

Supplemental material S1 - Secondary findings.

Modelling 5-km running performance on level and hilly terrains in recreational runners

SM1.1 - Correlations between 5-km running performance on level and hilly terrains versus anthropometric and neuromuscular variables in recreational runners

Table S1.1 Pearson correlation coefficients (*r*) and p-values (*P*) between level and hilly running performance *versus* anthropometric and neuromuscular variables.

Variables	Level		Hilly	
	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>
Body Mass (kg)	-.032	.892	-.089	.708
Height (m)	-.088	.711	-.054	.820
Body Fat (%)	-.086	.718	-.028	.907
BMI (kg.m ⁻²)	-.029	.972	-.078	.745
LLL (cm)	-.008	.902	-.003	.989
Maximum ST (kg)	-.334	.150	-.180	.448
Relative ST (kg·body mass ⁻¹)	-.424	.062	-.194	.413

Body Mass Index (BMI), Lower Limb Length (LLL), Strength (ST).

SM1.2 - Correlations between 5-km running performance on level and hilly terrains versus physiological variables in recreational runners. In this section, we have included the non-specific correlations, i.e., between level performance versus physiological variables determined from uphill (7%) tests, and between hilly performance versus physiological

variables determined from level (0%) tests.

Table S1.2 Pearson correlation coefficients (r) and p-values (P) between level running performance *versus* physiological variables evaluated in maximal and submaximal tests at 7% incline.

Variables	level running performance	
	r	P
VO ₂ max	-.404	.070
vVO ₂ max	-.530	.016
VT ₁	-.078	.744
vVT ₁	-.285	.223
HR at VT ₁	.032	.894
VT ₂	-.417	.067
vVT ₂	-.758	.001
HR at VT ₂	.247	.294
RE	-.298	.202
HR _{RE}	.807	.001

Table S1.3 Pearson correlation coefficients (r) and p-values (P) between hilly running performance *versus* physiological variables evaluated in maximal and submaximal tests at 0% incline.

Variables	hilly running performance	
	r	P

VO ₂ max	-.332	.153
vVO ₂ max	-.633	.003
VT ₁	-.400	.080
vVT ₁	-.416	.068
HR at VT ₁	.027	.911
VT ₂	-.464	.039
vVT ₂	-.636	.003
HR at VT ₂	.316	.175
RE	-.274	.243
HR _{RE}	.653	.002