

Table S1. Sensitivity analyses of the associations between the number of guideline adherence at baseline and changes in physical fitness and body composition over one year

(n=320)

Predictors	BFP		FFM		SMM		Physical fitness	
	β (95%CI)	P	β (95%CI)	P	β (95%CI)	P	β (95%CI)	P
Intercept	8.43 (2.56,14.30)	0.005	0.55 (-1.46,2.57)	0.589	-0.94 (-2.56,0.68)	0.254	37.82 (24.77,50.87)	<0.001
Covariates								
Age	0.10 (-0.35,0.54)	0.671	0.02 (-0.15,0.19)	0.821	-0.13 (-0.27,0.01)	0.061	-0.68 (-1.61,0.26)	0.158
Sex (Ref: boys)								
Girls	-0.80 (-1.67,0.08)	0.074	-0.15 (-0.46,0.17)	0.361	-0.01 (-0.26,0.26)	0.996	0.92 (-0.99,2.83)	0.345
Weight status	1.29 (0.02,2.56)	0.046	-0.02 (-0.40,0.36)	0.918	-0.13 (-0.44,0.18)	0.426	-3.13 (-5.24,-1.01)	0.004
Main caregiver's age	-0.08 (-0.23,0.07)	0.305	0.03 (-0.02,0.09)	0.240	0.07 (0.03,0.12)	0.002	-0.16 (-0.48,0.17)	0.346
Main caregiver's sex (Ref: male)								
Female	-0.62 (-1.62,0.38)	0.221	-0.07 (-0.43,0.29)	0.704	0.16 (-0.14,0.45)	0.298	2.20 (0.08,4.31)	0.042
Main caregiver's education level (Ref: primary school or below)								
College and above	-0.50 (-2.49,1.49)	0.620	0.07 (-0.65,0.79)	0.850	0.18 (-0.41,0.76)	0.557	0.16 (-4.07,4.39)	0.940
High/middle school	0.34 (-1.64,2.33)	0.734	-0.08 (-0.80,0.64)	0.827	-0.08 (-0.67,0.50)	0.783	1.60 (-2.62,5.81)	0.457
Household income (Ref: low)								
Average	-0.81 (-1.92,0.30)	0.152	0.09 (-0.32,0.50)	0.662	-0.10 (-0.43,0.23)	0.535	1.35 (-1.02,3.72)	0.262
Above average	-0.07 (-1.27,1.13)	0.910	0.41 (-0.02,0.85)	0.062	0.07 (-0.29,0.42)	0.720	1.23 (-1.32,3.78)	0.343
Dependent variable at baseline	-0.16 (-0.24,-0.08)	<0.001	-0.01 (-0.04,0.02)	0.590	0.06 (0.02,0.10)	0.003	-0.43 (-0.52,-0.34)	<0.001
The number of guideline adherence (Ref: none)								
Meeting one	0.14 (-1.28,1.55)	0.851	0.51 (-0.01,1.02)	0.053	0.31 (-0.11,0.72)	0.150	3.25 (0.23,6.26)	0.035
Meeting two	-1.38 (-2.75,-0.02)	0.047	0.61 (0.11,1.11)	0.016	0.42 (0.02,0.82)	0.042	5.55 (2.63,8.46)	<0.001
Meeting all three	-1.15 (-2.95,0.65)	0.210	0.93 (0.28,1.58)	0.005	0.22 (-0.31,0.75)	0.417	5.45 (1.62,9.29)	0.005

Note: BMI=Body Mass Index, BFP=body fat percentage, FFM=fat-free mass, SMM=skeletal muscle mass, β = unstandardized standardized coefficient, CI=confidence

interval, Ref=reference group. Change scores were calculated as follow-up value minus baseline value.

Table S2. Sensitivity analyses of the associations between the combinations of guideline adherence at baseline and changes in physical fitness and body composition over one year (n=320)

Predictors	BFP		FFM		SMM		Physical fitness	
	β (95%CI)	P	β (95%CI)	P	β (95%CI)	P	β (95%CI)	P
Intercept	7.61 (1.88,13.34)	0.009	1.12 (-0.84,3.08)	0.262	-0.82 (-2.45,0.80)	0.319	39.86 (26.90,52.82)	<0.001
Covariates								
Age	0.14 (-0.29,0.57)	0.518	-0.01 (-0.16,0.16)	0.997	-0.13 (-0.27,0.004)	0.057	-0.74 (-1.67,0.20)	0.121
Sex (Ref: boys)								
Girls	-1.17 (-2.03,-0.31)	0.008	-0.01 (-0.32,0.30)	0.952	0.02 (-0.24,0.28)	0.855	1.49 (-0.43,3.40)	0.128
Weight status	1.34 (0.09,2.59)	0.036	0.03 (-0.35,0.40)	0.884	-0.13 (-0.44,0.19)	0.437	-3.20 (-5.33,-1.07)	0.003
Main caregiver's age	-0.05 (-0.20,0.10)	0.506	0.03 (-0.03,0.08)	0.362	0.07 (0.03,0.12)	0.002	-0.20 (-0.53,0.12)	0.223
Main caregiver's sex (Ref: male)								
Female	-0.88 (-1.86,0.09)	0.076	0.01 (-0.35,0.36)	0.963	0.17 (-0.13,0.46)	0.270	2.65 (0.55,4.75)	0.014
Main caregiver's education level (Ref: primary school or below)								
College and above	-0.67 (-2.61,1.27)	0.494	0.07 (-0.63,0.77)	0.839	0.16 (-0.42,0.75)	0.587	0.53 (-3.67,4.72)	0.805
High/middle school	0.14 (-1.79,2.08)	0.885	-0.09 (-0.78,0.61)	0.806	-0.11 (-0.69,0.47)	0.711	1.94 (-2.25,6.12)	0.363
Household income (Ref: low)								
Average	-0.59 (-1.68,0.49)	0.283	0.01 (-0.39,0.40)	0.966	-0.13 (-0.46,0.20)	0.452	1.13 (-1.22,3.48)	0.344
Above average	0.12 (-1.05,1.30)	0.839	0.29 (-0.14,0.71)	0.182	0.01 (-0.35,0.36)	0.972	1.07 (-1.48,3.62)	0.409
Dependent variable at baseline	-0.17 (-0.25,-0.09)	<0.001	-0.01 (-0.04,0.02)	0.419	0.06 (0.02,0.10)	0.003	-0.43 (-0.52,-0.35)	<0.001
Combinations of guideline adherence (Ref: none)								
Only MVPA	-1.90 (-3.80,-0.01)	0.049	0.89 (0.20,1.57)	0.011	0.33 (-0.25,0.90)	0.262	6.84 (2.74,10.94)	0.001
Only SST	1.71 (-0.01,3.41)	0.050	-0.19 (-0.81,0.43)	0.544	0.10 (-0.42,0.62)	0.707	0.37 (-3.33,4.07)	0.844
Only SLP	0.04 (-1.56,1.63)	0.964	0.83 (0.25,1.41)	0.005	0.45 (-0.04,0.93)	0.069	3.49 (0.02,6.95)	0.049
MVPA + SST	-2.10 (-4.00,-0.21)	0.030	1.08 (0.40,1.77)	0.002	0.81 (0.24,1.38)	0.006	5.25 (1.15,9.35)	0.012
MVPA + SLP	-2.78 (-4.48,-1.08)	0.001	1.06 (0.44,1.68)	<0.001	0.36 (-0.15,0.88)	0.169	7.35 (3.66,11.04)	<0.001
SST + SLP	-0.42 (-1.87,1.02)	0.565	0.21 (-0.31,0.74)	0.430	0.32 (-0.12,0.76)	0.159	4.61 (1.47,7.75)	0.004
MVPA + SST+ SLP	-1.11 (-2.86,0.63)	0.211	0.90 (0.27,1.53)	0.005	0.21 (-0.32,0.74)	0.429	5.37 (1.59,9.16)	0.006

Note: Note: BFP= body fat percentage (%), FFM=fat-free mass (kg), SMM=skeletal muscle mass (kg), β =unstandardized standardized coefficient, CI=confidence interval,

Ref=reference group, MVPA=moderate-to-vigorous physical activity, SST=sedentary screen time, SLP=sleep duration. Change scores were calculated as follow-up value minus baseline value.

Table S3. E-values for the associations between baseline guideline adherence and changes in physical fitness and body composition (n=337)

Predictors	BFP	FFM	SMM	Physical fitness
	E-values (CI)	E-values (CI)	E-values (CI)	E-values (CI)
The number of guideline adherence (Ref: none)				
Meeting one	1.22 (1.00)	2.10 (1.00)	1.79 (1.00)	2.01 (1.11)
Meeting two	2.10 (1.17)	2.36 (1.42)	2.24 (1.32)	2.62 (1.77)
Meeting all three	2.05 (1.00)	3.13 (1.80)	1.73 (1.00)	2.84 (1.72)
Combinations of guideline adherence (Ref: none)				
Only MVPA	2.41 (1.05)	3.03 (1.65)	1.77 (1.00)	2.94 (1.70)
Only SST	2.33 (1.16)	1.47 (1.00)	1.30 (1.00)	1.35 (1.00)
Only SLP	1.07 (1.00)	2.73 (1.59)	2.17 (1.00)	2.07 (1.00)
MVPA + SST	2.57 (1.29)	3.71 (2.15)	3.51 (2.01)	2.52 (1.36)
MVPA + SLP	3.19 (1.91)	3.25 (1.93)	2.00 (1.00)	3.11 (1.95)
SST + SLP	1.48 (1.00)	1.61 (1.00)	2.00 (1.00)	2.40 (1.51)
MVPA + SST+ SLP	2.03 (1.00)	3.06 (1.78)	1.73 (1.00)	2.82 (1.70)

Note: Note: BFP= body fat percentage (%), FFM=fat-free mass (kg), SMM=skeletal muscle mass (kg), CI=confidence interval, Ref=reference group, MVPA=moderate-to-vigorous physical activity, SST=sedentary screen time, SLP=sleep duration. Change scores were calculated as follow-up value minus baseline value.