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Comparison of agility among handball players of different playing position

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Abstract
Handball around the world is more dynamic and faster than ever before. The modification of rules and implementing various training methodologies resulted in drastic change in the playing format of the game. Handball is a strenuous contact Olympic team sport that places emphasis on speed, power, agility, strength, flexibility and endurance arm throwing, hitting, blocking, and pushing. Thirty two (32) male handball players were selected from Department of Physical Education and Sports Sciences, Annamalai University, Chidambram, Tamilnadu, India. These players were classified into four groups as backs (n = 12), wings (n = 7), pivots (n = 7) and goalkeepers (n = 6) respectively. The collected data was analysed using one way Analysis of variance (ANOVA). When *F* ratio was found significant, Scheffe's post hoc test was applied to know the difference between the four groups. It is concluded that handball players of different playing position showed significant difference on agility. The coaches and physical education teachers use this information while supplementing training to players and also use this information in the process of designing training program.

Keywords: Agility, Handball and Different Playing Positions.

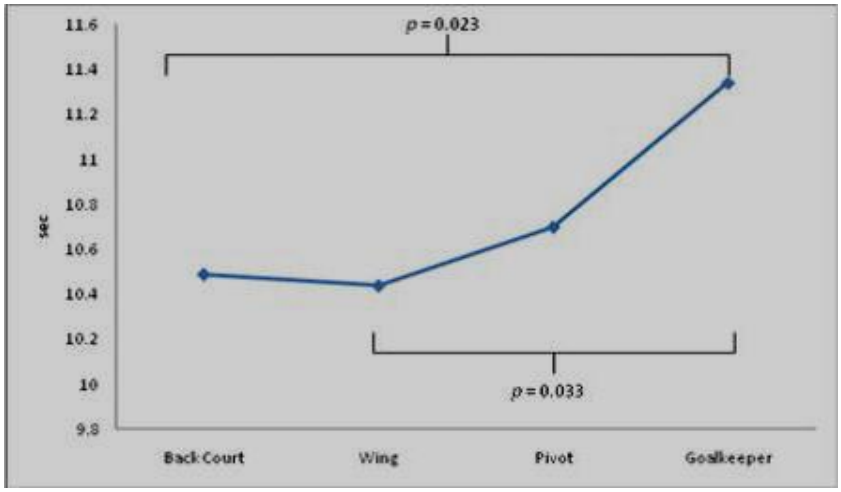
Introduction
Handball around the world is more dynamic and faster than ever before. The modification of rules and implementing various training methodologies resulted in drastic change in the playing format of the game. Handball is a strenuous contact Olympic team sport that places emphasis on speed, power, agility, strength, flexibility and endurance arm throwing, hitting, blocking, and pushing. The players have to sprint and change direction intermittently without getting fatigue. During the course of match players has to sprint for fast breaks quickly than their opponents. Feinting is important as that of sprinting, here the players perform feints to create free space to shoot. Agility is the most significant and visible components for handball players success. Therefore, the purpose of the study is to compare agility among male handball players of Annamalai University with respect to different playing position.

Methodology
Subjects
Thirty two (32) male handball players were selected from Department of Physical Education and Sports Sciences, Annamalai University, Chidambram, Tamilnadu, India. These players were classified into four groups as backs (n = 12), wings (n = 7), pivots (n = 7) and goalkeepers (n = 6) respectively. These selected subjects, who practice handball regularly and take part in competition. The selected subjects mean age: 21.62 ± 1.90 years; weight: 64.59 ± 7.25 kg and height: 172.07 ± 7.25 cm. The volunteered subjects signed a separate consent form to participate in the study.

Variables and Test
The agility was selected as criterion variable and measured using T test. All timing was recorded manually using a stop watch by establishing both tester and equipment reliability. All testing was conducted outdoor handball court with mud surface. Prior to the test, subjects performed a standardised warm-up followed by test. After completion of the test they were instructed to perform suitable warm-down for 20 minutes.

Statistical technique
The collected data was analysed using one way Analysis of variance (ANOVA). When *F* ratio was found significant, Schaffer's post hoc test was applied to know the difference between the four groups. All the statistical tests were calculated using the statistical package for the social science (SPSS) for windows (Version 16).

Figure 1: Post hoc comparison of agility among different playing position male handball players



Results

The result of the study clearly shows that agility (F = 4.439, *p* = 0.011) showed a significant difference among male handball players in different playing position. It denotes that agility found to be best in wing players and poor in goalkeepers (Figure 1). Since *F* is significant Schaffer's post hoc test was performed. It showed a significant difference on agility between back court vs. Goalkeeper (*p* = 0.023) and wing vs. goalkeeper (*p* = 0.033).

Discussion

Handball is a game which requires both aerobic and anaerobic fitness. They have to sprint frequently without fatigue which enables them to perform high during the competition. It identified that wing player had greater aerobic capacity than back, pivot and goalkeeper. It clearly states the roles of wings, who are required to rapidly shuttle from defense to offense and often, throwing at the goal without significant contact with the rival defensive players, attempting to exploit speed and agility (Milanese *et al*. 2011). Irrespective of playing position handball players require the ability to change direction or orientation of the body based on rapid processing of internal or external information quickly and accurately without significant loss of speed.This study clearly shows that wing players are found to be more agile than others.

However, no difference is speculated between back and wing; pivot and goal keeper. As Gambetta (2004) identified the key components of agility are body control - awareness, Recognition - reaction, Starting - first step, Acceleration, Footwork, Change of direction and Stopping. These qualities are prevailed high in wing players. It is understood that the wing and back court players who perform cuts, dodge and feint to break the opponents defence and to create passage for penetration this may be the reason for difference in agility among the players of different playing position.

Conclusion

It is concluded that handball players of different playing position showed significant difference on agility. The coaches and physical education teachers use this information while supplementing training to players and also use this information in the process of designing training program

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