



## ANALYSIS OF THE MOTOR ABILITIES OF SCHOOLGIRLS WITH SPECIFIC EDUCATIONAL NEEDS

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### Abstract

The objective of the research is to optimize the process of education for girls with specific educational and educational-coaching needs, practicing volleyball as out-of class activity.

The target of the research is to compare and analyze motors skills level of girls who participate actively in educational – coaching process in volleyball.

The object of our study covers two volleyball education - training groups at their initial stage of sport preparation, 20 pupils all at the age of 12-13 years; one group of 10 girls and each at the ordinary Bulgarian secondary school and one group of 10 girls with specific educational needs from secondary specialized school for children of impaired hearing in Sofia.

Our working hypothesis is: children of impaired hearing can level their motive abilities with those of children without such problems under appointed conditions of the education - training process.

Methods: Theoretical-logical analysis, testing, variation analysis, t-criteria of Student.

**Key Words:** students, specific educational needs, motor ability, training

### INTRODUCTION

Sport is an exceptional phenomenon and universal instrument towards education and healthy way of life. Sport is a powerful integrating factor teaching tolerance and acceptance of the differences between the people since early child's age. Practicing physical culture and sport appear as basic instrument for achieving good health and physical shape during school age, particularly in our time, when accent is predominantly put on theoretical knowledge, either humanitarian or linguistic. That is the reason why a number of authors are studying and analyzing the effect of sport as a basic factor for improving the health state, equal standing and socialization of people of specific needs. Adapted physical culture and sport are part of the general adaptation process of a number of activities, accompanying the everyday life and education of these people and in particular the children having various disorders and injuries [2, 3, 4, 5, 7, 8, 9].

According to us, practicing sport games have got particular importance about improving adaptation of children and youths of impaired hearing to the real life situations. By practicing games they are not only establishing specific motive skills, habits, physical and functional qualities but as well their visual – irritative reactivity is improved being in contact with partners and opponents during the game. Sport games at the same time, are building up a number of moral – will qualities as will, persistency, tolerance, pursuit of manifestation, team work, etc.

Our working hypothesis is: children of impaired hearing can level their motive abilities with those of children without such problems under appointed conditions of the education - training process.

## ORGANIZATION AND METHODOLOGY

### Organization

The study presented has got an attesting nature and its **objective** is to compare and analyze the level of the motive qualities of 12-13 years old pupils, systematically participating in volleyball educational - training lessons during their second year of exercise. [1,6].

The **object** of our study covers two volleyball education - training groups at their initial stage of sport preparation, 20 pupils all at the age of 12-13 years; one group of 10 girls and each at the ordinary Bulgarian secondary school (SS) and one group of 10 girls with specific educational needs from secondary specialized school for children of impaired hearing (SSS) in Sofia.

**Subject of the study** are the symptoms of the physical ability of 12-13 years old schoolgirls

### Methods

- Theoretical-logical analysis ;
- Testing ;
- Variation analysis ;
- t-criteria of Student's

## ANALYSIS AND RESULTS

The average values of the results from the "Long jump with both legs from static position" test for the SS girls are  $X = 178$  cm while those of the specific education needs pupils are respectively (SSS)  $X = 159,5$  cm. The difference of 18,5 cm is in favor of the 12-13 years old girls from the SS (fig. 1).

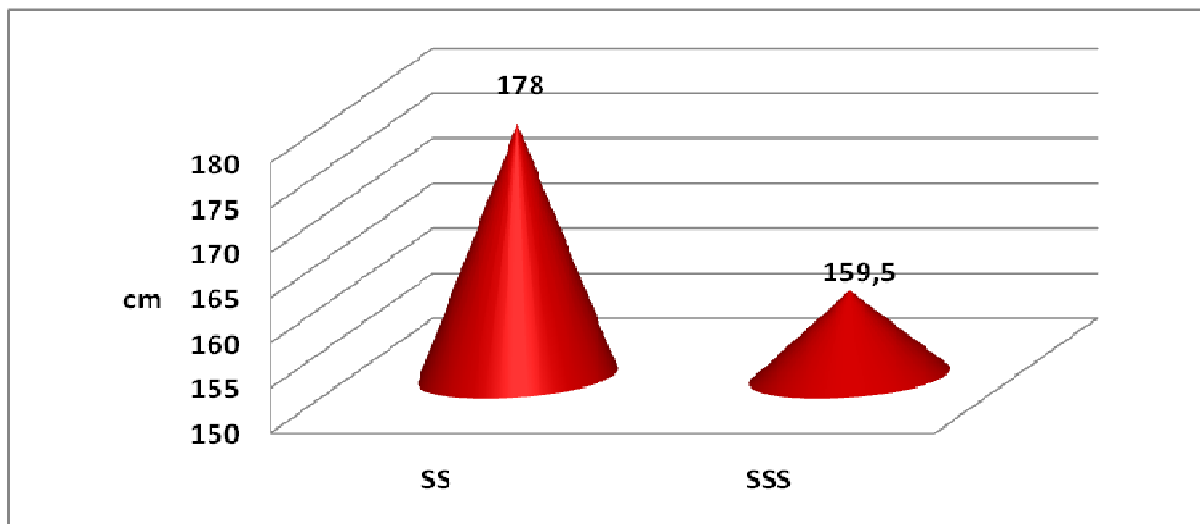


Fig.1: Long jump with both legs from static position/cm

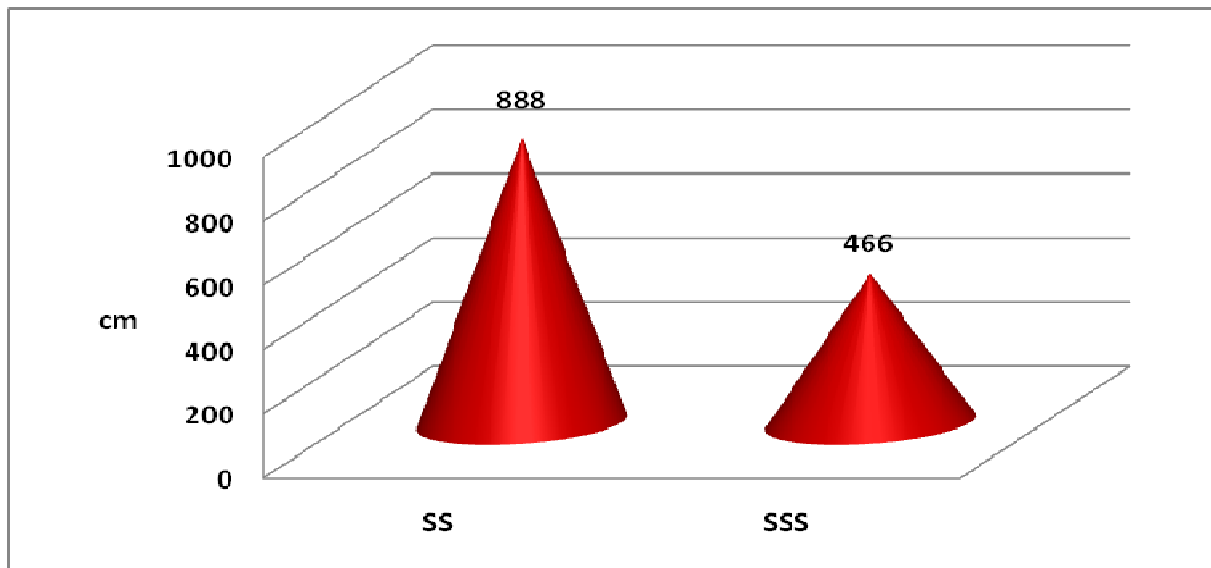


Fig.2: Throwing compact ball 3 kg/cm.

The average values of the “Throwing compact 3 kg ball” test SS girls’ results, taking part in volleyball education – training lessons are  $X - 888$  cm, the same indicator for the pupils of specific educational needs is respectively  $X - 466$  cm. The difference of 422 cm is in favor of the 12-13 years old girls from the SS.

The average values of the “Shuttle run” test results for the SS girls are  $X - 26,9$  s and  $X - 26,62$  s for the pupils of special educational needs. The difference of 0, 28 is in favor of the 12-13 years old SS girls.(Fig.3)

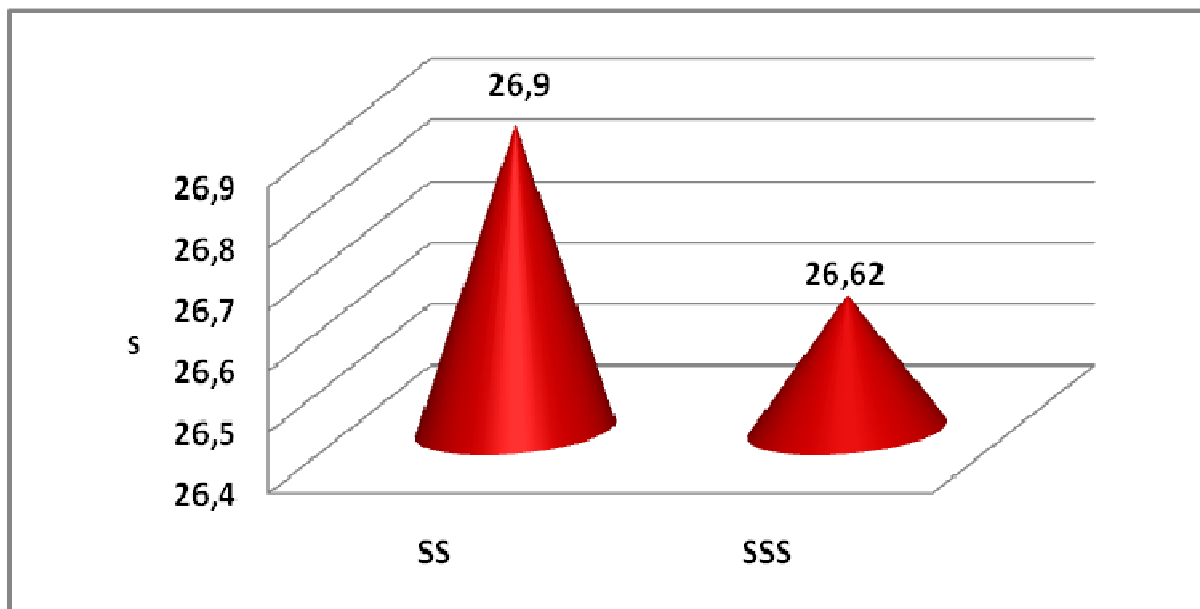


Fig.3: Shuttle run/s

Fig. 4 shows the results from the “Jumps on gymnastics bench” test. The average values are  $X - 34$  for the SS girls and  $X - 25,2$  are the results of the specific educational needs pupils. The difference of 8,8 is in favor of the 12-13 years old SS girls. (fig. 4)

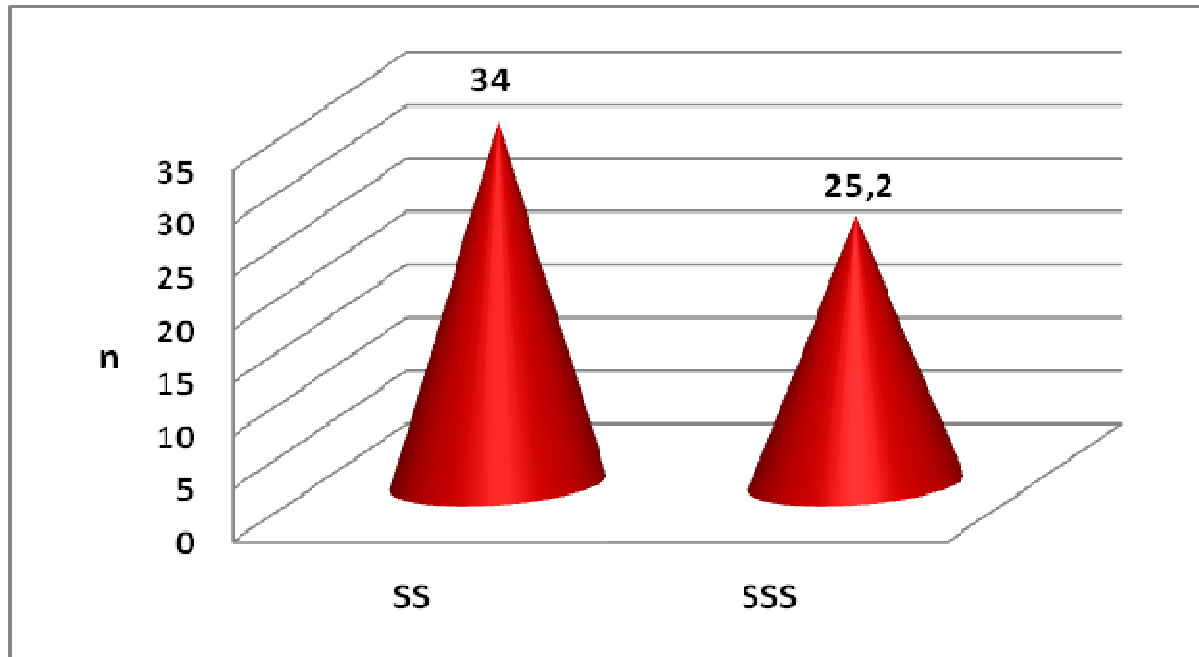


Fig.4: "Jumps on gymnastics bench" - number/30s

Fig. 5 presents the results from the "Dynamic flexibility" test. The average values of the test for the SS girls are  $X - 20$  while those for the pupils of special educational needs they are  $X - 10,9$ . The difference of 9,10 is in favor of the 12-13 years old SS girls.

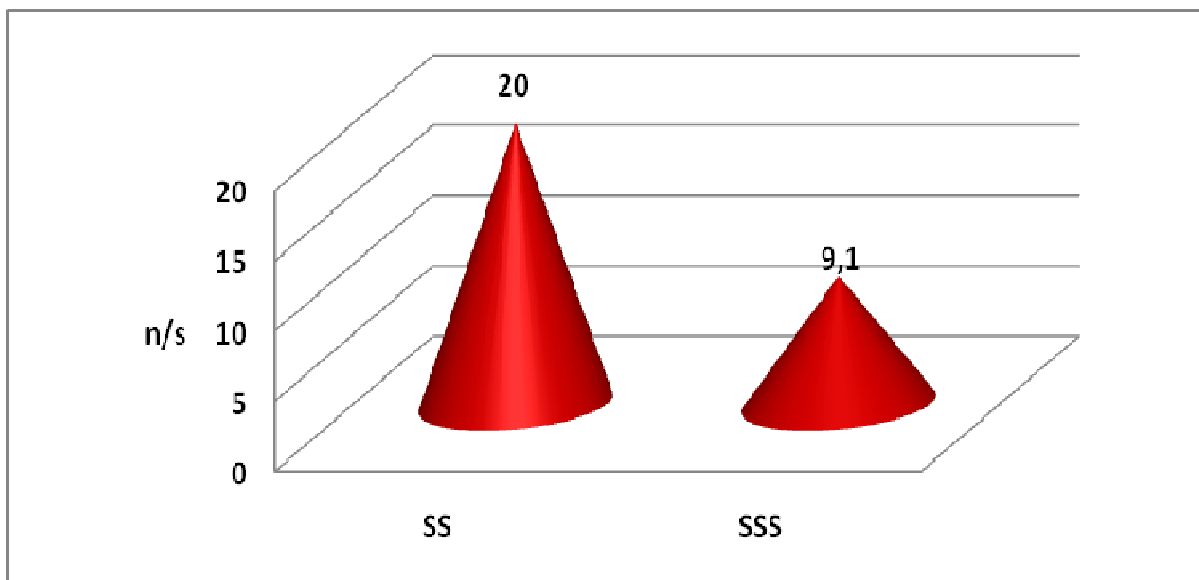


Fig. 5: Dynamic flexibility - number/30s

The "Dynamic flexibility" test results /fig. 5/ are better for the good in hearing pupils training volleyball. It turned out that the pupils of specific needs have difficulties in performing this test; we think that could result from the increased irritation of the vestibular apparatus, located in the impaired ear organ. Additional studies are needed for more categorical conclusions as the sample is small and the tests are single ones.

The analysis of the average levels differences of the indications studied shows that the SS groups have higher achievements in all researched indicators. The observed average

level differences of the indications studied do not allow making serious deductions and conclusions; that is the reason why the t-criteria of Student have been calculated (fig. 6).

It is obvious from the data presented in fig. 6 that for 4 of the indicators for the girls, the values of the calculated comparative t-criteria are lower than the critical (have values under 2.02) and consequently for them, it can by higher guarantee probability be maintained, that there do not exist considerable distinctions in the development level of the indications studied and it is only for the fifth indicator - "Dynamic flexibility" ( $t = 2,86$ ) where the differences are considerable.

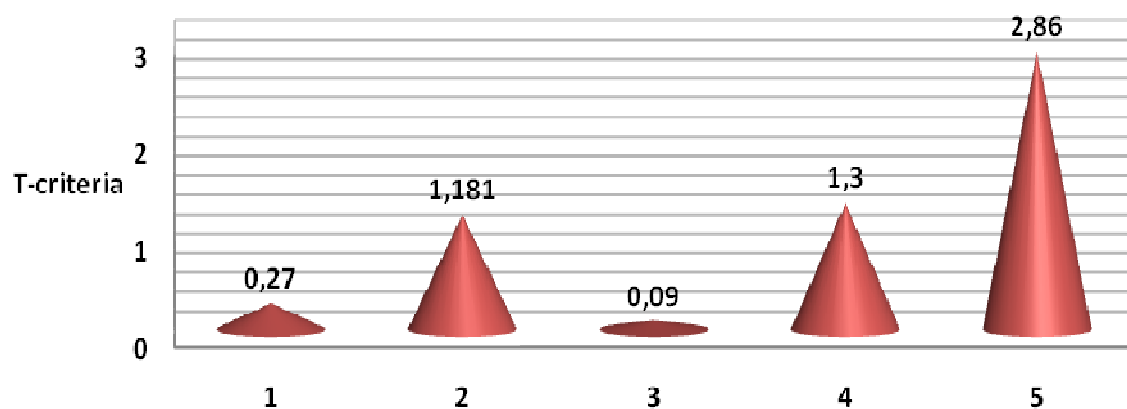


Fig.6: Significance of the differences between the average levels of the motive qualities /t-criteria of Student/

The values of the variation coefficient are under 10% for the third, fourth and fifth indicator for the girls, which speaks about homogeneity and stability of the indicators studied, while the values of the first and second indicator speak about relative homogeneity and stability of the indicators studied.

## CONCLUSIONS

The studies conducted and analysis of the results confirms that the effect of the physical exercises is strictly individual.

The observations described and the analysis of the results of our study, which is of attesting nature, lead to the conclusion that under the education-training process and the choice of appropriate methods and means, satisfactory result can be achieved even for pupils of specific educational needs, without the physical exercises and sport to loose their purposefulness and attraction.

Our suppositions for leveling the motive abilities of pupils having specific educational needs with those of the SS pupils, practicing volleyball, have been confirmed by the close levels of the physical qualities but they need deeper studies with a greater number of pupils and defining the program requirements in more details, the conditions and the regime of work. Additionally we have to underline that it is imposing to put an accent on demonstrativeness upon teaching pupils of specific educational needs as well as the ability to know, although not perfectly, mimic speech so that the education in any sport be done more effectively and rapidly.



The difficulties met by the pupils of specific educational needs upon the execution of the dynamic flexibility test show the need of deeper researches of the abilities of the deaf children and those with impaired hearing to perform rapid and complicated motive actions, having an irritated vestibular apparatus and the dynamic state of the body.

We think that the conclusions presented under our study and researches have got methodological and practical significance for the education - training process and the physical education of children of impaired hearing.

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