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were regularly training at Jawaharlal Nehru Stadium, New Delhi. The analysis of data employing Person's Product Moment Correlation Method revealed that performance in 5000m was significantly related to sit and reach test. Performance in 10000m was significantly related to the scores in sit and reach test.

KEYWORDS : Long distance events, Flexibility variables

INTRODUCTION

Running is classical "athletics sport" can be considered both simple and difficult, simple because it is an instinctive, natural skill performed at some time by all but the most unfortunate difficult in its mechanical complexity (Dyson, 1973). Running movement is brought about by a combination of forces exerted both internally and externally by the body to produce movement. Good running call for coordinated action of the entire body which refers to fitness. Physical education is an integral part of education. Along with physical fitness it is the most important part in the field of education. It brings a desirable change in the total behavior of an individual. Physical fitness means having the ability of a person to live a full and balance existence. The improvement of physical fitness is the application of the principles of exercise-physiology to the improvement of one's capacity to meet successfully life's physical challenges. Competitive sports and athletics provide the participation with a variety of physical challenges that must be successfully if the participant is to win a satisfactory share of competitions. Heart rate at sub maximal running races expressed as the percentage of HR max could prove to play an important role in predicting distance running performance among highly trained runners. A similar high correlation is found in heterogeneous group (Costill et al. 1975). Flexibility is defined as the extent or full range of movement in any joint without undue strain to the articulation and muscles attachments Greater flexibility is mechanically advantageous as it saves energy and reduces the risk of injuries Johnson B, Nelson J.K. (1969) . We have seen a significant increase in the flexibility in players than the controls. These players stood at a very good score of 7th grade according to the grading and scoring for general physical fitness of National level athletes Sodhi & Siddhu LS(1984) . Kanchana (2000) conducted a study entitled predictive value of multivariate characteristics in determining distance running performance. The subjects for the study were 60 female middle and long distance runners who had participated in inter divisional athletic meet representing their respective colleges. The variables selected were anthropometric measurements, physical and physiological variables. Multiple Linear Regression Analysis was done in order to predict middle and long distance running performance on the basis of selected variables. Katiyar & Rashogi (2013) studied comparison of endurance and flexibility among volleyball, basketball and handball players.

METHODOLOGY

The subjects for the study were 800m (N=10) and 1500m (N=10) runners who were regularly training at the Jawaharlal Nehru Stadium, New Delhi and all of them had participated at least in the state level athletic meets. According to their performance they were termed as intermediate level athletes. The Flexibility variables selected were sit and reach test, bridge up test and trunk extension test. Performance of the subjects in each of the selected variable was tested adopting standardized procedures. The subjects were urged to put up their best performance in each of the tests.

ANALYSIS OF DATA

The statistical analysis of data collected on 10 athletes each participating in 800m and 1500m was correlated to selected flexibility varjables using Person/s Product Moment Correlation Method. The level of significance to check the relationship obtained by Persons Product Moment Correlation Method was set at 0.05 level of confidence. The value of 0.632 was needed for significance at .05 level of confidence with 8 degrees of freedom.

Table 1

Relationship of selected flexibility variables to performance in 800m

Variables correlated	Coefficient of Correlation
Sit and Reach test and performance in 5000m	-0.68 *
Bridge up test and performance in 5000m	-0.28
Trunk Extension test and performance in 5000m	0.13

N=10

*Significant at .05level of confidence r.₀₅ (8) = 0.632

From the above table it is evident that performance in 5000m run is significantly related to Sit and reach test (r = -0.68). In respect of other flexibility variables namely Bridge up test and Trunk extension test the relationship with performance in 800m was statistically not significantly as the value of correlation in respect of each these variables were less than the table value of 0.632 with 8 degrees of freedom.

The relationship performance in 5000m with selected flexibility variables is graphically presented in figures 1 to 3.



Fig.1. Relationship of performance in 5000m to sit and reach test.



Fig.2. Relationship of performance in 5000m to bridge up test.



Fig.3. Relationship of performance in 5000m to trunk extension test

Table 2

Relationship of selected flexibility variables to performance in 10000m

Variables Correlated	Coefficient of Correlation
Sit and Reach test and performance in 10000m	-0.64*
Bridge up test and performance in 10000m	-0.10
Trunk Extension test and performance in 10000m	-0.20

N=10

*Significant at .05 level of confidence $r_{.05}(8) = 0.632$

Table 2 shows relationship of performance in 10000m to selected flexibility variables namely sit and reach test, bridge up test and trunk extension test. It is seen from the table that performance in 1500m is significantly related at 0.05 level of confidence to sit and reach test (r = -0.64). The value is higher than the table value of 0.632 with 8 degrees of freedom. The table further shows 10000m performance is significantly not related to bridge up test and trunk extension test performance as the value of coefficient of correlation obtained is -0.10 and -0.20 which is less than table value 0.632 with 8 degrees of freedom.

The relationship performance in 10000m with selected flexibility variables is graphically presented in figures 4 to 6.



Fig.4. Relationship of performance in 10000m to sit and reach test.



Fig.5. Relationship of performance in 10000m to bridge up test.



Fig.6. Relationship of performance in 10000m to trunk extension test.

Discussion of Findings

The performance in long distance events selected in the study i.e. 5000m and 10000m to a great extent is influenced by anaerobic endurance. Flexibility is considered as one of the most important motor components in view of the fact that its development leads to indirect development of endurance and speed. Relationship of performance in sit and reach test contributes to good performance in the two middle distance events. Sit and reach test measure flexibility in the back and hamstring muscles of the legs. In the both middle distance events that is 5000m and 10000m flexibility plays an important role when the athlete takes a drive for the ground. In both the middle distance events the runners take long strides while participating in the events.

Conclusion

Sit and reach test was identified as only flexibility variable for contributing to good performance in the middle and long distance events.

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