

Postural Photogrammetry as Promising Tool for Clinical Use: A Reliability Study

ABSTRACT

Many studies on postural photogrammetry had reported various intra-class correlation coefficients (ICC) across postural variable measurements, however no conclusive solution was given. This reliability and cross-sectional study was done in June 2016 at the Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah. A total of 24 male adult subjects with mean age 28.5 years (± 4.8 years), body mass 24.97 kg (± 3.85 kg) and height 166.6 cm (± 6 cm) were evaluated for standing postural photogrammetry. Four sets of manually digitized posture image files (by 4 raters) were measured and statistically analyzed for inter-rater agreement as well as the influence of image resolution and camera height from the floor on various postural variable measurements. The ICC between 4 raters for all postural variables was excellent (the lowest ICC was 0.940 for Q Angle of the Right Knee measurements). Two-Way ANOVA showed that postural variable measurements were not affected by either image resolution or camera height from the floor. Scrupulous attempts done on standing postural photogrammetry amplified the potential for standing postural evaluation in clinical settings.