Comparative study of explosive strength and abdominal strength between rural and urban female state level volleyball players

Dr. Raj Kumar

Abstract
The study was conducted to know the explosive strength and abdominal strength between rural and urban female state level volleyball players. The total 100 female volleyball state level players were selected randomly rural and urban from Jalandhar District 50 from rural and 50 from urban between the age ranged of 18-25 years for comparing strength of abdomen and explosive strength of leg of rural and urban players mean, SD and ‘t’ ratio was difference existed between both parameters. The average age in case of urban female players was 22.32 years and in case of rural players it was 23.92 years and the mean difference is 0.6 years. The rural subjects were older in age. The SD is case of urban students was +1.08 years of the mean and +1.33 years of mean in case of rural female volleyball players. Urban players have a mean is 21.41 and SD=9.8879, In other side the mean of rural female volleyball players is 26.96 and SD is 8.3548 as mean difference is .45, S.E. is 1.2533, ‘t’ ratio is 2.43. Statistically significant at 0.5 levels because calculated value is greater than tabulated value. In standing brand jump mean is 1.81 or S.D, 1969. A difference of mean (0.2 cms) in favors of urban female state level volleyball players in the conclusion only bent knee set up significantly better than urban players but other items both groups are round about same performance.

Keywords: Explosive strength, abdominal volleyball, randomly rural, urban

Introduction
For net explosive strength and abdominal strength between rural and urban female state level volleyball players the strength therefore it is an important factors as which the sports performance depends upon the magnitude and type of resistance is to be tackled in various sports. The sportsman of different sports needs different level and types of strength to achieve good performance.

Schools have the potential to improve the health of young people by providing instruction in physical education that promotes enjoyable lifelong physical activity. Diseases and health problem resulting from an inactive lifestyle have their origins early in life. This is when an active life style should be established. Fitness begins at birth and should continue throughout a person’s life. Fitness improves general health and it is essential for full and vigorous living. The physically fit child feels more alert and eager to do things. A weak child is a weak brick in the wall of the country. The wealth of a country depends entirely upon the health of every citizen of the country.

The complex nature of physical fitness can be best understood in terms of its components such as cardiovascular endurance, strength, flexibility, speed, agility and muscular endurance. In addition to these components of physical fitness there are many other factor which contribute to physical fitness including heredity, living standard, nutrition, hygienic conditions, environmental and climate factors etc.

Objective of Study
The objective of the study is to compare explosive strength among rural and urban state level female volleyball players:-
1. To compare abdominal strength among rural and urban state level female volleyball players.
2. The study to characterize the level of abdominal and explosive strength in female volleyball players.

**Procedure and Methodology**

100 female state level volleyball players were selected randomly rural and urban from Jalandhar district 50 from rural and 50 from urban between the ages ranged of 18 to 25 years. The players which have selected for the study had participated at least state level tournament.

**Selection of the variables**

There were two variables selected for the purpose of the study is:-

1. Explosive strength which was measured by standing broad jump.
2. Abdominal strength which was measured by numbers of bent knee sit ups.

**Analysis and Interpretation of Data**

To compare strength of abdomen and explosive strength of leg of rural and urban players mean, S.D and ‘t’ ratio was computed so as to see whether any significant difference existed between both parameters.

**Table 1:** Number of subjects in varying groups with age in years

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Group</th>
<th>Numbers</th>
<th>SD</th>
<th>Range</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Urban</td>
<td>50</td>
<td>1.08</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>2.</td>
<td>Rural</td>
<td>50</td>
<td>1.33</td>
<td>13</td>
<td>17</td>
</tr>
</tbody>
</table>

Table-1 show that the average age in case of urban female state level players was 22.32 years and in case of rural players it was 23.92 years and the mean difference is 0.6 years. The rural subjects were older in age. The S.D in case of urban students were +1.08 years of mean and +s1.33 years of mean in case of rural players.

**Table 2:** Mean, S.D. and ‘t’ ratio of (N=100) Urban and rural female state level volleyball players in sit-ups

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Group</th>
<th>Numbers</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
<th>S.E.</th>
<th>‘t’ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Urban</td>
<td>50</td>
<td>21.41</td>
<td>9.887</td>
<td>9.45</td>
<td>1.2533</td>
<td>2.4</td>
</tr>
<tr>
<td>2.</td>
<td>Rural</td>
<td>50</td>
<td>26.96</td>
<td>8.3548</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tabulated value of t=2.00

In this table the urban female state level volleyball players have a mean is 21.41 and SD=9.8879. In other side the mean of rural players is 26.96 and SD is 8.3548 or Mean Difference is 9.45, S.E. is 1.2553,’t’ ratio is 2.43. Statistically significant at .05 levels because calculated value is greater than tabulated value. This table is showing in figure.

**Table 3:** Mean, S.D. and ‘t’ ratio of (N=100) Urban and rural female state level volleyball players in standing broad jump

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Group</th>
<th>Numbers</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
<th>S.E.</th>
<th>‘t’ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Urban</td>
<td>50</td>
<td>1.81</td>
<td>.1969</td>
<td>0.0264</td>
<td></td>
<td>.7575</td>
</tr>
<tr>
<td>2.</td>
<td>Rural</td>
<td>50</td>
<td>1.79</td>
<td>.1931</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tabulated value of t=2.00

Table shows that urban players had a mean is 1.81 or S.D is. 1.969 or rural players mean is 1.79 and S.D is .1931. a difference of mean .02 Cms in favor of urban female statement volleyball players. Yet the difference were statistically insignificant.

Hence the performance in standing broad jump was identical of both the urban and rural population and null hypothesis is accepted because calculated value .757 is less than the tabulated value 2.00. This table is shown in figure-2.
Discussion of findings
The result is showing that there was significant difference found between rural and urban female state level volleyball players in relation and abdominal strength, rural players have more abdominal strength comparatively to urban. Rural players in addition to playing volleyball they work hard in other work as like farming and working in their home. This may be reason of difference between rural and urban female volleyball players. There was also insignificant difference found in relation to explosive strength. In volleyball these skill jumping are used very rarely by the players in volleyball so and they do not performing training for the development of explosive strength. It may be reason that there was insignificant difference found. According to Pefra reyes me, Tan SK, Molina RM conducted “Study Urban-Rural contrasts in the Physical Fitness of school children is Oaxaca, Mexico” and concluded that explosive power standing long jump and abdominal strength and endurance time sit-up were better in urban than in rural children without and with adjustment for age and body size. Urban-Rural difference in running speed and flexibility sit and reach varied by age group and sex. Younger rural children and older urban girls performed better in the distance run whereas older rural and urban boys did not differ in endurance. It is just reference in my study.

Conclusion
The Rural female statement volleyball players performed significant better than urban players in the test item of bent knee sit-up.
There was no significant difference in the performance of rural and urban female state level volleyball players in the test items of standing broad jump.
The overall picture which emerges from the analysis of data reveals that neither players nor urban players were categorically superior to their counterparts. There was a mixed and explosive strength of leg all the research works find out that rural in component of physical fitness, but some urban found volleyball players are also superior in components of fitness.

References