P91. Competitive warm-up in international friendly fixtures: Exploratory study in U-16 national basketball team

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INTRODUCTION

A proper warm-up strategy is determinant to achieve the optimal state of readiness and consequently to perform in basketball (Berdejo-del-Fresno, 2011). However, the physical demands of warm-up strategies during international fixtures is practically unknown. The purpose of this study was to assess the reliability of external measures of a competitive warm-up.

METHODS

Ten under-16 national team basketball players participated in an 18-minute warm-up before 3 international friendly fixtures. The warm-up consisted of (a) four-corner passing drill (2 min.) (b) general warm-up and offensive skills drill (6 min.), (c) lay-ups (3 min.), (d) 3-points shooting (2 min.), (e) free-throws and defensive slide (2 min.) and (f) quick lay-ups (3 min.). Workload data was collected via WIMU PRO Local Positioning System (Realtrack Systems, Almeria, Spain), sampled at 20 Hz, and housed tri-axial accelerometer (100 Hz). External workload consisted of distance covered (DC) ($m \cdot min^{-1}$), distance covered ($m \cdot min^{-1}$) in stationary per walking (< 6.0 $km \cdot h^{-1}/min^{-1}$), jogging (>6.0–12.0 $km \cdot h^{-1}$), running (>12.10–18.0 $km \cdot h^{-1}$), high-intensity running (> 18.0 $km \cdot h^{-1}$), accelerations (Acc) and decelerations (Dec) ($n \cdot min^{-1}$), high-intensity accelerations (HIAcc) and decelerations (HIDec) ($n \cdot min^{-1}$), peak speed (PS) ($km \cdot h^{-1}$), peak acceleration (PAcc) and deceleration (PDec) ($m \cdot s^{-2}$), high-intensity actions (HIA) ($n \cdot min^{-1}$) and Player Load (PL) (a.u./min.) (Vazquez-Guerrero, Reche, Cos, Casamichana, & Sampaio, 2018). Intraclass correlation coefficient (2,1) (ICC) between the 3 international friendly fixtures three assessments, was computed using SPSS (SPSS, Inc., Version 24.0, Chicago, IL) with the 95% confidence limit.

RESULTS

The highest amount of distance was covered at low-intensity (stationary per walking and jogging) (Table 1). *Almost perfect* agreement was found for high-intensity actions (ICC = 0.82). *Substancial* agreement was found for distance covered in stationary per walking, jogging and, high-intensity running, but also for accelerations, decelerations and player load (ICC range = 0.69-0.79) (table 1).

Table 1

Intraclass correlation coefficient for the external load measures

Variable	Mean±SD	ICC	Variable	Mean±SD	ICC
DC ($m \cdot min^{-1}$)	82.14±6.43	0.25	HIAcc ($n \cdot min^{-1}$)	1.13±0.43	0.40
Stationary per walking ($m \cdot min^{-1}$)	31.48±3.11	0.79	HIDec ($n \cdot min^{-1}$)	1.03±0.38	0.57
Jogging ($m \cdot min^{-1}$)	40.94±6.50	0.72	PS ($km \cdot h^{-1}$)	16.43±1.36	0.24
Running ($m \cdot min^{-1}$)	9.62±3.39	0.58	PAcc ($m \cdot s^{-2}$)	2.87±0.27	0.20
High-intensity running ($m \cdot min^{-1}$)	0.09±0.24	0.73	PDec ($m \cdot s^{-2}$)	-2.84±0.35	0.58
Acc ($n \cdot min^{-1}$)	18.71±1.11	0.73	HIA ($n \cdot min^{-1}$)	10.55±4.07	0.83
Dec ($n \cdot min^{-1}$)	18.63±1.08	0.69	PL (a.u./min.)	1.43±0.20	0.77

CONCLUSIONS

The present competitive warm-up is a reliable strategy in most of acceleration/deceleration related variables (Acc, Dec, HIA and PL). The athletes performed higher values of DC, HIAcc, HIDec, HIA, and PL in the warm-up than during the international friendly fixtures. Thus, current strategy may afford suitable opportunities for the athletes to prepare physically and mentally for the international fixtures.

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