

Baseline comparability between the recommendation and validation groups within each sex, assessed using standardized mean differences (SMDs)

Table S2a. Baseline characteristics of male participants in the recommendation and validation groups, with standardized mean differences (SMDs)

	Recommendation (n = 944)	Validation (n = 944)	SMD
Age (years), mean $\pm$ SD	18.65 $\pm$ 1.25	18.65 $\pm$ 1.20	0.017
Activity variables (min/day), compositional mean (%)			
MVPA	44.92 (3.12%)	42.61 (2.96%)	0.111
LPA	262.37 (18.22%)	263.75 (18.32%)	0.033
SED	535.14 (37.16%)	533.30 (37.03%)	0.028
SLP	597.57 (41.50%)	600.32 (41.69%)	0.063
Mental health, mean $\pm$ SD			
Depression	5.43 $\pm$ 5.16	5.35 $\pm$ 5.07	0.016
Anxiety	5.40 $\pm$ 5.12	5.55 $\pm$ 5.29	0.026
Stress	6.69 $\pm$ 6.19	6.55 $\pm$ 6.14	0.024
Father's education, n (%)			0.136
Middle school or below	589 (62.3%)	546 (57.8%)	
High school	213 (22.6%)	256 (27.1%)	
Junior college or bachelor's degree	130 (13.8%)	137 (14.5%)	
Postgraduate or above	12 (1.3%)	5 (0.6%)	
Mather's education, n (%)			0.088
Middle school or below	658 (69.7%)	634 (67.2%)	
High school	169 (17.9%)	200 (21.2%)	
Junior college or bachelor's degree	111 (11.8%)	106 (11.2%)	
Postgraduate or above	6 (0.6%)	4 (0.4%)	
Monthly household income, n (%)			0.066
<5000RMB	410 (43.4%)	407 (43.1%)	
5001~10000RMB	375 (39.7%)	363 (38.5%)	
10001~20000RMB	125 (13.2%)	128 (13.6%)	
>20001RMB	34 (3.7%)	46 (4.9%)	
Sleep efficiency, n (%)			0.044
>85%	443 (46.8%)	437 (46.3%)	
75%~85%	382 (40.5%)	398 (42.2%)	
65%~75% (Contains 75%)	93 (9.9%)	87 (9.2%)	
<65%	26 (2.8%)	22 (2.3%)	
Sleep quality, n (%)			0.070
Very good	294 (31.1%)	310 (32.8%)	
Fairly good	536 (56.8%)	505(53.5%)	
Fairly bad	101 (10.7%)	113 (12%)	
Very bad	13 (1.4%)	16 (1.7%)	

Note: MVPA, moderate-to-vigorous-intensity physical activity; LPA, light physical activity; SED, sedentary behavior; SLP, sleep, SMD, standardized mean difference.

Table S2b. Baseline characteristics of female participants in the recommendation and validation groups, with standardized mean differences (SMDs)

	Recommendation (n = 2, 089)	Validation (n = 2,089)	SMD
Age (years), mean $\pm$ SD	18.81 $\pm$ 1.34	18.80 $\pm$ 1.31	0.014
Activity variables (min/day), compositional mean (%)			
MVPA	39.46 (2.74%)	38.95 (2.70%)	0.025
LPA	263.10 (18.27%)	260.45 (18.09%)	0.061
SED	535.41 (37.18%)	541.58 (37.61%)	0.091
SLP	602.03 (41.81%)	599.02 (41.60%)	0.068
Mental health, mean $\pm$ SD			
Depression	4.69 $\pm$ 4.29	4.84 $\pm$ 4.30	0.037
Anxiety	5.22 $\pm$ 4.60	5.37 $\pm$ 4.66	0.031
Stress	6.75 $\pm$ 5.65	6.88 $\pm$ 5.62	0.023
Father's education, n (%)			0.048
Middle school or below	1257 (59.9%)	1264 (60.2%)	
High school	551 (26.3%)	545 (26.0%)	
Junior college or bachelor's degree	284 (13.5%)	277 (13.2%)	
Postgraduate or above	6 (0.3%)	12 (0.6%)	
Mather's education, n (%)			0.021
Middle school or below	1439 (68.6%)	1435 (68.4%)	
High school	419 (20%)	433 (20.6%)	
Junior college or bachelor's degree	231 (11%)	221 (10.5%)	
Postgraduate or above	9 (0.4%)	9 (0.5%)	
Monthly household income, n (%)			0.038
<5000RMB	988 (47.1%)	997 (47.5%)	
5001~10000RMB	798 (38%)	809 (38.6%)	
10001~20000RMB	240 (11.4%)	233 (11.1%)	
>20001RMB	72 (3.5%)	59 (2.8%)	
Sleep efficiency, n (%)			0.094
>85%	891 (42.5%)	829 (39.5%)	
75%~85%	912 (43.5%)	908 (43.3%)	
65%~75% (Contains 75%)	238 (11.3%)	285 (13.6%)	
<65%	57 (2.7%)	76 (3.6%)	
Sleep quality, n (%)			0.017
Very good	587 (28.0%)	578 (27.5%)	
Fairy good	1257 (59.9%)	1269 (60.5%)	
Fairy bad	237 (11.3%)	232 (11.1%)	
Very bad	17 (0.8%)	19 (0.9%)	

Note: MVPA, moderate-to-vigorous-intensity physical activity; LPA, light physical activity; SED, sedentary behavior; SLP, sleep, SMD, standardized mean difference.