

THE IMPORTANCE OF POSTURAL GYMNASTICS IN HARMONIOUS PHYSICAL DEVELOPMENT IN PRESCHOOL STUDENTS

Raluca MIJAICĂ¹

Abstract: *Gymnastics is an important factor in the good shaping of the body at an early age. The purpose of gymnastic exercises is to positively influence the improvement of the muscular system and thus the optimization of health. The article is based on the natural need of children to have a harmonious physical development by forming the reflex of correcting the port. This aspect will determine a correct posture and a general development of the body by efficient methods.*

Key words: *gymnastics, correct posture, gymnastic exercises, pre-school students*

1. Introduction

Gymnastics at the level of preschoolers has a special importance being beneficial in the harmonious development of the body, in the prevention of postural problems.

The efficiency of gymnastics is given by the early and correct evaluation of the child as well as by its application within a process of correction, improvement or acquisition, which requires continuity [5].

Why is the correct posture of a preschooler so important? A correct posture maintains the correct alignment of the body, contributing to a good functionality of all the body's systems. Thus, gymnastic exercises can contribute

to the proper development of children, to ensure a position that ensures energy efficiency where it should be used [6].

If a child's position is unstable, excess energy is used to maintain balance and gain stability, which in turn can affect the ability to complete fine motor tasks and even sit and listen in class.

The correct attitude of the human body is a function of it that is achieved by the synergistic and coordinated action of the elements of the musculoskeletal system and the nervous system, which maintains stability, balance and constant relationships first between the body and its segments, and second between the body and the environment. So, attitude is the spatial projection of the body in the

¹ Department of Physical Education and Special Motricity, Transilvania University of Braşov

positions and motor acts most frequently used by man in his daily affairs, but especially in the positions sitting, sitting, lying down, as well as while walking [7].

A vicious posture at this age can cause a number of health problems, which will manifest throughout the body.

Posture problems start right at home, incorrect position at the office and even during sleep, and then the road to school of the little student who carries his backpack on his back [8].

2. Principles of Postural Gymnastics

Basically, posture refers to the alignment and positioning of the body in relation to the gravitational force. The human body would be in any position: orthostatism, lying on its back, etc. gravity exerts a force on the joints, ligaments and muscles of the body, and a good posture involves the distribution of gravitational force throughout the body.

With constant and regular postural gymnastics, a marked improvement in joint mobility and a greater elasticity of muscle tissue is obtained.

A good position of the body in space, promotes the well-being of the body, [9], (fig.1).

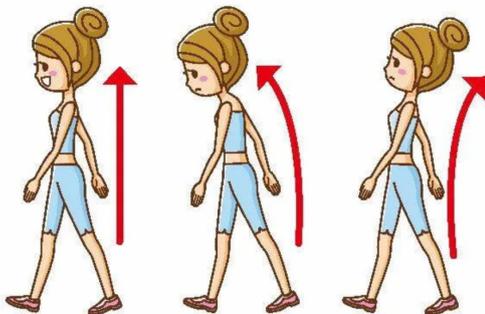


Fig.1. *Body posture*, [9].

2.1. The benefits of proper posture

Stress relief is a major factor that triggers and maintains health. When stress affects the body, the spine will also suffer from the psyche and biochemistry of the whole body.

More efficient breathing is the more important mechanism. It is very important to oxygenate the tissues completely. The most important muscle of the breath is the diaphragm. For optimal functioning, an effective posture is needed to help the body in the process of nutrition and detoxification.

An effective posture determines the muscle to work in synergy for a solid structural support of the body and its purpose is to improve flexibility and eliminate the tension exerted on the intervertebral discs.

Good flexibility is important for the body to move smoothly.

2.2. Disadvantages of an incorrect position

Improper body posture generates discomfort and can be a source of many health conditions, especially of the back, but also of the muscular, skeletal or cardiovascular systems.

Improper posture is not only related to the unsightly appearance of the body, but also to certain health problems. This is important for maintaining both physical and mental health. If the posture is not correct, the body may not function properly.

Improper posture is the main cause of cervical spine pain (behind the neck) and headaches. It is important that the neck and spine are aligned with the rest of the body. Otherwise, muscle strains and

headaches will occur. Misalignment of the posture can also affect the legs at some point. This can cause pain in the lower limbs and can prevent you from wearing certain types of shoes [10].

3. Postural Analysis

Postural assessments analyze the subject's static position to see if there are imbalances that can cause or cause pain and discomfort.

Postural assessments in many cases also include manual tests that check how well the muscles and joints are working and whether there are imbalances that need to be corrected.

The body works in the best conditions when it is in the right position. When the body is in the correct postural alignment, it moves and distributes the weight evenly and appropriately allowing the muscles, joints and spine to work together to help execute the movement. If something is not aligned, then injuries and pain can occur.

It investigates how the subject's body moves and functions. It investigates the anomalies and compensations that may have occurred and the main objective is to discover and treat the causes underlying these diseases.

Performing a postural assessment without any apparatus allows the observation of a person's overall alignment by assessing how the body moves and how the relationship between the subject's muscles and joints works. The purpose of this is to detect deviations from the initial position.

The visual observation method is the most common method used to assess posture in practice. The only advantage of this method is that it does not require any

equipment.

A recent study was performed based on the visual observation method. Different variables were evaluated [2].

3.1. Description of the technique of the visual observation method

The subject should be barefoot and maintain a relaxed position/posture.

There should be a sufficient distance between the subject and the evaluator to properly visualize his position. The different components of postural assessment are viewed anteriorly, posteriorly and laterally.

Examples of different components that can be included in the postural assessment:

- Neck position
- Shoulder:
 - Symmetry - at the level of the shoulders from the anterior and posterior view
 - Roundness - evaluated anteriorly and laterally.
 - Are your shoulders in internal rotation?
 - Is there an anterior bringing of the humeral head?
- Thoracic spine:
 - Lateral evaluation - Is there an increased or decreased thoracic hyperkyphosis?
 - General vertebral curvature:
 - Reary evaluated - Is there a scoliosis of the spine?
- Lumbar spine:
 - Side assessment - Is there an increased lumbar lordosis or a flattened lumbar spine?
 - Rear evaluation - Is there a visible muscle spasm encountered at the thoraco-lumbar junction?

- Pelvis
 - Anterior, posterior and lateral evaluation.
 - Evaluation of the levels of the iliac crests.
 - Is the pelvis tilted anteriorly or posteriorly?
- Hip joint:
 - Symmetry - at the hip joint.
 - Is it in internal or external rotation?
 - Is there an increased visible mass in the gluteal region?
 - Looked from the side - is it in extension or in flexion?
- Knee joint:
 - Is it hyperextended when viewed from the side? [2].

One can identify the general postural type (Scoliosis, Lordosis or Kyphosis), because this can provide clues about the affected structures, fig.2.

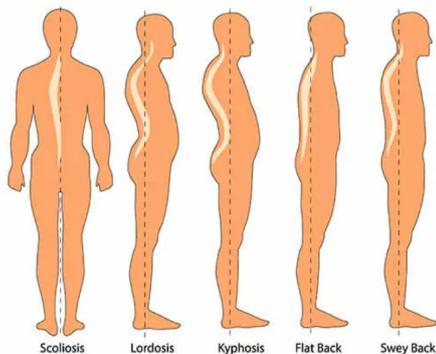


Fig.2. *General postural types* [11].

Test 1. Elasticity of spinal mobility.

The subjects performed from sitting on the chair bending the torso forward with the arms down, knees outstretched, reaching with the middle fingers the lowest level, as far as possible below the

horizontal level of the edge of the chair and holding for 2 seconds in the maximum position reached. At the edge of the seat the figure is 0 below the level is marked with plus, above it is marked with minus. It is measured in cm using the ruler.

Test 2. Mobility of scapulo-humeral joint elasticity

The subjects were in a position sitting away with the gymnast on their heads. The cane was raised from front to top. This was performed 2-3 times by gradually reducing the distance between the hands until the movement is performed with weight. Using the ruler, measure the distance between your hands in centimeters.

Test 3. Pain level testing

Each participant was asked before and after different movements, executions to estimate the level of pain felt using this scale made to be easily understood by children. Taking into account the age of the participants, the results were not expected to be accurate because they could exaggerate, and the girls in particular are more sensitive to pain as a result of the data obtained by this method are indicative, fig. 3.

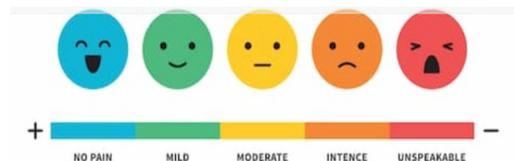


Fig. 3.

Analog visual scale [12].

4. Postural Gymnastics Program

The postural gymnastics program must be based on a number of objectives. These are: analgesia, increased range of motion, strengthening, gaining muscle endurance, recovery of motor functions and better postural balance.

The postural gymnastics program should include warm-up and relaxation exercises, exercises to correct a specific problem and general exercises for the whole body.

Breathing exercises:

- a) Initial position - Standing
 - Raising the arms outstretched laterally above the head while inhaling on the nose, lowering the arms laterally with expiration;
- b) P.I - Sitting with arms outstretched above the head
 - 2. Lowering the outstretched arms forward with inspiration, raising the arms with expiration.

Spine flexibility exercises:

- Starting position: Palm and knee support
- Slow lifting of the left leg at the same time as the right arm holding;
 - Ditto the opposite leg and arm.

Abdominal muscle strengthening exercise:

- Initial position: Lying on your back with your legs bent and your feet on the ground:
- Lift the torso and knees to the chest, arms bent at the elbow joints hands making grip at the tibia, hold for 5 seconds.

Values obtained at evaluation Table 1

	Patient 1		Pacient 2	
	Inițial	Final	Inițial	Final
Test 1	2	4	2	3
Test 2	70/2	65/4	74/1	70/2
Test 3	3	1	4	2

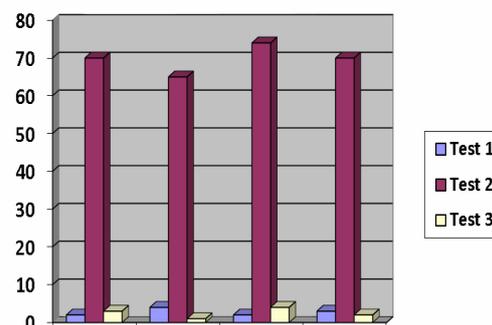


Fig. 4. Tests examination data

6. Discussion

In corrective gymnastics there are some fundamental aspects of posture. The lumbar spine supports all the body weight above the pelvis and is the first region to show symptoms of postural disorders.

The principles for corrective gymnastics are: working with body weight only in the initial phases of the program; to exercise the entire locomotor system as well as the affected part; to respect the individual limits.

Exercising of any kind is an important asset for maintaining a correct body posture and for achieving optimal health [1-4].

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