Scoliosis

POSTER PRESENTATION Open Access

The influence of lateral spinal curvature on range of motion

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Background

This study was conducted in Primary school on 97 pupils, age12±2, on 55 girls and 42 boys.

Aim

The objective of this research was to establish the existence of lateral spinal curvature, as well as its influence on range of motion of the spine.

Methods

Height, body mass, spacing between hands, and length of the upper limbs were measured in all of the examinees. Lateral spinal curvature was identified using a bob (plummet) and clinical examination. Examinees performed five spinal flexibility tests: right and left lateral mobility test, forward bending test, shoulder static flexibility test, and neck and trunk static flexibility test. Results gathered using a bob (plummet) and clinical examination were compared to the results of flexibility tests. Difference between these methods in children with, and without, lateral spinal curvature was determined with statistical T-test. Medcalc program was used for statistics. Statistical significance was affirmed at p=0.01 level.

Results

Results on the prevalence of lateral spinal curvature in this study show less case in male population, 35.71%, over female population, 40%. Results of all four flexibility tests were in favor of healthy population. Neck and trunk static flexibility test showed difference of 4.11cm with statistical significance of p=0.0021, shoulder static flexibility test 4.41cm (p=0.0078), right lateral mobility test 2.62cm (p=0.0008), and left lateral mobility test 2.52cm (p=0.0017). There was no statistical significance for forward bending test.

Conclusion

According to above mentioned results, it can be concluded that lateral spinal curvature has a considerable significance on spinal mobility.

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