

Title: Evaluation of Hand Grip Strength in Elite and Novice Rock Climbers by Using Jamar Plus Digital Hand Dynamometer

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Abstract (250-300 words)

Hand grip strength is responsible for efficient performance evaluation and provides an objective index for the functional integrity of upper extremity. The aim of the study was to compare the grip strength of elite and novice rock climbers and to evaluate the effect of dominant hand on hand grip strength of rock climbers. Thirty rock climbers were taken through non probability convenient sampling for this cross sectional study. 15 of them were assigned in a group of elite rock climbers who had the climbing experience of more than a year while the rest 15 rock climbers were lie under the category of novice rock climbers who had the climbing experience of less than a year. Grip strength in pounds (lbs.) was measured by using Jamar Plus Digital Hand Dynamometer. Elite rock climbers had more hand grip strength than novice rock climbers for right hand (173.15±44.96,141.13±38.81) and left hand (160.28±56.46,106.57±41.88) respectively. The results regarding comparison of hand grip strength in elite and novice rock climbers as shown by t test, the difference of mean was 32.02 and a significant p-value 0.046 and difference of mean 53.71 and a non-significant p-value 0.07 indicating significant marked difference of right and no significant difference in left hand grip strength assessment, respectively. No statistically significant difference (p-value=0.212) was found between the grip strength of left handed elite and novice rock climbers in favour of the dominant hand whereas statistically significant difference (p-value=0.05) was found for right handed elite and novice rock climbers in favour of the dominant hand. We concluded that hand grip strength can be improved with climbing experience and achievement and the dominant hand is significantly stronger in right handed people but no significant difference between sides could be documented for left handed people.

Biography(100-150 words)

Dr. Noor Fatima has completed her Doctor of Physical Therapy Degree from University of Lahore and doing Master of Science in Neurology from University of Lahore. She has worked as Physiotherapist at University of Lahore Teaching Hospital.

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