

## A Pilot Study Examining the Relationship between Functional Movement Screening Scores and Rodeo Performance Outcomes

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### ABSTRACT

Research has identified diverse levels of flexibility among different sports and the athletes that compete within them. Rodeo, in particular, is a high intensity, high velocity sport, that requires substantial dynamic range of motion during competition. Functional Movement Screening (FMS) is a comprehensive set of tests that is recognized as a valid precursor to identifying potential injury and has established mobility norms for various sports. However, no studies have explored the FMS profile of rodeo athletes and the relationship between FMS and rodeo performance. **PURPOSE:** This investigation was designed to establish FMS norms for rodeo athletes per event (i.e., rough stock and timed events) and determine the impact of mobility on event specific performance. **METHODS:** Pre-season FMS was conducted on 29 collegiate rodeo athletes. Rodeo performance outcomes was collected upon the conclusion of the regular spring season rodeo. A spearman's rank order correlation was employed to assess the relationship between FMS scores and rodeo performance outcomes. Alpha levels were set at  $p < 0.05$ . **RESULTS:** Descriptive FMS results ( $M \pm SD$ ) are as follows: Tiedown Ropers ( $n = 2$ )  $15 \pm 1.41$ ; Saddle Bronc Riders ( $n = 2$ )  $15.5 \pm 0.71$ ; Steer Wrestlers ( $n = 5$ )  $16.6 \pm 2.70$ ; Breakaway Ropers ( $n = 13$ )  $16.6 \pm 2.43$ ; Goat Tiers ( $n = 5$ )  $17.2 \pm 1.79$ ; Barrel Racers ( $n = 6$ )  $16.2 \pm 2.14$ . Strong, significant negative correlations were recognized between Barrel Racers Average Time and Shoulder Mobility ( $r_s(6) = -.878, p = .021$ ), Rotary Stability ( $r_s(5) = -.845, p = .034$ ), Deep Squat ( $r_s(5) = -.878, p = .021$ ), and Total FMS Score ( $r_s(5) = -.812, p = .050$ ). Marginal correlations were identified between Shoulder Mobility and Catch Percentage ( $r_s(5) = .783, p = .118$ ) and In-line Lunge and Average Time ( $r_s(5) = -.707, p = .182$ ) for Steer Wrestlers. A marginal correlation was identified between Hurdle Step and Average Time ( $r_s(13) = -.536, p = .059$ ), and Rotary Stability and Average Time ( $r_s(5) = -.707, p = .182$ ) for Breakaway Ropers. **CONCLUSION:** These results provide a novel perspective regarding the FMS status of rodeo athletes, and highlights the influence sufficient dynamic mobility has on rodeo performance outcomes.