

Prevalence of postural deviations in school of education and professional practice of physical education

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Abstract

This study aimed to verify through postural assessment proposed by Kendall, McCreary and Provance (1990), the prevalence of postural alignment of elementary school students of both sexes, aged between seven and ten years. For the definition of the survey, was chosen a private school in the city of Hortolandia - SP were evaluated in 201 schools. The methodology was the demarcation of the spinous processes of the cervical, thoracic and lumbar vertebrae of the students were evaluated after posterior and lateral views. Data were tabulated and treated statistically. The results showed a high incidence in postural deviations and asymmetries compared to existing research. It was observed that boys showed an incidence of kyphosis and lordosis higher than girls and that scoliosis is present in more girls.

Keywords: postural evaluation, postural deviations, school.

1 Introduction

The posture of the human body has been studied in several areas as anthropology, anatomy, kinesiology, orthopedics, among others, due to the great importance it has in the context of development and human movement through this descriptive study where we analyzed the prevalence of postural alignment and the role of school physical education teachers face these asymmetries. The stance taken by the man brings advantages in terms of movement and release of the upper limbs, making it more skilled and thus contributing to the development of habits acquired by him over the years, but these habits are collaborating with each day so that men will become increasingly sedentary. Modern man spends much more time sitting, tense, without doing physical exercise, overeating and working in positions vicious, because of the technological breakthrough, the facilities of modern life and mass of computer. With these changes in culture and habit of life, the anatomy and biomechanics of the spine have also been modified, where their changes and their consequences become an important focus in the academic, scientific and medical. In Brazil, disorders of the spine are the second leading cause of worker removal in the service retirement, and 80% of the population, suffer from some type of change in the locomotor period of his greatest productivity (BRACCIALLI, 1997). These changes may be present from childhood and adolescence, taking into account several factors, specifically the body posture adopted in classrooms by students (EITNER, KUPRIAN, MEISSNER et al., 1984).

The material carried in backpacks, the weight of this material, school furniture, and body composition among other factors, verifying the high prevalence of postural problems in school due to lack of proper orientation on the nutritional quality of students as well as the quality of life and specific guidance on posture where these phases, changes,

sudden and disorderly occur during the development and growth of the individual allowing for the development or enhancement of postural problems (ASCHER, 1976).

According to Gallahue and Ozmun (2003), several factors, including the nutritional deficiencies and excesses, serious illness and prolonged the acute and chronic effects of exercise on levels of low and high intensity can modify the normal development process and can influence the growth patterns and have lasting effects on children.

According to research conducted by Somazz (1999) 22.4% of students assessed by him have some kind of change in the spine. Bernardineli (1996), analyzing the preschool to fourth grade of elementary school, found that 88% of children were shown to misalignment of the spine, 34% had scoliosis and 24% of students had low back pain. However, while growth is not completed, you can act on skeletal structures realigning them more effectively. Therefore, the sooner the change is identified, addiction, postural misalignment, they will get more time for possible treatments. It is for the physical educator active in school and educational sphere, be prepared to perform postural assessments in school, developing a prevention program and if possible correction of these changes (BRACCIALLI, 1997; ENRIQUEZ, 2002).

2 Material and methods

To develop this study we evaluated 201 children of both sexes (96 boys and 105 girls), aged between seven to ten years regularly enrolled in elementary school the Instituto Adventista São Paulo – IASP, private school Hortolândia municipality. All participating children were formally authorized by their parents through a free and informed consent formally sent to them and returned to school. We

Table 1. Prevalence of postural deviations and asymmetries in students.

Deviations and asymmetries	%
Position of the cervical spine in antepulsion	40.30
Flexion of his thoracic spine of boys	63.54
Flexion of his thoracic spine of girls	25.72
Hyperextension lumbar spine of boys	80.21
Hyperextension lumbar spine of girls	21.90
Scoliosis of the type "C"	41.30
Scoliosis of the type "S"	9.95

used two tests to identify possible deviations of the spine, performed according to Kendall, McCreary and Provance (1990). For the realization, those boys showed up wearing a swimming shorts and girls two-piece swimsuit. After the explanation of how to proceed from the tests, the spinous processes of each individual was marked with a pencil dermatographic. After the demarcation of anatomical points, students have adopted a static standing position under the platform and then students were evaluated only in vision lateral and posterior. The data were reported in individual evaluation sheet and then the results were tabulated.

3 Results

Through the postural assessment conducted, we found that all students have a tendency to postural deviations and asymmetries (Table 1), which was already expected, since in their studies, Pinera apud Brighetti (1993), evaluating 100 students from first to eighth grade concludes that 95% of students had some kind of paramorphisms.

In 40.30% of the students that we studied, the position of the cervical spine was also classified as antepulsion. In studies by Neto Junior, Pastre and Monteiro (2004), 53% of individuals are analyzed patients with cervical lordosis. We found that 43.78% of the schoolchildren examined by us have the flexion of his thoracic spine increased, where 63.54% of boys have showed this condition while only 25.72% of girls are in this situation, which is considered high when compared to studies cited by Brighetti and Bankoff (1986), where only 25% of 201 schoolchildren had a tendency to postural kyphosis and according to research by Somazz (1999), 4.5% of students had thoracic kyphosis. Looking at the lumbar spine, 49.75% of all students evaluated by us have hyperextension their curvature, 80.21% where of boys have the same frame while only 21.90% of girls fall into this situation, values also high when compared to the work of Somazz (1999), where 15.70% of children were showing hyperlordosis, according to research by Neto Junior, Pastre and Monteiro (2004), 73% of individuals are analyzed patients with lumbar lordosis. Regarding the percentage of our students, we observed values close to the search Bernardineli (1996), after analyzing the first students from the fourth grade found that 88% of those have misalignment of the spine. Of the students we evaluated, 51.25% have some type of lateral spine where 41.30% had scoliosis of the type "C" and 9.95% had scoliosis of the "S" type, which is close to the values presented by Bernardineli (1996), which shows that 34% of students surveyed are characterized by scoliosis.

4 Conclusion

In all schoolchildren, both girls and boys find some kind of diversion or postural asymmetry, both in assessing lateral view as in evaluation of the posterior view and the index of kyphosis and lordosis in boys was higher compared to females; the presence of scoliosis is higher in girls compared to boys; Students analyzed showed significantly elevated rates compared to other previous studies to others groups of schoolchildren. We realized the need for the professional physical education, emphasizing the teacher, be prepared to work with students who need a differentiated service due to their postural abnormalities and also obtain knowledge more solid to work with your students these questions, making it necessary: Inclusion of simple techniques with postural assessment in regular biometric exams, guidance and update knowledge of the issues of posture, so as to act on a practical level may make the identification of major postural changes, such as forwarding the pathological cases to professionals medical area, need for integration among professionals from various fields who work directly with students, each of which can contribute with their specific training.

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