عنوان مقاله:

Evaluating the Validity and Reliability of Thoracic and Lumbar Curvature Measurements Using Image Processing Software (IPSO)

محل انتشار:

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خلاصه مقاله:

The present study aimed to evaluate image processing software (IPSO) for physical abnormalities compared to standard Cobb measurements when measuring thoracic and lumbar curvature. This was a correlational study. The participants included ۵۶ healthy male and female volunteers visiting the radiology centers at Firoozgar and Bahonar hospitals in Tehran with a mean age of ۴۵.۲±۱۳.۹ years, mean weight of ۷۶.۱±۱۲.۳ kg, mean height of ۱.۶۷±۰.۱۳ m, and mean body mass index (BMI) of ۲۷.۴ ± ۵.۷ kg/m۲. Before the study, the participants were briefed on the significance, purpose, and process, completed a medical-sports record questionnaire, and consented to participate in the study. Thoracic and lumbar curves were measured using radiography (the Cobb measurement) and image processing software.The results showed that the thoracic (ICC=۰.۶۵) and lumbar curve (ICC=۰.۶۱) measurement data obtained using the image processing method had moderate validity relative to the Cobb method; Moreover, lumbar (ICC=۰.۹۸) and thoracic (ICC=۰.۹۶) curves measured with the test-retest software had excellent reliability. The reliability of the thoracic and lumbar curve measurements using the two testers with the image processing software were respectively (ICC=۰.۹۱) and (ICC=۰.۸۴). The good to excellent reliability and moderate validity of thoracic and lumbar curve measurements using image processing software for physical abnormalities and its ease of use, lower cost, and more features mean that it can be used to examine thoracic and lumbar skeletal deformities, and especially treatment them.Physical abnormalities are diagnosed and evaluated using different software; and one such software registered in Iran for image processing of physical abnormalities is IPSO corrective exercises.

کلمات کلیدی:

Validity؛ Reliability؛ Image Processing Software (IPSO)؛ Cobb method

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