Results of Physiotherapeutic Postural screening in Children and Young people in Montenegro

Krsto Kovacevic*

Master of Physical Therapy, President of the Chamber of Physiotherapists of Montenegro, Balkans

*Corresponding author: Krsto Kovacevic, Master of Physical Therapy, President of the Chamber of Physiotherapists of Montenegro, Balkans

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ABSTRACT

Keywords: Postural screening; Physiotherapists

Abbreviations: N: Number; X: Arithmetic Mean; SD: Standard Deviation

Introduction

The research was carried out within the campaign "Straighten up and practice!", designed as a free counseling service in public places in several Montenegrin cities, and intended to recognize and identify postural problems in children and young people in time in Montenegro. The work included 1,181 respondents, out of which 562 (47.6%) boys and 619 (52.4%) girls. The tests were conducted in 17 cities of Montenegro (Podgorica, Bijelo Polje, Cetinje, Bar, Niksic, Ulcinj, Budva, Berane, Herceg Novi, Kolasin, Rozaje, Zabljak, Petnjica, Danilovgrad, Pljevlja, Kotor and Tivat) from 15.03.2015. until 27.09.2015. Checks for the purpose of detecting postural problems were carried out by physiotherapists (specialists of applied physiotherapy) at several points for them. Respondents came voluntarily with their parents at the invitation sent through the Ministry of Education of Montenegro, the Association "Parents" and the Directorate for Youth and Sport of Montenegro [1-10].

Materials and Methods

Respondents are children and young people between the ages of 5 and 25. The screening method records postural status data. The work included 1181 subjects, out of which 562 boys and 619 girls. Tests were conducted in 17 cities of Montenegro (Podgorica, Bijelo Polje, Cetinje, Bar, Niksic, Ulcinj, Budva, Berane, Herceg Novi, Kolasin, Rozaje, Zabljak, Petnjica, Danilovgrad, Pljevlja, Kotor and Tivat) [11-20]. Checks for the purpose of detecting postural

problems were carried out by physiotherapists (specialists of applied physiotherapy) at several points for them. Respondents came voluntarily with their parents at the invitation sent through the Ministry of Education of Montenegro, the Association "Parents" and the Directorate for Youth and Sport of Montenegro. The research lasted from 15.03.2015. to 15.10.2015. The basic demographics were collected from the respondents. We used generally accepted methods of observation and measurement to determine postural problems. We observe head position, shoulder position, bladder position, Lorenc's triangular size, folded elbow positions, pelvis inclination, Iliopsoas muscle flexibility, knee position, foot position and Adams test (preclined). We measured: body height, body weight and leg length. Evaluation sheets that were numbered and made on a scrapped paper were filled based on the examination so that one copy (original) of this list was given to parents. The data collected were analyzed using the descriptive statistics method. Statistical analyzes were performed by IBM SPSS Statistics 23. The categorical variables are represented by the number (n) and percentage (%) of the observations, and the continuous variable by the arithmetic mean (x) and the standard deviation (SD) or the median with quartile ranges, depending on the normality of the data distribution.

Distribution regularity was evaluated based on frequency histogram and calculated using the Shapiro-Wilk test. For the

analysis of the categorical screening variables, the variable age was transformed and recoded into categories with approximately the same distribution of the number of respondents by category. Screening results were analyzed using descriptive statistics; a hi-square (x^2) test was used to compare the groups. The difference between the groups was considered significant if p <0.05 [21-29].

Results

The results of the study showed that: in 25.5% of respondents, the head is in the protege; in 29.5% of subjects with lower right shoulder; in 24.7% of the subjects lowered left shoulder; in 41.6% of shoulders in the protege; in 36.2% of respondents there is a winginess of both blades; in 54.9% of subjects, the asymmetric position of the lower angle of the blades is present; in 70.5% of respondents, the asymmetric position of Lorenz's triangles is present; in 18.8% of subjects, the front pelvis is present; in 1.1% of the respondents the asymmetry of the SIAS position is present; in 52.6% of respondents there is a contract of both M. Iliopsoas; in 13.2% of respondents, one of the knee deformities is present; in 72.7% of the subjects there are lowered vaults of both feet; in 22.0% of subjects, valgus is present in both Achilles tendons; in 3.1% of subjects, there is a bilateral halux valgus; 1.6% of respondents had a leg difference of 1 cm; Of the total of 206 respondents (17.4%) who have registered gestures, the same is corrected in 122 respondents (59.22%), ie it is not corrected at 84 (40.78%). In 82.6% of subjects, no hump was recorded.

Conclusion

The results of this research can be used to point out the application of certain activities so that postural deformities can be detected, controlled, prevented and treated efficiently by effective programs of preventive and therapeutic exercises created and applied by physiotherapists. This certainly includes the introduction of several systematic reviews, prescribing the therapies necessary to prevent the development of postural deformities, during the school year during which, in co-operation with other professionals, special attention will be paid to the timely identification of postural deformities among students. In Montenegrin society, the presence of postural deformities is understood too lightly because parents are not sufficiently familiar with these conditions and their consequences. On the basis of the obtained results, certain recommendations were made to parents and the competent state authorities for adequate action in order to prevent and treat postural deformities in children in primary schools.

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