



Change in Agility for 9-11 Years Girls

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Abstract

Agility is an important motor fitness component. It increases with age from childhood for both boys and girls. Purpose of the present study was to analyze and understand the change in agility from nine to ten and ten to eleven years of girls. For this study a total of 30 girls were randomly selected for each of three age groups - 9 years, 10 years and 11 years. For assessing agility, 4x10Y Shuttle run test was administered as per procedure laid down in the AAHPERD Youth Fitness Test Battery Manual. Mean and standard deviation of performance in the test of agility were calculated as the measure of central tendency and variability respectively. Difference between means was tested using 't' test. Results indicated that agility increase with increase of age from nine to ten and ten to eleven years for girl groups, the increase was neither significant for nine to ten years nor from ten to eleven years for girls.

Keywords: Agility, Motor fitness.

Introduction

Agility is the ability to change the direction of motion without reducing speed. It is an important motor fitness component. It involves acceleration speed, explosive strength, balance, flexibility etc. Agility plays an important role in performance of games and sports involving changing direction /position with speed, such as Basketball, Soccer, Field Hockey, Gymnastics and so on.

Agility develops with age during Pre-adolescence and adolescence along with development of speed, strength and flexibility. There have been studies to analyze agility with age for boys. Present study was planned to analyze change in agility with age for 9 – 11 years girls. It was hypothesized that

Agility for girls would increase significantly from nine to ten and ten to eleven years of age.

Methodology

The Subject

A total of 90 girls were selected equally from three different age groups of 9 to 11 years using random sampling technique. Thus there were 30 girls subjects from each of three age groups of nine to eleven years.

Criterion Measure

The main measuring criterion for this study was Agility. The performance was expressed in time taken to complete the test.

Equipment and Tools Used

- a) Measuring tape
- b) Weighing machine
- c) Digital stopwatch
- d) Two Wooden blocks

Procedure for Collecting Data

The purpose of body was to analyze development of agility with respect to age of different groups of subject and it was measured using 4x10Y Shuttle run test following standard procedure as described in AAHPERD Youth Fitness Test.

Analytical Procedure

The collected data were analyzed using appropriate statistical procedure. Mean was calculated as the measure of central tendency; standard deviation was calculated as measure of variability and significance of difference between two means was measured by calculating ‘t’ value.

Presentation and Analysis of Data

Mean and Standard Deviation values of agility of three different age group of subjects as measured in second for 4x10Y Shuttle Run test have been presented in Table-1.

Table -1 Mean and Standard Deviation values of the performance of three different groups subjects in 4x10Y Shuttle Run test

Age group	Mean time (s)
9 years	13.87±1.18
10 years	13.48 ±1.02
11 years	13.44 ±0.98

In is seen from the table values that the mean time taken to complete the test of agility decreased from 13.87s for nine years to 13.48s for ten years of girl group. It is revealed from this results that the agility increased from nine to ten years of age groups for girls studied in this study. Similarly, the mean values of time taken to complete the agility test decreased from 13.48s for the age group of ten years to 13.44s for the age group of eleven years. Thus, it is understood that the agility increased from the age group of ten to eleven years of age. The mean values of performance in the test of agility have been presented in Fig. 1.

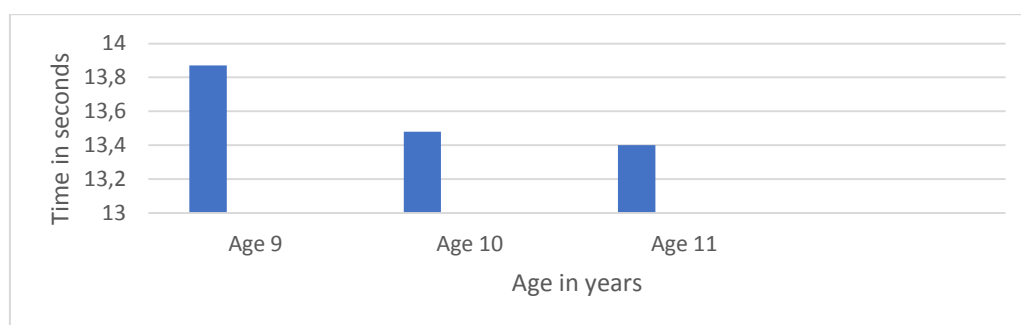


Fig.-1: Mean performance in the test of agility for different age groups

After ascertaining that the agility exhibited a trend of increase with respect to age from nine to eleven years, the significance of increase in mean values

of performance from nine to ten years and ten to eleven years of age were tested using ‘t’ test. Table -2 presents the results.

Table – 2 Significance of mean difference in performance for (4x10) yard shuttle run for successive groups of subjects

Means of value of performance in agility test (s)			Mean difference	t value	Remarks
9Y	10Y	11Y			
13.87	13.48		0.39	0.087*	Not significant
	13.48	13.44	0.04	0.436*	Not significant

*t (0.05) with df 58=2.001

It is noted from the results as shown in above table that the mean differences in performance from nine to ten years and ten to eleven years of age groups were not statistically significant at 0.05 level.

Conclusion

Analysis of data indicates that there was a trend of increase in agility from nine to ten and ten to eleven years of age groups for girls. But, the increase in agility was neither significant for nine to ten years nor for ten to eleven years of age groups of girls. Thus the formulated hypothesis in the beginning for the study was not accepted.

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