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A study on the selected physical fitness variables between bratachari group and general exercise group

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Abstract

The purpose of the study was to compare the selected fitness variables between Bratachari group and General exercise group. For the study, 10 male Bratachari and 10 General exercise subjects were selected purposively from Jargram Milan Tirtha Sangha, Bardhaman and Nilkanta Pal High School, Jalpaiguri, WB respectively. The age of the subjects were ranged between 15 to 20 years. The fitness variables selected for the study were Speed, Agility, Explosive Strength, Cardio-respiratory Endurance, Muscular Endurance, Flexibility. Standard tests were used to measure the selected fitness variables. Basketball playing ability was measured by Johnson Basketball Ability Test. Descriptive statistics and independent t-test were used to compute the data. The result of the study expressed the t-value of speed, agility, explosive strength, cardio-respiratory endurance, muscular endurance and flexibility were 2.24, 2.65, 2.69 and 4.37 respectively which were significant at 0.05 level.

Keywords: Bratachari, general exercise group, fitness

1. Introduction

The Bratachari movement was a movement for spiritual and social improvement in India initiated by Gurusaday Dutt in 1932. The movement aimed to raise the self-esteem and national awareness of people of undivided India regardless of their religion, caste, sex or age. It was a comprehensive program of physical, mental, and intellectual culture, based on folk traditions of physical exercise, art, dance, drama, music, singing and social service. The Bratacharis undertake to perform good deeds, strengthen the fellowship and develop the mind and body through dance movement was propagated by the Bengal Bratachari Society which was started by Gurusaday Dutt.

To perform the Bratachari activities, one need a high level physical fitness that may have impact on their daily living activities. The normal person are doing regular general exercises for their fitness development or maintenance or for the prevention and treatment purpose of their diseases or deformities.

Now the researcher liked to compare the impact of regular Bratachari practices with regular General exercises practices on selected physical fitness variables that are very important for excelling their performance as well as in their regular daily living activities. There are very few researches on Bratachari. With this background and less availability of research work on Bratachari on the selected parameters, this study was undertaken.

The objective of the study was to compare the selected physical fitness variables between Bratachari group and General exercise group.

2. Methodology

2.1 Subjects: For the purpose of the study twenty subjects, aged 15-20 years, were selected purposively. Among them 10 were selected purposively from Jargram Milan Tirtha Sangha, Bardhaman as Bratachari group and 10 were selected purposively from Nilkanta Pal High School, Jalpaiguri, WB as General exercise group.

2.2 Variable: The fitness variables selected for the study were Speed, Agility, Explosive Strength, Cardio-respiratory Endurance, Muscular Endurance, Flexibility.

2.3 Test and Criterion Measure: Speed was measured by 50 meter Dash Test and was recorded in second. Agility was measured by 4X10 meter Shuttle Run Test and the score was recorded in second. The Explosive Strength was measured by Standing Broad Jump and the score was recorded in meter. The Cardio-Respiratory Endurance was measured by Queen’s College Step Test and the score was recorded in ml/kg/min. The Muscular Endurance was measured by One Minute Bent

Knee Sit Up Test and the score was recorded in Numerical Value. The Flexibility was measured by Sit and Reach Test and the score was recorded in centimetre.

2.4 Statistical Analysis: The data were computed by using descriptive statistics, normality of data was checked by skewness and kurtosis then independent t-test was used to compare the two groups. The level of significance was set at 0.05 level.

3. Result and Discussion

Table 2: Descriptive Statistics of Selected Variables of the Two Groups

| Variables and Groups | N | Mean | Std. Deviation | Std. Error Mean | Skewness | Kurtosis | Best Score | Worst Score | |
|----------------------------|-----|------|----------------|-----------------|-----------|-------------|------------|-------------|-------|
| Speed (sec) | BG | 10 | 8.101 | 0.367074 | 0.116079 | -0.712537 | -0.841022 | 7.45 | 7.85 |
| | GEG | 10 | 8.374 | 0.3935931 | 0.1244651 | 0.3492227 | -1.224849 | 8.5 | 8.97 |
| Agility (sec) | BG | 10 | 9.974 | 0.4088249 | 0.1292818 | -0.711155 | 1.1741869 | 9.15 | 10.63 |
| | GEG | 10 | 10.54 | 0.6134782 | 0.1939989 | -0.340399 | -1.103975 | 9.48 | 11.32 |
| Explosive Strength (Meter) | BG | 10 | 2.166 | 0.1901 | 0.06011 | -1.27807 | 0.38104 | 2.36 | 1.81 |
| | GEG | 10 | 2.017 | 0.11126 | 0.03518 | 0.04033 | -0.54416 | 2.2 | 1.83 |
| Muscular Endurance | BG | 10 | 36.5 | 1.64992 | 0.52175 | -1.02046 | 0.83322 | 38 | 33 |
| | GEG | 10 | 34.7 | 1.25167 | 0.39581 | -0.99442 | 1.21451 | 36 | 32 |
| Flexibility (cm) | BG | 10 | 15.4 | 2.98887 | 0.94516 | -0.45317 | -0.56531 | 19 | 10 |
| | GEG | 10 | 12.5 | 1.84089 | 0.58214 | 2.40934E-17 | -1.17273 | 15 | 10 |
| C-R Endurance (ml/kg/min) | BG | 10 | 55.218 | 4.8948 | 1.54787 | 0.42858 | 0.18719 | 64.29 | 47.49 |
| | GEG | 10 | 50.85 | 3.7981 | 1.20107 | 0.57695 | -0.54625 | 57.57 | 45.81 |

Table 1 describes the mean, standard deviation, Standard error, Skewness, Kurtosis, best score and worst score of subjects on selected variables of both the groups.

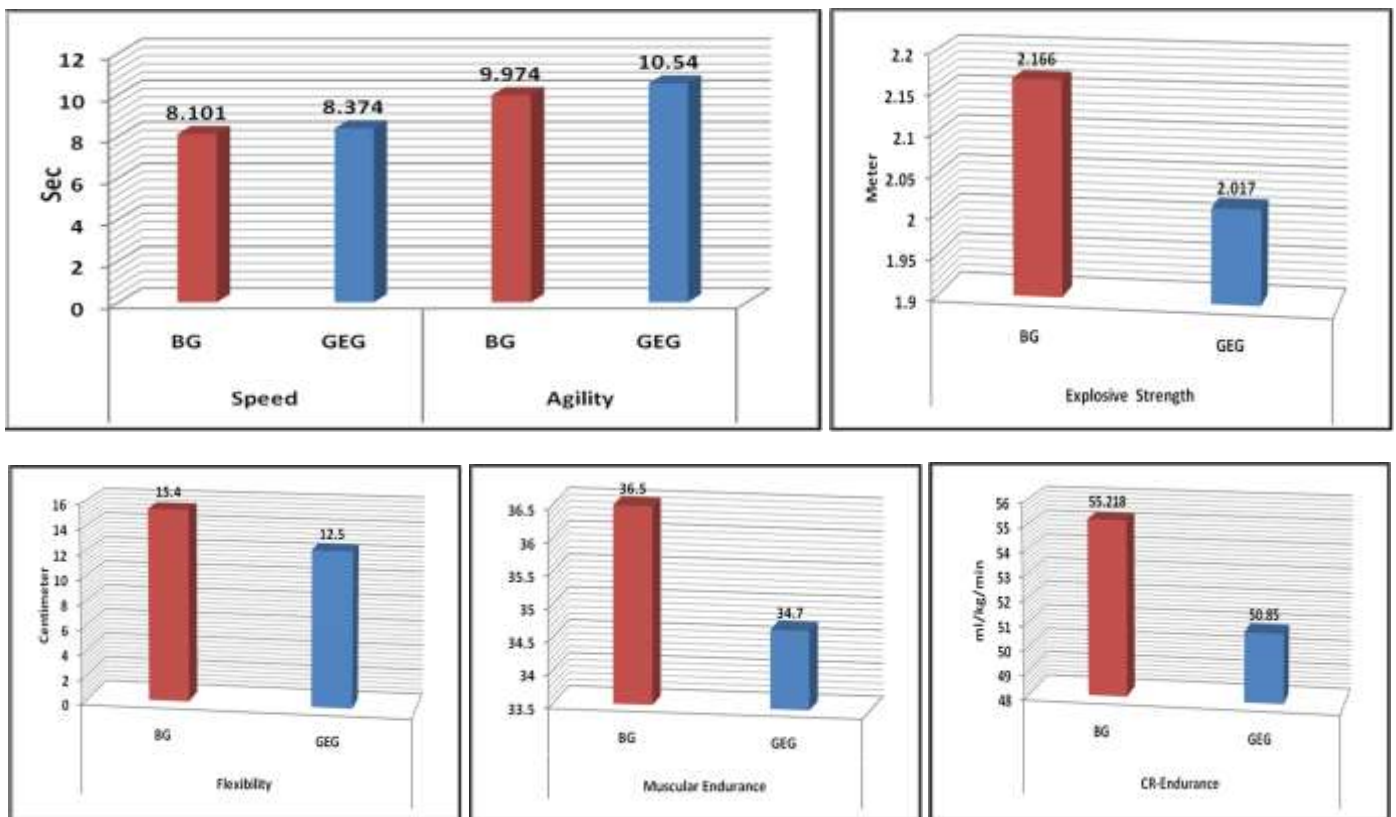


Fig 1, 2, 3, 4 & 5: Graphical Representation of Speed, Agility, Explosive Strength, Flexibility, Muscular Endurance and CR-Endurance of Bratachari and General Exercise Groups

Table 3: Paired Sample t-Test between the Bratachari Group and General Exercise Group

| Variable | Groups | df | Mean | Mean Difference | Std. Error Difference | t-value | Sig. (2-tailed) |
|----------------------------|--------|----|--------|-----------------|-----------------------|---------|-----------------|
| Speed (Sec) | BG | 18 | 8.1.01 | 0.273 | -0.17019 | 1.604 | 0.126 |
| | GEG | | 8.374 | | | | |
| Agility (Sec) | BG | 18 | 9.974 | 0.566 | -0.23313 | 2.428* | 0.025 |
| | GEG | | 10.54 | | | | |
| Explosive Strength (Meter) | BG | 18 | 2.166 | 0.149 | -0.06965 | 2.14* | 0.046 |
| | GEG | | 2.017 | | | | |
| Muscular Endurance | BG | 18 | 36.5 | 1.8 | -0.6549 | 2.75* | 0.01321 |
| | GEG | | 34.7 | | | | |
| Flexibility (cm) | BG | 18 | 15.4 | 2.9 | -1.11006 | 2.612* | 0.012 |
| | GEG | | 12.5 | | | | |
| CR End (ml/kg/min) | BG | 18 | 55.218 | 4.368 | -1.9592 | 2.23* | 0.038 |
| | GEG | | 50.85 | | | | |

*Significant at 0.05 level

Table-3 expressed the t-value of the selected fitness variables between Bratachari Group and General Exercise Group. For fitness variables the t-value of speed, agility, explosive strength, muscular endurance, flexibility and cardio-respiratory endurance were 1.604, 2.428, 2.14, 2.75, 2.612 and 2.23. Except speed remaining t-value of the selected variables were found significant at 0.05 level.

From the result it was cleared that the Bratachari Group were better in respect to agility, explosive strength, muscular endurance, flexibility and cardio respiratory endurance than the General Exercise group. Bratachari activities require more fitness in almost all physical fitness parameters for exhibiting a gracious and skillful performance for which they need to do regular proper scientific strenuous training that might be the cause of the result came in this study. The study was supported by the study of Basak (2016) [1] did a comparative study of physical fitness parameters between General college students and Training college students. Physical fitness is a required element for all the activities in our society. Result of the present study revealed that among various physical fitness variables explosive strength, flexibility, agility, balance and muscular endurance is better in training college students than the general college students. The study was also supported by the study of Roy (2016) [5] who worked on beneficial effect of Bratachari and Folk games programme on blood lipid profile of obese adolescent. The result showed that Bratachari and Folk games programmes significantly reduce the total cholesterol, LDL cholesterol, triglycerides and significantly increase the level of HDL cholesterol in obese adolescents.

4. Conclusion

On the basis of the result it was concluded that the Bratachari were better in Agility, explosive strength, muscular endurance, flexibility and cardio-respiratory endurance while compared with the general exercise practitioners.

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