

# RECURRENT NECK PAIN AND HEADACHES IN PREADOLESCENTS ASSOCIATED WITH MECHANICAL DYSFUNCTION OF THE CERVICAL SPINE: A CROSS-SECTIONAL OBSERVATIONAL STUDY WITH 131 STUDENTS

Sue A. Weber Hellstenius, DC, MSc

## ABSTRACT

**Objective:** To identify if there were differences in the cervical biomechanics in preadolescents who had recurrent neck pain and/or headaches and those who did not.

**Methods:** A controlled comparison study with a convenience sample of 131 students (10-13 years old) was performed. A questionnaire placed students in the no pain group or in the neck pain/headache group. A physical examination was performed by a doctor of chiropractic to establish head posture, active cervical rotation, passive cervical joint functioning, and muscle impairment. The unpaired t test and the  $\chi^2$  test were used to test for differences between the 2 groups, and data were analyzed using SPSS 15 (SPSS Inc, Chicago, Ill).

**Results:** Forty percent of the children (n = 52) reported neck pain and/or recurrent headache. Neck pain and/or headache were not associated with forward head posture, impaired functioning in cervical paraspinal muscles, and joint dysfunction in the upper and middle cervical spine in these subjects. However, joint dysfunction in the lower cervical spine was significantly associated with neck pain and/or headache in these preadolescents. Most of the students had nonsymptomatic biomechanical dysfunction of the upper cervical spine. There was a wide variation between parental report and the child's self-report of trauma history and neck pain and/or headache prevalence.

**Conclusion:** In this study, the physical examination findings between preadolescents with neck pain and/or headaches and those who were symptom free differed significantly in one of the parameters measured. Cervical joint dysfunction was a significant finding among those preadolescents complaining of neck pain and/or headache as compared to those who did not.

(J Manipulative Physiol Ther 2009;32:625-634)

Key Indexing Terms: Neck Pain; Headache; Child; Cervical Vertebrae; Chiropractic