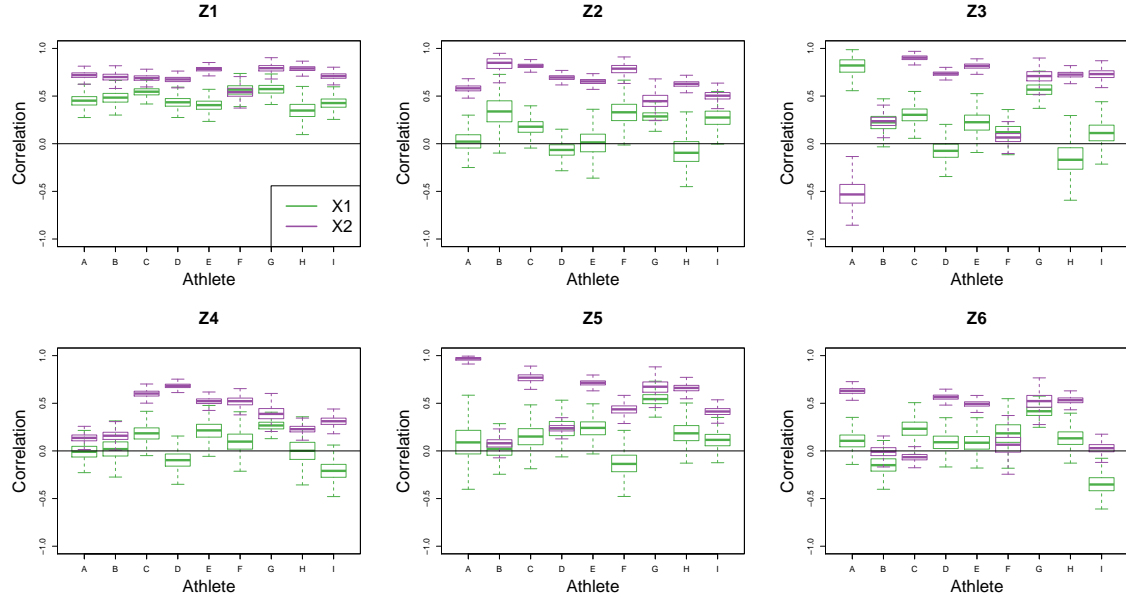


Figure A9: (Pseudo data) Boxplots of the posterior distributions of the correlation between each latent continuous wellness metric,  $\tilde{\mathbf{Z}}_{ij}$ , and the latent factors for X1 and X2  $\mathbf{Y}_{i1}$  and  $\mathbf{Y}_{i2}$ , for each athlete  $i$  and latent metric variable  $j$ .

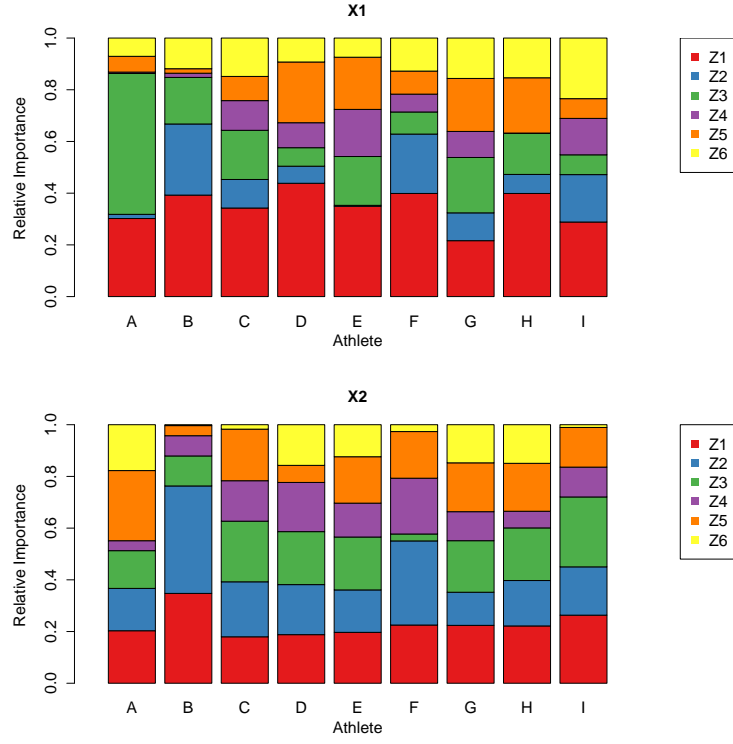


Figure A10: (Pseudo data) Posterior mean estimates of the relative importance statistics,  $R_{mj}$ , defined in (10) for each athlete and metric for the X1 latent factor (top) and X2 latent factor (bottom).