

Statistical Analysis Plan

Differences in Lower-Extremity Strength and Power between Elite Hockey Players with and without Patellar Tendinopathy

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Descriptive statistics [mean \pm standard deviation (SD)] are calculated for all variables. The Shapiro–Wilk test is used to assess the normal distribution of the observed measurements. One-way ANOVA, followed by a post hoc Bonferroni test, is used to identify differences among the healthy group and the groups with unilateral and bilateral PT for the observed variables. To evaluate effect sizes (ES) for differences among the groups, partial eta squared values (η^2) are used as follows: small ES: >0.02 ; medium ES: >0.13 ; large ES: >0.26 . A paired-samples t-test is used to identify differences in peak force output between the left and right legs, separately within each observed group. Based on a power of 0.90 ($\alpha = 0.05$), approximately seven experimental players for each group and seven control players are required to detect a 20% difference between unilateral PT, bilateral PT, and controls. Therefore, this study is planned to recruit a minimum of 25 players, accounting for potential dropouts. Statistical significance for all tests is set at $p < 0.05$. Statistical analyses are performed using SPSS® 30.0 (IBM SPSS Statistics, New York, USA) for Windows.