Comparison of Selected Coordinative Abilities Amongst Contact, Semi–Contact and Non–Contact Sports Players.

Ajinkya Sanjay Deshmukh
Research Scholar, CACPE, Pune 37

Dr. Shrikant S Mahadik
Research GuideCACPE, Pune 37

ABSTRACT

Coordination abilities are qualities of an organism to coordinate separate element of action in our system to decide a concrete action task. Coordination abilities help faster and effective learning and also help to achieve a higher-level performance. In this research researcher want to test the difference between selected coordinative abilities (Only reaction ability and balancing ability) amongst the contact sports, semi contact sports and non-contact sports. After this study the parents or guardian will get an idea in which sports activity they should involve their child according to their coordinative abilities, so that they can perform well in their respected sporting activity. The objective of the study was to conduct coordinative ability test amongst the different sports players of contact, semi contact and non-contact sports and analyse test score to find the difference between coordinative ability of different sports. In this study researcher has select the different sportsmen from different sports to conduct the test for collection of the data so random purposive sampling technique was use in this research (Total 90 subjects, 30 from each sport). In the end of the study with the help of data collected the researcher found that there is for reaction ability no significant difference between contact sports and semi-contact sports (p=0.38). There was no significant difference between contact sports and non-contact sports(p=0.59). There was no significant difference between semi-contact sports and non-contact sports(p=0.28). And for balancing ability there is no significant difference between contact sports and semi-contact sports (p=0.27). There was no significant difference between contact sports and non-contact sports(p=0.98). There was no significant difference between semi-contact sports and non-contact sports(p=0.37).

Introduction

Physical Education and sports being an integral part of education, have also experience the impact of scientific advancement. Now the sportsmen have been able to give outstanding performance because of involvement of new, scientifically substantiated training methods and means of exercise of sports exercise such as sports techniques and tactics, improvement of sports gear and equipment, as well as others components and conditions of the system of sports training.

The top-class players today required speed, power, unlimited endurance and absolutely top physical and mental fitness to withstand the strains and stress of completion. World top most sporting nations are very much conscious of these facts. They concentrate on the development of basic physical fitness components and the related aspects. They start training child concentrating on those fitness factors which are supposed to play a dominant role in its future performance in sports and games such as flexibility, agility, strength, reaction time, balance and coordination accordingly which are appropriate for specific age group.

The component coordination plays a greater role in sports. Individual and collective factors become completely effective only by a certain coordinative mastery of the technique. In each game or sport different coordinative ability are important. Coordinative abilities are primarily dependent on the motor control and regulation process of central nervous system.

The coordinating function of the central nervous system and the one of its properties which Ivan Pavlov called plasticity are given a leading role in physical treatment of the essence of coordinative abilities. 'The ability to coordinate movements qualitatively undoubtedly depends on the perfection of function of the analyzers. There are seven coordinative abilities identified. These are orientation ability, differentiation Ability, coupling ability, adaptation ability, rhythm ability, balance Ability, and reaction Ability.

Methodology

In this researcher had compared the coordinative abilities (Only reaction ability and balancing ability) of contact sports, non-contact sports and semi contact sports. The study attempt to identify and analyze the similarities and differences between these sporting groups. So, this study was a comparative study. The participant in this study

were the sports players of different sports from Pimple Saudagar region of PCMC. The sampling in this study was done by purposive sampling

technique. The researcher has selected two of the coordinative abilities namely coupling ability and balancing ability to conduct the test on the sportsmen.

Analysis and interpretation of data

The statistical analysis of the data has been done which includes descriptive statistics and ANOVA as in this research we are comparing three groups to find out the difference between coupling and balancing coordinative abilities.

Table No. 1 : *Descriptive Statistic of Reaction Ability in Comparison of Selected Coordinative Abilities amongst Contact Sports Players.*

	N	Mean	SE	SD
Contact Sports	30	12.54	0.23	1.30

Table no. 1 shows that in Reaction ability test of contact sports mean scores of contact sports is 12.54. Standard error of contact sports is 0.23. Standard deviation score of Reaction ability of contact sports is 1.30 respectively. Out of 30 students nearly 20 students (68.26%) fall within the time of 11.24 second and 13.84 second.

Table No. 2 : *Descriptive Statistic of Reaction Ability in Comparison of Selected Coordinative Abilities amongst Semi-Contact Sports Players.*

	N	Mean	SE	SD
Semi Contact Sports	30	13.59	0.57	3.15

Table no. 2 shows that in Reaction ability test mean score of semi contact sport is 13.59. Standard error of semi contact sport is 0.57. Standard deviation score of Reaction ability of semi contact sports is 3.15 respectively. Out of 30 students nearly 20 students (68.26%) fall within the time of 16.74 seconds and 10.44 seconds.

Table No. 3 : *Descriptive Statistic of Reaction Ability in Comparison of Selected Coordinative Abilities amongst Non - Contact Sports Players.*

	N	Mean	SE	SD
Non-contact Sports	30	12.89	0.25	1.38

Table no.3 shows that in Reaction ability test mean score of non-contact sports is 12.89. Standard error of non-contact sports is 0.25. Standard deviation score of

Reaction ability of standard deviation is 1.381 respectively. Out of 30 students nearly 20 (68.26%) students fall within the time of 11.51 seconds and 14.27 seconds.

Table No. 4 : *Descriptive Statistic of Balancing Ability in Comparison of Selected Coordinative Abilities amongst Contact Sports Players.*

	N	Mean	SE	SD
Contact Sports	30	0.20	0.08	0.48

Table no. 4 shows that in balancing ability test mean score of contact sports is 0.20. Standard error of contact sports is 0.08. Standard deviation score of balancing ability of contact sports is 0.48 respectively. Out of 30 students nearly 20 (68.26%) students fall within the score of 0.68 and – 0.28.

Table No. 5 : *Descriptive Statistic of Balancing Ability in Comparison of Selected Coordinative Abilities amongst semi-contact Sports Players.*

	N	Mean	SE	SD
Semi Contact Sports	30	0.46	0.14	0.48

Table no. 5 shows that in balancing ability test mean score of semi contact sports is 0.46. Standard error of semi contact sports is 0.14. Standard deviation score of balancing ability of semi contact sports is 0.48 respectively. Out of 30 students nearly 20 (68.26%) students fall within the score of 0.94 and – 0.02.

Table No. 6 : *Descriptive Statistic of Balancing Ability in Comparison of Selected Coordinative Abilities amongst non-contact Sports Players.*

	N	Mean	SE	SD
Non-contact Sports	30	0.23	0.10	0.56

Table no. 6 shows that in balancing ability test mean score of non-contact sports is 0.233. Standard error of non-contact sports is 0.10. Standard deviation score of balancing ability of non-contact sports is 0.568 respectively. Out of 30 students nearly 20 (68.26%) students fall within the score of 0.79 and – 0.33.

Table No. 7 : *Summary of ANOVA for the comparison of reaction ability amongst contact sports, semi contact sports and non-contact sports.*

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	30.52	2	15.26	3.44	0.036
Within Groups	385.27	87	4.42		
Total	415.80	89			

ANOVA Test was run to find out the difference between the scores of reaction ability test scores between different types of sports, that is contact sports, semi-contact sports and non-contact sports. The above table reveal that scores were not statistically significant for different sports type F= 3.447, P= 0.36 (P<.05).

Table No. 8 : *Multiple comparison of reaction ability contact sports, non-contact sports and semi contact sports.*

Sports Types	Sports Type	Mean diff.	Std. Error	Sig.
Contact sports	Semi-contact sports	-1.41	0.54	0.38
Contact sports	Non-contact sports	-0.55	0.54	0.59
Semi-contact sports	Non-contact sports	0.86	0.54	0.28

Scheffe test was run to find out the significant difference between the groups for reaction ability. The test scores show that's there is no significant difference between contact sports and semi-contact sports (p=0.38). There was no significant difference between contact sports and non-contact sports(p=0.59). There was no significant difference between semi-contact sports and non-contact sports(p=0.28).

Table No. 9 : *Multiple comparison of balancing ability amongst contact sports, non-contact sports and semi contact sports*

Sports Types	Sports Type	Mean diff.	Std. Error	Sig.
Contact sports	Semi-contact sports	-0.26	0.16	0.27
Contact sports	Non-contact sports	-0.03	0.16	0.98
Semi-contact sports	Non-contact sports	0.23	0.16	0.37

Scheffe test was run to find out the significant difference between the groups for balancing ability. The test scores show that's there is no significant difference between contact sports and semi-contact sports (p=0.27). There was no significant difference between contact sports and non-contact sports(p=0.98). There was no significant difference between semi-contact sports and non-contact sports(p=0.37)

Conclusion

The purpose of the study was to find out the selected coordinative abilities among the context sports, semi contact sports and non-contact sports. From the statistical procedure it is interpreted that there was no significant difference between contact sports and non-contact sports but there is significant difference between contact and semi contact sports.