



## Reduction in neck strength in young people with and without headache

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Individuals with headache have reduced isometric flexion and extension muscle strength, but it is not known whether this reduction is already present in the early years of the disease. To evaluate the strength of the flexor and extensor muscles of the cervical spine in young adults with and without headache. This study included young adults of both sexes, aged between 18 and 30, with and without a diagnosis of headache and excluded those with a history of cervical trauma; pregnancy; herniated or bulging cervical disc and joint pathologies; cervical and facial tumors. A pre-prepared questionnaire was used to assess general data, the Headache Screening Questionnaire (HSQ) to screen for headache and the Neck Disability Index (NDI) was used to assess the level of disability related to neck pain. Flexor and extensor muscle strength was measured using a portable dynamometer (Lafayette Instrument Company). The normality of the data was tested using the Shapiro-Wilk test, the data was summarized by means and standard deviation, analysis of variance (ANOVA) was used to verify the difference between the groups, the level of statistical significance adopted was  $p \leq 0.05$ . We assessed  $n=60$  individuals,  $n=30$  with headache and  $n=30$  from the control group, with a mean age, height and weight of  $23.33 \pm 6.28$  years,  $1.64 \pm 0.09$ m<sup>2</sup> and  $64 \pm 12.14$  kg and  $22.07 \pm 2$  years,  $1.62 \pm 2$ m<sup>2</sup> and  $64.54 \pm 14.11$  respectively ( $p=0.34$ ), mean time, frequency, duration and intensity of headache of  $3.26 \pm 2.4$  years  $10.9 \pm 8.20$  days,  $18 \pm 8$  hours,  $8.82 \pm 1.07$  VAS. Mild neck pain was the most common in both groups. A significant difference was observed between the groups for the extensor muscles ( $p=0.043$ ). Young adults with headache showed reduced strength in the flexor muscles of the cervical spine when compared to controls.

Ethics Committee for Research with Human Beings of CEUMA University - UNICEUMA opinion no. 4.874.439