



Is There a Difference in Squat-Jump Profiles Between Starters and Non-Starters in Collegiate Female Rowers?



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INTRODUCTION

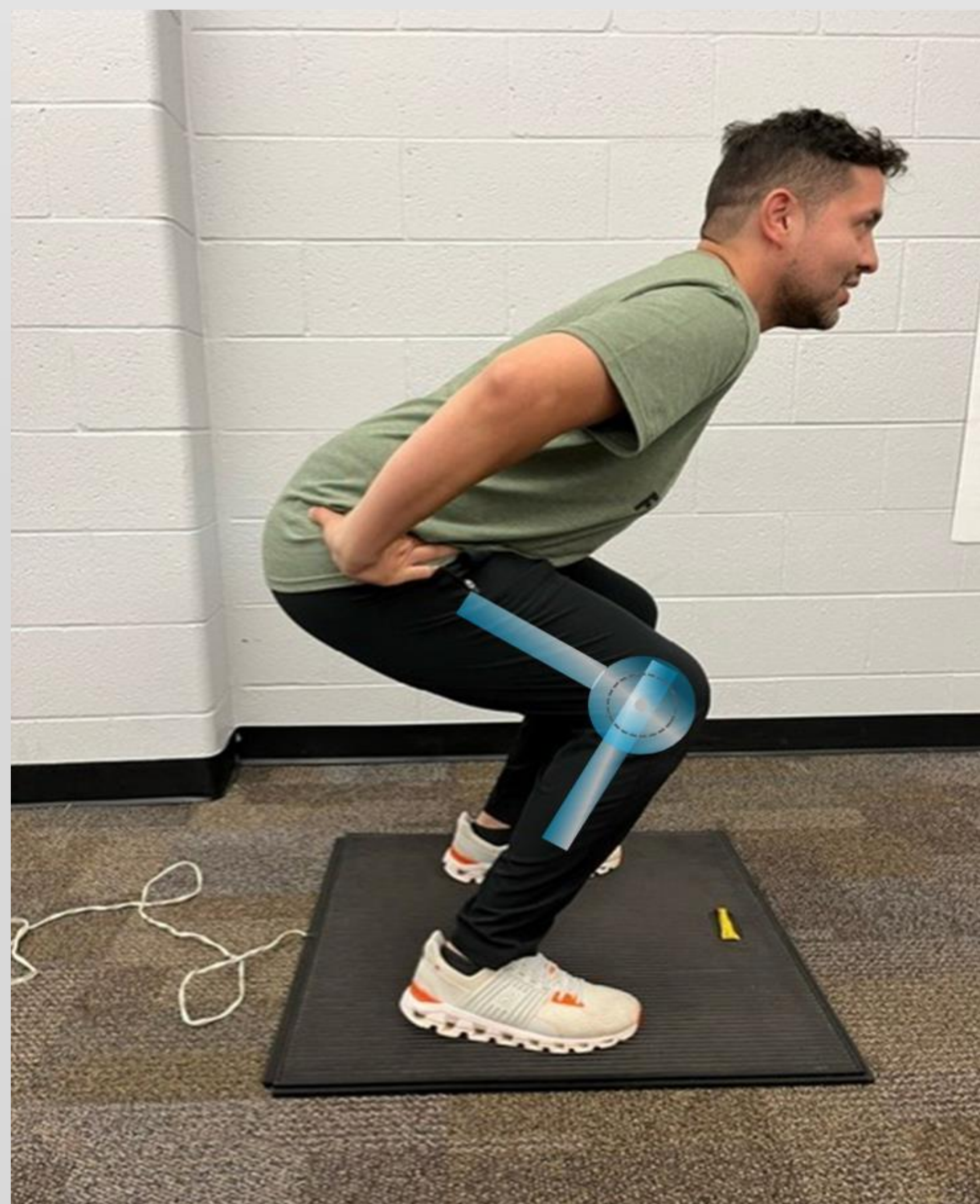
Power has been shown to be a dominant variable required for athletic performance. Among collegiate female rowers, power may be necessary through movement mechanics (row), as well as leg drive. **PURPOSE:** To analyze the power and velocity variables with a squat jump (SJ) among Division II collegiate female rowers.

METHODS

Methods: Two groups, starters and non-starters were organized in accordance with the head rowing coach for the women's rowing team. Eight starters (age = 19.75 ± 1.39 years, height 170.44 cm ± 2.28 cm, mass 71.91 kg ± 5.80 kg) and nine non-starters (age = 19.22 ± 1.09 years, height 170.16 cm ± 9.90 cm, mass 73.26 kg ± 13.17 kg) performed three maximal effort squat jump attempts. Squat jump height was assessed with the utilization of a jumping mat (SJ_JH). While average power (AP), peak power (PP) average velocity (AV), and peak velocity (PV) were measured simultaneously via the use of a linear transducer. Of the three attempts the highest SJH was used for analysis. A non-parametric Mann Whitney U evaluated the difference between the groups and an alpha of 0.05 was used for level of significance.

Table 1. Mean (Standard Deviation) Values for Performance Assements

	Non-Starter		Starter		P-Value
	Mean	SD	Mean	SD	
Squat Jump Height (cm)	33.73	6.12	35.43	4.21	<i>P</i> = 0.673
AV (m·s ⁻¹)	1.07	0.28	1.17	0.07	<i>P</i> = 0.743
PV (m·s ⁻¹)	2.03	0.63	2.03	0.56	<i>P</i> = 0.743
AP (w)	780.33	208.03	869.88	134.14	<i>P</i> = 0.321
PP (w)	3259.44	1355.37	3319.25	1299.85	<i>P</i> = 0.743



RESULTS

RESULTS: The current results of this study indicate no statistically significant difference between groups for SJ_JH (*P* = 0.673), AP (*P* = 0.743), PP (*P* = 0.743), AV (*P* = 0.321) or PV (*P* = 0.743)

CONCLUSIONS

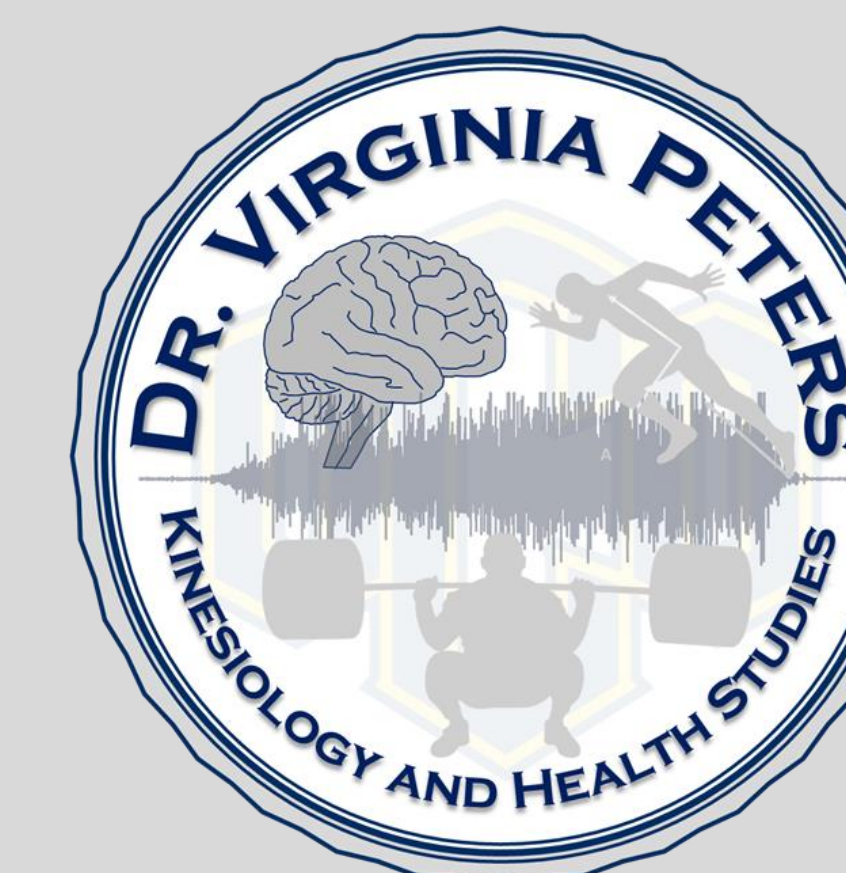
Conclusion: A differentiation between a starter and non-starter in Division II collegiate female rowers was not found for power and or velocity measures when performing maximal SJ's.

PRACTICAL APPLICATIONS

Application: Although the present study did not observe significant differences in SJ performance between groups, the present findings can allow for other evaluation methods (other power and or velocity variables), or other more sensitive measurements (rate of torque or force development) to be implemented on collegiate female rowers.

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