Additional file 6. Model Summaries

Figure 1. Model summary of the Random Intercept Model with Level-2 predictor *gender*

```
Family: hurdle_gamma
  Links: mu = log; shape = identity; hu = logit
Formula: energy_intake ~ 1 + gender + (1 | x | ID)
         hu ~ 1 + gender + (1 | x | ID)
   Data: data (Number of observations: 2044)
Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;
         total post-warmup samples = 4000

Group-Level Effects:
~ID (Number of levels: 99)
                           Estimate  Est.Error l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
sd(Intercept)                0.12 (√σ²u1)  0.05     0.01     0.22  1.00     795   599
sd(hu_Intercept)             0.23 (√σ²u0)  0.08     0.04     0.38  1.00     831   507
cor(Intercept,hu_Intercept)  0.71 (ρu1u0)  0.34    -0.34     0.99  1.00     704   627

Population-Level Effects:
              Estimate   Est.Error  l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
Intercept         6.27 (β10)     0.06     6.14     6.39   1.00     4889     3135
hu_Intercept     -0.05 (β00)     0.09    -0.23     0.13   1.00     4074     2942
gender           -0.25 (β11)     0.07    -0.39    -0.10   1.00     4855     3059
hu_gender        -0.02 (β01)     0.11    -0.24     0.20   1.00     4241     2749

Family Specific Parameters:
      Estimate Est.Error l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
shape     0.94      0.04     0.87     1.02 1.00     5706     2843

Samples were drawn using sampling(NUTS). For each parameter, Bulk_ESS
and Tail_ESS are effective sample size measures, and Rhat is the potential
scale reduction factor on split chains (at convergence, Rhat = 1).
```

Figure 2. Model summary of the Random Slope Model with Level-1 predictor energetic arousal (*EA*)

```
Family: hurdle_gamma
  Links: mu = log; shape = identity; hu = logit
Formula: energy_intake ~ 1 + gender + EA + (1 + EA | x | ID)
         hu ~ 1 + EA + (1 + EA | x | ID)
   Data: data (Number of observations: 2025)
Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;
         total post-warmup samples = 4000

Group-Level Effects:
~ID (Number of levels: 99)
                           Estimate Est.Error l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
sd(Intercept)                0.11 (√σ²u1)     0.05     0.01     0.21 1.00      801      611
sd(EA)                       0.02 (√σ²u12)    0.02     0.00     0.06 1.00     2144     1789
sd(hu_Intercept)             0.22 (√σ²u0)     0.08     0.04     0.37 1.00     1098      950
sd(hu_EA)                    0.11 (√σ²u01)    0.04     0.02     0.18 1.00     1154     1608
cor(Intercept,EA)            0.00 (ρu1u12)    0.45    -0.80     0.81 1.00     4486     2421
cor(Intercept,hu_Intercept)  0.56 (ρu1u0)     0.34    -0.36     0.95 1.00      843      899
cor(EA,hu_Intercept)         0.04 (ρu12u0)    0.43    -0.78     0.80 1.00     1744     2524
cor(Intercept,hu_EA)         0.36 (ρu1u01)    0.37    -0.51     0.89 1.00     1177     1124
cor(EA,hu_EA)               -0.05 (ρu12u01)   0.44    -0.81     0.78 1.00     1463     2423
cor(hu_Intercept,hu_EA)      0.24 (ρu0u01)    0.34    -0.50     0.82 1.00     2347     2418

Population-Level Effects:
                       Estimate Est.Error l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
Intercept                6.24 (β10)     0.06     6.12     6.36 1.00     4883     3222
hu_Intercept            -0.06 (β00)     0.05    -0.16     0.04 1.00     4046     2537
gender                  -0.22 (β11)     0.07    -0.37    -0.08 1.00     4479     2810
EA                       0.02 (β12)     0.02    -0.01     0.05 1.00     5552     3172
hu_EA                   -0.04 (β01)     0.03    -0.09     0.01 1.00     5232     3301
Family Specific Parameters:
      Estimate Est.Error l-95% CI u-95% CI Rhat Bulk_ESS Tail_ESS
shape     0.94      0.04     0.88     1.02 1.00     5073     2594

Samples were drawn using sampling(NUTS). For each parameter, Bulk_ESS
and Tail ESS are effective sample size measures, and Rhat is the potential
scale reduction factor on split chains (at convergence, Rhat = 1).
```