

**Table S1.** Shapiro-Wilk, skewness and kurtosis results of the variables obtained from Hooper and Mackinnon wellness questionnaire, heart rate and speed.

Method	HIIT + SCWT				HIIT			
	Shapiro Wilk		Skewness	Kurtosis	Shapiro Wilk		Skewness	Kurtosis
	Contrast	p-value			Contrast	p-value		
Physical effort	0.890	0.003	-1.022	0.622	0.873	0.001	0.155	-1.548
Cognitive effort	0.899	0.006	-0.562	0.536	0.939	0.068	-0.121	-0.866
Emotional effort	0.900	0.006	-1.212	1.958	0.933	0.047	-0.261	-0.964
Mean HR	0.970	0.509	0.253	0.825	0.965	0.377	0.602	0.526
Maximum HR	0.980	0.790	0.254	-0.334	0.971	0.532	-0.215	-0.208
Mean speed	0.960	0.275	0.229	-1.014	0.958	0.249	-0.554	-0.211
Maximum speed	0.972	0.544	-0.165	-0.791	0.945	0.107	-0.788	0.369

HR: Heart rate; VT1: Ventilatory threshold 1.

**Table S2.** Shapiro-Wilk, skewness and kurtosis results of the differences between pre and post of the Questionnaire to Quantify the Mental Load in Sports (QQMLS), visual analogue scale for mental fatigue, and RMSSD.

Method	HIIT + SCWT				HIIT			
	Shapiro Wilk		Skewness	Kurtosis	Shapiro-Wilk		Skewness	Kurtosis
	Contrast	p-value			Contrast	p-value		
General fatigue	0.878	0.002	0.078	-0.679	0.918	0.018	0.679	2.008
Muscle soreness	0.894	0.004	0.423	1.122	0.850	<0.001	0.551	-0.399
Stress level	0.822	<0.001	-0.444	1.326	0.896	0.002	1.565	5.323
Mood state	0.336	<0.001	-1.211	2.830	0.794	<0.001	<0.001	1.564
VAS	0.958	0.241	-0.046	1.398	0.949	0.133	0.457	0.498
RMSSD	0.980	0.803	-0.012	-0.483	0.986	0.939	0.368	0.809

HR: Heart rate; VT1: Ventilatory threshold 1.