

A Comparative Study of Agility among Football and Hand Ball Players of Kashmir University

^aShowkat Hussain, ^bAamir Suhail Bhat

^aAssistant Professor, Govt. College of physical Education, Ganderbal (J&K), India

^bR/O: Noonmai Yaripora, Teh & Dist: Kulgam, India

Abstract

The present study entitled “A comparative study of agility among football and handball players of Kashmir university “was undertaken with the following objectives:-

To study of agility among football and handball players of Kashmir university.

To study physical health of football and hand ball players of Kashmir university.

To put forth the results of the agility for further development in coaching at university levels

The sample comprised of 12 players (6 football players and 6 handball players of intercollegiate level all the players of both the games were contacted by the investigator at the ground / court during the tournament period.

The physical fitness parameters adopted in the present study included in the study was agility to measure the physical fitness

To assess the agility of the subjects squat thrust, side step test, shuttle run, semo agility test, right boomerang run test and dodging run test were used to measure the agility. The data was statistically analyzed by computing t –test.

KEYWORDS :- Agility, football and volley ball players

Introduction

Agility is a specific athletic attribute, which is fundamentally important to sports performance for three reasons. First, developing agility will provide a strong foundation for neuromuscular control and motor skill function, thereby establishing overall athleticism. Second, changing directions is a common cause of injury, so by teaching individuals proper movement mechanics we may be able to reduce injury risk. Finally, as an athlete matures, a heightened ability to quickly change directions will enhance overall performance in both proactive offensive and reactive defensive circumstances

At present, a new definition of agility is proposed: “a rapid whole-body movement with change of velocity or direction in response to a stimulus”. Agility has relationships with trainable physical qualities such as strength, power and technique, as well as cognitive components such as visual-scanning techniques, visual-scanning speed and anticipation. Agility testing is generally confined to tests of physical components such as change of direction speed, or cognitive components such as anticipation and pattern recognition. New tests of agility that combine physical and cognitive measures are encouraged. OR

The speed with which an individual may change his body positions or fastness in changing directions while moving is known as agility. For example, shuttle run etc.

Method

For the present study, total 60 male players, 30 from football and 30 from hand ball were selected as subjects in 2014 from the University of Kashmir who have participated in the intercollegiate tournaments. To assess the agility of the subject’s six agility tests (squat thrust, side step test, shuttle run, semo agility test, right boomerang run test and dodging run test) were used to measure the data. The data was collected during the intercollegiate tournament of Kashmir University.

Results :- **TABLE 1: SQUAT THRUST MEAN, STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:**

GROUP	MEAN	S.D	T-TEST	M.D	M.D
FOOTBALL	15.8	0.77	0.45	0.01	58

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ISSN 2249-9598

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HANDALL	15.7	1.03			
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Level of Significance = 0.05

Tabulated 't' 0.05 (58) = 2.000

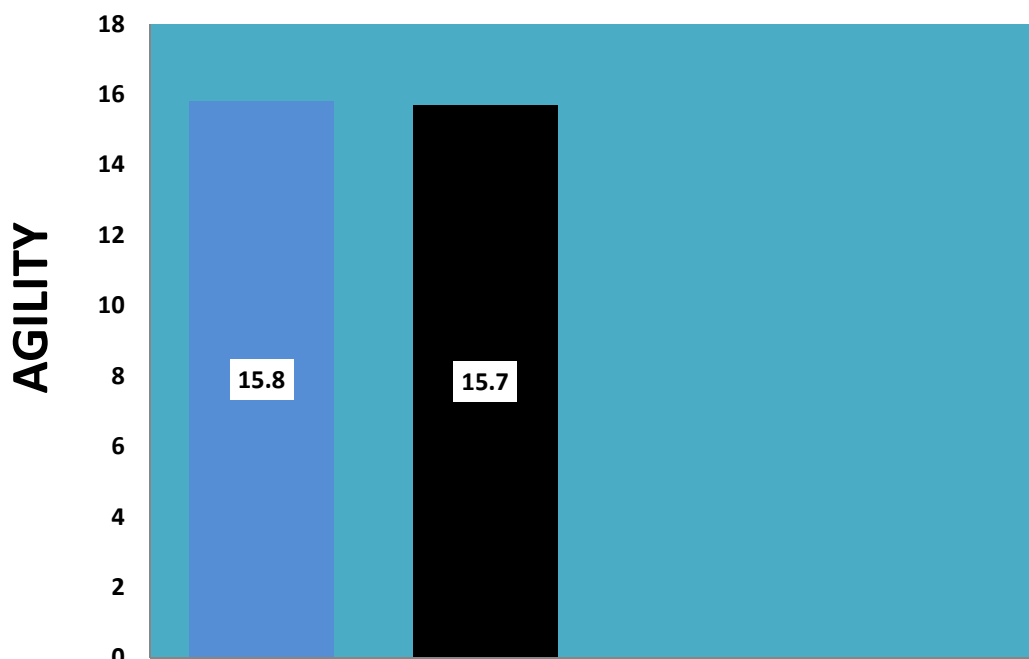
Table-1 reveals that there is no significant difference between means of football players and handball players because mean of handball players is 15.7 is slightly less than mean of football players i.e. 15.8, and there mean difference is 0.01. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.77 and handball players S.D. = 1.03 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no significant difference between football players and handball players because value of calculated 't' = 0.45, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

III.6 HYPOTHESIS TESTING:

Hypothesis-1: Researcher hypothesized that the agility of football players in squat thrust is more than the handball players.

The agility of football players in squat thrust is more than the handball players is rejected. Because difference found in t-test value is less than tabulated t-test value at 0.05 level of confidence. There was no significant difference found the value of calculated 't' = 0.45, is less than tabulated 't' = 2.000.

GRAPHICAL COMPARISON OF SQUAT THRUST MEANS BETWEEN FOOTBALL AND HANDBALL PLAYERS:



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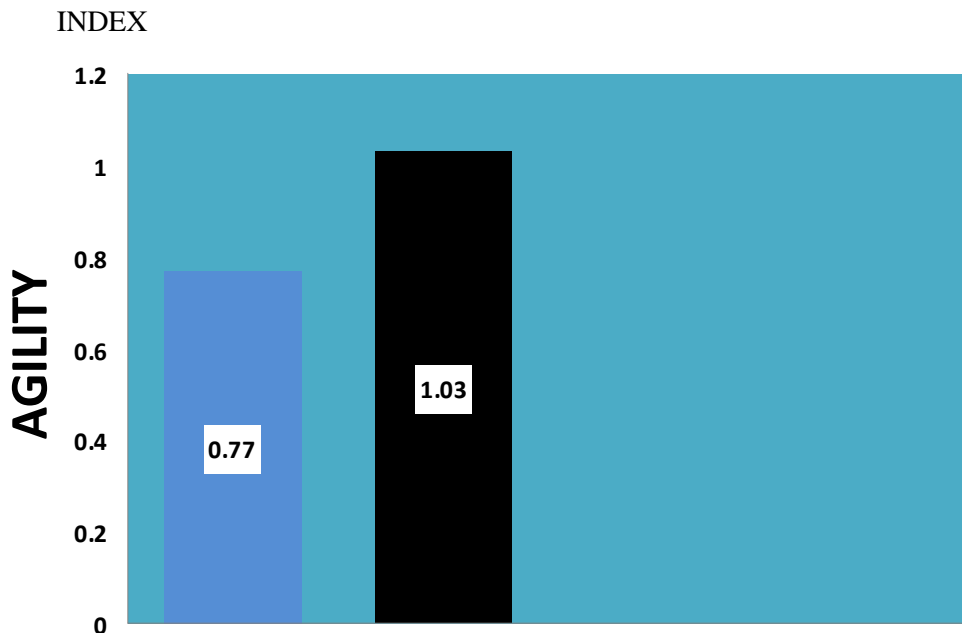


: FOOTBALL



: HANDBALL

GRAPHICAL COMPARISON OF SQUAT THRUST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:



: FOOTBALL



: HANDBALL

TABLE 2: SHUTTLE RUN MEAN, STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:

GROUP	MEAN	S.D	M.D	T TEST	M.D
FOOTBALL	11.18	0.51	0.31	1.47	58
HANDALL	10.87	0.45			

***Level of Significance = 0.05**

Tabulated 't' 0.05 (58) = 2.000

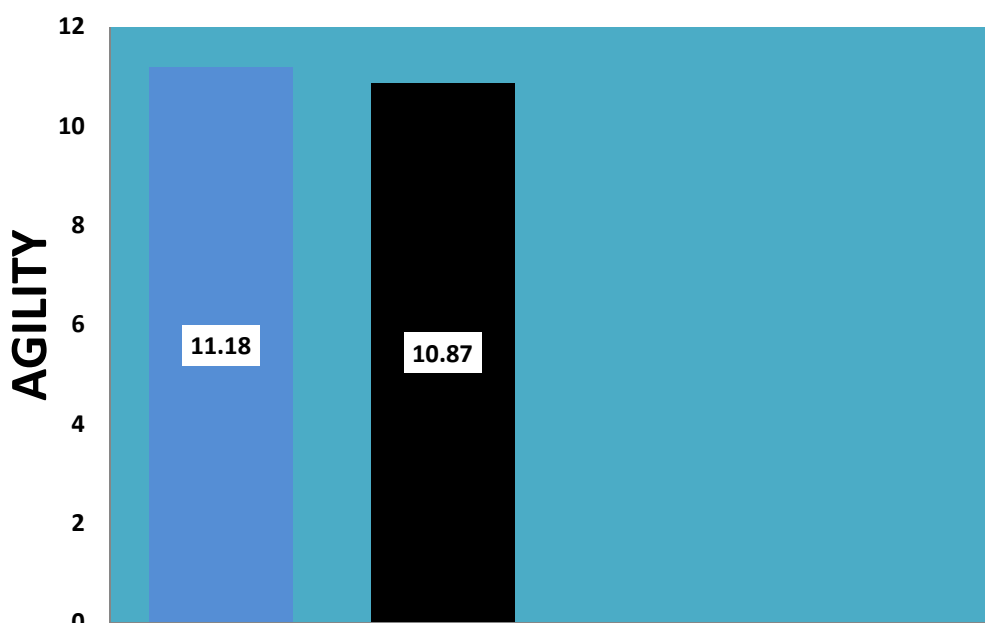
Table-2 reveals that there is least significant difference between means of football players and handball players because mean of handball players is 10.87 is slightly less than mean of football players i.e. 11.18, and there mean difference is 0.31. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.51 and handball players S.D. = 0.45 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no

significant difference found between football players and handball players because value of calculated 't' = 1.475, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

Hypothesis-2: Researcher hypothesized that the agility of football players in shuttle run is more than the handball players.

The agility of football players in shuttle run is more than the handball players is rejected. Because difference found in t-test value is less than tabulated t-test value at 0.05 level of confidence. There is no Significant difference found, the value of calculated 't' = 1.475, is less than tabulated 't' = 2.000.

GRAPHICAL COMPARISON OF SHUTTLE RUN MEANS BETWEEN FOOTBALL AND HANDBALL PLAYERS:



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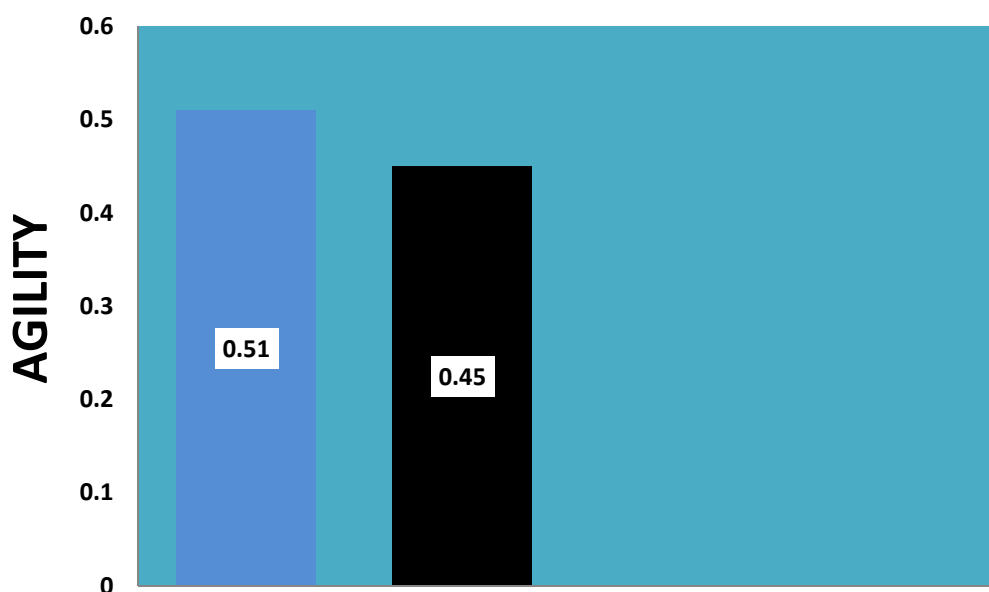


: FOOTBALL



: HANDBALL

GRAPHICAL COMPARISON OF SHUTTLE RUNS STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:



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: FOOTBALL



: HANDBALL

TABLE 3: SIDE STEP TEST MEANS, STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:

GROUP	MEAN	S.D	M.D	T-test	M. D
FOOTBALL	10.84	1.42	0.63	1.70	58
HANDALL	10.21	0.93			

Level of Significance = 0.05

Tabulated 't' 0.05 (58) = 2.000

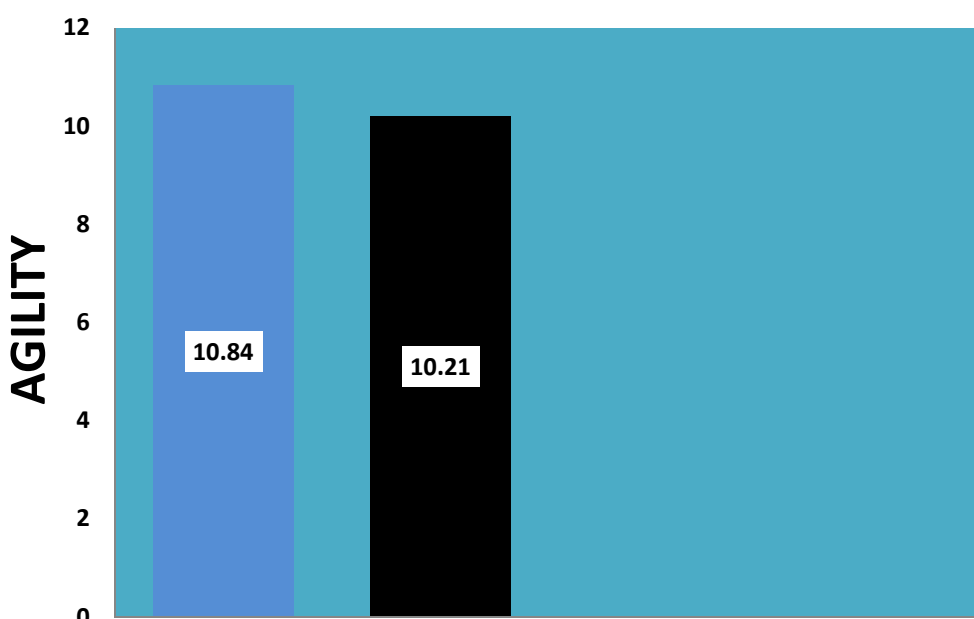
Table-3 reveals that there is no significant difference between means of football players and handball players because mean of handball players is 10.21 is slightly less than the mean value of football players i.e. 11.18, and there mean difference is 0.63. Standard deviation was calculated between Football players and handball players. Football players S.D. = 1.42 and handball players S.D. = 0.93. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no

significant difference found between football players and handball players because value of calculated 't' = 1.70, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

Hypothesis-3: Researcher hypothesized that the agility of football players in side step test is more than the handball players.

The agility of football players in side step test is more than the handball players is not accepted. Because less difference is found in t-test value than tabulated t-test value at 0.05 level of confidence. There is no significant difference found, the value of calculated 't' = 1.70, is less than tabulated 't' = 2.000.

GRAPHICAL COMPARISON OF SIDE STEP TEST MEAN BETWEEN FOOTBALL AND HANDBALL PLAYERS:



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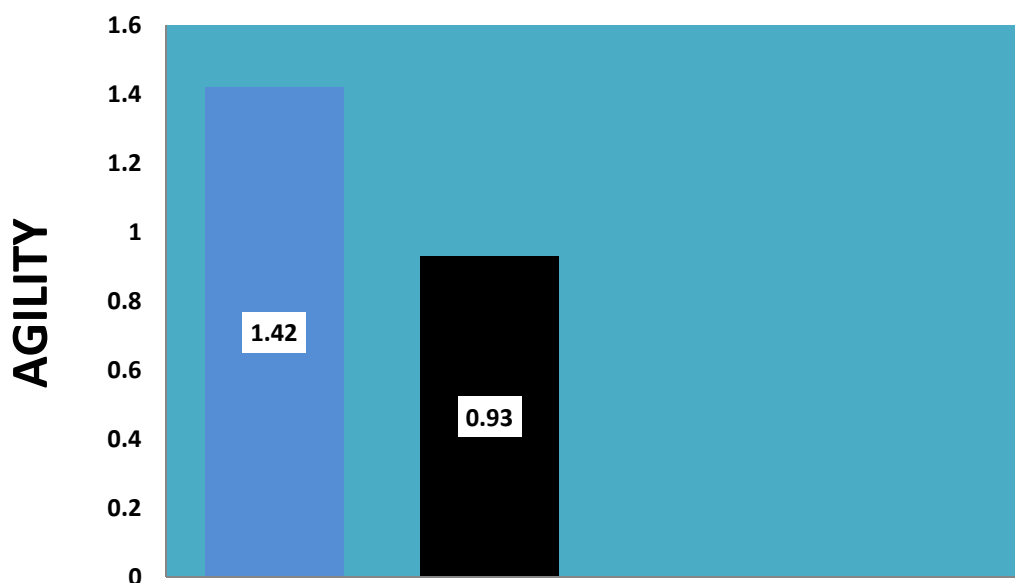


: FOOTBALL



: HANDBALL

GRAPHICAL COMPARISON OF SIDE STEP TEST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:



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: FOOTBALL



: HANDBALL

TABLE 4: SEMO AGILITY TEST MEAN, STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:

GROUP	MEAN	S.D	M.D	T TEST	M.D
FOOTBALL	14.07	0.79	0.24	0.96	58
HANDALL	14.31	0.92			

Level of Significance = 0.05

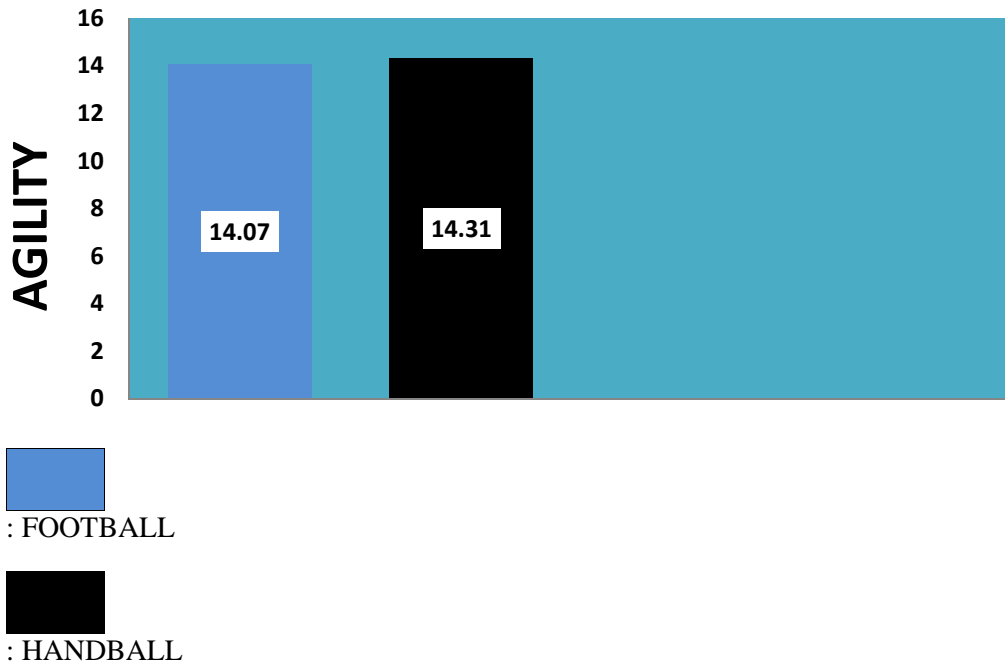
Tabulated 't' 0.05 (58) = 2.000

Table-4 reveals that there is least significant difference between means of football players and handball players because mean of handball players is 14.31 is slightly less than mean of football players i.e. 14.07, and there mean difference is 0.24. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.51 and handball players S.D. = 0.45 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no significant difference found between football players and handball players because value of calculated 't' = 0.96, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

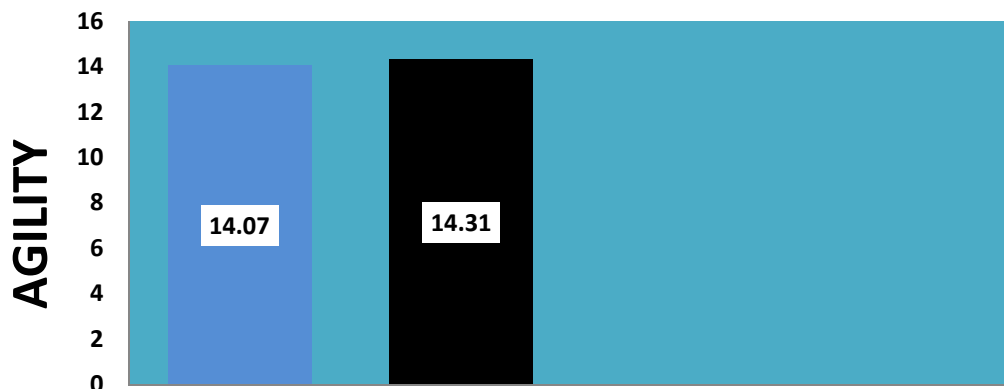
Hypothesis-4: Researcher hypothesized that the agility of football players in Semo agility test is less than the handball players.

Fourth hypothesis that the agility of football players in SEMO agility run test is more than the handball players is rejected. Because difference found in t-test value is less than tabulated t-test value at 0.05 level of confidence. There is no significant difference found, because value of calculated 't' = 0.96, is less than tabulated 't' = 2.000.

SEMO AGILITY TEST MEANS BETWEEN FOOTBALL AND HANDBALL PLAYERS:



GRAPHICAL COMPARISON OF SEMO AGILITY TEST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:





: FOOTBALL



: HANDBALL

TABLE 5: BOOMERANG RUN TEST MEAN, STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:

GROUP	MEAN	S.D.	M.D	T-TEST	M.D
FOOTBALL	20.34	0.52	0.29	1.94	58
HANDALL	20.05	0.50			

Level of Significance = 0.05

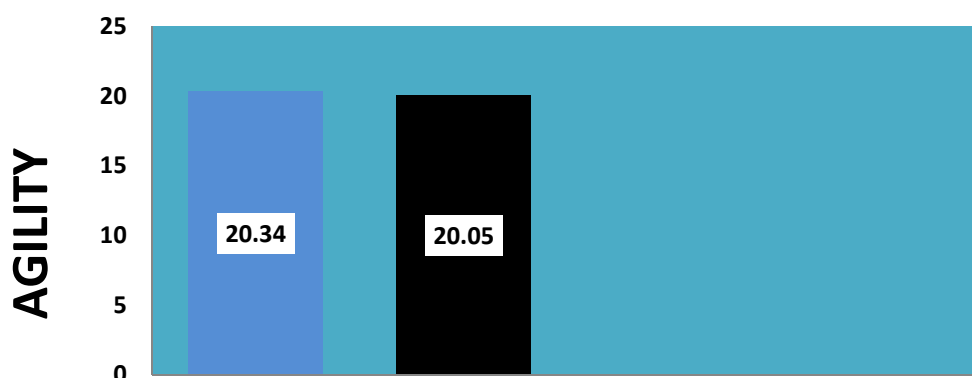
Tabulated 't' 0.05 (58) = 2.000

Table-5 reveals that there is least significant difference between means of football players and handball players because mean of handball players is 20.05 is slightly less than mean of football players i.e. 20.34, and there mean difference is 0.29. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.51 and handball players S.D. = 0.45 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no significant difference found between football players and handball players because value of calculated 't' = 0.29, is less than tabulated 't' =2.000 at 0.05 level of confidence,

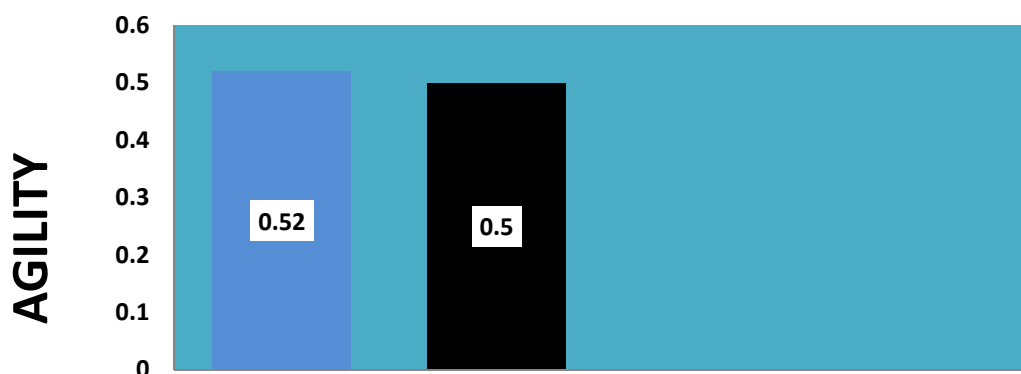
Hypothesis-5: It was hypothesized that the agility of football players in right boomerang run test is more than the handball players.

The agility of football players in boomerang run agility test is more than the handball players, is rejected. T-test value is less than tabulated t-test value at 0.05 level of confidence. There was no significant difference found between football players and handball players because value of calculated 't' = 0.29, is less than tabulated 't' =2.000.

GRAPHICAL COMPARISON OF BOOMERANG RUN TEST MEAN BETWEEN FOOTBALL AND HANDBALL PLAYERS:



GRAPHICAL COMPARISON OF BOOMERANG RUN TEST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:



GROUP	MEAN	S.D.	M.D	T-TEST	M.D
FOOTBALL	18.56	0.43	0.07	0.04	58
HANDALL	18.49	0.48			

***Level of Significance = 0.05**

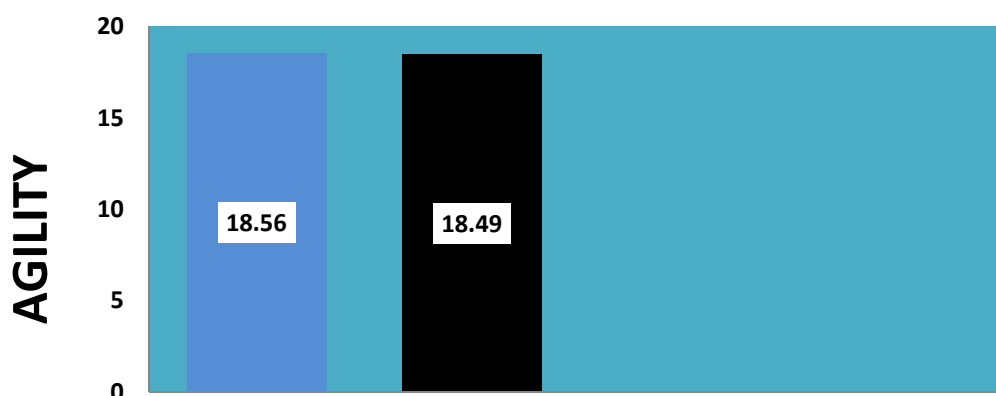
Tabulated 't' 0.05 (58) = 2.000

Table-6 reveals that there is least significant difference between means of football players and handball players. Mean of handball players is 18.49 is slightly less than mean of football players i.e. 18.56, and there mean difference was 0.070. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.43 and handball players S.D. = 0.48 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no significant difference found between football players and handball players because value of calculated 't' = 0.07, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

Hypothesis-6: Researcher hypothesized that the agility of handball players in Dodging run test is more than the football players.

The agility of handball players in dodging run agility test is more than the football players, is rejected. Because difference found in t-test value is less than tabulated t-test value at 0.05 level of confidence. No significant difference is found between football players and handball players. Value of calculated 't' = 0.07, is less than tabulated 't' = 2.000.

GRAPHICAL COMPARISON OF DODGING RUN TEST MEAN BETWEEN FOOTBALL AND HANDBALL PLAYERS:



GRAPHICAL COMPARISON OF DODGING RUN TEST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:

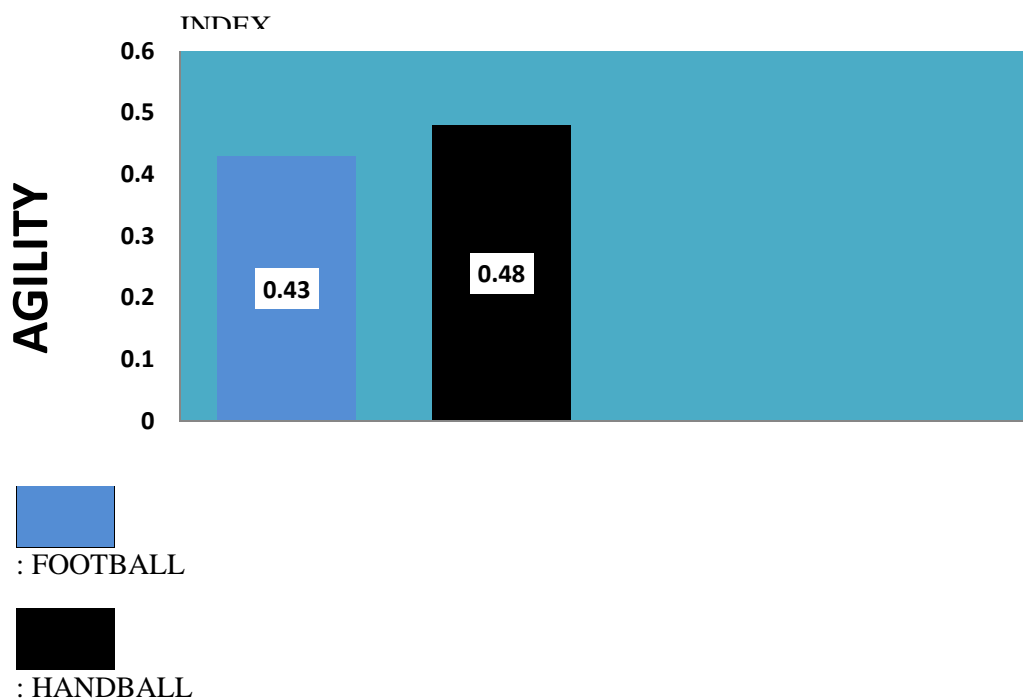


TABLE 7: HEXAGON RUN AGILITY TEST MEAN AND STANDARD DEVIATION AND T-TEST BETWEEN FOOTBALL AND HANDBALL PLAYERS:

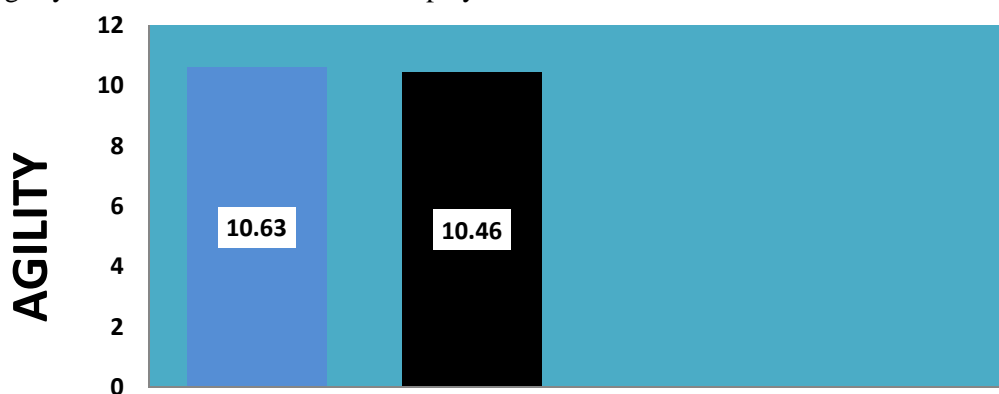
GROUP	MEAN	S.D.	M.D	T-TEST	M.D
FOOTBALL	10.63	0.43	0.17	1.55	58
HANDALL	10.46	0.46			

***Level of Significance = 0.05**

Tabulated 't' 0.05 (58) = 2.000

Table-7 reveals that there is least significant difference between means of football players and handball players. Mean of handball players is 10.46 is slightly less than mean of football players i.e. 10.63, and there mean difference was 0.170. Standard deviation was calculated between Football players and handball players. Football players S.D. = 0.43 and handball players S.D. = 0.46 was collected. To check the significant difference between football players and handball players. The data was analyzed by applying t-test. There was no significant difference found between football players and handball players because value of calculated 't' = 1.55, is less than tabulated 't' = 2.000 at 0.05 level of confidence,

Hypothesis-7: Researcher hypothesized that the agility of football players in hexagon run agility test is more than the handball players.



BETWEEN FOOTBALL AND HANDBALL PLAYERS:

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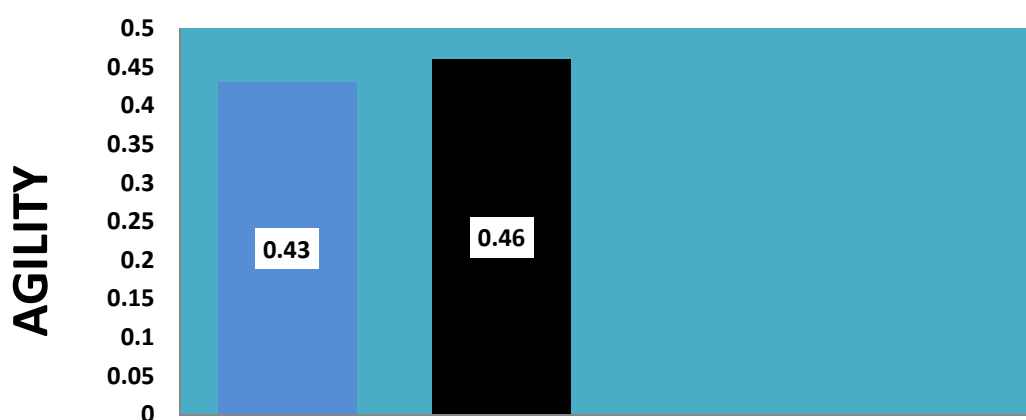


: FOOTBALL



: HANDBALL

GRAPHICAL COMPARISON OF HEXAGON RUN AGILITY TEST STANDARD DEVIATION BETWEEN FOOTBALL AND HANDBALL PLAYERS:



: FOOTBALL



: HANDBALL

Discussion :-

According to table-1 least significant difference is between means of football players and handball players in squat thrust. Where mean value of football players is 15.8 and that of handball players mean value is 15.7. The data was again analyzed by applying t-test. But before applying t-test, standard deviation was calculated. Standard deviation of football players is 0.77 and that of handball players is 1.03. It was found that there is no significant difference in squat thrust between football players and handball players, because calculated 't' = 0.45, which is less than tabulated 't' = 2.000 at 0.05 level of significance.

According to statistical analysis, table-2 shows that there is no significant difference between football players and handball players in shuttle run. Where mean value of football players is 11.18 and that of handball players mean value is 10.87. Standard deviation of football players is 0.51 and that of handball players is 0.45. The data was again analyzed by applying t-test. It was found that there is no significant difference in shuttle run agility test between football players and handball players, because calculated 't' = 1.47, which is less than tabulated 't' = 2.000 at 0.05 level of significance.

Table-3 shows that there is least significant difference between means of football players and handball players in side step test. Where mean value of football players is 10.84 and that of

handball players mean value is 10.21. The data was again analyzed by applying t-test. But before applying t-test, standard deviation was calculated. Standard deviation of football players is 1.42 and that of handball players is 0.93. It was found that there is no significant difference in side step agility test between football players and handball players, because calculated $t = 1.70$, which is less than tabulated $t = 2.000$ at 0.05 level of significance.

Table-4 shows that there is not significant difference between means of football players and handball players in semo agility test. Where mean value of football players is 14.07 and that of Hand Ball player Mean Value is 14.31, whose mean difference is 0.24. To check the significant difference between football players and Hand Ball players of semo agility test. The data was again analyzed by applying t-test. Standard deviation was calculated Standard deviation of football players is 0.79 and that of Handball players is 0.92. After that t- test was applied. It was found that there is no significant difference in semo agility test between football and Handball players because calculated $t = 0.96$, which is less than Tabulated $t = 2.000$ at 0.05 level of significance.

Table-5 shows that there is least significant difference between means of football players and handball players in boomerang agility test. Where mean value of football players is 20.34 and that of handball players mean value is 120.05. The data was again analyzed by applying t-test. But before applying t-test, standard deviation was calculated. Standard deviation of football players is 0.52 and that of handball players is 0.50. It was found that there is no significant difference in boomerang agility test between football players and handball players, because calculated $t = 1.94$, which is less than tabulated $t = 2.000$ at 0.05 level of significance.

Table-6 also reveals that no significant difference between means of football players and handball players in dodging run agility test. Where mean value of football players is 18.56 and that of Handball player Mean value is 18.49, whose mean difference is 0.7. To check the significant difference between football players and Handball players in dodging run agility test. The data was again analyzed by applying t-test. Standard deviation was calculated. Standard deviation of football players is 0.43 and that of Handball players is 0.48. After that t- test was applied. It was found that there is no significant difference in dodging run agility test between football and Handball players because calculated $t = 0.04$, which is less than Tabulated $t = 2.000$ at 0.05 level of significance.

Table-7 shows that there is no significant difference between means of football players and handball players in dodging run agility test. Where mean value of football players is 10.63 and that of Handball player Mean Value is 10.46, whose mean difference is 0.17. To check the significant difference between football players and Handball players in hexagon run agility test. The data was again analyzed by applying t-test. Standard deviation was calculated. Standard deviation of football players is 0.43 and that of Handball players is 0.46. After that t- test was applied. It was found that there is no significant difference in dodging run agility test between football and Handball players because calculated $t = 1.55$, which is less than Tabulated $t = 2.000$ at 0.05 level of significance.

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