

STUDY	TYPE OF STUDY	PA measure	PHYSICAL ACTIVITY	EF measure	EF component	EXECUTIVE FUNCTION	Expected direction	Correlation r(adjusted)	P	N	AGE GROUP	Time frame
1	observational	subjective	self-reported PA	subjective		executive function deficits total	negative	0,2	< .001	260	young adults	1 week
1	observational	subjective	self-reported PA	subjective		self-management of time dificits	negative	0,21	< .001	260	young adults	1 week
1	observational	subjective	self-reported PA	subjective		self-organization deficits	negative	0,2	< .001	260	young adults	1 week
1	observational	subjective	self-reported PA	subjective		self-restraint deficits	negative	0,13	< .05	260	young adults	1 week
1	observational	subjective	self-reported PA	subjective		self-motivation deficits	negative	0,2	< .001	260	young adults	1 week
1	observational	subjective	self-reported PA	subjective		emotion regulation deficits	negative	0,09	> .05	260	young adults	1 week
2	observational	objective	average daily MVPA	objective		selective attention	positive	-0,07	< .001	6069	children	6 years
2	observational	objective	average daily MVPA	objective		attentional control	positive	0	> .05	6069	children	6 years
2	observational	objective	average daily MVPA	objective	Updating	working memory	positive	0	> .05	6069	children	6 years
2	observational	objective	average daily MVPA	objective	Inhibition	response inhibition	positive	0,01	> .05	6069	children	6 years
3	obvervational	objective	average daily PA	objective	Inhibition	inhibition	positive	0,368	<.01	208	adults	1 week
4	observational	subjective	vigorous PA	objective	Inhibition	response inhibition reaction time	negative	0,316	< .05	64	young adults	1 week
4	observational	subjective	vigorous PA	objective	Inhibition	go trials reaction time	negative	0,079	> .05	64	young adults	1 week
4	observational	subjective	vigorous PA	objective	Inhibition	nogo trials reaction time	negative	0,189	> .05	64	young adults	1 week
5	observational	objective	light PA	subjective	Shifting	task switching perceptions	positive	0,36	0,07	32	young adults	1 week
6	observational	subjective	vigorous PA	objective	Inhibition	go/no-go inhibition	negative	0,08	> .05	118	young adults	1 week
6	observational	subjective	vigorous PA	objective	Inhibition	stop-signal inhibition	negative	0,13	> .05	118	young adults	1 week
6	observational	subjective	vigorous PA	objective	Updating	visual memory updating	positive	0,14	> .05	118	young adults	1 week
6	observational	subjective	vigorous PA	objective	Updating	n-back updating	positive	0,19	< .05	118	young adults	1 week
6	observational	subjective	vigorous PA	objective	Shifting	task-cueing shifting	negative	0,06	> .05	118	young adults	1 week
6	observational	subjective	vigorous PA	objective	Shifting	alternating runs shifting	negative	-0,11	> .05	118	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Inhibition	go/no-go inhibition	negative	-0,15	< .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Inhibition	stop-signal inhibition	negative	-0,04	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Updating	visual memory updating	positive	-0,03	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Updating	n-back updating	positive	-0,04	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Shifting	task-cueing shifting	negative	-0,01	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Shifting	alternating runs shifting	negative	-0,01	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Inhibition	inhibition factor score	negative	-0,12	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Updating	updating factor score	positive	-0,03	> .05	191	young adults	1 week
7	RCT	subjective	vigorous PA	objective	Shifting	shifting factor score	negative	-0,01	> .05	191	young adults	1 week
8	intervention	objective	class attendance	objective		dual task % error	negative	0,1	> 0.5	177	older adults	12 months
8	intervention	objective	class attendance	objective	Inhibition	stroop task cost	negative	0,01	> 0.5	177	older adults	12 months
8	intervention	objective	class attendance	objective	Inhibition	flanker proportional cost	negative	0,04	> 0.5	177	older adults	12 months
8	intervention	objective	class attendance	objective		WCST % per errors	negative	-0,01	> 0.5	177	older adults	12 months
8	intervention	objective	class attendance	objective	Shifting	task-switching costs	negative	0,02	> 0.5	177	older adults	12 months

Notes. RCT = Randomized controlled trial, PA = Physical Activity, MVPA = Moderate/Vigorous Physical Activity, EF = Executive function, N = Sample size