IS THERE A DIFFERENCE IN COUNTERMOVEMENT JUMPING PROFILES BETWEEN STARTERS AND NON-STARTER IN COLLEGIATE FEMALE ROWERS?

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INTRODUCTION

Athletes are recruited for specific positions and or events on their respective teams, however, does one's physiological profile enable them to be successful? The purpose of this study was to see if there are differences in countermovement jump performance between starters and non-starters in division II collegiate female rowers.

METHODS

Starters and non-starters were grouped according to the head rowing coach for the women's rowing team. Nine non-starters (age = 19.22 ± 1.09 years, height 170.16 cm ± 9.90 cm, mass 73.26 kg ± 13.17 kg) and eight starters (age = 19.75 ± 1.39 years, height 170.44 cm ± 2.28 cm, mass 71.91 kg ± 5.80 kg) performed maximum countermovement jumps. A jumping mat was used to measure countermovement vertical jump height (CMJ_JH, and a linear transducer was used to assess average power (AP), peak power (PP) average velocity (AV) and peak velocity (PV) variables. Each individual performed three maximal attempts, and the highest CMVJH attempt was used for analysis. A non-parametric Mann Whitney U was used to assess differences between status, and an alpha of 0.05 was used for level of significance.

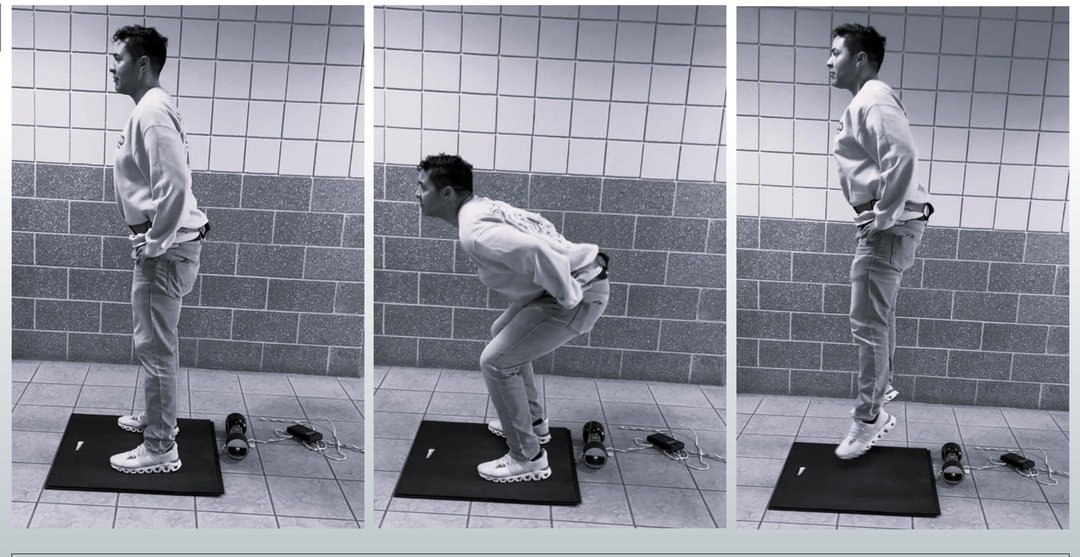

Figure 1. Includes pictures of the countermovement jump (CMJ) from start to finish. Athletes were instructed to keep hands on their hips the whole time, and were asked to jump as high as they could. The jumping mat measured vertical jump height, and the linear transducer measured average and peak power, as well as average and peak velocity.

RESULTS

The present findings observed no significant difference for CMJ_JH (P = 0.541), AP (P = 0.200), PP (P = 0.743), AV (P = 0.673) and PV (P = 0.541).

CONCLUSIONS

The present findings suggest that CMJ performance does not differentiate starter from non-starter in division II collegiate rowers.

PRACTICAL APPLICATIONS

These findings may be of importance to the coaching or strength and conditioning staff. While the present study did not see a difference in vertical jump performance between status (starter vs. non-starter), future studies may want to incorporate more sensitive modes of assessment (emg, force plate, etc.) to further researchers understanding in physiological profile differences with athletes.

ACKNOWLEDGEMENTS

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Countermovement Jump Height Performance with Division II Female Rowers

	Starters (n = 8)		Nonstarters (n = 9)		
	Mean	SD	Mean	SD	P
CMJ height (cm)	37.4	4.73	38.83	2.51	0.541
MV ($m \cdot s^{-1}$)	1.08	0.32	1.17	0.2	0.673
PV ($m \cdot s^{-1}$)	2	0.73	2.31	0.3	0.541
MP (w)	753	226.08	861.11	194.59	0.200
PP (w)	3561.25	1847.08	4082.33	1589.04	0.743

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