
Analysis of Agility of Netball Players among Different Age Groups

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ABSTRACT: *The purpose of the study was to find out the analysis of agility of netball players among different age groups. To achieve this purpose of the study, four hundred and eighty netball players were selected as subjects who were attend the state championship during the year 2016-2017. The selected subjects were aged between 13 to 45 years and they were examined by a qualified physician and certified that they were medically and physically fit to participate above programme. Based on their age the subjects were divided into four equal groups of 120 each namely Group I- under 14 years boys (120), Group II - under 16 years boys (120), Group III - under 18 years boys (120) and Group IV- under 20 years boys (120). The selected criterion variable such as agility was measuring by Hexagonal Obstacle test. The analysis of variance (ANOVA) was used to find out the significant differences if any, between the groups on selected criterion variable. The 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. The result of the present study has revealed that there was a significant difference among the groups on agility.*

Keywords: *agility, netball players, different age categories.*

I. INTRODUCTION

Sports in the present world have become extremely competitive. It is not the more participation or practice that brings out victory to an individual. Therefore, sports life is affected by various factors, like physiology, Biomechanics. Sports Training, Sports Medicine, and Sociology and Psychology etcetera. All the coaches, trainers, physical education personal and doctors are doing their best to improve the performance of the players of their country. Athletes/players of all the countries are also trying hard to bring laurels/medals for their countries in International competitions. The physical education profession is entering one of the most exciting –dynamic eras in the history. Traditionally the physical education profession has been viewed as providing services within the educational field specifically to the schools within the last 50 years the scope of physical education has expanded tremendously. Performance of players has dramatically progressed over the past few decades. Performance levels unimaginable before are now common and the no of athletes capable of outstanding results are increasing. One among the contribution factors is that athletics is a challenging field, and intense motivation has encouraged long, hard hours of week. Also, coaching has been more sophisticated, partially from the assistance of sports specialists and scientists. Sports Sciences have progressed from descriptive to scientific. A broader base of knowledge about athletes exciting now is reflected in training methodology. Now a day's people are aware of physical fitness and they know the importance of physical education. The physical education is one part of the education process. In the physical fitness it is very important for the youth people know that slogan a "sport for all". It is developed of physical mental, emotional, social and spiritual though the medium of physical activities. The word physical refers to body and indicates bodily characteristics such as strength, speed, endurance, flexibility, agility, explosive power, coordination and performance. It seemingly contrasts the body with the mind. This refers to a process of

education that develops the human body especially fitness and movement skills. In netball throwing accuracy is more useful to secure more score through the correct passes and town game while it requires physical fitness too. The forward players often need speed vertical jump, coordination, agility and skill. A tall player will have high reach and collect the ball and throw quickly to pass the team mate is one of the basic skills in net ball that players must masters. The young player should also be encouraged to execute the netball throw by using proper holding of the ball. Their fingers spread over the ball extend the aim to produce the necessary force speed to reach the ball to his team mate. For netball throw speed explosive power reaction time strength and coordination is more important. Netball is a which demands a high level of physical fitness players need adequate strength, speed, agility, endurance, flexibility, explosive power reaction time to participate without under strain or fatigue. Among all games netball with its humble beginning had progressed rapidly. Netball is a enjoyable game and has all the elements of a first rate sport it is probably one of the leading ball game in the world. It may be called movement oriented as action implies movement. Netball is completely with action within one second many things may happen in this game in comparison with other games. This is one of the reasons why this game has become one of the most popular sports in the world. The game of netball is the American's greatest contribution to the world of sports. The tempo and excitement is more in the play for both players and spectators. Netball is played with skill and fitness, teamwork and strategy making it a fact and thrilling sports. In general, agility is defined as " the ability of a rapidly respond to change by adapting its initial stable configuration" Here, agility or nimbleness is the ability to change the body's position efficiently, and requires the integration of isolated movement skills using a combination of balance, coordination, speed, reflex, strength and endurance. agility is the ability to change the direction of the body in an efficient and effective manner and to achieve this you require a combination of balance the ability to maintain equilibrium when stationary or moving (i.e, not to fall over) through the coordination actions of our sensory functions (eyes, ears and the proprioceptive organs in our joints); static balance - the ability to retain the center of mass above the base of support in a stationary position; dynamic balance- the ability to maintain balance with body movement; speed - the ability to move all or part of the body quickly; strength - the ability of a muscle or muscle group to overcome a resistance; and lastly, co- ordination- the ability to control the movement of the body in co-operation with the body's sensory functions (e.g, catching ball [ball, hand and eye co-ordination]).

METHODOLOGY

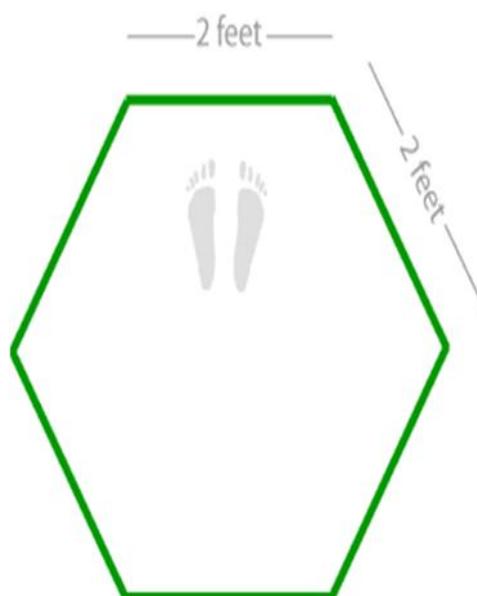
In the present study all the students were attend the state championship during the year 2016-2017. A representative sample of four hundred and eighty netball players was selected as subjects. The selected subjects were aged between 13 to 20 years and they were examined by a qualified physician and certified that they were medically and physically fit to participate above programme. Based on their age the subjects were divided into four equal groups of 120 each namely Group I- under 14 years boys (120), Group II - under 16 years boys (120), Group III - under 18 years boys (120) and Group IV- under 20 years boys (120). The selected criterion variable such as agility was measuring by Hexagonal Obstacle Test.

A. Test Administration – Agility

Using athletic tape, mark a hexagon (six sided shape) on the floor. The length of each side should be 24 inches (60.5 cm), and each angle should work out to be 120 degrees. The person to be tested starts with both feet together in the middle of the hexagon facing the front line. On the command 'go', they jump ahead across the line, then back over the same line into the middle of the hexagon. Then, continuing to face forward with feet together, jump over the next side and back into the hexagon. Continue this pattern for three full revolutions. Perform the test both clockwise and anti-clockwise.

Scoring

The athletes score is the time taken to complete three full revolutions. The best score from two trials is recorded. Comparison of the anti-clockwise and clockwise directions will show if any imbalances exist between left and right movement skills.



B. Analysis of Data

The analysis of variance (ANOVA) was used to find out the significant differences if any, between the groups on selected criterion variable. The “F” ratio found to be significant, the Scheffe’s post hoc test was used to find out the significant difference among the paired means. The 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate.

RESULTS

The mean and standard deviation and “F” ratio scores of under 14 years, under 16 years, under 18 years and under 20 years boys on coordination of netball players are given in table 1.

Table – 1

COMPUTATION OF ANALYSIS OF VARIANCE ON AGILITY OF NETBALL PLAYERS

Mean and SD				Source of Variance	Sum of Squares	Df	Mean Squares	Obtained F - ratio
Group I under 14 years boys	Group II under 16 years boys	Group III under 18 years boys	Group IV senior boys under 20 yrs					
12.23	12.62	13.12	13.62	B	139.53	3	46.51	88.09*
± 0.85	± 0.67	± 0.78	± 0.74	W	251.33	476	0.528	

*Significant at 0.05 level of confidence,

(The table ‘F’ value required for significance with df 3 and 476 is 2.62)

Table 1 shows the mean, standard deviation and ‘F’ ratio of different ages of basketball players on agility. The mean values of Group I is 12.23, Group II is 12.62, Group III is 13.12 and Group IV is 13.62 respectively. The values of standard deviation of Group I is 0.85, Group II is 0.67, Group III is 0.78 and Group IV is 0.74 respectively. The obtained “F” value is 88.09 is greater than the table “F” value of 2.62 with df 3 and 476 required for significance at 0.05 level of confidence. The results of the study indicate that there is a significant difference among the mean of Group I, Group II, Group III and Group IV on agility.

As the “F” ratio was found significant in case of agility the Scheffe’s post hoc test was applied to test the significance of differences between paired means separately among basketball players belonging to different age group which is presented in table 2.

Table – 2

SIGNIFICANCE DIFFERENCES BETWEEN THE PAIRED MEANS OF AGILITY AMONG NETBALL PLAYERS BELONGING TO DIFFERENT AGE GROUPS

Means				Mean Difference	Confidence Interval
Group I under 14 years boys	Group II under 16 years boys	Group III under 18 years boys	Group IV senior boys under 20 yrs		
12.23	12.62			0.39	3.12
12.23		13.12		0.89	3.12
12.23			13.62	1.39	3.12
	12.62	13.12		0.50	3.12
	12.62		13.62	1.00	3.12
		13.12	13.62	0.50	3.12

*Significance at 0.05 level of confidence

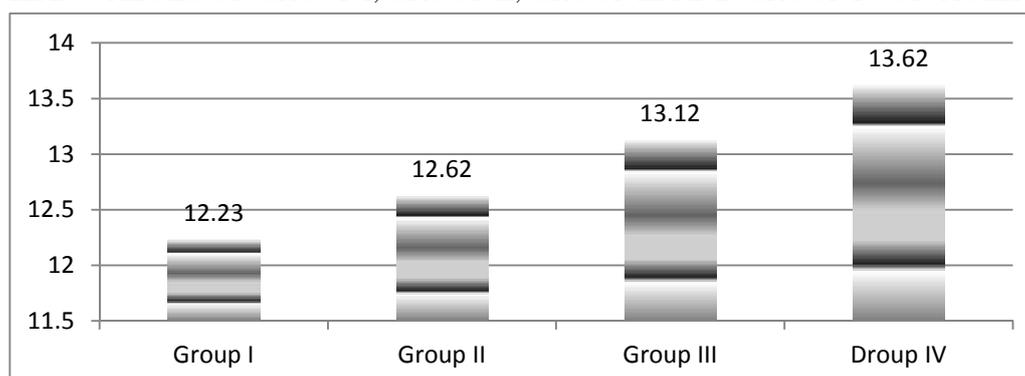
Table 2 shows that the mean differences on Group I and Group II, Group I and Group III, Group I and Group IV, Group II and Group III, Group II and Group IV, Group III and Group IV are 0.39, 0.89, 1.39, 0.50, 1.00 and 0.50 respectively and the above values are lesser than the confidence interval value of 3.12, which shows no significance differences at 0.05 level of confidence.

However, there was no significant deference from all the groups on agility.

The mean values of Group I, Group II, Group III and Group IV on agility are graphically represented in the figure.

Figure

MEAN VALUES OF GROUP I, GROUP II, GROUP III AND GROUP IV ON AGILITY



DISCUSSION/CONCLUSION

The results of the study indicate that the experimental group namely group I has significantly differed from the Agility, when compared to the group-II, group-III, group-IV. It is also found that the improvement caused by group-I performance was greater than that when compared to the effects caused by the other groups. It is a known fact that the Agility is best suited for developing physical fitness. The present study also revealed that the above findings of the study was supported by Arazi Hamid and Asadi, Abbas (2011), Chittibabu and Akilan, (2013) and Slobodan Jaric, Ugarkovic and Kukolj (2001).

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