

## COMPARISON OF CO-ORDINATIVE ABILITIES OF BASKET BALL PLAYERS AT DIFFERENT LEVELS OF PERFORMANCE

**Dr. Manoj Goel**

**Assistant Professor (Physical Education)**

**D.A.V Centenary College, Faridabad (Haryana)**

Preparation of a sportsman for competition is carried out through joint efforts between the sports scientists, practitioner, and coaches. It is recognized by present day coaches that the supervisory method of preparing athletes for competition is one, which is based on proven scientific principles rather than the trail and error, or on empirical judgment. Performance improvement in the most events of sports and game includes physical and psychological fitness. As performance in the game and sports is affected by different coordinative abilities. So the investigator was interested in the studying of coordinative abilities of basketball players at different level of performance.

### OBJECTIVE.

- To determine the coordinative abilities of Basket Ball players at different levels of performance.

### HYPOTHESES

- There may exist a significant difference in coordinative abilities factors such as differentiation ability, lateral jumping ability and agility of Basketball players at different levels of performance.

### METHODOLOGY

The present study is confined to conduct only on 300 Basket Ball players. The age limit of players of Basket Ball ranges between 18 to 25 years. Only male players were taken as subjects of the study. The present study was conducted on State/Inter College, Inter-University /National players of Basket Ball

### SAMPLE

The subjects selected for the present study were those who have played Basketball game at different level of performance i.e. national/ interuniversity and State/inter College.

Retrieved from <https://ijeponline.org/index.php/journal>

For the present study 300 Basket Ball players national/ interuniversity and state/ inter colleges from north zone were selected for the sample.

#### TOOL USED:

The following tools were used to collect the data for coordinative abilities.

**(a) Control run test**

To measure the differentiation ability.

**(b) Side step test**

To measure the lateral jumping ability.

**(c) Zig-zag run test**

To measure the agility.

#### COLLECTION OF DATA

The data was also collected from the Basketball players of various colleges, universities and S.A.I. centers . For this purpose investigator visited himself to the different universities, colleges and S.A.I. centers, every Basketball player was given coordinative abilities test & data was collected. Proper and accurate instructions were given prior to each and every test to collect a correct and appropriate data.

**TABLE .1**  
**ANOVA OF DIFFERENTIATION ABILITY OF BASKETBALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

Source of variation	df	Sum of Square	Mean Square Variation	F
Between Groups	1	0.166	0.166	8.82*
Within Group	298	5.826	0.0199	
Total	299	5.992		

\*Significant at 0.01 level.

Tabulated value for df (1,298) at 0.01 level of significance is 6.76

**Table .1** Indicates that the calculated 'F' value is 8.82 which is greater than the required table value at 0.01 level of significance. From the results it is clear that the differentiation ability significantly varies among basketball players at different level of performance. Hence, Scheffe's Post Hoc test was calculated to find out the paired mean difference among basketball players at different level of performance.

**TABLE .2**

**SCHEFFE'S POST HOC TEST FOR THE MEAN IN DIFFERENTIATION ABILITY OF BASKET BALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

National/Interuniversity	State/Inter college	Mean Difference	Critical value
0.030	0.078	0.048*	0.043

\*Significant at 0.01 level.

**Table 2:** It can be seen that the mean difference between National/ Inter university and state level / Inter college basketball player were found significant at 0.01 level of significance. Further the table implies that mean score of National/ Inter University basketball player was 0.030 seconds where as the mean score of State/ Inter College basketball players was 0.078 seconds. It means that the lower the scores higher the differentiation ability or vice-versa. So National /Inter University basketball players have better differentiation ability as compared to state/ Inter college players.

**TABLE.3**

**ANOVA OF LATERAL JUMPING ABILITY OF BASKET BALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

Source of variation	df	Sum of Square	Mean Square Variation	F
Between Groups	1	33.38	33.38	0.135**
With in Group	298	72932.63	244.73	
Total	299	72966.01		

\*\*Not significant at 0.01 level of significance.

Tabulated value for df (1,298) at 0.01 level of significance is 6.76.

**Table 3 :** Indicates that the calculated 'F' value is 0.135, which is less than the required table value at 0.01 level of significance. From the results it is clear that the lateral jumping ability is not significantly varies among the basketball players at different level of performance. Hence, Scheffe's Post Hoc test was calculated to find out the paired mean difference among players.

**TABLE 4.**

**SCHEFFE'S POST HOC TEST FOR THE MEAN DIFFERENCE IN LATERAL JUMPING ABILITY OF BASKETBALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

National/Interuniversity	State/Inter college	Mean Difference	Critical value
56.76	55.96	0.80**	4.67

\*\*Not significant at 0.01 level of significance.

**Table 4.** Shows that Scheffe's Post Hoc test for the mean difference of Lateral Jumping Ability of basketball players at different level of performance. The table shows no significance difference among all players at 0.01 level of significance.

**TABLE.5**  
**ANOVA OF AGILITY OF BASKETBALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

Source of variation	Df	Sum of Square	Mean Square Variation	F
Between Groups	1	20.14	20.14	7.86*
Within Group	298	762.56	2.56	
Total	299	782.70		

\*Significant at 0.01 level.

Tabulated value for df (1,298) at 0.01 level of significance is 6.76.

**Table 5** Indicates that the calculated 'F' value is 7.82 which is greater than the required table value at 0.01 level of significance. From the results it is clear that the agility significantly varies among the basketball players at different level of performance. Hence, Scheffe's Post Hoc test was calculated to find out the paired mean difference among players at different level of performance.

**TABLE 6**  
**SCHEFFE'S POST HOC TEST FOR THE MEAN DIFFERENCE IN AGILITY OF BASKETBALL PLAYERS AT DIFFERENT LEVEL OF PERFORMANCE**

National/Interuniversity	State/Inter college	Mean Difference	Critical value
22.86	23.35	0.65*	0.47

\*Significant at 0.01 level.

**Table 6 :** It can be seen that the mean difference between National/ Inter university and state level / Inter college basketball player were found significant at 0.01 level of significance. Further the table implies that mean score of National/ Inter University basketball player was 22.86 seconds where as the mean score of State /Inter College players was 23.35 seconds It means that the lower the scores higher the agility or vice-versa. So National /Inter University players have better agility as compared to state/ Inter college players.

## CONCLUSIONS

On the basis of the discussion of the results , the following conclusion were made.

The present samples of the basketball players showed significant differences in differentiation ability and agility Where as were not no significant was found in lateral jumping ability. At different performance levels, national/ interuniversity players were found better in differentiation ability and agility as compared to state/ inter college players. However, both levels of players have almost equal status in lateral jumping abilities.

## REFERENCES

- AAHPER. (1958),** *“Youth Fitness Test Manual”* Washington, D.C. American Association of Health, Physical Education and Recreation.
- Bunnel, R.D., Ludwig and Hirtz, P. (1988) :** *“Comparison of Co-ordinative Abilities of high school and college Volleyball players”*. Research Quarterly for exercise and sports, V-52, n 4, P.P. 128-135.
- Bhupinder (1988):** *“Comparison of the various Physical fitness factors of various games players.”* Unpublished Thesis.
- Blume, D.D. (1984) :** *“Grund Positionenzu Einerdiagnostik der Co-operative Fahigkeiten (Basic Positions for diagnostic of Co-ordinative Abilities) Theorie Und Praxis der Korperkultur,”* Berling 33, 1984, pp. 121-124.
- Esoebcsgade A.S. (1947):** *“Development of Motor Coordination in Boys and Girls,”* Research Quarterly, 18 (1), March, pp. 30-43.
- Fleishzman (1964):** *“The Structure and Measurement of Physical Fitness,”* (Die Struktur and Messung der Korperlichen (Fitness), New York Coordinative Fahigkeiten), p. 122.
- Fox Edward L. (1979):** *“Sports Physiology”* W.B. Saunders Company Toronto p. 153, p. 305
- Fukushima Sho (1981):** *“Physical Conditioning”* SNIPES, Vol. 4, No.1.
- Hare, D. (1986):** *“Principles of Sports training,”* 1986, p. 150.
- Hartzman, Ch. (1981):** *“Das Okonomisierte Testprofil Cus Diagnose Methode Zur Erpassung Koordi Nativer Fahigkeiten.”* (Economical Test Profile as Diagnostic Method of Assessment Coordinative Abilities). Wiisensch afliche Zeitschrift der

Retrieved from <https://ijeponline.org/index.php/journal>

Deutschen Hochs Chule fur Korper-Kultur Leipzig, 1981, p. 22.

**Helga Buttcher (1983):** *“Relationship of Coordinative Abilities and Swimming Techniques in School Swimming Classes,”* pp. 79-81, + PKK, Beiheft 1, Berlin, 1983.

**Hirtz, P. (1985):** *“Koordinative Fahigkeiten in Schulsport”* (Coordinative Abilities in School Sport), Volk und Wissen. Volkseigner, Verlag, Berlin, 1985, pp. 134-138.

**Johnson and Fisher, (1979):** *“Scientific Basis of Athletics Conditioning, Lea & Febiger,”* Philadelphia, pp. 80-209.

**Johan, D.S. (1983):** *“Motor Development of India Male Children and Youth From 9 yrs to 16 yrs. of age, Masters Thesis,”* N.S.N.I.S., Patiala.

**John (1976):** *“Scientific Principles and Methods of Strength Fitness.”* Addition-Wisly Publishing Company, p. 98.

**Kala (1998)** *“A Comparative Study of some of the physical fitness and coordinative ability Variable of Kabaddi and Kho-Kho players of Kurukshetra University Kurukshetra,”* Unpublished dissertation, “Dept. of Physical Education, Kurukshetra University, Kurukshetra.

**Kenneday, A.J (1990)** – *“Fitness A way of life”*, Tata Mcgrew Hill, New Delhi.

**Loyd Bolph (1991),** *“A Comparison of physical fitness of Volleyball players of Texas”.* Dissertation Abstract International PP,

**Ludwig and Hirtz, P. (1981):** *“Zur Co-ordinative Motorischen Vervo-IIkommung in der Klassen 2 his 4”* (Co-ordinative-Motoric Perfection in the Classes 2 to 4) in./Korpererziehung, 6, 1981, pp. 262-265.

**Lutter Schroder, H. (1972) :** *“Eintestverfahren Zur Eenrleilung der Korperlichen Leizrlangs – Fahigkeir. Leisbeserzie Nung Schornfoff 2 f”* (A Test Procedure for Assessment of Physical Performance Abilities), 1972, pp. 42-44.

**Marting D. (1980):** *“Grundlagen der Trainings Lehre”* (Basics of Training Science) Teil II, Karl Hofman Verlag, schorndort.

**Mathana Satish (2004):** *“Comparative Study of Co-ordinative Ability of State level volleyball and Basket Ball players.”* Unpublished Dissertation, Deptt. of Physical Education Kurukshetra University, Kurukshetra.

**Meena (2003),** *“Compare the coordinative Ability of Basketball players at different level.”* Unpublished Dissertation, Deptt. of Physical Education Kurukshetra University, Kurukshetra.

Retrieved from <https://ijeponline.org/index.php/journal>

**Neeraj (1999)** : “A Comparative Study of Co-coordinative Ability Variables of Hand Ball and Basket Ball Female Players of Haryana State.” (M.Phil. Dissertation.

**Ozerove, Y.V., Belov, S.A., Gorinevskeya, V.S. Bocharove, L.G. Kulkinova, L.P., Travina, A.P. and Sukole, S.I. (1982)**, “Comparison of Selected Anthropometric Measurements and Co-ordinative Abilities variables of Volleyball players”, as cited in thesis for international seminar for volleyball coaches Moscow.

**Sharma, Sharda (1996)**: “Diagnostic Study of Coordinative Abilities of Sports Boys and Girls in Haryana.” (Unpublished Ph.D. Thesis Submitted to Kurukshetra University, Kurukshetra, 1996).

**Singh Hardayal; (1991)**: “Science of Sport training,” D.V.S. Publications New Delhi:

**Willmor Jack (1977)**, “Athletic Training and physical fitness.” Allyn and Bacon, Sydney p. 99.

**Winter, R. (1976)**: “Die Motroische Entwicklung Des Menschen Vonder Geburtbis Inshone Aite” (Motor Developmetn of Human Being from Birth Till Old Age) In: Bewegungslehre meine I.K. : Schnabel, G.: Volk Und I Wissen Volkseigner Verlag, Berlin, 1976.

.