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A Study of Selected Physical Fitness Components on Sprinters

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Abstract: *This study is investigated the sprinters agility performance for their quickness with the help of Shuttle run 10x4 tool, sprinters explosive strength for their power with the help of standing broad jump tool and sprinters flexibility for their free body moment with the help of forward bend and reach tool. In this present examination was to look at the agility, explosive strength and flexibility of Marathwada region of Maharashtra's sprinter athletes. The examination done on 30 boys and 30 girls sample whose age group is 18 to 22 years and whose training age is 1.5 or more years. In this examination the Shuttle run 10x4 tool, standing broad jump and forward bend and reach used as a test tool for agility, explosive strength and flexibility. In this examination mean and standard deviation is applied for the compare score with hypotheses and sprinter athlete scores. This study is used for all those who is working as a coach, player and who studied for physical fitness.*

Keywords: Agility, Explosive Strength, Flexibility, Sprinters, Marathwada Region Athlete.

I. INTRODUCTION

There are near about ten components of physical fitness and motor fitness or skill related fitness components in all these we select only three of these. They are agility, explosive strength and flexibility. They are the key components of physical fitness. They plays main role in every physical sports event. Agility is the capacity to quickly adjust body course, speed up, or decelerate. It is affected by balance, strength, coordination, and ability level. Deftness can be worked on by first fostering a sufficient base of solidarity and molding that is proper for the trouble level of the competitor. Explosive strength is the speed at which you could use your power! It includes heavy loading in shorter high velocity moves for a few repetitions with lengthy relaxation periods among. Think one rep max vertical bounce, or one rep max clutch/easy and jerk. In non exercising phrases, suppose a punch. Someone with a high level of explosive strength goes to have extra punching electricity than someone with less explosive strength. Flexibility is the capability of a joint or collection of joints to transport via an unrestricted, ache loose range of movement. Although flexibility varies broadly from man or woman to man or woman, minimum degrees are important for preserving joint and total frame health. Many variables affect the loss of ordinary joint flexibility including injury, state of no activity or a loss of stretching. The range of movement could be motivated by means of the mobility of the tender tissues that surround the joint. These soft tissues encompass: muscle mass, ligaments, tendons, joint capsules, and pores and skin. A lack of stretching, particularly when blended with activity can lead to a fatigue brought on soft tissue shortening over the years.

II. METHODOLOGY

2.1 Objectives

1. To measure agility of sprinters of Marathwada region of Maharashtra.
2. To measure explosive strength of sprinters of Marathwada region of Maharashtra.
3. To measure flexibility of sprinters of Marathwada region of Maharashtra.

2.2 Hypothesis

1. The agility, explosive strength and flexibility of sprinter of Marathwada region of boys and girls are good.
2. The agility, explosive strength and flexibility of Marathwada region of boys and girls sprinter are not good.

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2.3 Selection of Sample

The sample consist of 60 sprinter athletes 30 boys and 30 girls of Marathwada region of Maharashtra, whose age under 18 to 22 years and whose training age is above 1.5 years. In this study convenience sampling method of non probability sampling is adopted.

2.4 Tool Used

Shuttle run 10x4 tool, standing broad jump and forward bend and reach these three tools is used for examine sprinters agility, explosive strength and flexibility. In each test gives three attempts to each individual for accuracy of data and acquiring qualified assistant for measuring the data.

2.5 Statistics Used:

In this study we use mean of central tendency and standard deviation for the interpreted data or analyze the data with the help of hypothesis testing. After that we see the reject or accept the hypothesis and give the conclusion of the study. We calculate the separate mean and standard deviation for boys and girl but we conclude equivalent for the appropriate result.

III. RESULT AND CONCLUSION

Statistical result of comparison of boys and girl scores of the shuttle run, standing broad jump and forward bend and reach test scores of sprinter athlete of Marathwada region mean and standard deviation show test wise individually.

Sr. No.	Test	Players	Mean	Std. Deviation
1	Shuttle run	30 boys	12.11	1.27
2	Shuttle run	30 girls	11.98	0.78
3	Standing broad jump	30 boys	145.26	20.92
4	Standing broad jump	30 girls	135.9	19.44
5	Forward bend and reach	30 boys	2.83	3.17
6	Forward bend and reach	30 girls	8.18	3.92

Table 1: Shows mean and S.D of sprinters shuttle run, standing broad jump and forward bend and reach test.

IV. CONCLUSION

1. The agility, explosive strength and flexibility of sprinter of Marathwada region of boys and girls are good is significant.
2. The agility, explosive strength and flexibility of sprinter of Marathwada region of boys and girls are not good is insignificant.

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