

# A Correlation Study Between Shoulder Power, Hand Grip Strength, and Functional Movement in Cricket Players of South Gujarat Region by Using Medicine Ball Put Test, Hand Dynamometer and Functional Movement Screen

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## Abstract

**Background:** Cricket as a sport requires excellent functional movement, upper extremity power, hand grip strength, and coordination.

**Objective:** The study aimed to find the correlation between Shoulder Power, Grip Strength, and Functional Movement in Professional Cricket Players of the South Gujarat Region. Shoulder power is essential for cricketers and Medicine Ball Put Test is used to measure it. Hand Grip Strength is one of the best indicators of overall strength of upper limb

and the Hand Dynamometer is the most reliable tool to measure grip strength. Functional Movement Screen identifies seven fundamental movement patterns with a score ranging from 0-21 points.

**Methodology:** This study was conducted with 98 cricketers of age group 18-22 using a convenient sampling method, according to inclusion and exclusion criteria 95 cricketers were included in the study and conducted over 6 months. The Outcome Measures were used to measure Shoulder Power, Grip Strength, and Functional Movement.

**Result:** The correlation coefficient of Grip Strength and Shoulder Power is  $r = 0.60$ , the correlation coefficient of Grip Strength and Functional Movement is  $r = 0.35$  and the correlation coefficient of Shoulder Power and Functional Movement is  $r = 0.42$ .

**Conclusion:** The result concludes that Grip Strength and Shoulder Power have a high correlation + association, Functional Movement and Shoulder Power have a moderate correlation + association and Functional Movement and Grip Strength have a weak correlation + association.

**Keywords:** Cricket Players; Functional Movement Screen; Grip Strength; Shoulder Power