

**Supplementary Materials for**  
**Bayesian Multilevel Compositional Data Analysis with the R Package *multilevelcoda***

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#### Bayesian Multilevel Compositional Data Analysis with the R Package *multilevelcoda*

**Table 1**

*Priors Setting for Bayesian Multilevel Models with Compositional Predictors.*

Parameter	Description	Prior
<b>Population-level (Fixed)</b>		
$\gamma_0$	Intercept	student_t(3, 2.6, 3.1)
$\beta^{z_{1 \cdot j}^{(b)}}$	Longer sleep relative to awake in bed, MVPA, LPA, and SB on average	flat
$\beta^{z_{2 \cdot j}^{(b)}}$	Longer time awake in bed relative to MVPA, LPA, and SB on average	flat
$\beta^{z_{3 \cdot j}^{(b)}}$	Longer MVPA relative to LPA, and SB on average	flat
$\beta^{z_{4 \cdot j}^{(b)}}$	Longer LPA relative to SB on average	flat
$\beta^{z_{1ij}^{(w)}}$	Longer-than-usual sleep relative to awake in bed, MVPA, LPA, and SB on a given day	flat
$\beta^{z_{2ij}^{(w)}}$	Longer-than-usual time awake in bed relative to MVPA, LPA, and SB on a given day	flat
$\beta^{z_{3ij}^{(w)}}$	Longer-than-usual MVPA relative to LPA, and SB on a given day	flat
$\beta^{z_{4ij}^{(w)}}$	Longer-than-usual LPA relative to SB on a given day	flat
<b>Group-level (Random)</b>		
$\sigma_u$	Intercept	student_t(3, 0, 3.1)
$\sigma_\varepsilon$	Residual	student_t(3, 0, 3.1)