

## Supplementary Material

**Supplementary Table 1.** Model-fit parameters for null model and the final regression models

| Criterion       | Model                                                                                                                                   | DF | BIC     | AIC     | adj. R <sup>2</sup> |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------|----|---------|---------|---------------------|
| PAHCO           | Imer(PAHCO ~ 1 + (1   ID))                                                                                                              | 3  | 786.07  | 772.89  | 0.35                |
|                 | Imer(PAHCO ~ Gender + Age + Relationship Status + Education Level + Leisure-time PA + Measurement time + (1   ID))                      | 12 | 595.53  | 542.81  | 0.65                |
| CCPT            | Imer(CCPT ~ 1 + (1   ID))                                                                                                               | 3  | 942.50  | 929.33  | 0.26                |
|                 | Imer(CCPT ~ Gender + Age + Relationship Status + Education Level + Leisure-time PA + Measurement time + (1   ID))                       | 12 | 766.58  | 713.92  | 0.60                |
| PAAR            | Imer(PAAR ~ 1 + (1   ID))                                                                                                               | 3  | 899.21  | 846.55  | 0.54                |
|                 | Imer(PAAR ~ Gender + Age + Relationship Status + Education Level + Leisure-time PA + Measurement time + (1   ID))                       | 12 | 903.58  | 890.41  | 0.63                |
| PASR            | Imer(PASR ~ 1 + (1   ID))                                                                                                               | 3  | 1156.75 | 1169.91 | 0.38                |
|                 | Imer(PASR ~ Gender + Age + Relationship Status + Education Level + Leisure-time PA + Measurement time + (1   ID))                       | 12 | 1022.58 | 1075.25 | 0.57                |
| Leisure-time PA | Imer(Leisure-time PA ~ 1 + (1   ID))                                                                                                    | 2  | 1700.31 | 1691.54 | 0.00                |
|                 | Imer(Leisure-time PA ~ Gender + Age + Relationship Status + Education Level + Measurement time + HRQOL + CCPT + PAAR + PASR + (1   ID)) | 15 | 1306.29 | 1240.47 | 0.65                |
| HRQOL           | Imer(HRQOL ~ 1 + (1   ID))                                                                                                              | 2  | 1700.31 | 1691.54 | 0.00                |
|                 | Imer(HRQOL ~ Gender + Age + Relationship Status + Education Level + Measurement time + Leisure-time PA + CCPT + PAAR + PASR + (1   ID)) | 15 | 1413.62 | 1347.80 | 0.63                |

Notes. DF = Degrees of Freedom, BIC = Bayesian Information Criterion, AIC = Akaike Information Criterion, adj. R<sup>2</sup> = Corrected Proportion of Explained Variance, PAHCO = Physical Activity-related Health Competence, CCPT = Control Competence for Physical Training, PAAR = Physical Activity-specific Affect Regulation, PASR = Physical Activity-specific Self-Regulation