

NAZIV DISERTACIJE: Ergonomska analiza školskog namještaja i antropometrijskih karakteristika djece u prevenciji mišićno – koštanih poremećaja**Autor: Aldina Alibegović****Mentor: Prof. dr. Amra Mačak Hadžimerović****Datum odbrane: 23.01.2023.****DOI: <https://doi.org/10.17532/DD.2023.01>****SAŽETAK**

Uvod: Mišićno – koštani poremećaji djece školske dobi predstavljaju globalni zdravstveni problem s dokazima da rasprostranjenost problema raste. Ukupna prevalenca mišićno – koštanih poremećaja među djecom školske dobi u razvijenim zemljama kreće se od 16% do 86%, a u zemljama u razvoju učestalost je veća i kreće se od 46,3% do 88,8%. Kako bi se spriječili zdravstveni problemi, važno je „radno ili školsko okruženje“ prilagoditi potrebama djece školske dobi.

Ciljevi: Ciljevi studije su bili ispitati stavove djece školske dobi o udobnosti školskog namještaja, ispitati lokalizaciju i intenzitet bola te stepen umora tokom sjedenja u školi, analizirati položaj tijela tokom sjedenja na školskom času, ispitati nivo usklađenosti između dimenzija školskog namještaja i antropometrijskih karakteristika djece školske dobi, analizirati uticaj školskog namještaja i položaja tijela na pojavu mišićno – koštanih poremećaja, te kreirati ergonomske – preventivno – promotivni priručnik za djecu školske dobi.

Materijal i metode: Studija je obuhvatila 150 ispitanika oba spola (52% ispitanika muškog spola i 48% ispitanika ženskog spola), od čega je 86 ispitanika pohađalo sedmi razred, a 64 ispitanika je pohađalo osmi razred. Svim ispitanicima koji su bili uključeni u istraživanje, radila su se mjerenja antropometrijskih karakteristika u sjedećem položaju i mjerile su se dimenzije školskog namještaja, te se radila analiza položaja tijela tokom sjedenja na školskom času. Također, svi ispitanici su bili anketirani na osnovu odabranih anketnih upitnika o ispitivanju stavova o udobnosti školskog namještaja, o lokalizaciji i intenzitetu bola, te stepenu umora.

Rezultati: Analizom usklađenosti školskog namještaja, utvrđeno je da je školski namještaj neusklađen za 55,3% ispitanika, djelimično usklađen za 43,3% ispitanika, dok je za 1,3% ispitanika bio u potpunosti usklađen. Utvrđeno je da su neusklađenost između dimenzija školskog namještaja i antropometrijskih karakteristika djece, te nefiziološki položaji sjedenja tokom pohađanja nastave, povezani s pojavom mišićno – koštanih poremećaja djece školske dobi.

Zaključak: Istraživanje je potvrdilo sve tri radne hipoteze, da dimenzije školskog namještaja nisu usklađene s antropometrijskim karakteristikama djece školske dobi (HR1), zatim da je neusklađen školski namještaj statistički značajno utiče na pojavu mišićno – koštanih poremećaja djece školske dobi (HR2), te da djeca školske dobi većinu vremena sjede nepravilno tokom trajanja školskog časa (HR3).

Ključne riječi: školski namještaj, školska djeca, mišićno-koštani poremećaji, ergonomija, sjedeći položaj.

DISSERTATION TITLE:**Author:** Aldina Alibegović**Mentor:** Prof. dr. Amra Mačak Hadžimerović**Date of defence:** 23. January 2023.**DOI:** <https://doi.org/10.17532/DD.2023.01>**ABSTRACT**

Introduction: Musculoskeletal disorders in school-aged children are a global health problem and evidence suggests that the prevalence of the problem is increasing. The overall prevalence of musculoskeletal disorders in school-aged children ranges from 16% to 86% in developed countries, and is higher in developing countries, ranging from 46.3% to 88.8%. In order to prevent health problems, it is important to adapt the "work or school environment" to the needs of school-age children.

Aim: The aim of the study was to investigate the attitude of school children towards the comfort of school furniture, to investigate the localization and intensity of pain and the degree of fatigue while sitting at school, to analyze the posture while sitting at school, to investigate the degree of correspondence between the dimensions of school furniture and the anthropometric characteristics of the age of school children, to analyze the influence of school furniture and posture on the incidence of musculoskeletal disorders, and to develop an ergonomic preventive support manual for school children.

Material and Methods: The study included 150 respondents of both genders (52% male respondents and 48% female respondents), of which 86 respondents attended the seventh grade and 64 respondents attended the eighth grade. Anthropometric characteristics were measured in a seated position for all respondents included in the study, and the dimensions of school furniture were obtained, as well as an analysis of posture while sitting in class. In addition, all respondents were asked about their attitudes toward the comfort of school furniture, the localization and intensity of pain, and the degree of fatigue using selected questionnaires.

Results: When analyzing the agreement of school furniture, it was found that school furniture was not agreed for 55.3% of the respondents, partially agreed for 43.3% of the respondents, and fully agreed for 1.3% of the respondents. It was found that the mismatch between the dimensions of school furniture and the anthropometric characteristics of children, as well as non-physiological sitting positions during lessons, were associated with the occurrence of musculoskeletal disorders in school-age children.

Conclusion: The study confirmed all three working hypotheses, namely that the dimensions of school furniture do not match the anthropometric characteristics of school-aged children (HR1), that inappropriate school furniture has a statistically significant effect on the incidence of musculoskeletal disorders in school-aged children (HR2), and that school-aged children usually sit irregularly during lessons (HR3).

Key words: school furniture, school children, musculoskeletal disorders, ergonomics, sitting position.