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RESEARCH ARTICLE

MOTOR ABILITY STATUS AMONG NATIONAL LEVEL MALE PLAYERS OF CONTACT AND NON-CONTACT GAMES

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ABSTRACT

For the purpose of the study, sixty (N=60) national level male players of contact games (twenty for each game i.e., football, hockey and basketball) and sixty (N=60) national level male players of non-contact games (twenty for each game i.e., volleyball, cricket and baseball) from Chandigarh were selected as subjects of the study by using purposive sampling technique. The age of the subjects ranged between 19-25 years. To assess motor ability status, Barrow General Motor Ability Test (1957) that is consist of three items named zigzag run (agility), standing broad jump (power), medicine ball put (strength) was used. To find out the significance differences 't' test was used with the help of SPSS software. For testing hypothesis, the level of significance was set at 0.05. No significant differences were obtained between contact and non-contact games on zig-zag run and standing broad jump. Significant difference was obtained on medicine ball put between contact and non-contact games. The finding reveals that national level players of non-contact games have performed significantly better than players of contact games on medicine ball put.

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INTRODUCTION

Physical performance is depends on many factors such as basic factors, fundamental skills and athletics and sports activities. Basic factors those are basic to all performance such as agility, power, speed, coordination and balance. Running, jumping, throwing, climbing and hanging are fundamental skills. These are racial activities and form the basic pattern of all motor performances. Athletic and sports activities are highly specialized and achieved by practice and specialization. Skills consist of the abilities to bring about some end result with maximum outlay of energy, or of time and energy (Beashel and Taylor, 1996). Motor performance is a complex phenomenon and made up of several factors such as physical performance factors, structural factors, physiological factors, and psychological factors. Speed, agility, power, strength and fundamental skills are considered as physical performance factors which underlie the performance of skills. The science of motor development studies the development of motor abilities, technical skills and abilities and motor performance from birth. The motor development has been an area of interest for the physical education teachers and sports scientists for many years (Galton 1884, Gilber 1894, Roger1925, Jenkins 1930, Espenschade 1940, Menthney 1941). The study of various aspects of motor development, especially the development of motor abilities and their assessment continued with a greater momentum after the Second World War (Espenschade 1947, Kane and Meredith 1952, Marjorio 1954, Shirly 1959, Keogh 1965, Espenschade and Eckert 1967). Motor ability measurement is usually concerned with some form of running, throwing, and jumping; tests are repeated from time to time, and sometimes brief practice on them is permitted. The level of ability recorded may be due to capacity for neuromuscular coordination, to practice, to strength, or to other less evident factors (Scott, and French, 1959). Every person has all abilities but amount of abilities are differ in every person. Literature revealed that individual with high motor abilities can easily learn many other skills with less effort and a person who has lack of motor abilities cannot achieve high level of performance even after very hard effort. Motor abilities can be improved with practice to achieve a specific level for a particular task or skill. Performance is dependent on motor abilities. In many studies, relationship between motor abilities and performance is found high. Abilities are also influenced one's Environment and Culture. And improvement is depending on level of quality of ability and practice.

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Objective of the study

The objective of the study was to compare the motor ability status (zig-zag run, standing broad jump and medicine ball put) between contact and non-contact games.

MATERIALS AND METHODS

For the purpose of the study, sixty (N=60) national level male players of contact games (twenty for each game i.e., football, hockey and basketball) and sixty (N=60) national level male players of non-contact games (twenty for each game i.e., volleyball, cricket and baseball) from Chandigarh, age ranged between 19-26 years were selected as subjects of the study by using purposive sampling technique. To assess motor ability status of the subjects, *Barrow General Motor Ability Test (1957)* that is consist of three items named Zigzag Run (Agility), Standing Broad Jump (Power), Medicine Ball Put (Strength) was used. To find out the significance differences among national level players on motor ability status, 't' test was applied with the help of SPSS software. For testing hypothesis, the level of significance was set at 0.05.

RESULTS OF THE STUDY

The comparison between contact and non-contact games on motor ability was analyzed using 't' test. The data pertaining to the same is presented in Table 1 to 3.

Table 1. Comparison of scores on zigzag run between players of contact and non-contact games

Variable	Group	Mean	SD	MD	SE	't' - value
Zigzag Run	Contact Game	23.1250	1.53587	.07417	.19828	.207
	Non-Contact Game	23.1992	2.30420		.29747	

**Significant at .05 level*
't' .05 (118) = 1.98

It is depicted from the Table 1 that the calculated 't' value in case of national level male players of contact and non-contact games on zigzag run was not found to be statistically significant as the value obtained was .207 whereas, the tabulated value was 1.98 which 118 degree of freedom at .05 level of significance. Mean score of zigzag run between contact and non-contact games are depicted graphically in Figure-1.

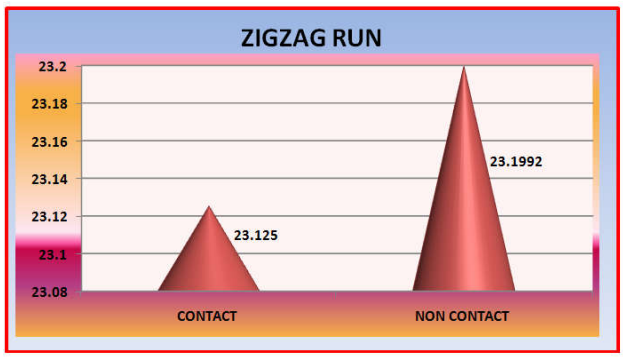

Figure 1. The Graphical Representation of Mean Score of Zigzag Run between Contact and Non-Contact Games

The comparison of scores on standing broad jump between contact and non-contact games is presented in Table 2.

Table 2. Comparison of scores on standing broad jump between contact and non-contact games

Variable	Group	Mean	SD	MD	SE	't'-value
Standing Broad Jump	Contact Game	2.3478	1.11190	.07600	.14355	.500
	Non-Contact Game	2.2718	.39050		.05041	

**Significant at .05 level*
't' .05 (118) = 1.98

It is depicted from the Table 2 that the calculated 't' value in case of national level male players of contact and non-contact games on standing broad jump was not found to be statistically significant as the value obtained was .500 whereas, the tabulated value was 1.98 which 118 degree of freedom at .05 level of significance. Mean score of standing broad jump between contact and non-contact games are depicted graphically in Figure-2.

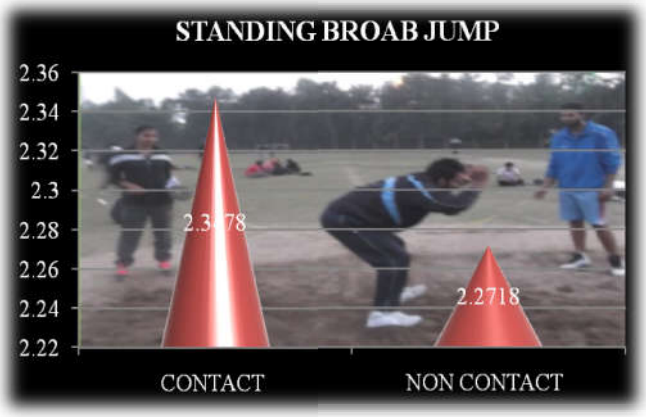

Figure 2. The graphical representation of mean score of standing broad jump between Contact and Non-Contact Games

The comparison of scores on medicine ball put between contact and non-contact games is presented in Table-3.

Table 3. Comparison of scores on medicine ball put between contact and non-contact games

Variable	Group	Mean	SD	MD	SE	't' value
Medicine Ball	Contact Game	9.3407	1.90834	1.53533	.24637	4.243*
	Non-Contact Game	10.8760	2.05290		.26503	

**Significant at .05 level*
't' .05 (118) = 1.98

It is depicted from the Table 3 that the calculated 't' value in case of national level male players of contact and non-contact games on medicine ball put was found to be statistically significant as the value obtained was 4.243 whereas, the tabulated value was 1.98 which 118 degree of freedom at .05 level of significance. Mean score of medicine ball put between

contact and non-contact games are depicted graphically in Figure-3.

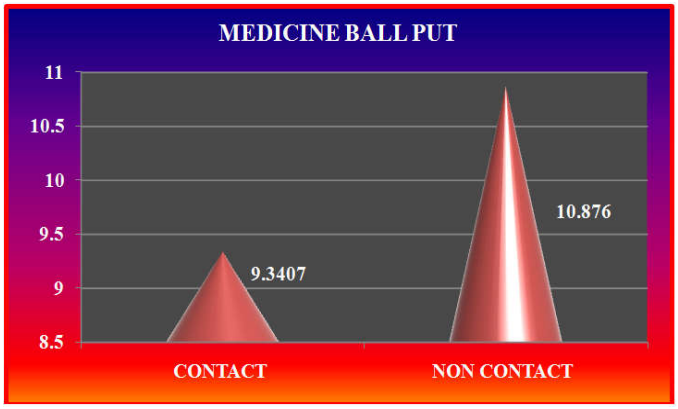

Figure 3. The Graphical Representation of Mean Score of Medicine Ball Put between Contact and Non-Contact Games

DISCUSSION OF FINDINGS

The finding of the study showed that there was significant difference obtained on medicine ball put among national level male players. Non-contact game players demonstrated significantly better than contact game players on medicine ball put. Tripathi and Sharma (2012) found that significant difference in agility among hockey, football, basketball, volleyball and handball in relation to their muscular endurance and agility, when the subjects were involved in similar type of daily routine. Ramkumar (2014) compared explosive power between male volleyball and basketball players of Annamalai University. The result of the study showed that there was no significant difference on explosive power between volleyball and basketball players. He concluded that both games demands greater explosive power for better performance. Bal and Sandhu (2013) concluded that significant difference between baseball picher and cricket fast bowler on the sub-variables i.e. speed, agility and cardiovascular endurance.

Conclusion

- No significant differences were observed on zigzag run and standing broad jump between contact and non-contact games. A significant difference was observed on medicine ball put between contact and non-contact games.
- It has been found that national level male players of non-contact games have performed significantly better than national level male players of contact games on medicine ball put.

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