

## Assessment of Selected Health Related Physical Fitness Variables of South District in Tripura

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### Abstract

The purpose of the study was to "Assessment of Selected Health Related Physical Fitness Variables in Tripura". The study was conducted on 270 male tribal students belonging to Tripura and falling in the age range of 9 to 14 years. In this study there were three selected components of health related physical fitness i.e. Flexibility, Muscular strength and Cardio- Respiratory endurance were assessed using standard techniques. Descriptive statistics mean and standard deviation were used to analysis the data. From the findings it revealed that sit ups were increasing with their age, the sit and reach test for flexibility also increasing due to their age and cardio respiratory endurance was decreasing due to their age and energy level.

**KEYWORDS:** Health Related Physical Fitness, Tribal Students.

### Introduction

The tribal populations of Tripura being neglected for long period in nutritional and health issues, needs to be uplifted and so we required empirical evidence which can be achieved through this research. To know the current status of health related physical fitness of tribal students, the present study was carried out on 270 male tribal students belonging to Tripura and falling in the age range of 9 to 14 years. Three components of health related physical fitness namely Flexibility, Muscular strength and Cardio- Respiratory endurance were assessed using standard techniques. The purpose of the study is to find out the current status of tribal students of Tripura.

### Objective of the study

- i. To find out the current physical fitness status of tribal students of Tripura.
- ii. The study will assess the health related physical fitness of tribal students of Tripura.

### Methodology

#### Selection of the Subjects

For the purpose of the study two hundred seventy (N=270) students were randomly selected from the south district of Tripura. 45 subjects from each class i.e. (45x6) =270 nos. 20 schools from south Tripura district were selected randomly and their aged range between 9-14 years.

#### Selection of the Variables

Keeping in mind the feasibility criteria, availability of equipments and the purpose of the investigation the following variables were selected.

Health related physical fitness:

- a) Cardio- Respiratory endurance – One mile run
- b) Muscular strength – Bend knee sit-up for 1 minute
- c) Low back and hamstring Flexibility – Sit and reach

**Selection of Tools**

Stop watch, measuring tape, whistle and constructed box were used for the study.

**Collection of Data**

The data of the study was collected by using following method:-

- i. Cardio respiratory function was assessed by the time taken in seconds for the one-mile run.
- ii. Abdominal muscular strength and endurance was assessed by the number of correctly executed sit-ups performed in sixty seconds.
- iii. Flexibility was measured by sit and reach test and recorded in centimetres.

**Procedure**

The maximum number of **sit-ups** achieved in 60 seconds was recorded. The subjects were instructed to keep their arms across the chest while curling up to a sitting position until their elbows touched their thighs. This test gave us insight into abdominal strength and endurance. One trial was given.

The **sit and reach** (SAR) measured the distance of the performed stretch to the nearest cm. Before the test, the shoes were removed and the subjects were instructed to slowly reach forward with their knees fully extended as far as possible with palms facing downward. This test represents flexibility in the lower back and upper thighs. Three trials were administrated and the mean value was taken in the analysis.

A distance run (**1 mile**) was measured as the time elapsed to the nearest second from the starting signal to crossing the finish line. This test presents an example of cardio respiratory endurance. The time necessary to cover the proposed distance was recorded in minutes and seconds. One trial was administrated.

**Statistical Technique**

For the purpose of the study to check the current status of tribal students of Tripura, descriptive statistics of mean and SD was employed.

**Results and Discussion**

**Table: I Mean values of various components of selected health related physical fitness**

Mean Age (Years)		9 years	10 years	11 years	12 years	13 years	14 years
	N		45	45	45	45	45
SIT-UPS SCORE	MEAN	29.95	33.48	32.51	34.64	36.28	38.31
	SD	5.81	6.63	6.89	8.34	7.78	8.39

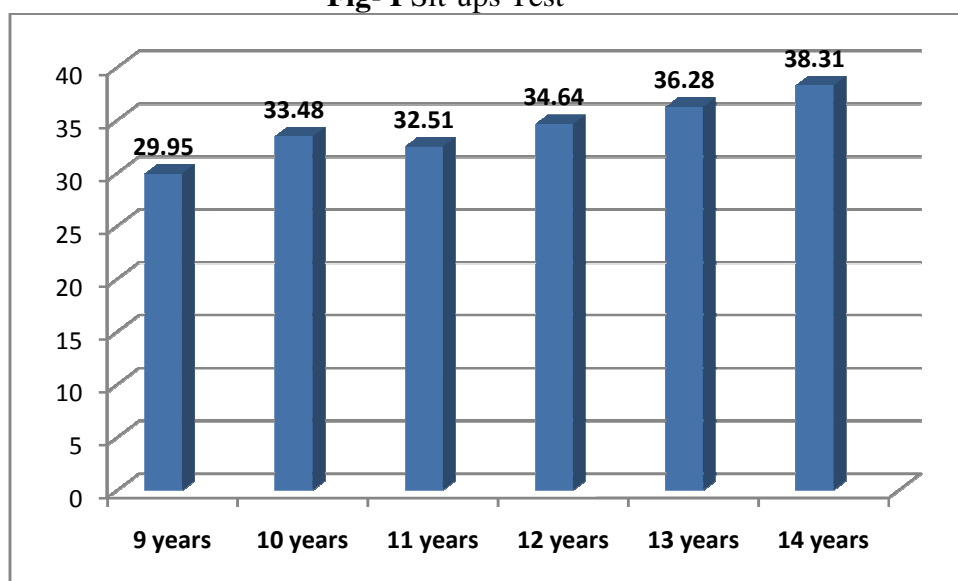
SIT & REACH TEST SCORE	MEAN	4.24	5.62	6.53	6.58	8.91	9.73
	SD	5.43	5.83	5.08	6.15	5.59	7.00
1 MILE RUN SCORE	MEAN	9.52	7.83	7.29	7.39	6.86	6.74
	SD	0.81	0.96	1.08	1.07	1.05	1.39

Table-I shows the mean & SD of sit ups test score in 9 years tribal students was 29.95 ±5.81, 10 years tribal students was 33.48 ±6.63, 11 years tribal students was 32.51 ±6.89, 12 years tribal students was 34.64 ±8.34, 13 years tribal students was 36.28 ±7.78 & 14 years tribal students was 38.31 ±8.39.

The mean and SD of sit & reach test score in 9 years tribal students was 4.24 ±5.43, 10 years tribal students was 5.62 ±5.83, 11 years tribal students was 6.53 ±5.08, 12 years tribal students was 6.58 ±6.15, 13 years tribal students was 8.91 ±5.59 & 14 years tribal students was 9.73 ±7.00.

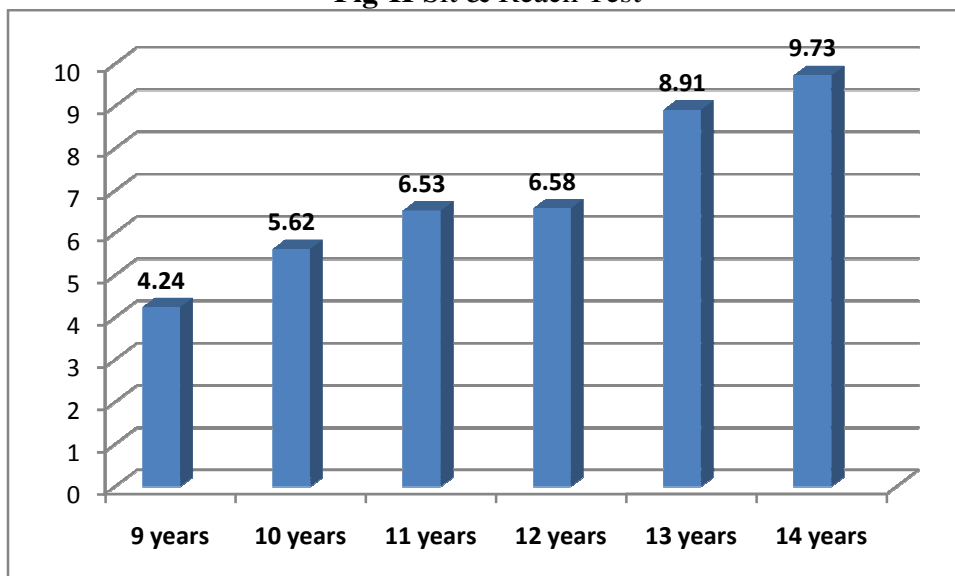
Again, the mean and SD of 1 mile run score in 9 years tribal students was 9.52 ±0.81, 10 years tribal students was 7.83 ±0.96, 11 year tribal students was 7.29 ±1.08, 12 years tribal students was 7.39 ±1.07, 13 years tribal students was 6.86 ±1.05 & 14 years tribal students was 6.74 ±1.39.

**Fig- I Sit-ups Test**



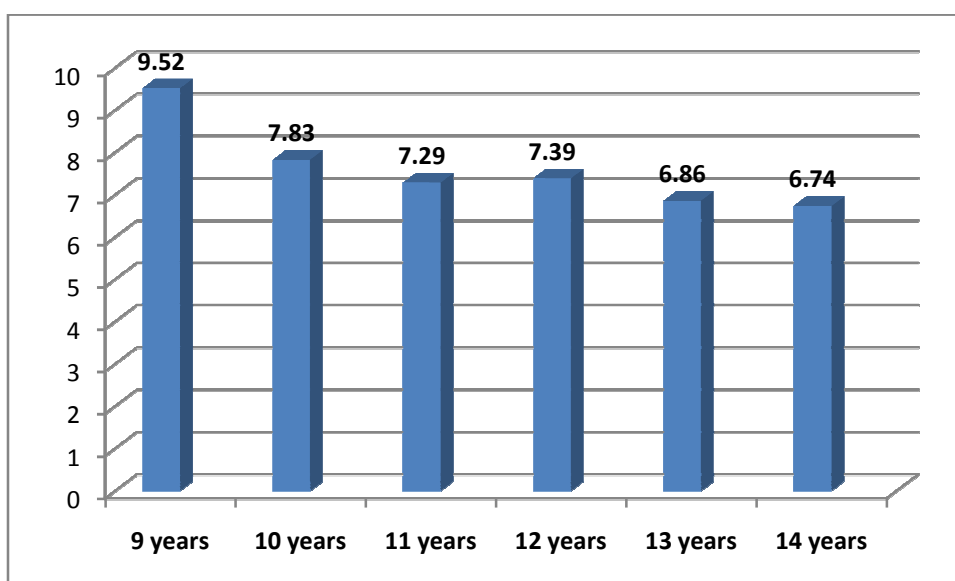
**Fig-I** shows the mean of value of sit ups on tribal students of Tripura. The figure shows that the frequency of sit ups was increasing due to their age and nutritional status etc.

**Fig-II Sit & Reach Test**



**Fig-II** shows the mean of value of sit & reach on tribal students of Tripura. The figure was increasing frequently due to their age, flexibility and nutrition etc.

**Fig-III One Mile Run Test**



**Fig-III** shows the mean of value of one mile run on tribal students of Tripura. The figure was decreasing frequently due to their age, energy, strength and nutrition etc.

**Conclusion**

**Base on the study we can conclude that the:**

- ❖ Number of sit ups that were increasing with their age.
- ❖ The distance of the performed stretch to the nearest cm. of sit and reach test also increasing due to their age and flexibility.
- ❖ The proposed distance in cardio respiratory endurance through 1 mile run that was also decreasing due to their age and energy level.

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