

Appendix

Table A1. Descriptive statistics and randomization check for the intervention groups of Study 1

Group	Female (%)	Age	Weight (kg)	Height (cm)	Previous week steps walked
Neutral	63.72	47.59	63.69	163.83	43,690.81
Gain	64.28	47.56	63.37	164.85	43,447.77
Loss	65.44	47.45	62.91	164.59	43,009.86
<i>t</i> -statistics of Neutral – Gain	-0.184	0.047	0.301	-0.823	0.130
<i>t</i> -statistics of Neutral – Loss	-0.523	0.179	0.787	-0.795	0.385

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A2. Linear Probability Model (LPM) and Ordinary Least Squares (OLS) regression analysis result of Study 1

DV:	(1)	(2)
	Achievement	# of Steps
Gain	0.0909*** (0.0275)	0.228*** (0.0443)
Loss	0.104*** (0.0232)	0.204*** (0.0414)
Constant	0.133 (0.247)	1.021 (0.874)
N	1,248	1,248

Note: Baseline group is the neutral intervention (no-framing) group. The same control variables are included as in Table 3. Location and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A3. Linear Probability Model (LPM) regression analysis result with time-location fixed effects

DV:	(1)
	Achievement
Sunny	-0.0315 (0.0259)
Loss	-0.0543*** (0.0209)
Sunny × Loss	0.124*** (0.0202)
Constant	0.0201 (0.0584)
N	5,956

Note: The same control variables are included as in Table 3. Individual, location, day, and day × location fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A4. Logit and Probit regression analysis result

DV:	(1) Logit	(2) Probit
	Achievement	# of Steps
Sunny	-0.747 (0.616)	-0.912* (0.470)
Loss	-0.786*** (0.294)	-0.869*** (0.229)
Sunny × Loss	1.559*** (0.286)	1.808*** (0.232)
N	5,956	5,956

Note: We log-transform the walking steps to adjust the skewness of data. The same control variables are included as in Table 3. Individual, location, and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A5. Linear Probability Model (LPM) regression analysis result

DV:	(1) Discard outliers	(2) Discard observations experienced radical weather change
	Achievement	Achievement
Sunny	-0.0315 (0.0259)	0.0321* (0.0176)
Loss	-0.0500** (0.0209)	-0.0515** (0.0213)
Sunny × Loss	0.120*** (0.0202)	0.123*** (0.0212)
Constant	0.00531 (0.0592)	0.0183 (0.0599)
N	5,916	5,592

Note: The same control variables are included as in Table 3. Individual, location, and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A6. Difference-in-difference (DID) analysis results of intervention effect on the post-experiment period in sunny weather

DV:	# of Steps walked during the post-experiment period						
Weather:	Sunny						
Period:	1 Day (Treat)	2 Day	3 Days	4 Days	5 Days	6 Days	7 Days
Loss×After	0.407*** (0.091)	0.410*** (0.105)	0.437*** (0.133)	0.381*** (0.100)	0.392*** (0.117)	0.335** (0.156)	0.133* (0.076)
Constant	7.742*** (0.0458)	7.758*** (0.0644)	7.623*** (0.0622)	7.469*** (0.0579)	7.544*** (0.0607)	7.713*** (0.0630)	7.869*** (0.0499)
N	5,952	5,952	5,952	5,952	5,952	5,952	5,952

Note: We log-transform the walking steps to adjust the skewness of data. The same control variables are included as in Table 3. Individual, location, and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A7. Difference-in-difference (DID) analysis results of intervention effect on the post-experiment period in cloudy weather

DV:	# of Steps walked during the post-experiment period						
Weather:	Cloudy						
Period:	1 Day (Treat)	2 Day	3 Days	4 Days	5 Days	6 Days	7 Days
Loss×After	-0.342*** (0.075)	-0.227*** (0.070)	-0.203** (0.081)	-0.242*** (0.061)	-0.141** (0.062)	-0.120* (0.069)	0.055 (0.083)
Constant	7.202*** (0.050)	7.698*** (0.0452)	7.652*** (0.0569)	7.706*** (0.0241)	7.763*** (0.0408)	8.134*** (0.0415)	7.291*** (0.0483)
N	5,956	5,956	5,956	5,956	5,956	5,956	5,956

Note: We log-transform the walking steps to adjust the skewness of data. The same control variables are included as in Table 3. Individual, location, and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A8. Linear Probability Model (LPM) regression analysis result by parks accessibility

DV:	(1) High park accessibility	(2) Low park accessibility
	Achievement	Achievement
Sunny (β_1)	-0.00113 (0.0292)	-0.0250 (0.0267)
Loss (β_2)	-0.0652* (0.0350)	-0.0419* (0.0233)
Sunny × Loss (β_3)	0.140*** (0.0350)	0.132*** (0.0231)
Constant	0.00279 (0.0908)	0.00773 (0.0558)
N	2,680	3,276

Note: The same control variables are included as in Table 3. Individual, location, and day fixed effects are included. Robust clustered standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.