

## THE INCIDENCE OF SAGITTAL POSTURAL DEFORMITIES AMONG HIGH SCHOOL STUDENTS: PRELIMINARY STUDY

### **Abstract**

**INTRODUCTION:** The regular posture of children and youth is nowadays, in a global sense, a great challenge. **AIM:** The goal of the current research was to make an assessment of the postural status of the high school children, both male and female, and determine the frequency of the postural deformities in the sagittal plane, i.e., the frequency of kyphotic, lordotic, and kypho-lordotic bad body posture, as well as if there is a statistically significant difference with the determined deformities regarding the sports activities and the sex of the subjects. **METHODS:** The data of the postural status were achieved within the research project OI179024, funded by the Ministry of Education and Science of the Republic of Serbia. The sample of the subjects comprised 236 participants (of male sex, N=103 or 43,6%; female sex N=133 or 56,4%) of the high school of economy in Nis, of bodily height of 173, 42+7,62 cm, bodily weight 64,6+10,35 or of age 16,82+1,33 (Mean+St.Dev). The sample of subjects was divided into sub-samples of athletes (N=116 or 49,2%) or sub-sample of non-athletes (N=120 or 50,8%). The results are shown by table, applying the descriptive statistics and z-test for the difference between two proportions. **RESULTS:** Kyphotic, lordotic and kypho-lordotic bad body posture was found among 20,8%, 24,2% or 33,1% of the subjects respectively. Significant changes of deformities of the spinal column, between athletes and non-athletes, are present regarding the kyphotic bad body posture (more present in the sample of non-athletes, sig = 0,000), while the significance regarding the lordotic bad body posture is at the threshold of significance (sig=0,062). Between boys and girls, there are statistically significant differences regarding the kyphotic, lordotic and kypho-lordotic bad body posture (more present with the girls, sig=0,000, sig=0,000,; sig=0,000; respectively). **CONCLUSION:** While preventing and correcting postural deformities, there should be a focus on the isometric muscle potential first, i.e. the endurance of the musculature and the strength with the statistical conditions of muscular strain.

**Key words:** sagittal postural status, high school population, frequency, athletes, non-athletes, boys, girls

---