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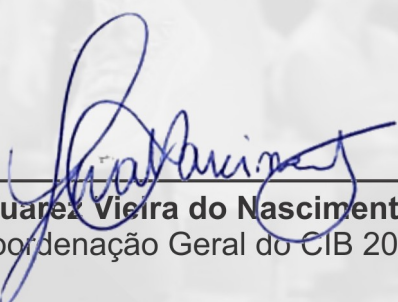Prezado(a) Pesquisador(a): **ZHANG SHAOLIANG**

Informamos que o estudo **COMPARISON OF THE MOVEMENT CHARACTERISTICS BASED ON POSITION-SPECIFIC BETWEEN U18 AND PROFESSIONAL BASKETBALL PLAYERS** de autoria de Juan Trapero; Carlos Sosa; Shaoliang Zhang; Changjing Zhou; Rubén Portes; Miguel-angel Gómez; Alberto Lorenzo foi **APROVADO** para ser apresentado no formato de **Comunicação Oral** no *IX Congresso Ibérico de Basquetebol/ II Congreso Iberoamericano de Baloncesto* (CIB 2018), que será realizado em Florianópolis/SC, no período de 20 a 24 de novembro de 2018.

As informações sobre a data, o horário, o local e o modelo de apresentação dos trabalhos serão disponibilizadas no site do congresso a partir do dia 21 de agosto de 2018. Assim, o primeiro autor do trabalho deverá estar regularmente inscrito no congresso (cadastrado e com a taxa de inscrição paga) até o dia **20 de agosto de 2018** para viabilizar a apresentação do trabalho e a respectiva publicação do resumo nos Anais do CIB 2018. Caso o primeiro autor não possa estar presente no evento, somente um dos coautores regularmente inscrito no evento poderá apresentar o trabalho.

As indicações da Comissão Científica do CIB 2018, para submissão da versão completa do artigo em periódicos indexados em bases de referência internacional, serão encaminhadas posteriormente ao primeiro autor de cada trabalho selecionado.

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Cordialmente,
Comissão Científica IX CIB

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Juarez Vieira do Nascimento
Coordenação Geral do CIB 2018

COMPARISON OF THE MOVEMENT CHARACTERISTICS BASED ON POSITION-SPECIFIC BETWEEN U18 AND PROFESSIONAL BASKETBALL PLAYERS

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PALAVRAS-CHAVE:movement characteristics; Physical performances; Playing position

INTRODUÇÃO

The use of smart sensor devices in basketball may provide important information about the physical and physiological demands during practice and competition (Fox, Scanlan, & Stanton, 2017). The assessment of acceleration and deceleration efforts is crucial in quantifying the repeated intermittent efforts performed by players (Vigh-Larsen, Dalgas, & Andersen, 2017). To date, the performance profiles of accelerations and decelerations of basketball players have been documented in the studies (Schelling and Torres, 2016; Svilar, Castellano, & Juki?, 2018; Svilar, Castellano, Jukic, & Casamichana, 2018), but little is known regarding the difference of the movement characteristics between young and professional basketball players according to playing position. Consequently, the aim of this study was to compare the movement characteristics according to specific playing position between U18 and professional basketball players.

MATERIAIS E MÉTODOS

24 basketball players were used. 12 of them played in a U18 team (Guards=5; Forwards=5; Centres=2) (age: 17.6 ± 0.4 years), and were qualified as "*semi-elite players*" (Swann, Moran, & Piggott, 2015). Semi-elite athletes are those whose highest level of participation is below the top standard possible in their sport (e.g., in talent development programs). These players competed at the highest national level and in some international competitions.

In addition, 12 professional basketball players (Guards=5; Forwards = 4; Centres= 3) (age: 28 ± 3.9 years), who were identified as "*world – class elite players*" (Swann, et al., 2015), which means that the players have experienced sustained success at the highest level, with repeated wins over a prolonged period of time.

A total of 120 drills of 5x5 full court were recorded (65 of the U18 team and 55 of the professional team). The acceleration/min, deceleration/min, max acceleration, max deceleration, g-force accelerations and deceleration of both groups, was measured using an inertial measurement unit (WIMU, Realtrack Systems, Almeria, Spain). The accelerometer was attached to the player using an elastic shirt tight on the back. The reliability and validity of WIMU Realtrack Systems were identified to reach an acceptable level (Muyor, Granero-Gil, & Pino-Ortega, 2017). The project was approved by the local Scientific and Ethics Committee and all procedures complied with the Declaration of Helsinki.

Data were tested for normality using a Shapiro–Wilk test, with all data shown to be normally distributed ($p > 0.05$). The differences between U18 and professional basketball players considering specific-position were tested by independent sample t-test. Mean differences between two groups, 95% confidence intervals (CI) and Cohen's d effect sizes (ES) were calculated for all differences. Effects were classified as trivial (0.0–0.2), small (0.2–0.5), moderate (0.5–0.8), and large (>0.8). Statistical analyses were conducted in IBM SPSS Version 22.0 (IBM Corporation, Somers, New York, USA).

RESULTADOS

Our results show that U18 basketball players, from all position, made more movement of acceleration and deceleration per average minutes than their counterpart professional basketball players.

According to the position-specific, U18 guards have better performance in g-force acceleration (ES=0.88) and g-force deceleration (ES=0.98) than professional guards. The same results for U18 centres (g-force acceleration, ES=0.44; and g-force deceleration, ES=0.53).

Conversely, professional forwards have better performance in max acceleration (ES=0.42) and deceleration (ES=0.42) than U18 forwards.

CONCLUSÃO

The aim of this study was to compare the movement characteristics according to specific playing position between professional and U18 basketball players. It is worth noting that U18 basketball players from all position made more movement of the accelerations and decelerations per average minutes than professional basketball players. This result is supported by Zhang et al. (2017) who pointed out that professional performers make more informed decisions on when and where to run in offence and defence; therefore, those players possibly covered shorter distances at lower average velocities to reach their destinations.

Additionally, U18 guards and centres have better performance in g-force acceleration and g-force deceleration than professional guards and centres, whereas professional forwards have better performance in max acceleration and deceleration than U18 forwards. These results are supported by the study of Scanlan, Dascombe, & Reaburn (2011); Svilar, Castellano, Jukic, et al. (2018) who suggested that there are differences in terms of the activity profiles of accelerations and decelerations among position-specific as well as between game categories.

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