

## A Comparison of Speed, Agility and Quickness (SAQ) among Players of Different Sports

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### Abstract

All athletes can benefit from improved balance, quicker feet, and a faster reaction time, and this is exactly what Speed, Agility, and Quickness (SAQ) drills help you achieve. The aim of the present study was to compare the speed, agility, and quickness among players of different games that are Football, Hockey, and Cricket. For the present study 45 female players were selected, 15 from each game who have taken part in the west zone inter university tournament. Between the age group of 18 to 22 years. The 30m flying start test was used to assess the speed, semo agility test was used to find out the agility, and medicine ball chest pass was conducted to check the quickness among Football, hockey, and cricket female Players. One way ANOVA test was conducted to compare the groups. The results of the study show that there were significant difference between the three groups in case of speed and quickness but there were no significant difference between the groups in case of agility. It is recommended that Football, Hockey, and cricket female players must be given good speed, agility, and quickness training in order to enhance the performance.

**KEYWORDS:** speed, agility, quickness, football, hockey, and cricket.

### INTRODUCTION

Speed, agility, and quickness training has become a popular way to train athletes, Whether they are school children or a soccer player or professional in a training camp, they can all benefit from speed, agility, and quickness training. Speed, agility, and quickness training may be used to increase speed, and strength, or the ability to exert maximal force during high-speed movements. This method has been around for several years, but it is not used by all athletes primarily due to lack of education regarding the drills. It manipulates and capitalizes on the stretch-shortening cycle while bridging the gap between traditional resistance training and functional-specific movements. Some benefits of speed, agility, and quickness training include increase in muscular power in all multilane movements; brain signal efficiency; kinesthetic or body spatial awareness; motor skills and reaction time.

Whether we're training for strength, endurance, or a combination of (football, hockey, rugby, volleyball), the benefit of adding speed, agility, and quickness drills to our fitness routine can take our game to the next level. While SAQ drills are often thought of as interchangeable, it is important to recognize how these components are related, as well as how they differ.

As a multi-sport athlete in youth, it is fortunate enough to learn the benefits of SAQ training early in athletic career. As a youth soccer player, speed, agility, and quickness training was introduced at a young age. In a sport where being faster than your opponent can make a huge difference, one can quickly learn how to use a speed ladder and training cones to gain an advantage over opponents. In many training sessions going through the T-Drill to improve agility, eventually adding a soccer ball to improve ball skills. Zigzag drills are common on the soccer pitch for players of all ages, and much like the T-Drill, a ball can be added to improve skill development as well as agility. The Chase Drill is always a favorite of athletes of varying sports as it combines SAQ training with some good light-hearted competition.

Regardless of whether one consider oneself a strength, endurance, or combination athlete, focusing on improving one's speed, agility, and quickness will help one improve one's performance and lead to better results. As with any type of training, repetition and consistency are key. Try several types of drills and focus on the ones that give the most enjoyment. Many SAQ drills are more effective with a training partner, so don't be afraid of a little friendly competition. While soccer and martial arts require a combination of strength, speed, and endurance, it was happily surprised to learn how well SAQ training translated to most recent sport of choice: trail running. As began training for first trail ultra-marathon, one of the first things realized was how important downhill running was in order to improve time. It was quickly found that it was an elite trail runner's ability to navigate technical terrain downhill at a fast pace that separated them from the rest of the pack. As It began to improve skill of downhill trail running, It was soon realized that the background as a soccer player, and then many hours of training dedicated to foot speed, agility, and reaction time was an advantages as It navigated rocks, roots, and other hazardous obstacles at top speed.

Speed, agility, and quickness (SAQ) training is too often associated with sports and other physically demanding activities. Upon closer observation, it can be realized that what can be missed the everyday events and activities that can greatly benefit from SAQ training.

Soccer is one of the most challenging sports for which to design an agility and quickness program because it consists of almost constant movement over two 45-minute periods. Given the amount of movement, agility becomes a central element in a soccer player's effectiveness. Training that improves this capacity has the ability to enhance soccer performance significantly, contributing to improvement in all elements of play. Since game speed and agility are context-specific, coaches must be able to break down the movement requirements of soccer to develop an effective program. Soccer movement is intermittent, with each game featuring between 1,200 and 1,400 changes of direction. These movements vary in speed and direction, with players changing directions about every 2 to 4 seconds. Typical sprinting activities span approximately 5 to 15 meters (5.5-16.4 yd) and occur once every 30 seconds on average.

Hockey is a game of fast paced, multi-directional movement and positions. Players with higher levels of agility are often able to control their body position, reducing the potential for injury to occur. Therefore, preparing the body for unbalanced positions and hockey specific movements may prevent or greatly reduce risk of injury. Younger

hockey players are advised to modify SAQ's to decrease impact forces into their joints and growth plates. SAQ drills can be performed using the body weight as resistance but need to be progressive in order to develop and improve. Always focus on developing proper technique and begin with simple, low intense, general patterns and progress to complex, high intense, sport-specific patterns.

For hockey players, include lateral (sideways) movements, not just drills being performed in a straight line. As part of one's exercise program, SAQ's may be performed two or three times per week. For coaches, SAQ drills may be used as a dynamic warm-up for one's team prior to a game

SAQ drills focus on running mechanics, movement efficiency, coordination and reaction training. Obviously, this type of training enhances muscle strength, endurance and motor skills. However, another main benefit of SAQ training is injury prevention, or "pre-habilitation." This applies to the athlete and non-athlete alike.

## **FOOTBALL**

Football is a game played by two teams of eleven players using a round ball. Players kick the ball to each other and try to score goals by kicking the ball into a large net.

## **CRICKET**

Cricket is an outdoor game played between two teams of 11 Players trying to score points, called runs, by hitting a ball with a wooden bat.

## **FIELD HOCKEY**

Field hockey is an outdoor game played on a grass field between two teams of 11 players who use long curved sticks to hit a small ball and try to score goals.

## **SPEED**

Speed is the ability to move as fast as possible in a linear direction. Working on speed usually involves sprints or side stepping to lateral speed.

## **AGILITY**

Agility is the ability to change direction effectively while moving at a linear speed. Changing direction in sport is key to success and many athletes overlook that having a strong core is the key to balance and stability which allow the body to train and build agility.

## **QUICKNESS**

Quickness is the reaction time of the body to make a move or a series of moves. it is the reaction to a unpredictable response in a game.

## **METHODS AND MATERIALS**

## **PROCEDURE**

## **SELECTION OF SUBJECTS**

45 female players were selected from three games (15 from each game) and the three games were Cricket, Hockey and Football, The subjects were from LNIPE, Gwalior.

Subjects of age 18- 23 years participated in the study. Athletes who had participated in West zone inter University tournament were selected for the study.

## **ADMINISTRATION OF TEST**

The test was administered on the players of LNIPE, Gwalior, prior to the actual administration of the testing program. All the subjects were properly explained about the procedures of the test. The different tests have been explained below:

### **1. SPEED – 30M FLYING START**

A 50m area was marked for sprint, the subject stood behind the starting line, where the starting 20 m area sprint was recorded and after crossing the 20 m starting area the time was started and only 30 m area was recorded for the measurement of the subject.

### **2. AGILITY – SEMO AGILITY TEST**

An area of 12 into 19 ft was marked with an adequate running space around it, 4 cones were placed squarely in each corner. The student lined up outside the lane (at A) with their back to the line. At signal Go, the student did side steps from A to B and had to run outside the corner cone; then backpedaled from B to D and ran to the inside of the corner cone; they then sprinted forward from D to A and ran to the outside of the corner cone; then backpedaled from A to C and ran to the inside corner then sprinted forward from C to B and ran outside the corner cone; and finally they did side steps from B to the finish line at A.

### **3. QUICKNESS- MEDICINE BALL CHEST PASS**

The subject held the 2 kg medicine ball in front of the wall, they stood 2 meters away from the wall to perform the drill. On the command of tester subjects continued to pass the ball on the wall for 30 seconds in front of their chest; the recorder counted the no of passes in given time period. In case of any fault the pass was not considered.

After collecting the data the three groups were compared to each other

## **RESULT**

In the light of set objectives of the study, the data was collected and analyzed. The present chapter deals with the analysis of Data finding and discussion of Hypothesis.

The analysis of data was collected on forty five [N=45] female subjects who participated in the West Zone University. The subjects were selected from Cricket, Hockey and Football.

The results and findings of the study are presented and explained below

**DESCRIPTIVE TABLE**

		N	Mean	Std. Deviation
Speed	Football	15	5.11	0.443
	Cricket	15	4.79	0.355
	Hockey	15	5.08	0.275
	Total	45	4.99	0.385
Agility	Football	15	17.24	1.153
	Cricket	15	17.02	1.619
	Hockey	15	16.14	1.249
	Total	45	16.80	1.409
Quickness	Football	15	39.47	8.374
	Cricket	15	48.33	7.218
	Hockey	15	50.67	11.52
	Total	45	46.16	10.240

**TABLE 2**

**ANOVA**

		Sum Squares	of Df	Mean Square	F	Sig.
Speed	Between Groups	.954	2	.477	3.596	.036
	Within Groups	5.573	42	.133		
	Total	6.527	444			
Agility	Between Groups	10.239	2	5.120	2.784	.073
	Within Groups	77.227	42	1.839		
	Total	87.467	44			
Quickness	Between Groups	1047.511	2	523.756	6.168	.004
	Within Groups	3566.400	42	84.914		
	Total	4613.911	44			

This table shows the output of the ANOVA analysis and whether there is a statistically significant difference between our group means.



Table 3, Multi comparisons display which groups differed from each other.

The Tukey post hoc test is generally the preferred test for conducting post hoc test on a one way ANOVA.

This table indicates that there is a statistical significant difference between the speed of cricket and football as  $p < 0.05$  in both the groups.

We can also observe from the table that there is no statistically significant difference between the groups in case of Agility as  $p$  is greater than 0.05 in all the groups.

Lastly we can see that for quickness there was a significant difference between the three groups as  $p < 0.05$

## **DISCUSSION**

The purpose of the study was to compare the Speed, Agility, and Quickness among different games that were Football, Cricket, and Hockey. The result of the study reveals that

1. There was a significant difference between the means of Football and Cricket as the  $p < 0.05$ . This means that the population means were not equal between the two groups.
2. There was no significant difference between the means of all the three groups in case of Agility. This means that the population means were equal for all the groups.
3. In case of quickness a significant difference was found between the three groups as  $p < 0.05$ . the population means can thus be said unequal.

## **CONCLUSION**

**The following conclusions were established based on the results:**

Taken together, a one way ANOVA was conducted to compare the effect of Speed, Agility, and Quickness on Footballers, Cricketers, and Hockey players Post hoc comparison using the Tukey test indicated that the mean score for Speed was significantly different for Footballers and Cricketers when compared to Hockey players.

Based on the results of the Post hoc test, it revealed clearly that there was no significant difference between the three groups which have been compared, in case of Agility.

Lastly we can conclude that there was a significant difference in case of Quickness of the players.

## **RECOMMENDATIONS**

In the light of conclusions drawn, following recommendations are made:

1. A similar study can be carried out on other physical variables other than the ones used in this study.
2. Similar studies can be carried out on the male subjects as well.

3. It is recommended that the present study may be undertaken by selecting subjects of different age groups and achievement level other than those employed in this study.
4. Similar study may be carried out on large samples.
5. It can be conducted on male and female subjects both.

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