CHAPTER 5
SUMMARY, CONCLUSIONS
AND
RECOMMENDATION
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RECOMMENDATIONS

5.1 SUMMARY

The purpose of the study was to compare All India Varsity and Inter State Championship in their Handball team statistics and their relationship to winning and losing the game.

The subject were selected from four best teams of All India Varsity Handball Tournament held at Punjab University Chandigargh from 1.10.2004 to 4.10.2004 in the year 2004-05. The name of four teams of Universities are on merit is (1) Punjabi University Patiala (2) Panjab University Chandigarh (3) Delhi University Delhi and (4) Choudhary Devilal University Sirsa and four best teams of Inter State Handball Championship in the year 2004-05 held at Jamshedpur, organized by Tata steel and Jharkhand state Handball association from 10.12.04 to 15.12.04 were selected for the study, the team’s played in semifinal and loser’s final. The name of state on merit is (1) Jharkhand state (2) SSCB (3) Chhattisgarh and (4) Punjab. 128 Handball players of eight team’s (16 from each team) were the subject of the present study.
On analyzing the data collected for average height in Varsity level the players of Delhi University is superior (170 cm) and average weight and length of training years of Punjabi University Patiala players were superior than other Universities (weight = 68.5 kg, lengths of training year 6.0 year) but average age is higher in Punjabi University Patiala and Delhi University Delhi, i.e. 21 year.

The details of BMI and body surface area (BSA) of selected university players is as under -

**Body Surface Area of Inter varsity Handball players.**

1. Punjabi University Patiyala -(BSA) = 1.77 Sq. meter.
2. Punjab University Chandigarh (BSA) = 1.74 sq meter
3. Delhi University Delhi (BSA) = 1.74 sq meter
4. Choudhary Devi Lal University Sirsa (BSA) = 1.74 sq meter

**Body Mass Index of Inter Varsity Handball players:-**

1. Punjabi University Patiala -(BMI) = 24.66 Kg.sq.meter
2. Punjab University Chandigarh (BMI) = 23.66 Kg.sq.meter
3. Delhi University Delhi (BMI) = 22.23 Kg.sq.meter
4. Choudhary Devi Lal University Sirsa (BMI) = 23.66 Kg.sq.meter

In States the average height and weight is superior in Punjab state (182cm and 78 kg) but in average of length of training years and age, it is higher in Chhattisgarh state (length of training year 13 years and Age is 24 years).
The details of BMI and body surface area (BSA) of selected Inter State players is as under -

**Body Surface Area (BSA) of Inter State Handball Players:-**

1. Jharkhand State -(BSA) = 1.79 Sq. meter  
2. SSCB (BSA) = 1.79 Sq. meter  
3. Chhattisgarh State (BSA) = 1.96 Sq. meter  
4. Punjab State (BSA) = 1.99 Sq. meter

**Body Mass Index (BMI) of Inter State Handball Players:-**

1. Jharkhand State -(BMI) = 22.64 kg/ Sq. meter  
2. SSCB (BMI) = 25.48 kg/ Sq. meter  
3. Chhattisgarh State (BMI) = 23.76 kg/ Sq. meter  
4. Punjab State (BMI) = 23.54 kg/ Sq. meter

The following Handball team statices were selected i.e.

1. Throw on goal attempted.  
2. Field goal.  
3. Fast break.  
4. Personal fouls.  
5. Technical fouls.  
6. Fall shot.  
7. Faints.
8. Home court Advantage.

9. Half time lead.

10. Score per possession.


12. Left handed player used.

13. Interruption


15. Positional play).

The collected scores pertaining to each of selected statistics were assisted and compared on the basis of original score and the relationship with winning and losing performance were explained on the basis of positive and negative team statistics. Finally to compose all the teams pertaining to each selected variables and to find out the significant difference among the universities and state teams-

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\chi^2$</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Throw on goal Attempted</td>
<td>16.24</td>
<td>.05</td>
</tr>
<tr>
<td>2. Field goals</td>
<td>8.48</td>
<td>NS</td>
</tr>
<tr>
<td>3. Fast break</td>
<td>12.12</td>
<td>NS</td>
</tr>
<tr>
<td>4. Personal fouls</td>
<td>3.17</td>
<td>NS</td>
</tr>
<tr>
<td>5. Technical fouls</td>
<td>3.00</td>
<td>NS</td>
</tr>
<tr>
<td>6. Fall shot</td>
<td>12.47</td>
<td>NS</td>
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<tr>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>7. Faints</td>
<td>12.04</td>
<td>NS</td>
</tr>
<tr>
<td>8. Home court Advantage</td>
<td>32.80</td>
<td>.01</td>
</tr>
<tr>
<td>9. Half time lead</td>
<td>9.14</td>
<td>NS</td>
</tr>
<tr>
<td>10. Score per possession</td>
<td>39.43</td>
<td>NS</td>
</tr>
<tr>
<td>11. Jump shot</td>
<td>7.97</td>
<td>NS</td>
</tr>
<tr>
<td>12. Left handed player used</td>
<td>1.77</td>
<td>NS</td>
</tr>
<tr>
<td>13. Interruption</td>
<td>51.93</td>
<td>.01</td>
</tr>
<tr>
<td>14. Blocking and passes</td>
<td>34.68</td>
<td>.01</td>
</tr>
<tr>
<td>15. Positional play</td>
<td>7.89</td>
<td>NS</td>
</tr>
</tbody>
</table>

While comparing the teams of All India Varsity teams, it is reflected from the scores that higher the points scored in the positive team statistics lead towards their winning the match. Similarly lower scores in negative team statistics leads towards winning. Whereas lower performance or score in positive team statistics forces to loose the match. Similar relationship was obtained in case of all the four state teams.

Further while comparing the first, second, third and fourth position holder teams, Interior results were obtained of universities teams than states teams.
5.2 CONCLUSION

Within the limitations of present study the following conclusions were drawn-

**Body Surface Area of Inter varsity Handball players.**

1. Punjabi University Patiyala -(BSA) = 1.77 Sq. meter.
2. Punjab University Chandigarh (BSA) = 1.74 sq meter
3. Delhi University Delhi (BSA) = 1.74 sq meter
4. Choudhary Devilal University Sirsa (BSA) = 1.74 sq meter

**Body Mass Index of Inter Varsity Handball players:-**

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**Body Surface Area (BSA) of Inter State Handball Players:-**

1. Jharkhand State -(BSA) = 1.79 Sq. meter
2. SSCB (BSA) = 1.79 Sq. meter
3. Chhattisgarh State (BSA) = 1.96 Sq. meter
4. Punjab State (BSA) = 1.99 Sq. meter
Body Mass Index (BMI) of Inter State Handball Players:-

1. Jharkhand State -(BMI) = 22.64 kg/ Sq. meter
2. SSCB (BMI) = 25.48 kg/ Sq. meter
3. Chhattisgarh State (BMI) = 23.76 kg/ Sq. meter
4. Punjab State (BMI) = 23.54 kg/ Sq. meter

2. The Punjabi University has shown better performance in comparison to other Universities in all the positive team statistics which lead to winning.

3. The Choudhary Devial University has shown poor performance in comparison to the universities in positive team statistics which were the cause for losing.

4. The Jharkhand State shows better performance in comparison to other States in all the Positive team statistics which lead to winning.

5. The Punjabs State has shown poor performance in comparison to other state in positive team statistics which were the cause for losing.

6. The performance of Punjabi University and Jharkhand State in more or less similar to each other in all the team statistics.

7. The SSCB has shown better performance than the Punjab University in Handball team statistics.
8. The Chhattisgarh State has shown better performance than the Choudhary Devlal University in Handball team statistics.

9. The Delhi University shows better performance then the Choudhary Devlal University in Handball team statistics.

10. No Significant difference were obtained for eight teams in field goals, fast break, faint, fall shot, Jump shot, personal fouls, technical fouls, half time lead, left handed players used and positional play.

11. The significant difference were obtained for eight teams in shot on goal attempted, home court advantage, interruption and blocking and passes.
5.3 **RECOMMENDATION**

In the light of conclusion drawn the following recommendations are made.

1. Based on the findings of the present study, it is recommended that all the positive statistics must be improved and all the negative team statistics must be minimized for the success in the competition.

2. A similar study may be repeated with the subject from different countries.

3. A similar study may be repeated with the female subjects.

4. A Similar study may be conducted while choosing the other statistics apart from this study.