

Analysis of Flexibility among Tribal and Non-Tribal High School Boys of Karnataka

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Abstract – Flexibility as one of the component of physical fitness plays a major role in the efficient functioning of the day to day activities of the individuals. Flexibility is required all the age groups and to all the geographical people. Review by Singh (1984), “An improvement in flexibility can result in improvement in athletic performance. An increase in flexibility permits the athlete to exert force over great distance and thereby to generate greater force,” And Gurewitsch and O’Neill (1944) carried out one of the earliest studies on flexibility and found gradual declines in flexibility from 6 to 12 years of age, and then increases through age 18 and Hupprich and Sigerseth (1950) investigated a group of girls 9 to 15 years of age and reported no significant differences among them in six different flexibility test items. However, shoulder, knee, and hip flexion appeared to decrease from 12 years to 15 years of age. Significant of the study is to analysis of flexibility among tribal and non-tribal high school boys of Karnataka. It was hypothesis that tribal boys may be superior than non-tribal boys in Flexibility, variable selected was delimited to flexibility (only Hip, Ankle and Dynamic) and result stated that Most of the flexibility test, tribal boys were found superior than non-tribal boys and study recommended that tribal boys may be selected to undergo training in those events where flexibility is a determining factor.

Keywords: Flexibility, Tribes and Physical Fitness.

INTRODUCTION

Flexibility as one of the components of physical fitness plays a major role in the efficient functioning of the day to day activities of the individuals. It is also basic pre-requisite for a good quantitative and qualitative execution of sports movement. According to Singh (1984), “An improvement in flexibility can result in improvement in athletic performance. An increase in flexibility permits the athlete to exert force over great distance and thereby to generate greater force.”

Gurewitsch and O’Neill (1944) carried out one of the earliest studies on flexibility and found gradual declines in flexibility from ages 6 to 12 years and then increases through age 18 and Hupprich and Sigerseth (1950) investigated a group of girls 9 to 15 years of age and reported no significant differences among them in six different flexibility test items. However, shoulder, knee, and hip flexion appeared to decrease from ages 12 through 15 years.

SIGNIFICANT OF THE STUDY:

Significant of the study is to Analysis of flexibility among tribal and non-tribal high school boys of Karnataka.

HYPOTHESIS:

It was hypothesis that Tribal boys may be superior than non-tribal boys in Flexibility

Limitation:

1. Certain factors like diet, socio-economic status, exercise might have influenced the physical growth of the subjects. This was considered as one of the limitations.
2. All the flexibility tests were field tests, conducted without sophisticated instrument like electro-gonio meter. This, it is felt may affect the accuracy of the measurement and thus it is considered as limitation.
3. Any formal training the subjects had in their past which might have affected their flexibility, is also considered as a limitation.

Delimitation:

1. The study was de-limited to 200 tribal and 200 Non-tribal school boys.

2. The study was de-limited to 10-14 years school boys from Karnataka State.
3. The study was further delimited to the range of movement (flexibility) of the following areas.
 - i. Hip
 - ii. Ankle
 - iii. Dynamic

METHODOLOGY & MATERIALS

Hip Flexibility: Hip flexibility was recorded in centimeter side Split test

Ankle Flexibility: Ankle Flexibility was recorded in centimeter side Ankle Flexion Test

Dynamic Flexibility: Dynamic Flexibility was recorded in Numerical by conducting 20 seconds Dynamic Flexibility Test

SIDE SPLIT TEST

Aim: To measure the hip flexibility

Equipment's: Flexomeasure case with yard stick and ruler guide in

Procedure: From the erect standing position, the subjects were asked to extend their legs side to side until the crotch was as near to the floor as possible. The subjects were asked to do the movement slowly and steadily without bouncing. An assistant was given to support the subjects and they were made to stand behind the subject with zero end of the yard stick on the floor. When the lowest point was reached, the case was raised upward until the ruler guide rested under the crotch. The reading was taken in nearest centimeter in the case window at the lower line.

Scoring: The best score of three trails was recorded in nearest centimeter as the hip flexibility score.

ANKLE FLEXION TEST

Aim : To measure the ankle Flexion

Equipment's : Yard Stick / Measuring tape

Procedure: The subjects were instructed to stand as far as back from the wall as possible, keeping the heels flat on the floor and lean against the wall touching the wall with hands, chin and chest, keeping the body and knees straight. The measurement was taken from the toe line and the wall from the best lean position with heels on the floor in centimeters.

Scoring: The distance of the best lean was subtracted from standing body height from floor to chin was recorded in nearest centimeters.

Dynamic Flexibility Test

Aim : To measure the dynamic flexibility of the subjects

Instruments : Stop watch, Chalk and tape

Procedure: The subjects were instructed to stand with their back towards the wall, far enough from the wall to enable them to bend over without hitting the wall with their buttock. The feet of the subjects were placed shoulder width apart. Directly behind their back at shoulder height, an 'x' mark was made. Another 'x' mark was made on the floor in front of the subjects in between the feet. On the signal 'Go', the subjects bend and touch the 'x' mark between their feet with both the hands and then rise, twist to the left, and touch the 'x' mark on the wall with both hands. This was counted as one cycle. In the next cycle, the subject repeated the same, except they twisted to their right, continuing to alternate side to which he twisted in each cycle.

Scoring: The total number of cycles completed in 20 seconds, were recorded in numerical number as the individual's score.

Statistic: To compare the range of motion (flexibility) of tribal and non-tribal boys of Karnataka, two-way analysis of variance (2x5 Factorial Design) was used.

Further simple effect test followed by post-hoc test was applied to assess the significant differences between adjusted means. The hypothesis was tested for significant differences at 0.5 level.

CONCLUSION:

1. Tribal boys were found superior in hip flexibility in all age groups except 12 years.
2. Tribal boys overshadowed their non-tribal boys in ankle flexibility except 10 years.
3. Tribal boys exhibited better dynamic flexibility in 10, 11 and 13 years. However non-tribal boys superseded their tribal counterpart in dynamic flexibility in 12 and 14 years.
4. Most of the flexibility test, tribal boys were found superior than non-tribal boys.

The findings of the study showed significant differences in the as range of motion (flexibility) between tribal and non-tribal boys of 10-14 years. The tribal boys super seeded in the flexibility of different body parts.

RECOMMENDATIONS AND SCOPE FOR FURTHER RESEARCH

In light of findings and conclusions drawn, the following recommendations are made:

1. It is recommended that tribal boys may be selected to undergo training in those events where flexibility is a determining factor.
2. It is further recommended that non-tribal boys may be given extra care on their flexibility development.
3. Similar study can be conducted on girls and different variables, regions of the same age groups of tribal and non-tribal.

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