

Sex-Specific Difference of Functional Movement Screening Scores Among Rodeo Athletes

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ABSTRACT

Faulty movement patterns, especially in elite athletes, can lead to neuromuscular imbalances. Rodeo is an example of an injury prone sport that requires optimal muscular synergy, endurance, strength, and limb flexibility to succeed in rodeo performance. The Functional Movement Screening (FMS) test has shown validity in identifying various neuromuscular imbalances, and subsequently, scientific findings support the FMS threshold score (less ≤ 14) as valid for injury risk screening in collision and team sports, firefighters, and the tactical professions. If an athlete has a composite score of 14 or less in conjunction with a previous injury, they are 15 times more likely to sustain an injury. FMS studies have indicated women are more proficient in lower leg raise, while men possess greater trunk stability. However, both men and women overall report no significant differences in mean scores for FMS. However, identifying FMS outcome differences between male and female rodeo athletes has yet to be examined. **PURPOSE:** The purpose of the current investigation was to identify sex-specific FMS outcomes for rodeo athletes. **METHODS:** Collegiate rodeo athletes ($n = 85$; 25 men, 60 women) completed a Functional Movement Screening Test to establish athlete specific movement pattern efficiencies. A MANOVA ($p < .05$) was employed to examine differences in FMS outcomes between male and female rodeo athletes. **RESULTS:** Statistically significant main effect was reported between sex in overall FMS outcomes of rodeo athletes, $F(8, 76) = 5, p < .001$; Wilks' $\Lambda = .655, \eta^2 = .345$. Specifically, a significant between-subjects effect recognized sex differences when performance Active Straight Leg Raise ($p < .001$), Shoulder Mobility ($p = .012$), Truck Stability ($p = .005$), In-Line Lunge ($p = .005$), and Deep Squat ($p = .029$). No significant differences being identified between the sexes when assessing the Hurdle Step ($p = .201$), Rotary Stability ($p = .739$), nor Total FMS score ($p = .820$). **CONCLUSION:** These results suggest differences in FMS outcomes between sexes may be present among different rodeo events. Additionally, and specific to rodeo, FMS outcomes may be attributed to different physical demands associated with sex-specific events of rodeo. This information may also provide future researchers and practitioners insight into potential injury associated with low FMS scores of rodeo athletes.