

Baseline determinates of pain and disability in subgroups of adolescents with chronic musculoskeletal pain

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Chronic musculoskeletal pain is a common complaint between adolescents and its prevalence has been increasing over the last few years (1,2). Simultaneously, several different factors have been associated with chronic pain and disability in adolescents, including psychosocial factors, sleep, physical activity (3-6). Both psychosocial factors and sleep impairments also have been associated with central sensitization (7,8). However, few studies have simultaneously explored these factors. This study aims to explore and compare the association between psychosocial factors, sleep, central sensitization, and **chronic neck, back** and **limb pain** and disability in adolescents.

Methods

1730 adolescents who attended the 10th, 11th, and 12th grades were recruited from four high schools in Portugal (ethical approval number 19/2018) and were invited to complete an online questionnaire. Based on pain location, adolescents with chronic pain were grouped by chronic neck pain, thoracic and low back pain, and lower limb pain. Regression analysis was used to assess the associations between these variables and pain and disability.

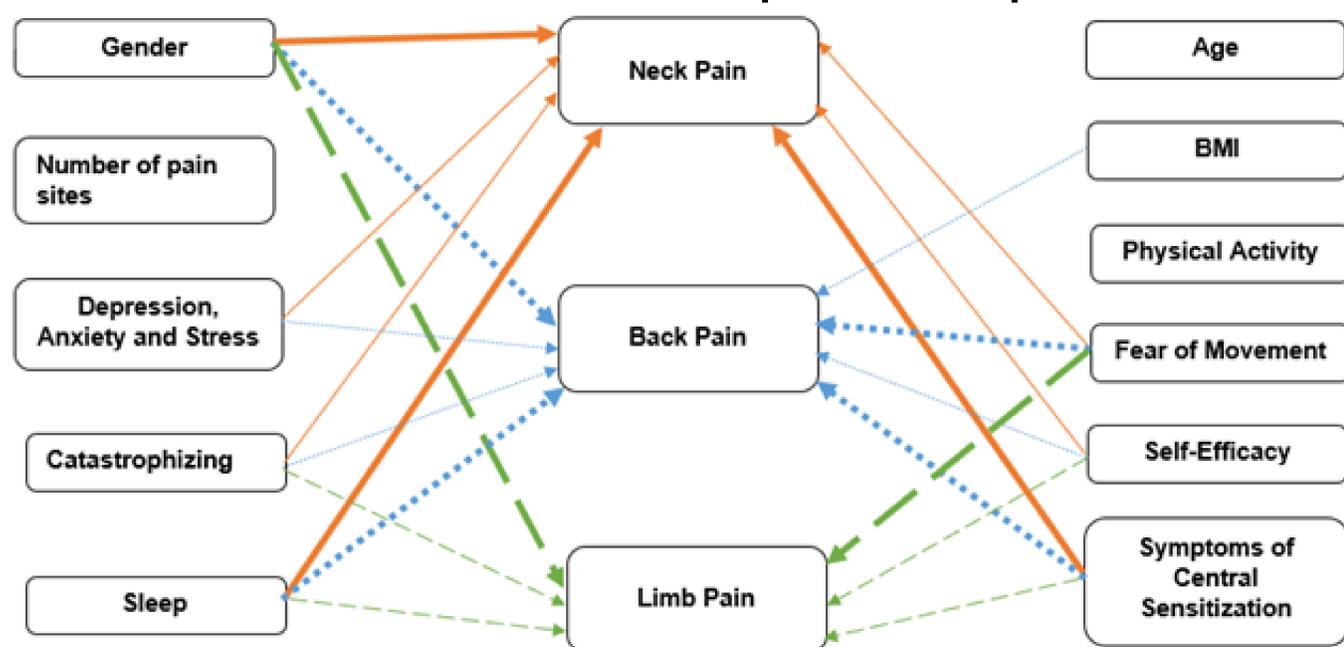
Results

Of the 1730 adolescents who participated in the study, 753 were categorized into chronic neck pain group, 384 in the back pain group and 298 in the limb pain group.

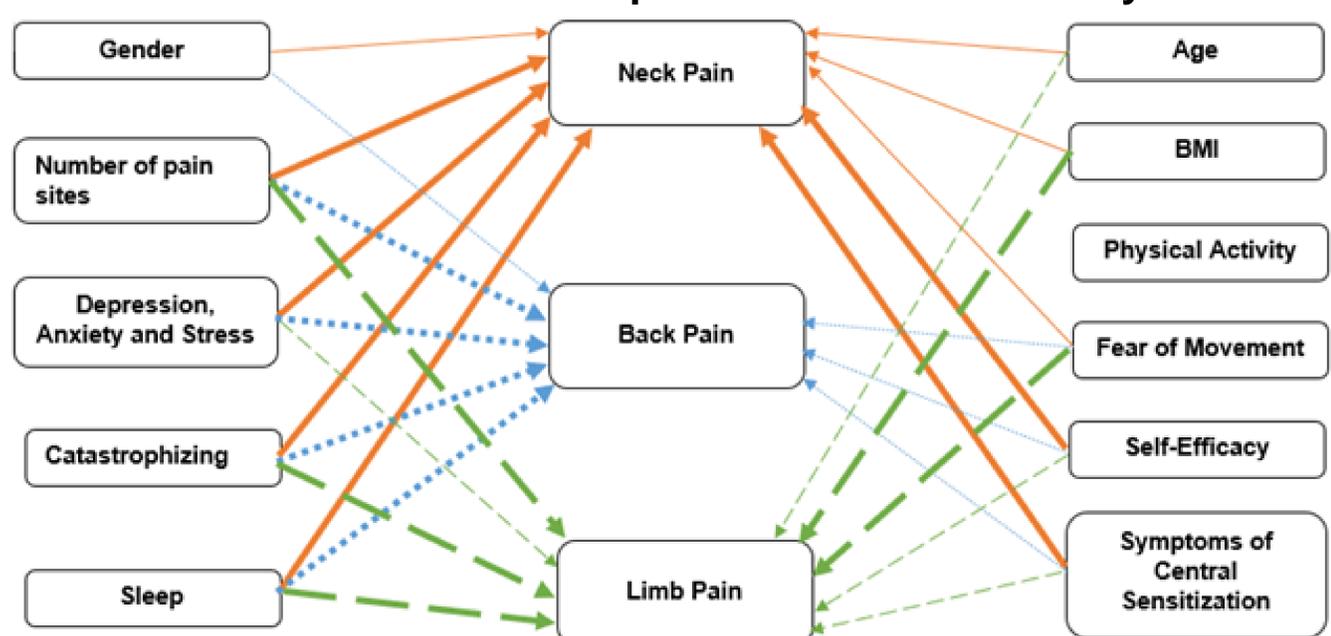
Highlights

- **Symptoms of central sensitization** and poor quality of **sleep** were associated with both **neck pain** and disability.
- Poor quality of **sleep** was associated with both **back pain** and disability
- **Fear of movement** was associated with both **limb pain** and disability
- Other factors should be included in the assessment of adolescents with chronic pain depending on the painful body sites.

Factors associated with the presence of pain



Factors associated with pain-associated disability



Note: Continuous orange lines represent the factors associated with the neck pain group, the dotted lines in blue represent the factors associated with the back pain group and the dashed lines in green represent the factors associated with the limb pain group. All thicker lines represent the factors that remained in the multivariable analysis.