

Supplementary table 1. Descriptive statistics and results of the Kolmogorov Smirnov test (KS) for total sample of participants

	Mean	Minimum	Maximum	Std.Dev.	KS (p)
Body height (cm)	145.0	130.0	163.0	6.4	0.11 (> 0.20)
Body mass (kg)	37.9	23.1	62.3	8.1	0.12 (> 0.10)
Body mass index (kg/m ²)	17.9	13.3	27.9	3.0	0.10 (> 0.20)
Fat mass (%)	24.3	14.5	40.3	5.4	0.09 (> 0.20)
Muscle mass (%)	43.0	33.8	51.9	3.2	0.08 (> 0.20)
Trunk lift (reps)	18.5	9.0	30.0	4.6	0.10 (> 0.20)
Broad jump (cm)	137.2	102.0	191.0	19.9	0.09 (> 0.20)
Sit and reach (cm)	48.1	0.0	75.0	12.4	0.13 (< 0.10)
Pacer (ml/kg/min)	53.7	42.1	65.1	5.6	0.09 (> 0.20)
Sit-ups (reps)	12.0	0.0	58.0	10.0	0.13 (> 0.10)
Push-ups (reps)	8.2	0.0	38.0	7.5	0.12 (> 0.10)
PLAYself (score)	73.2	28.7	94.1	11.2	0.07 (> 0.20)
PAQ-C (score)	3.5	2.0	4.7	0.6	0.08 (> 0.20)

Supplementary table 2. Correlations between study variables for total sample of participants (* denotes p < 0.05); results are presented as Pearson’s correlation (95%CI)

	BH	BM	BMI	FM	MM	TL	BJ	SR	PT	SU	PU	PLAC
BH	-											
BM	0.68* (0.56, 0.77)	-										
BMI	0.33* (0.15, 0.49)	0.91* (0.87, 0.94)	-									
FM	0.21 (0.02, 0.38)	0.75* (0.65, 0.82)	0.84* (0.77, 0.89)	-								
MM	-0.28* (-0.45, -0.1)	-0.72* (-0.8, -0.61)	-0.77* (-0.84, -0.68)	-0.94* (-0.96, -0.91)	-							
TL	0.04 (-0.15, 0.23)	0.18 (-0.01, 0.36)	0.23* (0.04, 0.4)	0.16 (-0.03, 0.3)	-0.07 (-0.26, 0.12)	-						
BJ	0.04 (-0.15, 0.23)	0.08 (-0.11, 0.27)	0.07 (-0.12, 0.26)	0.11 (-0.08, 0.29)	-0.12 (-0.3, 0.07)	0.13 (-0.06, 0.31)	-					
SR	-0.07 (-0.26, 0.12)	0.02 (-0.17, 0.21)	0.06 (-0.13, 0.25)	0.00 (-0.19, 0.19)	0.05 (-0.14, 0.24)	0.38* (0.2, 0.53)	0.14 (-0.05, 0.32)	-				
PT	0.09 (-0.1, 0.28)	0.02 (-0.17, 0.21)	-0.05 (-0.24, 0.14)	-0.06 (-0.25, 0.13)	0.01 (-0.18, 0.2)	-0.12 (-0.3, 0.07)	0.56* (0.41, 0.68)	-0.09 (-0.28, 0.1)	-			
SU	-0.16 (-0.34, 0.031)	-0.14 (-0.32, 0.05)	-0.10 (-0.28, 0.09)	-0.12 (-0.3, 0.07)	0.10 (-0.09, 0.28)	0.20 (0.01, 0.38)	0.37* (0.19, 0.52)	0.13 (-0.06, 0.31)	0.08 (-0.11, 0.27)	-		
PU	-0.07 (-0.26, 0.12)	-0.02 (-0.21, 0.17)	0.01 (-0.18, 0.2)	0.03 (-0.16, 0.22)	0.00 (-0.19, 0.19)	0.03 (-0.16, 0.22)	0.56* (0.41, 0.68)	0.12 (-0.07, 0.3)	0.36* (0.18, 0.51)	0.30* (0.12, 0.46)	-	
PLAC	-0.26* (-0.43, -0.07)	-0.24* (-0.41, -0.053)	-0.17 (-0.35, 0.021)	-0.05 (-0.24, 0.14)	0.07 (-0.12, 0.26)	0.10 (-0.09, 0.28)	0.10 (-0.09, 0.28)	-0.09 (-0.28, 0.1)	0.08 (-0.11, 0.27)	0.14 (-0.05, 0.32)	0.01 (-0.18, 0.2)	-
PA	0.10 (-0.09, 0.28)	0.17 (-0.02, 0.35)	0.14 (-0.05, 0.32)	0.14 (-0.05, 0.32)	-0.16 (-0.34, 0.03)	0.14 (-0.05, 0.32)	0.16 (-0.03, 0.34)	0.12 (-0.07, 0.3)	0.07 (-0.12, 0.26)	0.03 (-0.16, 0.22)	0.07 (-0.12, 0.26)	0.28* (0.1, 0.45)

Legend: BH – body height, BM – body mass, BMI – body mass index, FM – fat mass, MM – muscle mass, TL – trunk lift, BJ – broad jump, SR – sit and reach, PT – pacer test, SU – sit ups, PU – push-ups, PLAC – physical literacy (affective and cognitive domains) obtained by PLAYself questionnaire, PA – physical activity obtained by PAQ-C

Supplementary table 3. Age stratified correlations (3rd graders and 4th graders) between study variables (* denotes p < 0.05); results are presented as Pearson’s correlation (95%CI)

		BH	BM	BMI	FM	MM	TL	BJ	SR	PT	SU	PU	PL _{AC}
BH	3rd	-											
	4th	-											
BM	3rd	0.60* (0.39, 0.75)	-										
	4th	0.75* (0.61, 0.85)	-										
BMI	3rd	0.25 (-0.03, 0.49)	0.92* (0.86, 0.95)	-									
	4th	0.43* (0.19, 0.62)	0.92* (0.87, 0.95)	-									
FM	3rd	0.09 (-0.19, 0.35)	0.75* (0.6, 0.85)	0.86* (0.77, 0.92)	-								
	4th	0.28 (0.02, 0.51)	0.75* (0.61, 0.85)	0.85 (0.75, 0.91)	-								
MM	3rd	-0.25 (-0.49, 0.03)	-0.70* (-0.82, -0.53)	-0.72* (-0.83, -0.56)	-0.88* (-0.93, -0.8)	-							
	4th	-0.28 (-0.51, -0.02)	-0.74* (-0.84, -0.59)	-0.85* (-0.91, -0.75)	-0.99* (-0.99, -0.98)	-							
TL	3rd	-0.07 (-0.34, 0.21)	0.19 (-0.09, 0.44)	0.27 (-0.01, 0.51)	0.18 (-0.1, 0.43)	0.01 (-0.26, 0.28)	-						
	4th	0.10 (-0.17, 0.36)	0.17 (-0.1, 0.42)	0.19 (-0.08, 0.43)	0.14 (-0.13, 0.39)	-0.14 (-0.39, 0.13)	-						
BJ	3rd	-0.12 (-0.38, 0.16)	-0.21 (-0.46, 0.07)	-0.22 (-0.46, 0.06)	-0.16 (-0.41, 0.12)	0.13 (-0.15, 0.39)	0.13 (-0.15, 0.39)	-					
	4th	0.09 (0.83, 0.94)	0.31* (0.05, 0.53)	0.38* (0.13, 0.59)	0.30* (0.04, 0.52)	0.31* (0.05, 0.53)	0.07 (-0.2, 0.33)	-					

SR	3rd	-0.09 (-0.35, 0.19)	0.19 (-0.09, 0.44)	0.27 (-0.01, 0.51)	0.28 (0.01, 0.51)	-0.15 (-0.41, 0.13)	0.33* (0.06, 0.55)	0.21 (-0.07, 0.46)	-				
	4th	-0.11 (-0.36, 0.16)	-0.20 (-0.44, 0.07)	-0.20 (-0.44, 0.07)	-0.32* (-0.54, -0.06)	0.32* (-0.54, -0.06)	0.41* (-0.61, -0.16)	0.00 (-0.27, 0.27)	-				
PT	3rd	-0.03 (-0.3, 0.24)	-0.28 (-0.51, -0.01)	-0.34* (-0.56, -0.07)	-0.35* (-0.57, -0.09)	0.24 (-0.04, 0.48)	-0.20 (-0.45, 0.08)	0.54* (0.31, 0.71)	-0.23 (-0.47, 0.05)	-			
	4th	0.19 (-0.08, 0.43)	0.36* (0.1, 0.57)	0.36* (0.1, 0.57)	0.24 (-0.03, 0.48)	-0.24 (-0.48, 0.03)	-0.03 (-0.29, 0.24)	0.59* (0.38, 0.74)	0.08 (-0.19, 0.34)	-			
SU	3rd	-0.17 (-0.42, 0.11)	-0.10 (-0.36, 0.18)	-0.05 (-0.32, 0.23)	-0.06 (-0.33, 0.22)	0.02 (-0.25, 0.29)	0.24 (-0.04, 0.48)	0.53* (0.3, 0.7)	0.06 (-0.22, 0.33)	0.12 (-0.16, 0.38)	-		
	4th	-0.15 (-0.4, 0.12)	-0.20 (-0.44, 0.07)	-0.19 (-0.43, 0.08)	-0.20 (-0.44, 0.07)	0.20 (-0.07, 0.44)	0.17 (-0.1, 0.42)	0.26 (-0.01, 0.49)	0.30 (0.04, 0.52)	0.02 (-0.25, 0.28)	-		
PU	3rd	-0.08 (-0.35, 0.2)	-0.18 (-0.43, 0.1)	-0.18 (-0.43, 0.1)	-0.22 (-0.46, 0.06)	0.28 (0.01, 0.51)	0.08 (-0.2, 0.35)	0.50* (0.26, 0.68)	0.21 (-0.07, 0.46)	0.31* (0.04, 0.54)	0.36* (0.1, 0.58)	-	
	4th	-0.07 (-0.33, 0.2)	0.09 (-0.18, 0.35)	0.18 (-0.09, 0.43)	0.19 (-0.08, 0.43)	-0.19 (-0.43, 0.08)	-0.02 (-0.28, 0.25)	0.62* (0.42, 0.76)	0.04 (-0.23, 0.3)	0.43* (0.19, 0.62)	0.29 (0.03, 0.52)	-	
PL _{AC}	3rd	-0.59* (-0.74, -0.38)	-0.51* (-0.69, -0.28)	-0.33* (-0.55, -0.06)	-0.20 (-0.45, 0.08)	0.22 (-0.06, 0.46)	0.16 (-0.12, 0.41)	0.06 (-0.22, 0.33)	-0.13 (-0.39, 0.15)	0.03 (-0.24, 0.3)	0.15 (-0.13, 0.41)	-0.19 (-0.44, 0.09)	-
	4th	0.04 (-0.23, 0.3)	0.07 (-0.2, 0.33)	0.07 (-0.2, 0.33)	0.10 (-0.17, 0.36)	-0.10 (-0.36, 0.17)	-0.03 (-0.29, 0.24)	0.12 (-0.15, 0.37)	-0.06 (-0.32, 0.21)	0.15 (-0.12, 0.4)	0.12 (-0.15, 0.37)	0.18 (-0.09, 0.43)	-
PA	3rd	-0.06 (-0.33, 0.22)	0.05 (-0.23, 0.32)	0.07 -0.21, 0.34	0.17 (-0.11, 0.42)	-0.19 (-0.44, 0.09)	0.09 (-0.19, 0.35)	0.00 (-0.27, 0.27)	0.12 (-0.16, 0.38)	0.00 (-0.27, 0.27)	-0.04 (-0.31, 0.24)	-0.02 (-0.29, 0.25)	0.18 (-0.01, 0.43)
	4th	0.21 (-0.06, 0.45)	0.29 (0.03, 0.52)	0.26 (-0.01, 0.49)	0.08 (-0.19, 0.34)	-0.09 (-0.35, 0.18)	0.14 (-0.13, 0.39)	0.26 (-0.01, 0.49)	0.05 (-0.22, 0.31)	0.17 (-0.1, 0.42)	0.19 (-0.08, 0.43)	0.14 (-0.13, 0.39)	0.41* (0.16, 0.61)

Legend: BH – body height, BM – body mass, BMI – body mass index, FM – fat mass, MM – muscle mass, TL – trunk lift, BJ – broad jump, SR – sit and reach, PT – pacer test, SU – sit ups, PU – push-ups, PL_{AC} – physical literacy (affective and cognitive domains) obtained by PLAYself questionnaire, PA – physical activity obtained by PAQ-C

Supplementary table 4. Gender stratified (B – boys, G – girls) correlations between study variables for total sample of participants (* denotes p < 0.05); results are presented as Pearson’s correlation (95%CI)

		BH	BM	BMI	FM	MM	TL	BJ	SR	PT	SU	PU	PL _{AC}
BH	B	-											
	G	-											
BM	B	0.74* (0.59, 0.84)	-										
	G	0.62* (0.42, 0.76)	-										
BMI	B	0.49* 0.26, 0.67	0.94* (0.9, 0.96)	-									
	G	0.18 (-0.1, 0.43)	0.88* (0.8, 0.93)	-									
FM	B	0.30* (0.04, 0.53)	0.79* (0.66, 0.87)	0.87* (0.79, 0.92)	-								
	G	0.12 (-0.16, 0.38)	0.70* (0.53, 0.82)	0.81* (0.69, 0.89)	-								
MM	B	-0.30* (-0.53, -0.04)	-0.79* (-0.87, -0.66)	-0.87* (-0.92, -0.79)	-0.99* (-0.99, -0.98)	-							
	G	-0.25 (-0.49, 0.02)	-0.66* (-0.79, -0.47)	-0.67* (-0.8, -0.49)	-0.89* (-0.94, -0.82)	-							
TL	B	0.07 (-0.2, 0.33)	0.06 (-0.21, 0.32)	0.07 (-0.2, 0.33)	0.08 (-0.19, 0.34)	-0.08 (-0.34, 0.19)	-						
	G	0.06 (-0.21, 0.33)	0.36* (0.1, 0.57)	0.41* (0.16, 0.61)	0.26 (-0.01, 0.5)	-0.09 (-0.35, 0.18)	-						
BJ	B	0.17 (-0.1, 0.42)	0.11 (-0.16, 0.37)	0.04 (-0.23, 0.3)	0.20 (-0.07, 0.44)	-0.19 (-0.44, 0.08)	0.08 (-0.19, 0.34)	-					

	G	-0.10 (-0.36, 0.18)	0.04 (-0.23, 0.31)	0.11 (-0.17, 0.37)	0.02 (-0.25, 0.29)	-0.05 (-0.32, 0.22)	0.30* (0.03, 0.53)	-					
SR	B	0.19 (-0.08, 0.44)	0.08 (-0.19, 0.34)	0.01 (-0.26, 0.28)	-0.13 (-0.38, 0.14)	0.13 (-0.14, 0.38)	0.42* (0.17, 0.62)	0.31* (0.05, 0.53)	-				
	G	-0.19 (-0.44, 0.085)	0.01 (-0.26, 0.28)	0.11 (-0.17, 0.37)	0.08 (-0.19, 0.34)	0.00 (-0.27, 0.27)	0.15 (-0.13, 0.4)	0.16 (-0.12, 0.41)	-				
PT	B	0.06 (-0.21, 0.32)	0.08 (-0.19, 0.34)	0.04 (-0.23, 0.3)	0.11 (-0.16, 0.37)	-0.11 (-0.37, 0.16)	-0.08 (-0.34, 0.19)	0.54* (0.32, 0.71)	0.17 (-0.1, 0.42)	-			
	G	0.09 (-0.18, 0.35)	-0.10 (-0.36, 0.18)	-0.19 (-0.44, 0.09)	-0.31* (-0.54, -0.04)	0.19 (-0.09, 0.44)	0.12 (-0.16, 0.38)	0.57* (0.35, 0.73)	-0.02 (-0.29, 0.25)	-			
SU	B	-0.12 (-0.38, 0.15)	-0.14 (-0.39, 0.13)	-0.12 (-0.38, 0.15)	-0.13 (-0.38, 0.14)	0.13 (-0.14, 0.38)	-0.02 (-0.29, 0.25)	0.36* (0.1, 0.57)	0.17 (-0.1, 0.42)	-0.01 (-0.28, 0.26)	-		
	G	-0.18 (-0.43, 0.1)	-0.15 (-0.4, 0.13)	-0.09 (-0.35, 0.18)	-0.13 (-0.39, 0.15)	0.08 (-0.19, 0.34)	0.30* (0.03, 0.53)	0.42* (0.17, 0.62)	0.08 (-0.19, 0.34)	0.23 (-0.04, 0.47)	-		
PU	B	0.18 (-0.09, 0.43)	0.09 (-0.18, 0.35)	0.03 (-0.24, 0.3)	0.07 (-0.2, 0.33)	-0.07 (-0.33, 0.2)	0.07 (-0.2, 0.33)	0.60* (0.4, 0.75)	0.20 (-0.07, 0.44)	0.28 (0.01, 0.51)	0.13 (-0.14, 0.38)	-	
	G	-0.41* (-0.61, -0.16)	-0.20 (-0.45, 0.07)	-0.01 (-0.28, 0.26)	-0.02 (-0.29, 0.25)	0.12 (-0.16, 0.38)	0.26 (-0.01, 0.5)	0.49* (0.25, 0.67)	0.37* (0.11, 0.58)	0.32* (0.05, 0.54)	0.57* (0.35, 0.73)	-	
PL _{AC}	B	-0.40* (-0.6, -0.15)	-0.28 (-0.51, -0.01)	-0.15 (-0.4, 0.12)	0.01 (-0.26, 0.28)	-0.01 (-0.28, 0.26)	0.26 (-0.01, 0.49)	0.17 (-0.1, 0.42)	-0.10 (-0.36, 0.17)	0.02 (-0.25, 0.29)	0.06 (-0.21, 0.32)	-0.12 (-0.38, 0.15)	-
	G	-0.13 (-0.39, 0.15)	-0.21 (-0.45, 0.06)	-0.19 (-0.44, 0.09)	-0.12 (-0.38, 0.16)	0.15 (-0.13, 0.4)	-0.04 (-0.31, 0.23)	0.03 (-0.24, 0.3)	-0.11 (-0.37, 0.17)	0.19 (-0.09, 0.44)	0.19 (-0.09, 0.44)	0.19 (-0.09, 0.44)	-
PA	B	0.19 (-0.09, 0.44)	0.27 (0.01, 0.5)	0.25 (-0.02, 0.49)	0.24 (-0.03, 0.48)	-0.24 (-0.48, 0.03)	0.29 (0.02, 0.52)	0.18 (-0.09, 0.43)	0.21 (-0.06, 0.45)	0.04 (-0.23, 0.3)	-0.02 (-0.29, 0.25)	0.08 (-0.19, 0.34)	0.11 (-0.16, 0.37)
	G	0.03 (-0.24, 0.3)	0.07 (-0.2, 0.33)	0.04 (-0.23, 0.31)	0.04 (-0.23, 0.31)	-0.08 (-0.34, 0.19)	0.05 (-0.22, 0.32)	0.15 (-0.13, 0.4)	0.10 (-0.18, 0.36)	0.12 (-0.16, 0.38)	0.06 (-0.21, 0.33)	0.07 (-0.2, 0.33)	0.44* (0.19, 0.63)

Legend: BH – body height, BM – body mass, BMI – body mass index, FM – fat mass, MM – muscle mass, TL – trunk lift, BJ – broad jump, SR – sit and reach, PT – pacer test, SU – sit ups, PU – push-ups, PL_{AC} – physical literacy (affective and cognitive domains) obtained by PLAYself questionnaire, PA – physical activity obtained by PAQ-C