

Research Paper :

## Influence of socio-economic conditions on physical fitness of tribal area and non-tribal area college male students

NAGIN H. GAMIT

Received : January, 2011; Accepted : February, 2011

### ABSTRACT

The objective of the present study was to analyze the influence of selected Socio-economic factors on Physical Fitness of tribal area and non-tribal area college male student, with the assistance and help of the experts in the field of physical fitness. Physical education, Sports and previous researches on these areas made a comprehensive and suitable Physical Fitness and Socio-economic factors package. 480 male college students were randomly selected from twenty one academic colleges of Hemchandracharya North Gujarat University. For this research, AAHPERD Youth Fitness Test for Physical Fitness and Questionare for Socio-economic data of the same students was organized for the purpose to find out the influence of Socio-economic conditions on physical fitness of tribal area and non-tribal area college male students. The score obtained for physical fitness and socio-economic conditions in various factors were analyzed by using analysis of covariance for significant influence of socio-economic condition on physical fitness of tribal area and non-tribal area college male students. The socio-economic conditions variable like sports achievement by the members of the family, family literacy rate, parents occupation where significantly influenced on physical fitness of tribal area students, where as socio-economic conditions variable like sports achievement by the members of the family, family literacy rate, social status of the family members, property of the family, agriculture and yearly income of the family significantly influenced on physical fitness on non-tribal area students.

Correspondence to:

**NAGIN H. GAMIT**

Department of Physical  
Education, Shri and Smt.  
P.K.K. Arts College (H.N.G.  
University) PATAN (M.S.)  
INDIA

Gamit , Nagin H. (2011). Influence of socio-economic conditions on physical fitness of tribal area and non-tribal area college male students. *Internat. J. Phy. Edu.*, 4 (1) : 57-61.

**Key words :** Physical fitness, Socio-economic conditions

Physical fitness is a trunk of a tree that supports many branches which represent all the activities and make life worth living: intellectual life, spiritual life, occupation, love and social activities. It is one's richest possession; it can't be purchased but can be earned through a daily routine of physical exercise.

One of the important, remarkable, beautiful, valuable and priceless things that God has created particularly on the earth is human life. Therefore, it is necessary to protect and maintain human life in order to achieve higher goals and objectives and also to live a happy and meaningful life. The fitness of an individual, a society, a civilization and a government is very important in the life of the nation. If a nation is to remain strong, physically, mentally, spiritually and socially, education for Physical Fitness must be undertaken. It is self-evident that the fit citizens are nation's best assets and weak ones are liabilities. The wealth of the nation resides in the health and vitality of its people.

Late John F. Kennedy said, "Physical fitness is not one of the most important way to healthy body, it is the basic of dynamic and creative intellectual activity". The relation of the body and the activities of the mind are subtle and complex. Many of us not yet understand, but we do know that the intelligence and skill can only function at the peak of their capacity when the body is healthy and strong, the hardy spirits and tough minds usually inhabit in sound bodies. In this sense physical fitness is the basic of all activities of our society.

Physical fitness is essential not only in terms of general health but also special physical requirement for competitive sports and certain highly specialized and demanding occupation. It is universally accepted that success in various activities of games and sports mainly depend upon the physical fitness of its participants. The AAHPERD Youth Fitness Test has tremendously gained importance and has been recognized as one of the major Physical Fitness Tests, Variables such as strength,

endurance, speed, power, flexibility, cardio-vascular endurance seem to play an important role to determine success in sports.

Tribal communities belong to different ethnological group, profess diverse faith and are at varied levels of socio-economic developments and constitute an important segment of the population. There are number of physical, social, health and economic variables, which contribute to the wholesome development of a child in the course of life. These variables are subject to influence by socio-economic health and physical condition to which the child is exposed. The pattern of interrelationship of these variables may vary across different socio-economic barriers.

There are number of social factors which play an important role in the socio-economic conditions of the family, such as education, occupation, social status, property, sports participation, family income, community background, population of the family etc.

#### **Significance of the study:**

Even though increasing recognition to physical fitness for health and efficiency is forth coming all over the world. A lot of promotional and educative efforts are called for, to bring about desirable attitudes especially in the youth, college going students towards physical activities and sports to develop physical fitness. Physical fitness is the basic need for participation in games and sports. The fitness level of various physical fitness components is most important for making choice of the sport. The basic level of fitness has a vital role in improving any sport performance. But there seems to be a lack of specific knowledge regarding the influence of socio-economic conditions on physical fitness. The various variables of socio-economic conditions have effect at different levels on physical fitness.

The purpose of present study was to compare the influence of socio-economic conditions on physical fitness on tribal and non-tribal area college male students.

## **METHODOLOGY**

### **Subject:**

Subjects were randomly selected for this study were four hundred eighty male students from twenty one academic colleges of Hemchandracharya North Gujarat University. The average age of the subjects were twenty years, ranging from 19-23 years.

### **Variables:**

The research scholar reviewed the available scientific literature pertaining to the socio-economic conditions and

physical fitness from the books, journals, periodicals, magazines and research papers and listed down the important socio-economic conditions factors and Physical Fitness Test, which contained major physical fitness components like speed, endurance, strength, flexibility, ability.

The experts in the field of Physical Education and Sports were consulted and detailed discussions were held related to the physical fitness performance and socio-economic conditions. On the basis of review of related literature, experts opinion and research scholars own understanding of physical fitness and socio-economic conditions the following variables were selected for the purpose of this study.

### **Independent variable:**

- AAHPERD Youth Fitness Test total score.

### **Dependent variables:**

- Name of the variables
- Sports achievement of the sample.
- Sports achievements of the family members.
- Family size.
- Family literacy rate.
- Parent literacy level.
- Education level of the family.
- Parent occupation.
- Social status of the family members.
- Property of the family.
- Agriculture land of the family.
- Yearly income of the family.

### **Statistical analysis:**

The data obtained by various measures for physical fitness and various socio-economic conditions were subjected to the statistical methods in order to compare with tribal and non-tribal area students. As per statistic study, descriptive statistic and one sample 't' test as well as ANOVA test were done. Where, the value of 'F' was found and compared with tabulated 'F' value. The level of significant was kept at 0.01 and 0.05.

## **OBSERVATIONS AND DISCUSSION**

The results obtained from the present investigation as well as relevant discussion have been presented under following heads:

### **Tribal area students and non-tribal area students:**

\* indicates significance level of tribal area was at 0.05 is 1.37 and at 0.01 is 1.56

\*\* indicates significance level of non-tribal area was

**Table 1: Descriptive statistics and one sample 't' test of tribal area students**

| Socio-economic variables | Tribal area students |       |       |       | Non-tribal area students |        |        |       |
|--------------------------|----------------------|-------|-------|-------|--------------------------|--------|--------|-------|
|                          | N                    | Mean  | S.D.  | 't'   | N                        | Mean   | S.D.   | 't'   |
| 1.                       | 206                  | 1.20  | 1.62  | 10.60 | 274                      | 1.76   | 1.84   | 15.81 |
| 2.                       | 206                  | 1.43  | 2.06  | 9.93  | 274                      | 2.08   | 2.35   | 14.66 |
| 3.                       | 206                  | 6.39  | 2.19  | 41.92 | 274                      | 5.32   | 1.61   | 54.63 |
| 4.                       | 206                  | 73.67 | 20.44 | 51.74 | 274                      | 84.68  | 18.16  | 77.19 |
| 5.                       | 206                  | 2.19  | 3.06  | 10.29 | 274                      | 4.28   | 3.41   | 20.79 |
| 6.                       | 206                  | 14.37 | 7.09  | 29.09 | 274                      | 15.59  | 6.51   | 39.61 |
| 7.                       | 206                  | 3.36  | 2.24  | 21.52 | 274                      | 3.97   | 2.10   | 31.21 |
| 8.                       | 206                  | 0.07  | 0.52  | 2.00  | 274                      | 0.14   | 0.62   | 3.62  |
| 9.                       | 206                  | 43.13 | 80.23 | 7.72  | 274                      | 107.36 | 125.52 | 14.16 |
| 10.                      | 206                  | 3.18  | 3.17  | 14.41 | 274                      | 6.04   | 7.41   | 13.49 |
| 11.                      | 206                  | 26.52 | 29.27 | 13.01 | 274                      | 52.28  | 45.81  | 18.89 |
| Phy.Fit. variable        | 206                  | 30.95 | 8.13  | 54.62 | 274                      | 32.42  | 7.51   | 71.46 |

at 0.05 is 1.35 and at 0.01 is 1.53.

#### **Sports achievement of the sample:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.89 and non-tribal area was 0.97, these are not significant at both levels.

#### **Sports achievements of the family members:**

As shown in Table 2 for calculated 'F' value of tribal area was 1.53 and it is significant at 0.05 levels.

Whereas non-tribal area is 1.64 and it was significant at both 0.01 and 0.05 levels.

#### **Family size:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.74 and non-tribal area was 0.93, these are not significant at both 0.01 and 0.05 levels.

#### **Family literacy rate:**

As shown in Table 2 for calculated 'F' value of tribal area is 1.61 and non-tribal area was 1.81, these are significant at both 0.01 and 0.05 levels.

#### **Parent's literacy level:**

As shown in Table 2 for calculated 'F' value of tribal area was 1.23 and non-tribal area was 1.03, these are not significant at both 0.01 and 0.05 levels.

#### **Education level of the family:**

As shown in Table 2 for calculated 'F' value of tribal area was 1.20 and non-tribal area was 0.82, these are not significant at both 0.01 and 0.05 levels.

#### **Parent's occupation.**

As shown in Table 2 for calculated 'F' value of tribal

area was 1.61 and it is significant at both 0.01 and 0.05 levels.

Whereas non-tribal area was 0.61 and it was not significant at both 0.01 and 0.05 levels.

#### **Social status of the family members:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.65 and it is not significant at both 0.01 and 0.05 levels.

Whereas non-tribal area was 2.10 and it is significant at both 0.01 and 0.05 levels.

#### **Total worth of the property of the family:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.38 and it is not significant at both 0.01 and 0.05 levels.

Whereas non-tribal area all was 1.87 and it is significant at both 0.01 and 0.05 levels.

#### **Agriculture land of the family:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.62 and it is not significant at both 0.01 and 0.05 levels.

Whereas non-tribal area was 1.40 and it is significant at 0.01 levels.

#### **Yearly income of the family:**

As shown in Table 2 for calculated 'F' value of tribal area was 0.92 and it is not significant at both 0.01 and 0.05 levels.

Whereas non-tribal area was 1.59 and it is significant at both 0.01 and 0.05 levels.

– As shown in Fig. 1 in the group of tribal area all students, 'F'-ratio of selected variables 1, 3, 5, 6, 8, 9, 10 and 11 are non significant at both 0.01 and 0.05 levels,

**Table 2 : Analysis of variance of tribal and non-tribal students**

| Socio-economic Variable              | Source of variable | Tribal area student |     |             |           | Non-tribal area student              |     |             |           |
|--------------------------------------|--------------------|---------------------|-----|-------------|-----------|--------------------------------------|-----|-------------|-----------|
|                                      |                    | Sum of Squares      | df  | Mean Square | 'F' Ratio | Sum of Squares                       | df  | Mean Square | 'F' Ratio |
| 1.                                   | SSB                | 160.70              | 66  | 2.44        | 0.89      | 218.89                               | 66  | 3.32        | 0.97      |
|                                      | SSW                | 380.14              | 139 | 2.74        |           | 707.21                               | 207 | 3.42        |           |
| 2.                                   | SSB                | 367.18              | 66  | 5.56        | *1.53     | 517.33                               | 66  | 7.84        | **1.64    |
|                                      | SSW                | 505.23              | 139 | 3.64        |           | 988.91                               | 207 | 4.78        |           |
| 3.                                   | SSB                | 254.94              | 66  | 3.86        | 0.74      | 162.53                               | 66  | 2.46        | 0.93      |
|                                      | SSW                | 725.99              | 139 | 5.22        |           | 547.20                               | 207 | 2.64        |           |
| 4.                                   | SSB                | 37109.76            | 66  | 562.27      | **1.61    | 32884.98                             | 66  | 498.26      | **1.81    |
|                                      | SSW                | 48523.45            | 139 | 349.09      |           | 57136.76                             | 207 | 276.02      |           |
| 5.                                   | SSB                | 708.04              | 66  | 10.73       | 1.24      | 784.72                               | 66  | 11.89       | 1.03      |
|                                      | SSW                | 1205.58             | 139 | 8.673       |           | 2386.64                              | 207 | 11.53       |           |
| 6.                                   | SSB                | 3748.96             | 66  | 56.80       | 1.20      | 2411.57                              | 66  | 36.54       | 0.82      |
|                                      | SSW                | 6561.25             | 139 | 47.20       |           | 9174.83                              | 207 | 44.32       |           |
| 7.                                   | SSB                | 445.39              | 66  | 6.75        | **1.61    | 196.01                               | 66  | 2.97        | 0.61      |
|                                      | SSW                | 584.03              | 139 | 4.20        |           | 1012.70                              | 207 | 4.89        |           |
| 8.                                   | SSB                | 13.19               | 66  | 0.20        | 0.65      | 41.68                                | 66  | 0.63        | **2.10    |
|                                      | SSW                | 42.72               | 139 | 0.31        |           | 62.32                                | 207 | 0.30        |           |
| 9.                                   | SSB                | 200406.94           | 66  | 3036.47     | 0.38      | 1605576.02                           | 66  | 24326.91    | **1.87    |
|                                      | SSW                | 1119304.46          | 139 | 8052.55     |           | 2695355.46                           | 207 | 13021.04    |           |
| 10.                                  | SSB                | 466.11              | 66  | 7.06        | 0.62      | 4623.50                              | 66  | 70.05       | *1.40     |
|                                      | SSW                | 1593.81             | 139 | 11.47       |           | 10376.27                             | 207 | 50.13       |           |
| 11.                                  | SSB                | 53229.30            | 66  | 806.51      | 0.92      | 192326.44                            | 66  | 2914.04     | ** 1.59   |
|                                      | SSW                | 122353.15           | 139 | 880.24      |           | 380617.33                            | 207 | 1838.73     |           |
| Significant at * 0.05 level. (1.37)  |                    |                     |     |             |           | Significant at * 0.05 level. (1.35)  |     |             |           |
| Significant at ** 0.01 level. (1.56) |                    |                     |     |             |           | Significant at ** 0.01 level. (1.53) |     |             |           |

selected variable 2 is significant at 0.05 level and selected variables 4 and 7 are significant at both 0.01 and 0.05 levels.

– As shown in Table 2 in the group of non-tribal area, all students, 'F'-ratio of selected variables 1, 3, 5, 6 and 7 are non significant at both 0.01 and 0.05 levels, selected variables 10 is significant at 0.05 level and selected variables 2, 4, 8, 9 and 11 are significant at both 0.01 and 0.05 levels.

In comparison of tribal area and non-tribal area all students, selected variables such as sports achievement of the family members, family literacy rate and parent's occupation significantly affected physical fitness of all tribal area students, whereas, selected variables such as sports achievement of the family members, family literacy rate, social status of the family members, property of the family, agriculture land and yearly income of the family significantly affected physical fitness of non-tribal area all students.

According to the researcher's study, experience and knowledge, sports achievement of the family and the

family literacy rate significantly affected physical fitness of student coming from tribal area and non-tribal, because all population of tribal and non-tribal area understand the importance of the games and sports and its education. Government is giving more emphasis on education and sports participation in both the areas. The parent attitudes towards physical education are positive, so they are more interested in the participation of their child in games and sports for better health and fitness. Education is the basic need for good life. Physical education is an integral part of education, so educated people are participating more in games and sports and its effect on physical fitness of the students is significant by noticed.

There is no significant effect of socio-economic conditions variables such as social status of the family, property of the family, agriculture land and yearly income of the family on the students of the tribal area, whereas, it significant effect on the students of non-tribal area. According to the researcher view, these variables are related with economy of the family. Income of the family, agriculture land of the family and property of the family

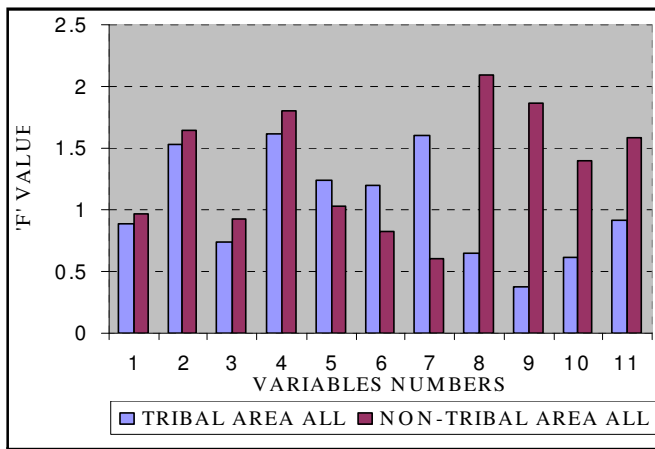


Fig. 2: Tribal area students and non-tribal area students

| Variables serial number     | 'F' value of tribal area all | 'F' value of non-tribal area all |
|-----------------------------|------------------------------|----------------------------------|
| 1.                          | 0.890                        | 0.971                            |
| 2.                          | *1.531                       | **1.641                          |
| 3.                          | 0.740                        | 0.932                            |
| 4.                          | **1.611                      | **1.805                          |
| 5.                          | 1.237                        | 1.031                            |
| 6.                          | 1.203                        | 0.824                            |
| 7.                          | **1.606                      | 0.607                            |
| 8.                          | 0.650                        | **2.097                          |
| 9.                          | 0.377                        | **1.868                          |
| 10.                         | 0.616                        | *1.398                           |
| 11.                         | 0.916                        | **1.585                          |
| * Significant level at 0.05 | 1.370                        | 1.350                            |
| **Significant level at 0.01 | 1.560                        | 1.530                            |

positively effects the social status of the family. These are interrelated variables which significantly affect physical fitness of non-tribal students, because there are

more chances to earn money and value of the properties is higher. Ultimately the economical condition of the family of non-tribal area is stronger than tribal area, which significantly affects physical fitness of the students of non-tribal area.

Parent's occupation is one of the socio-economic conditions variables which affect physical fitness. Socio-economic variable, parent's occupation significantly affect the Physical Fitness of tribal area students, whereas, it has no significant effect on the non-tribal area students. There are more chances to get higher job for the tribal area people, so their child has more chances to participate in games and sports activities. Ultimately its effect on physical fitness is significant.

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