

# A Comparative Study of Dynamic Endurance among Ethnic Tribal Adolescent Boys of Chhattisgarh

Dr. Kuldeep Dubey,

Principal, St. Vincent Pallotti College, Lodhi para, Raipur (C.G.) India.

kuldeep.dubey05@gmail.com

**ABSTRACT** - The aim of the present study is to compare dynamic endurance of adolescent tribal boys belonging to Gond, Halba, Kamar and Oraon tribes. This study was carried out on 200 ethnic adolescent tribal boys of Chhattisgarh. Gond, Kamar, Halba and Oraon tribes were chosen as ethnic group and 50 adolescent boys were selected from each ethnic tribe. Sit ups as prescribed in American Alliance for Health, Physical Education and Recreation - AAHPER (1980) was used to assess dynamic endurance of selected subjects. One way ANOVA statistical technique was used to compare dynamic endurance of tribal adolescent boys belonging to Gond, Halba, Kamar and Oraon tribes respectively. Results reveal statistically non-significant difference in dynamic endurance of tribal adolescent boys belonging to Gond, Halba, Kamar and Oraon tribes. It was concluded that ethnicity do not influence dynamic endurance of tribal adolescent boys belonging to various ethnic groups.

**Keywords :** Adolescent boys, Chhattisgarh, Dynamic endurance Ethnicity, Socio-Economic background, Tribal

## I. INTRODUCTION

Muscular endurance is the ability of a muscle or group of muscles to sustain repeated contractions against a resistance for an extended period of time. It is one of the components of muscular fitness, along with muscular strength and power.

Muscular endurance is related to a muscle or group of muscles required to maintain repeated contraction against a force or resistance for a prolonged period of time. Muscular endurance is a part of muscular fitness. Endurance can be static or dynamic in nature. Static endurance can be assessed by the duration of time a limb can keep a certain position. In contrast to this, dynamic endurance can be assessed by the number of times a limb can execute a movement against a given resistance. The benefits of dynamic endurance in our life are numerous. If we want to move an object from one place to other, dynamic endurance is required. Dynamic endurance enables a person to do the day-to-day activities more efficiently. Good dynamic balance also provides protection from injuries. With increased muscular endurance one can work more efficiently for longer periods of time without getting tired early. Main component of health related fitness i.e. dynamic endurance is of prime importance during adolescent period. The reason is simple. During adolescence so many psychological and physiological changes occur with increased demands on educational and other activities. To keep pace with all these changes an adolescent needs to have dynamic endurance so as to cope with these changes efficiently. In recent times special attention has been paid to tribal population of India to enhance their overall

wellbeing. In India researches have shown that tribal population in India are still lagging behind in terms of socio-economic status, health related issue and social constraints. Researches like Singh and Sidhu (1987), Mitra et al. (2002), Chowdhury, S.D. (2007), Bhardwaj and Kapoor (2007), Gahlawat, P. (2007), Ajeesh and Sudheer (2013), Shailesh and Mehrotra (2014), Agashe and Shambharkar (2016), Karkare and Agashe (2017) carried out work on tribal population to assess their anthropometric profile, fitness, cardio respiratory fitness, body type, personality etc. but so far comparison of dynamic endurance of tribal adolescent boys belonging to various ethnic tribes of Chhattisgarh has not been carried out. Hence, to fill this void the present study was planned.

## II. OBJECTIVES

The main objective of the present study is to compare dynamic endurance of Gond, Kamar, Halba and Oraon tribal adolescent boys.

## HYPOTHESIS

Ethnicity will significantly influence dynamic endurance of tribal adolescent boys of Chhattisgarh.

## III. METHODOLOGY

The following methodological steps were taken in order to conduct the present study.

### Sample

For present study, 50 tribal boys from Gond tribe (Mean age 14.76 yrs.), 50 tribal boys from Kamar tribe (Mean age 13.42 yrs), 50 tribal boys from Halba tribe (Mean age 14.68

yrs) and 50 tribal boys from Oraon tribe (Mean age 14.62 yrs) were randomly selected. The sample was collected from schools operational in Jashpur, Sariapali, Bastar, Ambikapur, Raigarh, Dhamtari, Balod districts of Chhattisgarh.

## TOOLS

### Sit-ups test

Sit-ups as described in American Alliance for Health, Physical Education and Recreation -AAHPER (1980) was used to collected data on dynamic endurance. This test evaluates abdominal muscular strength and dynamic endurance. The subject lies on back with knee flexed and feet on floor, heels 12 to 18" from the buttocks. Arms are crossed on chest with hands on opposite shoulder. The subject tightens his abdominal muscles curls to sitting position touching elbow to thigh then he return down, number of sit-ups in 60 second are recorded.

## IV. PROCEDURE

After following ethical consideration, the selected subjects performed sit-ups under the supervision of researcher. The number of sit-ups in 60 seconds were counted and tabulated according to each study group. One Way ANOVA statistical technique was used to compare data between various study groups. Results are shown in table 1.

### ANALYSIS OF DATA

**Table 1 One Way ANOVA Dynamic Endurance as Assessed by Sit-ups Score of Gond, Kamar, Halba and Oraon Tribal Boys (N=200)**

Groups	N	Dynamic Endurance	
		Mean	S.D.
Gond Tribal Boys	50	31.27	9.69
Kamar Tribal Boys	50	32.90	8.02
Halba Tribal Boys	50	33.56	8.98
Oreon Tribal Boys	50	32.00	5.90
F=0.73, p>.05			

Perusal of table 1 indicate that dynamic endurance of tribal adolescent boys belong to Gond (M=31.27), Kamar (M=32.90), Halba (M=33.56) and Oreon tribes (M=32.00) did not differ significantly with each other. The F ratio of 0.73 also supports this finding statistically. Since the F-ratio was not found to be statistically significant, further statistics such as Least Significant Difference Test was not carried out.

On the basis of analysis of data, following results are obtained.

## RESULTS

- Dynamic endurance of tribal adolescent boys from Halba tribes was superior as compared to tribal adolescent boys representing Gond, Kamar and Oraon tribes respectively.

- The dynamic endurance of tribal adolescent boys representing Gond, Kamar and Oraon tribes respectively was found to be almost equal.

## V. DISCUSSION

Results of the present study indicate that dynamic endurance of tribal adolescent boys from four ethnic communities i.e. Gond, Kamar, Halba and Oraon respectively did not differ significantly with each other. The results are not surprising because all the tribal adolescents from four tribal communities are engaged in similar kind of physical activity. Apart from these their socio economic background and health related issues are similar. Hence in this context results are not surprising.

## VI. CONCLUSION

On the basis of results it was concluded that dynamic endurance of tribal adolescent boys representing Gond, Kamar, Halba and Oraon tribes did not differ significantly with each other.

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