# Supplementary File 2: Estimates of factor loadings and regression parameters

Factor loadings are reported under “Latent variables”, single effects are reported under “Regressions” and total effects (direct and indirect combined) are reported under “Defined Parameters”. In the first five columns: unstandardized parameters (estimate) with their standard errors (std.Err), related t-values and p-values. In the last two columns: the parameters with only the latent variable standardized (Std.lv) and completely standardized (Std.all) parameters. PR = perceived relatedness, PC= perceived competence, AM = autonomous motivation, CM = controlled motivation, pa15 = vigorous PA frequency, pa30= moderate PA frequency, pedct= pedometer counts, BMI = BMI, sexf = sex, educf = levels of education, emplf = employment status.

1. **Outcome: vigorous PA frequency**

Latent Variables:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR =~

 ssa1 1.000 0.885 0.885

 ssa2 0.992 0.021 48.033 Inf 0.000 0.878 0.878

 ssa3 1.043 0.019 55.112 Inf 0.000 0.923 0.923

 ssa4 0.981 0.020 49.555 Inf 0.000 0.869 0.869

 ssa5 0.904 0.028 32.456 Inf 0.000 0.801 0.801

 PC =~

 effb7 1.000 0.697 0.697

 effb8 1.047 0.055 19.077 Inf 0.000 0.730 0.730

 effb9 1.136 0.057 19.851 Inf 0.000 0.792 0.792

 effb10 1.001 0.056 17.908 Inf 0.000 0.698 0.698

 effb11 0.796 0.059 13.483 Inf 0.000 0.555 0.555

 effb12 0.898 0.056 15.901 Inf 0.000 0.626 0.626

 AM =~

 srb1 1.000 0.824 0.819

 srb5 0.911 0.051 17.839 Inf 0.000 0.751 0.747

 srb7 0.961 0.054 17.887 Inf 0.000 0.792 0.788

 srb8 0.872 0.054 16.244 Inf 0.000 0.718 0.715

 CM1 =~

 srb2 1.000 0.833 0.831

 srb6 0.997 0.044 22.839 Inf 0.000 0.831 0.829

 CM2 =~

 srb3 1.000 0.574 0.574

 srb4 1.800 0.171 10.551 Inf 0.000 1.033 1.032

 CM =~

 CM1 1.000 0.981 0.981

 CM2 0.523 0.064 8.107 Inf 0.000 0.744 0.744

Regressions:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 AM ~

 PC (a) 0.586 0.063 9.329 Inf 0.000 0.496 0.496

 PR (b) 0.164 0.050 3.270 Inf 0.001 0.177 0.177

 CM ~

 PC (c) 0.226 0.052 4.383 Inf 0.000 0.193 0.193

 PR (d) 0.434 0.041 10.658 Inf 0.000 0.470 0.470

 pa15 ~

 AM (e) 0.302 0.083 3.657 Inf 0.000 0.249 0.235

 CM (f) -0.065 0.078 -0.835 Inf 0.404 -0.053 -0.050

 PC (g) -0.167 0.088 -1.891 Inf 0.059 -0.116 -0.110

 PR (h) 0.110 0.070 1.571 Inf 0.116 0.098 0.092

 Sexf 0.341 0.093 3.645 Inf 0.000 0.341 0.152

 age -0.008 0.004 -2.059 Inf 0.039 -0.008 -0.082

 educf\_2 0.188 0.103 1.821 Inf 0.069 0.188 0.089

 educf\_3 0.388 0.138 2.821 Inf 0.005 0.388 0.144

 emplf\_1 0.644 0.169 3.817 Inf 0.000 0.644 0.281

 emplf\_2 0.111 0.179 0.621 Inf 0.534 0.111 0.045

 BMI -0.015 0.007 -2.123 Inf 0.034 -0.015 -0.078

 AM ~

 educf\_2 0.242 0.099 2.449 Inf 0.014 0.293 0.147

 educf\_3 0.185 0.124 1.488 Inf 0.137 0.225 0.088

 CM ~

 educf\_2 -0.065 0.087 -0.743 Inf 0.457 -0.080 -0.040

 educf\_3 -0.017 0.122 -0.142 Inf 0.887 -0.021 -0.008

 BMI 0.009 0.007 1.372 Inf 0.170 0.011 0.063

 AM ~

 BMI -0.004 0.008 -0.503 Inf 0.615 -0.005 -0.026

Covariances:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR ~~

 PC (i) 0.230 0.028 8.236 Inf 0.000 0.373 0.373

Defined Parameters:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 TotalPConpa15 0.026 0.063 0.406 Inf 0.685 0.040 0.038

 totalPRonpa15 0.131 0.048 2.712 Inf 0.007 0.115 0.109

 totalPConAM 0.624 0.057 10.986 Inf 0.000 0.562 0.562

 totalPRonAM 0.299 0.046 6.544 Inf 0.000 0.362 0.362

 totalPConCM 0.326 0.048 6.750 Inf 0.000 0.369 0.369

 totalPRonCM 0.486 0.038 12.793 Inf 0.000 0.543 0.543

 indirectPConpa15 0.187 0.055 3.422 Inf 0.001 0.139 0.131

 indirectPRonpa15 0.090 0.029 3.124 Inf 0.002 0.090 0.085

1. **Outcome: moderate PA frequency**

Latent Variables:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR =~

 ssa1 1.000 0.885 0.885

 ssa2 0.992 0.021 47.936 Inf 0.000 0.878 0.878

 ssa3 1.043 0.019 54.993 Inf 0.000 0.923 0.923

 ssa4 0.981 0.020 49.361 Inf 0.000 0.868 0.868

 ssa5 0.905 0.028 32.438 Inf 0.000 0.801 0.801

 PC =~

 effb7 1.000 0.698 0.698

 effb8 1.045 0.055 19.113 Inf 0.000 0.729 0.729

 effb9 1.134 0.057 19.837 Inf 0.000 0.792 0.792

 effb10 0.999 0.056 17.882 Inf 0.000 0.698 0.698

 effb11 0.796 0.059 13.501 Inf 0.000 0.556 0.556

 effb12 0.898 0.056 15.947 Inf 0.000 0.627 0.627

 AM =~

 srb1 1.000 0.824 0.819

 srb5 0.911 0.051 17.896 Inf 0.000 0.751 0.747

 srb7 0.963 0.053 18.001 Inf 0.000 0.793 0.789

 srb8 0.871 0.053 16.288 Inf 0.000 0.717 0.714

 CM1 =~

 srb2 1.000 0.834 0.832

 srb6 0.995 0.044 22.846 Inf 0.000 0.830 0.828

 CM2 =~

 srb3 1.000 0.574 0.573

 srb4 1.802 0.171 10.531 Inf 0.000 1.034 1.032

 CM =~

 CM1 1.000 0.981 0.981

 CM2 0.521 0.064 8.107 Inf 0.000 0.743 0.743

Regressions:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 AM ~

 PC (a) 0.585 0.063 9.345 Inf 0.000 0.496 0.496

 PR (b) 0.164 0.050 3.271 Inf 0.001 0.177 0.177

 CM ~

 PC (c) 0.227 0.052 4.387 Inf 0.000 0.194 0.194

 PR (d) 0.435 0.041 10.668 Inf 0.000 0.470 0.470

 pa30 ~

 AM (e) 0.036 0.086 0.417 Inf 0.676 0.030 0.028

 CM (f) -0.008 0.080 -0.098 Inf 0.922 -0.006 -0.006

 PC (g) 0.120 0.097 1.230 Inf 0.219 0.084 0.080

 PR (h) 0.083 0.071 1.178 Inf 0.239 0.074 0.070

 sexf 0.502 0.097 5.158 Inf 0.000 0.502 0.227

 age -0.010 0.004 -2.448 Inf 0.014 -0.010 -0.102

 educf\_2 0.119 0.111 1.069 Inf 0.285 0.119 0.057

 educf\_3 0.131 0.147 0.891 Inf 0.373 0.131 0.049

 emplf\_1 0.532 0.160 3.332 Inf 0.001 0.532 0.234

 emplf\_2 0.412 0.175 2.355 Inf 0.019 0.412 0.167

 BMI -0.009 0.008 -1.171 Inf 0.241 -0.009 -0.047

 AM ~

 educf\_2 0.242 0.099 2.449 Inf 0.014 0.293 0.147

 educf\_3 0.185 0.124 1.487 Inf 0.137 0.225 0.088

 CM ~

 educf\_2 -0.065 0.088 -0.742 Inf 0.458 -0.080 -0.040

 educf\_3 -0.017 0.122 -0.142 Inf 0.887 -0.021 -0.008

 BMI 0.009 0.007 1.373 Inf 0.170 0.011 0.063

 AM ~

 BMI -0.004 0.008 -0.502 Inf 0.616 -0.005 -0.026

Covariances:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR ~~

 PC (i) 0.231 0.028 8.236 Inf 0.000 0.373 0.373

Defined Parameters:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 totalPConpa30 0.159 0.067 2.371 Inf 0.018 0.126 0.120

 totalPRonpa30 0.118 0.050 2.350 Inf 0.019 0.112 0.107

 totalPConAM 0.623 0.057 11.015 Inf 0.000 0.562 0.562

 totalPRonAM 0.299 0.046 6.544 Inf 0.000 0.362 0.362

 totalPConCM 0.327 0.048 6.762 Inf 0.000 0.369 0.369

 totalPRonCM 0.487 0.038 12.811 Inf 0.000 0.542 0.542

 indirectPConpa30 0.025 0.053 0.472 Inf 0.637 0.019 0.018

 indirectPRonpa30 0.012 0.026 0.467 Inf 0.641 0.012 0.012

1. **Outcome: pedometer counts**

Latent Variables:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR =~

 ssa1 1.000 0.885 0.885

 ssa2 0.992 0.021 47.785 Inf 0.000 0.878 0.878

 ssa3 1.042 0.019 54.616 Inf 0.000 0.923 0.923

 ssa4 0.982 0.020 49.134 Inf 0.000 0.869 0.869

 ssa5 0.905 0.028 32.282 Inf 0.000 0.801 0.801

 PC =~

 effb7 1.000 0.698 0.698

 effb8 1.046 0.055 18.944 Inf 0.000 0.730 0.730

 effb9 1.135 0.058 19.729 Inf 0.000 0.793 0.793

 effb10 1.001 0.056 17.784 Inf 0.000 0.699 0.699

 effb11 0.794 0.059 13.370 Inf 0.000 0.554 0.554

 effb12 0.896 0.057 15.784 Inf 0.000 0.626 0.626

 AM =~

 srb1 1.000 0.824 0.819

 srb5 0.913 0.051 17.791 Inf 0.000 0.752 0.748

 srb7 0.962 0.054 17.914 Inf 0.000 0.792 0.788

 srb8 0.871 0.054 16.189 Inf 0.000 0.717 0.715

 CM1 =~

 srb2 1.000 0.833 0.831

 srb6 0.997 0.044 22.633 Inf 0.000 0.831 0.829

 CM2 =~

 srb3 1.000 0.574 0.574

 srb4 1.799 0.172 10.466 Inf 0.000 1.033 1.031

 CM =~

 CM1 1.000 0.981 0.981

 CM2 0.522 0.065 8.038 Inf 0.000 0.744 0.744

Regressions:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 AM ~

 PC (a) 0.586 0.063 9.269 Inf 0.000 0.496 0.496

 PR (b) 0.164 0.051 3.240 Inf 0.001 0.177 0.177

 CM ~

 PC (c) 0.226 0.052 4.347 Inf 0.000 0.193 0.193

 PR (d) 0.434 0.041 10.568 Inf 0.000 0.470 0.470

 pedCt ~

 AM (e) -0.053 0.076 -0.700 266.766 0.484 -0.044 -0.044

 CM (f) -0.018 0.068 -0.267 1085.093 0.790 -0.015 -0.015

 PC (g) -0.019 0.078 -0.240 484.413 0.810 -0.013 -0.013

 PR (h) 0.107 0.063 1.699 1590.918 0.090 0.095 0.095

 sexf -0.430 0.082 -5.257 1851.598 0.000 -0.430 -0.204

 age -0.015 0.004 -4.203 2949.808 0.000 -0.015 -0.158

 educf\_2 0.211 0.094 2.237 3137.276 0.025 0.211 0.105

 educf\_3 0.080 0.120 0.663 2265.584 0.507 0.080 0.031

 emplf\_1 -0.180 0.155 -1.165 2463.314 0.244 -0.180 -0.083

 emplf\_2 -0.057 0.166 -0.342 1843.433 0.732 -0.057 -0.024

 BMI -0.017 0.008 -2.314 1684.181 0.021 -0.017 -0.096

 AM ~

 educf\_2 0.242 0.100 2.428 Inf 0.015 0.293 0.147

 educf\_3 0.185 0.125 1.474 Inf 0.140 0.224 0.088

 CM ~

 educf\_2 -0.065 0.088 -0.736 Inf 0.462 -0.080 -0.040

 educf\_3 -0.017 0.123 -0.141 Inf 0.888 -0.021 -0.008

 BMI 0.009 0.007 1.361 Inf 0.174 0.011 0.063

 AM ~

 BMI -0.004 0.008 -0.498 Inf 0.618 -0.005 -0.026

Covariances:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 PR ~~

 PC (i) 0.231 0.028 8.166 Inf 0.000 0.373 0.373

Defined Parameters:

 Estimate Std.Err t-value df P(>|t|) Std.lv Std.all

 totalPConpedct -0.033 0.058 -0.573 2726.828 0.567 -0.008 -0.008

 totalPRonpedct 0.078 0.044 1.758 2124.280 0.079 0.066 0.066

 totalPConAM 0.623 0.057 10.921 Inf 0.000 0.562 0.562

 totalPRonAM 0.299 0.046 6.484 Inf 0.000 0.362 0.362

 totalPConCM 0.327 0.049 6.698 Inf 0.000 0.369 0.369

 totalPRonCM 0.486 0.038 12.687 Inf 0.000 0.542 0.542

 indirectPConPA -0.039 0.047 -0.842 531.129 0.400 -0.029 -0.029

 indirectPRonPA -0.019 0.023 -0.836 537.737 0.403 -0.019 -0.019