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The relationship between reported musculoskeletal pain in elementary school children and their participation in activities at school and at home: An ergonomic point of view

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Introduction: In the past few years, clinicians and researchers in the field of ergonomics have begun to examine whether or not ergonomic principles are relevant for children, especially in various learning environments. Recent studies report that the number of children complaining of discomfort and pain in the musculoskeletal system is on the rise. Objectives: the purpose of this study was to examine whether forth to sixth grade pupils report of discomfort or pain, in the musculoskeletal system, following participation in various activities at school and at home. The study looked at the extent of the phenomenon and the possible risk factors such as the type of activity and its frequency. Methods: The study included 168 elementary school children from the center of the Israel. The main study measure was the "Children and Youth activities Questionnaire", which was translated from English for the purpose of this research. The questionnaire underwent a content validation process and changes were made to adjust for age and culture. Results: In general, the students in this sample reported low levels of discomfort or pain. In addition, students participated in various activities with high frequencies in computer use (home and school), sports, watching TV and writing. The extent and frequency of computer usage increased with age. Fifth and sixth graders reported a higher percentage of discomfort or pain, as a result of using a laptop computer, Conclusions: It appears that the older the children get, there is an increase in the use of computers and an increased frequency of reported discomfort or pain. Yet, further study is needed to examine the epidemiology of this phenomenon. Contribution to the practice occupational therapy: the findings of this study support the importance of developing an ergonomic instruction program for children, parents and teachers to promote health and good working habits. In addition the interventions need to take into account the culture and the specific environments of the students.