Chapter-IV

ANALYSIS OF DATA AND RESULTS OF THE STUDY

In this chapter the research, the description of research process has been done.

The aim of this study was to study the physical fitness components difference between Hilly and Non hilly students.

For this research work, informative statistical analysis was done on 150 student of Hilly and 150 student of Non Hilly was taken.

STATISTICAL ANALYSIS OF DATA

The information of aspects physical fitness variables was
50 Yard Run,

Shuttle Run,

Standing Board Jump

Pull-ups

Sit ups,

600 yard run was checked by their test.

To check the mean differences of the Hilly and Non Hilly students, "t" test was taken in consideration

**LEVEL OF SIGNIFICANCE**

The level of significance chosen to study the significance of differences between means obtained by using mean difference method and analysis of variance was set at 0.05 level of confidence, which was considered adequate for the purpose of the study.

**FINDINGS**

For the study of Hilly and Non hilly students physical fitness test approached personally and test were conducted. Scores obtained from the test were taken for the statistical procedure and level of Significance was checked and the data is represented through graphs and tables, as below.

**Table-1**

50 yard run

The Difference of the Significance of the Mean of Hilly and Non hilly in the Performance of 50 yard run
<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>6.67</td>
<td>0.26</td>
<td>8.81</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>6.94</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05(150 ) is 1.95

From table 1 The Difference of the Significance of the Mean of Hilly and Non hilly in the Performance of 50 yard run it is seen that

1) Hilly student mean is 6.67
2) Non Hilly students mean is 6.94 .
3) Mean difference between this two groups is 0.26
4) ‘T’ ratio is 8.81
   which is significant at 0.05 level. “T” ratio is, is significant level at 0.05 (150 ) is 1.95

Graphically it is represented in Graph 1

   GRAPH -1

   50 Yard Run

The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of 50 yard run
From the Graph-1 conclusion shows that

1) 50 yard run performance of hilly area mean is 6.67

2) 50 yard run performance of Non hilly area mean is 6.94 mean difference shows significantly

Therefore its seems that Hilly area players have more Efficiency than Non hilly area players in 50 yard running

Table-2
**Shuttle run**

The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of shuttle run

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>11.42</td>
<td>0.12</td>
<td>1.22</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>11.54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05(150 ) is 1.95

From table 2 The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of shuttle run it is seen that

1) Hilly student mean is 11.42
2) Non Hilly students mean is 11.54
3) Mean difference between this two groups is 0.12
4) “T” ratio is 1.22
   which is not significant at 0.05 level. “T” ratio is, is significant level at 0.05(150 ) is 1.95

This Analysis shows that “t” ratio is below then 1.95 so it is not significant
Graphically it is represented in Graph 2

**GRAPH -2**

**Shuttle run**
The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of Shuttle Run

From the Graph-2 conclusion shows that

1) Shuttle run performance of hilly area mean is 11.42
2) Shuttle run performance of Non hilly area mean is 11.54 mean difference shows significantly

Therefore its seems that Hilly area players have more Efficiency than Non hilly area players in Shuttle running

Table-3

Stranding board jump

The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of standing board jump

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>5.41</td>
<td>0.26</td>
<td>4.66</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>5.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05(150) is 1.95

From table 3 The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of Standing board jump it is seen that

1) Hilly student mean is 5.41
2) Non Hilly students mean is 5.15
3) Mean difference between this two groups is 0.26
4) ‘T’ ratio is 4.66
   which is significant at 0.05 level. “T” ratio is, is significant level at 0.05(150 ) is 1.95
   Graphically it is represented in Graph -3

GRAPH -3

Standing board ump
From the Graph-3 conclusion shows that

1) Standing board ump performance of hilly area mean is 5.41

2) Standing board ump performance of Non hilly area mean is 5.15 mean difference shows significantly

Therefore it seems that Hilly area players have more Efficiency than Non Hilly area players in Standing board ump
Table-4

Pull-ups

The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of pull-ups

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>4.03</td>
<td>0.78</td>
<td>2.64</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>3.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05 (150) is 1.95

From table 4 The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of pull-ups it is seen that
1) Hilly student mean is 4.03
2) Non Hilly students mean is 3.25
3) Mean difference between this two groups is 0.78
4) ‘T’ ratio is 2.64
   which is significant at 0.05 level. “T” ratio is, is significant level at 0.05(150 ) is 1.95
   Graphically it is represented

   GRAPH -4

   Pull-ups
The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of pull-ups

From the Graph-4 conclusion shows that

1) Pull-ups performance of hilly area mean is 4.03
2) Pull-ups performance of Non hilly area mean is 3.25 mean difference shows significantly

Therefore it seems that hilly area players have more Efficiency than Non Hilly area players in Pull-ups

Table-5

Sit-ups

The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of Sit-ups

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>23.74</td>
<td>2.44</td>
<td>2.51</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>21.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05(150 ) is 1.95

From table 5 The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of Sit-ups it is seen that
1) Hilly student mean is 23.74
2) Non Hilly students mean is 21.3
3) Mean difference between this two groups is 2.44
4) ‘t’ ratio is 2.51

which is significant at 0.05 level. “T” ratio is, is significant level at 0.05 (150) is 1.95

Graphically it is represented in Graph 5.
The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of sit-ups

From the Graph-5 conclusion shows that

1) Sit-ups performance of hilly area mean is 23.74
2) Sit-ups performance of Non hilly area mean is 21.3 mean difference shows significantly

Therefore it's seems that hilly area players have more Efficiency than Non Hilly area players in Sit-ups

**Table-6**

600 yard run

The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of 600 yard run

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>1.49</td>
<td>0.14</td>
<td>6.58</td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>1.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“T” ratio is, is significant level at 0.05 (150) is 1.95
From table 6 The Difference of the Significance of the Mean of Hilly and Non hilly students in the Performance of 600 yard run it is seen that

1) Hilly student mean is 1.49
2) Non Hilly students mean is 1.63
3) Mean difference between this two groups is 0.14
4) ‘t’ ratio is 6.58

which is significant at 0.05 level. “T” ratio is, is significant level at 0.05 (150) is 1.95

Graphically it is represented in Graph 6.
The Difference of the Significance of the Mean of Hilly and Non Hilly in the Performance of 600 yard run

From the Graph-6 conclusion shows that
1) 600 yard run performance of hilly area mean is 1.49

2) 600 yard run performance of Non hilly area mean is 1.63 mean difference shows significantly

Therefore it seems that Hilly area players have more Efficiency than Non hilly area players in 600 yard running

Table-7

Hilly students and Non hilly students all comparison of Physical fitness test

<table>
<thead>
<tr>
<th>GROUP</th>
<th>MEAN</th>
<th>DIFFERENCE</th>
<th>“T” RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilly Student</td>
<td>52.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Hilly Student</td>
<td>49.85</td>
<td>2.94</td>
<td>8.64</td>
</tr>
</tbody>
</table>

“T” ratio is, significant level at 0.05 (150) is 1.95
From table 7 Hilly students and Non hilly students all comparison of Physical fitness test like

50 yard run

Standing Board jump,

Shuttle run

Pull-ups

Sit -ups

600 yard run it is seen that

1) Hilly student mean is 52.79
2) Non Hilly students mean is 49.85
3) Mean difference between this two groups is 2.94
4) ‘t’ ratio is 8.64

which is significant at 0.05 level. “T” ratio is, is significant level at 0.05 (150) is 1.95

Graphically it is represented in Graph 7.
From the Graph-7 conclusion shows that

1) Physical fitness test performance of hilly area mean is 52.79
2) Physical fitness test performance of Non hilly area mean is 49.85 mean difference shows significantly

Therefore its seems that Non hilly area players have more Efficiency than Hilly area players in Physical fitness test
Graph-8

All Physical Fitness Components Comparison
Discussion of Findings

Statistical analysis shows that, there is minor difference in physical fitness variables between Hilly students and Non hilly students

From statically analysis its shows that in;

1) In 50 yard run, Hilly student mean is 6.67 and Non Hilly students mean is 6.94 Mean difference between this two groups is 0.26 and ‘t’ ratio is 8.81 which is significant at 0.05 level..

2) In shuttle run it is seen that Hilly student mean is 11.42 and Non Hilly students mean is 11.54 Mean difference between this two groups is 0.12 and ‘t’ ratio is 1.22 which is not significant at 0.05 level..

3) In standing Board jump it is seen that Hilly student mean is 5.41 and Non Hilly students mean is 5.15 Mean difference between this two groups is 0.26 and ‘t’ ratio is 4.66 which is significant at 0.05 level..

4) In pull-up it is seen that Hilly student mean is 4.03 and Non Hilly students mean is 3.25 Mean difference between this two groups is 0.78 and ‘t’ ratio is 2.64 which is significant at 0.05 level.

5) In sit-up it is seen that Hilly student mean is 23.74 and Non Hilly students mean is 21.3 Mean difference between this two groups is 2.44 and ‘t’ ratio is 2.51 which is significant at 0.05 level.

6) In 600 yard it is seen that Hilly student mean is 1.49 and Non Hilly students mean is 1.63 Mean difference between this two groups is 0.14 and ‘t’ ratio is 6.58 which is significant at 0.05 level.
7) In All Fitness components it is seen that Hilly student mean is 52.79 and Non Hilly students mean is 49.85 Mean difference between this two groups is 2.94 and ‘t’ ratio is 8.64 which is significant at 0.05 level

**Discussion of Hypothesis**

From the above statistical analysis, it is seen that there is significant difference in physical fitness like 50 yard running, standing board jump, sit-ups, pull-ups and 600 yard running Hilly students are more strengthen than Non hilly students. In shuttle run Non hilly students were more agility power than Hilly students And in all over comparison analysis shows that Hilly students are very strength than Non hilly students

From the present research study and thorough discussion, we can find that the performance of the students from the hilly areas possesses more physical and mental stability, skill and flexibility with comparison with that of non-hilly students. In that case, our hypothesis proved right that hilly areas are good in physical fitness.

The discussion of existing barriers and resources makes it clear that attention should be given to addressing not only the challenges of individual behavior change but also the environmental barriers that inhibit a populationwide transition from a sedentary to an active lifestyle. Expenditure of resources for bike paths, parks, programs, and law enforcement to make playgrounds and streets safer will encourage physical activity in daily living and should thus be viewed as contributing to the health of all Americans. At the same time, evaluations of such changes can occur and more research accordingly conducted to clarify how much the availability of community spaces, facilities, and programs might encourage physical activity. Such information would better inform specific public policy decisions about providing environmental supports and resources to promote physical activity.

Flexibility of our joints should be of high level. Each join has limited range of motion. Flexibility of joints should be maintained. It is necessary to complete everyday task with normal movement of muscles without strain. Lack of flexibility causes low back pain. Flexibility of muscle is genetic. Muscle should be regularly used.
Overload helps to increase muscular strength. Muscles can bear more load than it is accustomed to bear. Gradually the tissues adjusts to the heap by expanding its size or capacity. Over-burden took after by adaption is the premise of wellness. Step by step the heart gets stronger and the individual needs to walk quicker to over-burden the heart. After certain time heart gets to be sufficiently solid to effectively handle the work.

Adaptability is a measure of a joints capacity to travel through a typical scope of movement. Every joint has a restricted scope of movement, contingent upon the joint. It is critical to keep up the adaptability of every joint so that typical daily errands can be finished without undue strain. Absence of adaptability can be identified with low back agony being. Adaptability like any characteristic is constrained by our hereditary gift. It is clear, be that as it may, that consistent utilization is important to create and keep up that gift.

Over-burden and specificity are identified with change of all wellness parts In place for anyone tissue to increment in capacity it must be presented to a heap more noteworthy than that to which it is acclimated; the tissue then steadily adjusts to this heap by expanding its size or capacity. The procedure of over-burden took after by adaption is the premise of wellness and execution programs. .Step by step, the heart gets stronger, and the individual needs to walk speedier to over-burden the heart.After several months working up to fast for several miles, the heart becomes strong enough to easily handle the walking.

The purpose of this study was to explore University students' who do and do not participate in physical activity classes, their attitudes toward physical activity, the importance of physical activity, and student opinions about Physical Education curriculum. Therefore, the following research questions guided this study:
1. What are the attitudes toward physical activity of University students who do and do not currently anticipate in physical activity classes?
2. What do University students think about the Physical Education curriculum?

Discussion Questions:

1. What do the pictures and discussions of “gymnastics” classes tell you about the early models of physical education?
2. Why do you think that sport had such a difficult time becoming part of physical education during the “gymnastics era”?

3. How did you react to the stories of early abuses in collegiate sport? Were they worse than abuses today?

4. What type of philosophy would you say supported the physical education that you experienced in middle or high school?

5. How did the popular view of fitness change during the time period examined in this chapter?

6. What were the significant events between 1900 and World War I that influenced physical education?

7. How did the Great Depression affect the development of sport and physical education?

8. How did World War II change our views of fitness, sport, and physical education?

9. What factors seem to make fitness more or less important and/or popular among the American public?

10. How has the physical-education curriculum changed in the past 100 years?

11. What factors have made collegiate and professional sport so popular?

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Studies about student academic achievement and building condition conclude that the quality of the physical environment significantly affects student achievement. 'There is sufficient research to state without equivocation that the building in which students spends a good deal of their time learning does in fact influence how well they learn'.

Desirable designs include having 'friendly and agreeable' entrance areas, supervised private places for students, as well as public spaces that foster a sense of community, with particular attention to the colour used. Today's schools must create spaces that students want to go to, similar to the way cafes attract people, rather than the space being purely functional.
Other research has acknowledged that 'student achievement lags in shabby school buildings' but go on to say that this research 'does not show that student performance rises when facilities go from ... decent buildings to those equipped with fancy classrooms, swimming pools, television studios and the like.

In one study the significant improvements in the learning environment were attributed to the better attitudes to teaching and learning the improvements in the physical environment created amongst all users.