



Physical Fitness Status of Rava Indo- Mongoloid Tribal Youths in Comparison to General Youths of India

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ABSTRACT

Objective: To explore the status of physical fitness of Rava Indo-mongoloid tribals living in plane and compare the same with general youths of same geographical origin. **Method:** Study area: Jalpaiguri district in West Bengal, India. **Subject:** 62 (31 from each group); age ranged 12-16 years. **Design:** The subjects were taken conveniently. Static group comparison design was employed to the study. **Criterion measures:** body composition, aerobic endurance, speed, muscular strength-endurance, and flexibility were measured adopting standard test and measurement procedures. **Statistics:** Mean, Standard Deviation and Independent t-test were used as statistical tool. Level of Significance was set at 0.05.

Findings: The t-value of body mass index, aerobic endurance, speed, abdominal strength-endurance and flexibility between rava indo-mongoloid tribal and general students were 3.336 (<0.05), 2.128 (<0.05), 1.842 (>0.05), 0.450 (>0.05), and 2.199 (<0.05) respectively. **Result and Conclusion:** It reveals that Indo-mongoloid tribal youths had significantly better and nearing normal BMI and greater flexibility while general youths performed significantly better in aerobic endurance. Insignificant difference exists between groups in speed and abdominal strength-endurance.

KEYWORDS : Rava Indo-mongoloid tribals, general students, body composition.

Introduction:

The racial divisions depend largely on genetic factors correlated with physical stature, socio-economic status, ethnicity, attitude, nutritional status, personal hygiene and exercise. The Mongoloid ethnic group of Indian tribals are the main residents of hilly area (wikipedia.org/wiki-ethnic group). 'Rava' originates from Farsi language and before five hundred BC, the Rava came in North East India from Siberia of Soviet Russia (Baharistan a Ghayebi, 1608-1624 BC by Sentab khar). Rava is a little-known scheduled tribe community of West Bengal and Assam. The dialect spoken by the Rava people is also of the same name. In West Bengal, Rava people mainly live in Jalpaiguri and Cooch Behar districts. Moreover, almost 70 per cent of them live in Jalpaiguri district (Wikipedia).

In most of the tribal societies, the inhabitants are found to continue their traditional lifestyles. But, the urbanization throughout the world already has changed the natural environment and affected spontaneous involvement in traditional tribal lifestyles too. As the genetic factor and the life style are two important determinants of physical fitness level, it is deemed reasonable whether, and if so, how much the Rava Indo-Mongoloid tribals differ in physical fitness in comparison to the general students residing in the same plane land.

Objectives of the study:

- To find out the fitness status of Rava Indo- Mongoloid Tribals of West Bengal, India.
- To compare the level of physical fitness between Rava Indo-Mongoloid Tribal and General youths.

Methodology:

Subjects: 62 male students, 31 from each population i.e. Rava-In-Do-Mongoloid tribals and general category of students ranging the age between 12 and 16 years were selected as subjects for this study.

Criterion Measures: Five criterions were measured for this study. These were BMI, aerobic endurance, speed, abdominal strength-endurance and flexibility using standardized tests and measuring procedures.

Statistical Technique: To compare the mean differences between rava tribal and general students on selected parameters, mean, standard deviation (SD) and independent t-test was computed by means of SPSS version 17 (Statistical Package for the Social Sciences, version 17.0, SPSS Inc, Chicago, IL, USA).

Findings & Discussion:

To find out the mean, standard deviation, standard error of mean and mean difference of different groups on selected parameters descriptive statistics and independent t-test were employed. Findings pertaining to this were presented in table I.

Table I: Personal data of different groups

Parameter	Group	Mean $\pm$ SD	SEM
Height (cm)	Rava Tribal	157.19 $\pm$ 9.62	1.72
	General	153.87 $\pm$ 12.05	2.16
Weight (kg)	Rava Tribal	43.72 $\pm$ 8.33	1.49
	General	38.38 $\pm$ 8.72	1.56

Table I1: Mean Difference of Different groups on Selected Parameters

Parameter	Group	Mean $\pm$ SD	SEM	Mean Difference	t-ratio	Level of Significance
BMI (kg/m ²)	Rava Tribal	17.50 $\pm$ 1.56	0.28	1.51	3.336*	0.001
	General	15.99 $\pm$ 1.96	0.35			
Aerobic Endurance (minute)	Rava Tribal	1.75 $\pm$ 0.33	0.05	0.19	2.128**	0.037
	General	1.94 $\pm$ 0.40	0.07			
Speed (second)	Rava Tribal	7.44 $\pm$ 0.46	0.08	0.31	1.842	0.070
	General	7.75 $\pm$ 0.79	0.14			
Muscular Strength Endurance (number)	Rava Tribal	25.35 $\pm$ 6.78	1.21	0.81	0.450	0.654
	General	24.54 $\pm$ 7.30	1.31			
Flexibility (cm)	Rava Tribal	13.98 $\pm$ 2.70	0.48	1.41	2.199*	0.032
	General	12.57 $\pm$ 2.30	0.41			

*Significant at 0.05 level (df = 60)

** Lower the score, better the performance

Legend: SD = Standard Deviation; SEM = Standard Error of mean

Table I shows the mean and standard deviations on personal data i.e. height and weight of the convenient subjects. Table II describes the mean value and standard deviations (SD) of selected parameters namely BMI, aerobic endurance, speed, muscular strength-endurance and flexibility of both the groups. The table reveals that Rava tribal group had mean BMI 17.50 ± 1.56 kg/m²; aerobic endurance 1.75 ± 0.33 minute, speed 7.44 ± 0.46 second, muscular strength-endurance 25.35 ± 6.78 and flexibility 13.98 ± 2.70 cm. On the other hand, the mean BMI, aerobic endurance, speed, muscular strength-endurance and flexibility of general youths were 15.99 ± 1.96 kg/m², 1.94 ± 0.40 minute, and 7.75 ± 0.79 second, 24.54 ± 7.30 and 12.57 ± 2.30 cm respectively.

To find out the significance in mean difference of various parameters between two groups, independent t-test was employed. Table II shows that the t value of BMI, aerobic endurance, speed, muscular strength-endurance and flexibility of the groups were 3.336 (<0.05), 2.128 (<0.05), 1.842 (>0.05), 0.450 (>0.05), and 2.199 (<0.05) respectively. It stands that BMI, aerobic endurance and flexibility of Rava youths had significantly better than General youths.

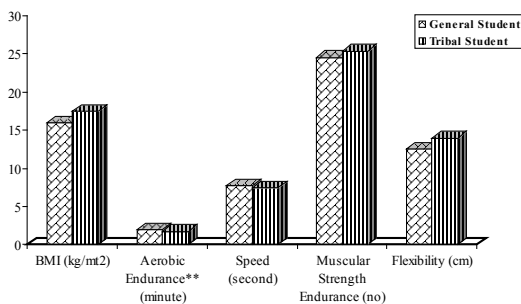


Figure 1: Graphical representation of means of different groups on physical fitness components

** Lower the score, better the performance

The graphical representation of means of two different groups in relation to physical fitness components is depicted in figure 1.

It is noted that both the groups under study belong to 'underweight' BMI category; however, the Rava Indo-mongoloid group had significantly higher BMI. This might be due to the reason that the average weight of the convenient Rava subjects was higher, probably due to their life style that has been reflected in BMI too. Besides, aerobic endurance and flexibility of Rava group of students were found significantly better than general youths.

Conclusions: This study concludes that Rava Indo- Mongoloid Tribal youths have a better level of physical fitness in comparison to general youths on all selected parameters i.e. body composition, aerobic endurance, speed, abdominal strength-endurance and flexibility in average. However, significantly better fitness components were body composition, aerobic endurance and flexibility.

REFERENCES

- Retrieved from http://en.wikipedia.org/wiki/Rabha_tribe | Haroonrashid, H. M. (2008). Role of body mass index on physical fitness index in two different age groups of healthy young males from north interior Karnataka, India. *Al Ameen Journal of Medical Science*, 1 (1), 50-54. | Joshi, P, Bryan, C., & Howat, H. (2012). Relationship of body mass index and fitness levels among schoolchildren. *Journal of Strength and Conditioning Research*, 26 (10), 1006-1014. | Maryam, R. S., & Mandana, G. (2013). The relationship of BMI, Fat percentage, and Waist-Hip ratio to Physical Fitness factors in Female Students. *Journal of Basic and Applied Scientific Research*, 3 (3), 1273-1278. | Robert, P, Kasietczuk, B., Boraczynski, T., Boraczynski, M., & Choszcz, D. (2013). Relationship Between BMI and Endurance-Strength Abilities Assessed by the 3 Minute Burpee Test. *International Journal of Sports Science*, 1 (3), 28-35. | Sharma, R., & Nigam, A. K. (2011). A study of body mass index in relation to motor fitness components of school going children involved in physical activities. *Journal of Exercise Science and Physiotherapy*, 7 (1), 29-33. |