

Measurement of the Quadriceps Angle with Respect to Various Body Parameters in Arab Countries

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Abstract : The quadriceps angle (Q angle), formed between the quadriceps muscles and the patella tendon, is considered clinically as a very important parameter which displays the biomechanical effect of the quadriceps muscle on the knee, and it is also regarded as a crucial factor for the proper posture and movement of the knee patella. This study had been conducted to measure the normal Q angle values range in the Arab nationalities and determine the correlation between Q angle values and several body parameters, including gender, height, weight, dominant side, and the condylar distance of the femur. The study includes 500 healthy Arab students from Yarmouk University and Jordan University of Science and Technology. The Q angle of those volunteers was measured using a universal manual Goniometer with the subjects in the upright weight-bearing position. It was found that the Q angle was greater in women than in men. The analysis of the data revealed an insignificant increase in the dominant side of the Q angle. In addition, the Q was significantly higher in the taller people of both sexes. However, the Q angle did not present any considerable correlation with weight in the study population; conversely, it was observed that there was a link with the condylar distance of the femur in both sexes. It was also noticed that the Q angle increased remarkably when there was an increase in the condylar distance. Consequently, it turned out that the gender, height, and the condylar distance were momentous factors that had an impact on the Q angle in our study samples. However, weight and dominance factors did not show to have any influence on the values in our study.

Keywords : Q angle, Jordanian, anatomy, condylar distance

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