



Immediate Effect of Thai Massage on Calf Muscle Flexibility and Postural Sway in Overweight Children: Pilot Study

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ABSTRACT

Introduction: Nowadays, overweight children are increasing and possibly impact on postural control. The excessive body weight reacted to postural perturbations and various body systems. Maintaining posture is essential for daily activities. However, the intervention to improve postural balance in overweight children is limited.

Objective: To explore the immediate effects of Thai massage on postural balance by recording the trajectory of the center of pressure (COP) in overweight children.

Methods: Twenty Thai children who are 10 – 12 years old with overweight (BMI from 85th to 94th percentile) were recruited from the school in Chiang Rai province and then categorized into treatment and control groups. Postural sway was examined using a force plate (Zebris Medical, Isny, Germany). Gastrosoleus muscle flexibility was measured by weight bearing ankle lunge test. The treatment group received a Thai massage for 30 minutes on the area of both feet, legs and hips and the control group rested on bed.

Results: There were no statistically significant differences between groups of postural sway. The flexibility of gastrosoleus muscle was significantly differences between groups ($p < 0.05$).

Conclusion: Thirty minute of Thai massage sessions showed immediate improvement of muscle flexibility that is important for postural control. However, there are some limitations of this study including small sample size and convenience sampling.

Keywords: Thai massage; postural sway; postural balance; muscle flexibility; overweight children